

# The Metropolitan Water District of Southern California

# Agenda

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

## Board of Directors

**August 20, 2024**

**12:00 PM**

<b>Tuesday, August 20, 2024 Meeting Schedule</b>
08:30 a.m. FAM 10:30 a.m. EOP 11:30 a.m. Break 12:00 p.m. BOD

Agendas, live streaming, meeting schedules, and other board materials are available here: <https://mwdh2o.legistar.com/Calendar.aspx>. Written public comments received by 5:00 p.m. the business days before the meeting is scheduled will be posted under the Submitted Items and Responses tab available here: <https://mwdh2o.legistar.com/Legislation.aspx>.

If you have technical difficulties with the live streaming page, a listen-only phone line is available at 1-877-853-5257; enter meeting ID: 891 1613 4145.

Members of the public may present their comments to the Board on matters within their jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference 1-833-548-0276 and enter meeting ID: 815 2066 4276 or to join by computer [click here](#).

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MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012

Teleconference Locations:

525 Via La Selva • Redondo Beach, CA 90277

City Hall • 303 W. Commonwealth Avenue • Fullerton, CA 92832

3008 W. 82nd Place • Inglewood, CA 90305

2680 W. Segerstrom Avenue Unit 1 • Santa Ana, CA 92704

Long Beach Water Department • 1800 E. Wardlow Road • Long Beach, CA 90807

Lobby Conference Room • San Diego County Water Authority • 4677 Overland Avenue • San Diego, CA 92123

148 Lighthouse Road • Hilton Head Island, SC 29928

7 Upper Meadow Lane • Oak Bluffs, MA 02568

Conference Room • 1545 Victory Boulevard, 2nd Floor • Glendale, CA 91201

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## 1. Call to Order

- a. Invocation: Director Stephen J. Faessel, City of Anaheim
- b. Pledge of Allegiance: Director Tracy M. Quinn, City of Los Angeles

## 2. Roll Call

**3. Determination of a Quorum****4. Opportunity for members of the public to address the Board on matters within the Board's jurisdiction. (As required by Gov. Code §54954.3(a))****5. OTHER MATTERS AND REPORTS**

- A.** Report on Directors' Events Attended at Metropolitan's Expense **[21-3618](#)**  
**Attachments:** [08202024 BOD 5A Report](#)
- B.** Chair's Monthly Activity Report **[21-3619](#)**  
**Attachments:** [08202024 BOD 5B Report](#)
- C.** Interim General Manager's summary of activities **[21-3620](#)**  
**Attachments:** [08202024 BOD 5C Report](#)
- D.** General Counsel's summary of activities **[21-3621](#)**  
**Attachments:** [08202024 BOD 5D Report](#)
- E.** General Auditor's summary of activities **[21-3622](#)**  
**Attachments:** [08202024 BOD 5E Report](#)
- F.** Ethics Officer's summary of activities **[21-3623](#)**  
**Attachments:** [08202024 BOD 5F Report](#)
- G.** Presentation of 5-year Service Pin to Director Tana McCoy, City of Compton **[21-3624](#)**
- H.** Report on list of certified assessed valuations for fiscal year 2024/25 and tabulation of assessed valuations, percentage participation, and vote entitlement of member agencies as of August 20, 2024 (FAM) **[21-3634](#)**  
**Attachments:** [08202024 FAM 5H B-L](#)  
[08202024 FAM 5-H Presentation](#)



- I. Presentation of commendatory resolution honoring The Rancho California Water District for 2024 recipient of the Outstanding Public Service Announcement Emmy Awards "Be a Water Hero" Campaign [21-3691](#)
- J. Presentation of commendatory resolution honoring Elsinore Valley Municipal Water District recipient of the American Water Works Association National 2024 Hydrant Hysteria Competition [21-3692](#)
- K. Induction of new Director Mark Gold from City of Santa Monica [21-3694](#)
  - (a) Receive credentials
  - (b) Report on credentials by General Counsel
  - (c) File credentials
  - (d) Administer Oath of Office
  - (e) File Oath

**Attachments:** [08202024 BOD 5K Sufficiency of Credentials](#)

**\*\* CONSENT CALENDAR ITEMS -- ACTION \*\***

**6. CONSENT CALENDAR OTHER ITEMS - ACTION**

- A. Approval of the Minutes of the Board of Directors Meeting for July 9, 2024 (Copies have been submitted to each Director, any additions, corrections, or omissions). [21-3625](#)  
**Attachments:** [2024-0709 BOD Meeting Minutes](#)
- B. Approve Commendatory Resolution for Director Judy Abdo representing City of Santa Monica [21-3693](#)
- C. Approve Committee Assignments

**7. CONSENT CALENDAR ITEMS - ACTION**

- 7-1 Authorize on-call agreements with AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc., in amounts not to exceed \$1.5 million each, for a maximum of three years for value engineering and related technical services in support of Capital Investment Plan projects; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (EOT) [21-3614](#)

**Attachments:** [08202024 EOT 7-1 B-L](#)  
[08192024 EOT 7-1 Presentation](#)

- 7-2** Authorize an agreement to Carollo Engineers Inc. in an amount not to exceed \$1.3 million for owner's advisor services to assist with progressive design-build project delivery on the Lake Mathews Pressure Control Structure and Electrical System Upgrades; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (EOT) **21-3615**

**Attachments:** [08202024 EOT 7-2 B-L](#)  
[08192024 EOT 7-2 Presentation](#)

- 7-3** Authorize an increase of \$840,000 in change order authority to an existing contract with Steve P. Rados for the installation of an isolation valve for the Wadsworth Pump Plant Bypass Pipeline; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (This action is part of a series of projects that are being undertaken to improve the supply reliability for State Water Project dependent member agencies) (EOT) **21-3616**

**Attachments:** [08202024 EOT 7-3 B-L](#)  
[08192024 EOT 7-3 Presentation](#)

- 7-4** Adopt the Mitigated Negative Declaration for the Inland Feeder-Foothill Pump Station Intertie Project and take related CEQA actions; adopt a resolution to accept \$5 million in funding from U.S. Bureau of Reclamation's WaterSMART Drought Response Program: Drought Resiliency Projects grant for Fiscal Year 2024 to support the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie project; and authorize the General Manager to accept grant funds, if awarded; designate Metropolitan's Group Manager of Engineering Services to be the signatory to execute actions for reimbursement by U.S. Bureau of Reclamation (EOT) **21-3617**

**Attachments:** [08202024 EOT 7-4 B-L](#)  
[08192024 EOT 7-4 Presentation](#)

- 7-5** Amend an existing agreement with Procure America Inc. for a new annual maximum amount of \$340,000 per year for a new not-to-exceed amount of \$1.7 million over the term of the agreement for the audit of Metropolitan's telecommunications circuits; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (EOT) **21-3628**

**Attachments:** [08202024 EOT 7-5 B-L](#)  
[08192024 EOT 7-5 Presentation](#)

- 7-6** Authorize a \$875,000 increase to an existing agreement with Computer Aid Incorporated to a new not-to-exceed amount of \$2,625,000 for staff augmentation support services for the operation and maintenance of the Metropolitan Cybersecurity Operations Center for an additional six months; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (EOT) **21-3629**

**Attachments:** [08202024 EOT 7-6 B-L](#)  
[08192024 EOT 7-6 Presentation](#)

- 7-7** Approve and authorize the distribution of Appendix A for use in the issuance and remarketing of Metropolitan's Bonds; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (FAM) **21-3688**

**Attachments:** [08202024 FAM 7-7 B-L](#)

- 7-8** Review and consider the Lead Agency's adopted Mitigated Negative Declaration and take related CEQA actions, and adopt resolution for 115th Fringe Area Annexation to Eastern Municipal Water District and Metropolitan (FAM) **21-3635**

**Attachments:** [08202024 FAM 7-8 B-L](#)  
[08202024 FAM 7-8 Presentation](#)

**\*\* END OF CONSENT CALENDAR ITEMS \*\***

## **8. OTHER BOARD ITEMS - ACTION**

- 8-1** Authorize the General Manager to enter into: (1) a forbearance agreement with Coachella Valley Water District, Imperial Irrigation District, Palo Verde Irrigation District, and the City of Needles to allow water conserved under the U.S. Bureau of Reclamation's conservation program to be added to Lake Mead; and (2) agreements with Imperial Irrigation District and San Diego County Water Authority under U.S. Bureau of Reclamation's conservation program to add water conserved by Imperial Irrigation District to Lake Mead that would otherwise accrue to San Diego County Water Authority; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA (OWS) **21-3681**

**Attachments:** [08202024 OWS 8-1 B-L](#)  
[08192024 OWS 8-1 Presentation](#)

- 8-2** Adopt the Twenty-Sixth Supplemental Resolution to the Master Bond Resolution authorizing the issuance of up to \$425 million of Water Revenue and Refunding Bonds, 2024 Series; and approve expenditures to fund the costs of issuance of the Bonds; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (FAM) **21-3703**

**Attachments:** [08202024 FAM 8-2 B-L](#)

- 8-3** Adopt resolution establishing the Ad Valorem tax rate for fiscal year 2024/25; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (FAM) **21-3633**

**Attachments:** [08202024 FAM 8-3 B-L](#)  
[08202024 FAM 8-3 Presentation](#)

- 8-4** Approve salary increase of 8.25 percent effective June 13, 2024 for Deven Upadhyay as Interim General Manager to reflect the added responsibilities and duties; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-3711**

**Attachments:** [08202024 BOD 8-4 B-L](#)

## **9. BOARD INFORMATION ITEMS**

- 9-1** Conservation Report **21-3626**

**Attachments:** [08202024 BOD 9-1 Report](#)

- 9-2** Update on proposed agreements with the Plumas Community Protection I Forest Resilience Bond LLC, North Feather I Forest Resilience Bond LLC, and Upper Butte Creek I Forest Resilience Bond LLC to establish watershed partnerships and forest health pilot investigations in the Northern Sierra Nevada; each agreement will not exceed \$200,000 per year for a maximum of two years (OWS) **[21-3631](#)**

**Attachments:** [08202024 OWS 9-2 B-L](#)  
[08192024 OWS 9-2 Presentation](#)

## **10. OTHER MATTERS**

- 10-1** Report on Department Head 2023 Salary Survey **[21-3637](#)**

**Attachments:** [08202024 BOD 10-1 Presentation](#)

- 10-2** Discussion of Department Head Performance Evaluations [Public Employees' performance evaluations; General Counsel, General Auditor, and Ethics Officer; to be heard in closed session pursuant to Gov. Code 54957] **[21-3639](#)**

- 10-3** Discuss and Approve Compensation Recommendations for General Counsel, General Auditor, and Ethics Officer **[21-3638](#)**

## **11. FOLLOW-UP ITEMS**

NONE

## **12. FUTURE AGENDA ITEMS**

## **13. ADJOURNMENT**

**NOTE:** Each agenda item with a committee designation will be considered and a recommendation may be made by one or more committees prior to consideration and final action by the full Board of Directors. The committee designation appears in parenthesis at the end of the description of the agenda item, e.g. (EOT). Board agendas may be obtained on Metropolitan's Web site <https://mwdh2o.legistar.com/Calendar.aspx>

Writings relating to open session agenda items distributed to Directors less than 72 hours prior to a regular meeting are available for public inspection at Metropolitan's Headquarters Building and on Metropolitan's Web site <https://mwdh2o.legistar.com/Calendar.aspx>.

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Executive Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

## August 20, 2024 Board Meeting

### Item 5A



Metropolitan Water District of Southern California  
Summary of Events

**Attended by Directors at Metropolitan's Expense in July 2024**

None



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

# Board Report

## ● Chair of the Board Adán Ortega Jr.'s Monthly Activity Report – July 2024

### Summary

This report highlights my activities as Chair of the Board during the month of July 2024 on matters relating to The Metropolitan Water District of Southern California's business.

### Monthly Activities

#### Key Activities

- Took part in a Podcast recording at Rowland Water District titled "H2Know Podcast Talking Issues", where I discussed the history and mission of Metropolitan in providing water delivery to Southern Californians. I emphasized the need for continued efforts to develop solutions for the future, like Metropolitan's Pure Water Southern California Program, to address climate impacts and vulnerabilities facing the region's water system and the communities served to advance strategies for an equitable and resilient water future.
- I had the honor of attending the Hispanic Employees Association (HEA) 2024 Scholarship Banquet, where I was asked to deliver the keynote address and help present scholarships to the deserving college students and their families. This event celebrated the achievements of those recognized and paid tribute to the Henry Lozano Memorial Scholarship, named in honor of HEA's founding president. This scholarship commemorates his dedication to assisting the next generation of leaders by promoting diversity in the workplace and advancing equal employment opportunities.





- Attended the City of Burbank City Council meeting with Board Member Marsha Ramos and Acting Interim General Manager Shane Chapman. We addressed the interrelation between CAMP4Water, the Biennial Budget Process, Bay-Delta Issues, and the Colorado River, as well as our collective resiliency in addressing the State Water Project Exclusive Areas challenges. We thanked the City Council and Burbank's representative on the Metropolitan Board, Director Marsha Ramos, for their leadership and continued collaboration.



- Provided opening remarks at Metropolitan's Community Leaders' Briefing with Inland Empire Utilities Agency (IEUA) where I discussed what Metropolitan is doing to ensure a resilient and sustainable water future amid climate change. IEUA President Marco Tule, Senator Rubio, and Metropolitan Water District Director Michael Camacho talked about important water issues, including the climate bond, PFAS, and securing funding and resources for water infrastructure projects.



- Participated in Metropolitan's Employee Appreciation Picnic where Interim General Manager Deven Upadhyay and I provided opening remarks. On behalf of the Board of Directors, I thanked everyone, including member agencies, for their hard work throughout the year and acknowledged the HR team and event organizers for their efforts. I highlighted that it had been five years since our last employee appreciation event and expressed hope that it would become an annual tradition. I also shared a brief history of the Shoshone tribes to emphasize the importance of water in Southern California and praised the employees' dedication to providing clean, reliable water. Lastly, I spoke about Metropolitan's resilience, adaptability, and innovative spirit as we approached our 100th anniversary.



- Director Miguel Luna and I joined San Fernando Mayor Celeste Rodriguez and the Honorable Dennis Garcia, Chairman of Elders of the Tataviam Band of Mission Indians, in an early morning Peace and Dignity Journey run send-off. Director Luna and I accompanied the runners for a 7-mile stretch of the run from San Fernando on their day-long run to Long Beach. This unique initiative promotes indigenous unity and cultural revitalization through long-distance relay runs across the Americas, where runners pass a sacred staff, symbolizing connections between communities. The event blends cultural celebration, advocacy, and personal transformation.



### Interviews & Correspondence

- I recorded a tribute interview about retiring U.S. Representative Grace Napolitano that will be shown at the upcoming banquet in her honor being held by the Mexican-American Legal Defense and Education Fund (MALDEF) in the Fall. I reminisced about meeting Congresswoman Napolitano over 30 years ago, her contribution to water resources in the Southwest, and Metropolitan's honor of naming the Grace F. Napolitano Pure Water SoCal Innovation Center.



### Special Activities

- Interim General Manager Deven Upadhyay and I have been conducting Metropolitan site meetings to meet with the employees, provide district updates, and listen to and address their concerns. So far, we have attended three meetings in August: Jensen, Diemer, and Weymouth Water Quality Lab, where we participated in a robust question-and-answer session addressing various topics, including Metropolitan's local and regional planning investments, workforce initiatives, and CAMP4W. We emphasized our commitment to upholding high service standards and transparency. I communicated the Board's strong unity in recent tough decisions and our united concern for their well-being. I was encouraged by the focus the workforce is demonstrating on our mission of providing safe and reliable drinking water to the community. Interim General Manager Deven Upadhyay's comments and answers to questions were received with candor, appreciation, good humor, and with sincere thanks.

- I was proud to celebrate the future of Metropolitan on National Intern Day. This summer, we're honored to host interns, including those participating in our Engineering Co-Op internship program, in partnership with California State Polytechnic University-Pomona and the Coro Southern California 2024 Youth Fellows Program. The three Coro fellows recently "graduated" from our Education department's experiential learning program, while our 17 engineering interns will be with us until March 2025. Thanks to hands-on experiences at locations including Diamond Valley Lake, the Pure Water facility, and Weymouth Water Treatment plant, our interns are gaining valuable workplace knowledge. The future is in good hands with these aspiring civic leaders and engineers.



### **Regularly Scheduled/Ongoing Meetings**

I continue to meet regularly to review the Board's organizational issues and coordinate activities with the Board Vice Chairs and Department Heads.





# General Manager's Monthly Report



Activities for the Month of July 2024



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# Message from the General Manager

In July the Metropolitan family gathered together at Whittier Narrows for the fun and food of the Employee Appreciation Day picnic, an event that felt strangely normal after many years of having to be canceled, a casualty of a pandemic that disrupted routines and workplaces and kept us further apart than we could have previously imagined.

The picnic—and a sister event we held at Iron Mountain for our desert workforce—was a time not just to appreciate the hard work of our employees but to celebrate that we are committed to a common and uplifting purpose. Our workforce is tackling some of the most important challenges of the day. We are providing the lifeblood of our region’s economy and wellbeing, and Metropolitan’s leadership has set forth an ambitious agenda to ensure we continue to fulfill our mission in the face of an accelerating climate crisis and the increasing uncertainty and stress it is adding to our system.

As we enjoyed the food, fun activities, and the chance to meet or reconnect with co-workers and their families, I felt confident and energized about our work. I felt the importance of being together in person, and most of all, I felt deeply grateful to be a part of such a dedicated and capable organization.

Deven Upadhyay  
Interim General Manager



*Right Photo  
Appreciation Event at Iron  
Mountain*

*Bottom Photos  
Appreciation Event at  
Whittier Narrows*





# Strategic Priorities Update

The General Manager's Strategic Priorities guide actions in key areas of change and opportunity that will strengthen Metropolitan and its ability to fulfill its mission. Review the General Manager's [Business Plan for FY24-25](#) and the ["SMART Tracker"](#) dashboard of specific actions that advance the Strategic Priorities.



## Empower the workforce and promote diversity, equity, and inclusion



### Goal Dashboard

8 Outcomes in progress at the start of the fiscal year

■ **Build a safe, inclusive, and accountable workplace where all employees feel valued, respected, and able to meaningfully contribute to decisions about their work to fulfill Metropolitan's Mission.**

The inaugural Executive Safety Committee (ESC) met in July. Providing high-level oversight and guidance to existing safety committees, ESC will provide direction to address safety initiatives to be implemented Metropolitan-wide and will provide ongoing review of Metropolitan-wide safety and performance data, injuries, and trends as well as upcoming Cal/OSHA regulations.

The Safety Review Request EForm was implemented to facilitate an employee's ability to report safety hazards and concerns, near misses, and suggestions for improvements. It provides a streamlined process for employees to report safety items anonymously, without fear of retaliation, for safety committees to address in partnership with Safety, Regulatory, and Training staff.

As part of the Equal Employment Opportunity Office's (EEO) outreach and training plans for the coming year, in July it piloted its new live virtual sexual harassment prevention training. A next virtual sexual harassment prevention training is planned for September.

The rollout of Civil and Inclusive Workplace training to all Metropolitan employees will begin in August with an Executive Session for Group Managers and above.



### EEO Training

**New live format piloted for sexual harassment training**



■ Prepare and support the workforce by expanding training and skill development and updating strategies to recruit and retain diverse talent, to meet the evolving needs and expectations of the workplace.

A Workforce Development Manager was hired, and Brenda Martinez begins her role on the Diversity, Equity & Inclusion (DEI) Team in August, having served the last couple of years as a recruitment specialist for Metropolitan. She will lead improvements to outreach and engagement, specifically around underutilized positions, that have been identified as part of DEI's focus on workforce development.

The Organizational Development & Training Unit (OD&T) facilitated the third class of our 14th cohort of Management University, which covered Active Listening, Persuasive Communication, and Effectively Delegation. OD&T conducted a training session on Stress Management & Positivity in the Workplace, on-site at Skinner.

The Engineering Services Group is working with other groups to develop a "Career Launch" program scheduled to start in October 2024. The program consists of six modules that expand awareness of various disciplines at Metropolitan to improve cross-functional work and support career development.



## Workforce Development

**Brenda Martinez is hired  
as Workforce Development  
Manager**



## Sustain Metropolitan's mission with a strengthened business model



### Goal Dashboard

5 Outcomes in process at the start of the fiscal year

- **Develop revenue and business model options that support the needs of the member agencies as well as Metropolitan's financial sustainability and climate adaptation needs.**

A Task Force has met three times—with a fourth meeting scheduled in August—to achieve the Board's directive to review and develop possible solutions for treated water cost recovery.

Member agency general managers convened with Deven Upadhyay for a strategic roundtable discussion about the Business Model review, and plans are developing for a retreat and future gatherings to further outline the scope of the review and possible refinements.

- **Identify and secure programmatic cost savings, organizational efficiencies and external funding.**

The Centralized Grants Management Office has developed a six-part Grants Administrator training series that will guide staff through grant application procedures; trainings and certification will be available on MyLearning.

Staff has received proposed budget reductions from all groups and is in the process of working with the Interim General Manager and Executive team to identify cost savings that minimize service impacts.

Metropolitan has begun negotiations with US Bureau of Reclamation (USBR) in order to finalize the award of "Bucket 2" funding, with a focus on the AVEK High Desert Water Bank and turf removal.



## Adapt to changing climate and water resources



### Goal Dashboard

10 Outcomes in process at the start of the fiscal year

#### ■ Provide each member agency access to an equivalent level of water supply reliability.

The CAMP4W Task Force of board members and member agency general managers met in July to discuss the further development of possible time-bound targets and of signposts that will be used in the adaptive management approach to resource planning in an increasingly uncertain environment of climate change. A template for the Annual CAMP4W Report was also developed and shared.

July saw more progress to enhance the long-term water supply reliability for the State Water Project dependent areas:

- A July board action authorized amending the agreement for procurement of the transformers for Sepulveda Pump Stations. Phase 1, which includes site investigation, design to the 70 percent level, and development of a guaranteed maximum price to complete all work, is scheduled to be completed by the end of 2024.
- A board action is planned for August 2024 to add the installation of a large isolation valve through a change order to the existing contract for the Wadsworth Pump Plant Bypass.
- Construction of the Inland Feeder Badlands Tunnel Surge Protection is approximately 20 percent complete. The contractor has completed excavation and started construction of the isolation valve vault.
- The study Surface Water Storage opportunities is 50 percent complete with a shortlist of potential sites identified and a set of evaluation criteria proposed.

■ Advance the long-term reliability and resilience of the region's water sources through a One Water approach that recognizes the interconnected nature of imported and local supplies, meets both community and ecosystem needs and adapts to a climate change.

As technical analysis continues in development of the draft Program Environmental Impact Report (PEIR) for Pure Water Southern California (PWSC), in July and August, draft terms related to PWSC participation are the subject of workshops with affected member agencies and follow up meetings to discuss issues specific to each agency.

Staff met with USBR in July to begin negotiations toward finalizing the Large Scale Water Recycling award for as much as \$99 M for PWSC. A informational update for the Board is planned for August, which will include including information on agreement modifications regarding the share of PWSC responsibility with the LA County Sanitation Districts.

The soil moisture project completed earlier this year was one of several studies investigating alternative management practices for fallowed fields in Palo Verde Irrigation District (PVID). Findings revealed that "armoring" a fallowed field with stubble/residue from the previous crop did not have a significant long-term effect on loss of soil moisture compared with bare fallow ground. However, the study did reveal insights into how the varied soil types in PVID lead to frequent over-irrigation of portions of many fields. It also revealed the importance of the soil's infiltration capacity in allowing applied water to percolate deeper into the root zone, something that the Chico State studies are continuing to investigate.

Staff held the first public meeting for the Webb Tract Wetland Restoration and Rice Conversion projects. The meeting was attended by over 30 interested parties.

Metropolitan anticipates conservation activities to focus on supporting member agency efforts to implement measures to comply with the recently finalized Conservation as a California Way of Life (CAACWOL) state regulations. Staff is planning to provide the Board an update on CAACWOL in September.



## Colorado River

**Agreement reached with  
PVID for conservation  
funded by Inflation  
Reduction Act**



## Protect public health, the regional economy, and Metropolitan's assets



### Goal Dashboard

9 Outcomes in process at the start of the fiscal year

#### Proactively identify, assess, and reduce potential vulnerabilities to Metropolitan's system, operations, and infrastructure.

Installation of the dam monitoring system at Garvey Reservoir has been completed, and testing and verification are still ongoing. The final system design for the system at DVL is anticipated to be complete in August, and installation of the system is anticipated to be on target for completion by June 2025.

The dam potential failure modes analysis (PFMA) and risk assessment for Lake Mathews is substantially complete with final report expected in the next 30 days. Workshops for the PFMA and risk assessment for Lake Skinner are scheduled for December 2024 with anticipated on-target completion.

A professional service agreement is in place in support of updating the Strategic Asset Management Plan, with work to commence in August.

In July, staff completed a facility-level and Jensen plant analysis toward a system-wide criticality assessment that can help inform and prioritize capital investments and O&M practices.

We have expanded the on-call Emergency Management Duty Officer cadre from three to four and trained them in Metropolitan processes and integrated them into emergency response procedures. Each Duty Officer takes a one-week 24/7 rotation and coordinates with an on-call Duty Manager, who is an experienced Emergency Manager. The new Duty Officers are Security Special Agents that have law enforcement experience and are familiar with the urgency of real time responses. All Duty Officers have been trained on Metropolitan's WebEOC Program and use it to track incident and potential real-time threats. They have also been trained on the Metropolitan emergency notification system, Met-Alert, so they can send emergency alerts to employees when needed.



### Dam Safety

Monitoring system for Garvey Reservoir is installed

All Emergency Operations Center (EOC) staff participated in tabletop exercises which focused on virtual EOC operations. EOC Planning and Intelligence Section staff completed official State training from the California Specialized Training Institute, the official training arm of the California Office of Emergency Services.

We are updating Metropolitan's Risk Assessment and Emergency Response Plan per the America's Water Infrastructure Act (AWIA). Virtual EOC activation protocols were added to the draft Emergency Response Plan, which will be included in the 2025 AWIA required update.



## Emergency Response

**Duty Officer capacity has been expanded and all officers trained**

### ■ Apply innovation, technology, and sustainable practices across project lifecycles.

Staff has issued a Request for Proposals and received and prequalified four consultants to perform preliminary design for charging infrastructure to support the transition to zero-emission vehicles. Staff is preparing a board action to award on-call agreements to support this design work.

Staff completed an Envision submittal for the Casa Loma Siphon No.1 Seismic Retrofit in June 2024. Staff is awaiting verification from the Institute for Sustainable infrastructure that the project meets the sustainability criteria in the Envision framework.



## Partner with interested parties and the communities we serve



### Goal Dashboard

6 Outcomes in progress at the start of the fiscal year

- **Grow and deepen collaboration and relationships among member agencies, interested parties and leaders on the issues most important to them and toward mutual and/or regional benefits.**

Staff used the CAMP4W community postcard and survey to share information on CAMP4W and provide opportunity for input at community events. More listening sessions and presentations are organized for August. Staff initiated conversations with environmental organizations to explore ideas on how to effectively engage community-based organizations in CAMP4W and other Metropolitan initiatives. Opportunities to leverage existing efforts and past models were discussed.

Liz Crosson presented at a CAMP4W workshop organized by the Upper San Gabriel Valley Municipal Water District. Attendees included Upper District retail agencies, cities, and interested parties.

- **Reach disadvantaged communities and non-traditional interested parties to better understand their needs and ensure their inclusion in decision making.**

DEI staff was at the American Indian Chamber of Commerce Annual Expo to promote contracting opportunities with Native American-owned businesses. We also engaged in the LA Latino Chamber of Commerce 2024 Business Expo.



# Executive Summary

*This executive summary is added to this report to provide a high-level snapshot of a key accomplishment from each area of the organization. Detailed information is reported in the pages following this summary.*

## **Bay-Delta Resources**

Staff published a paper with researchers at Southern Illinois University and UC Davis on contaminants in the Sacramento Deep Water Ship Channel. The paper, titled “A Baseline Assessment of Contamination in the Sacramento Deep Water Ship Channel” was published in Environmental Pollution.

Staff held the first public meeting for the Webb Tract Wetland Restoration and Rice Conversion projects. The meeting was attended by over 30 interested parties. Two levee improvement projects continue to progress on Bouldin Island and Bacon Island.

## **Chief Financial Officer**

Metropolitan is continuing its Member Agency Manager Treated Water Cost Recovery Workshops.

## **Colorado River Resources**

In July, the Bureau of Reclamation completed its final draft of the 2025 Annual Operating Plan for the Colorado River system. It appears that next year there will be another tier 1 shortage declaration, with Arizona, Nevada, and Mexico all having to take reductions in their Colorado River supply. Lake Mead is high enough, however, to avoid cutbacks to California. Additionally, it would allow Metropolitan to access its Intentionally Created Surplus water in Lake Mead, if needed, to fill the Colorado River Aqueduct next year.

## **Diversity, Equity & Inclusion**

During July, Diversity, Equity & Inclusion (DEI) staff continued to engage across the service territory with the diverse communities we serve. On the business outreach side, members of the DEI staff were at the American Indian Chamber of Commerce Annual (AICC) Expo sharing contracting opportunities with Native American-owned businesses. We also engaged in the LA Latino Chamber of Commerce 2024 Business Expo, among many other opportunities. We continue to engage in tribal knowledge sharing and trust-building with Native American communities, including taking part in such events as the San Fernando Valley “Peace and Dignity Run.” In July, we also hired a Workforce Development Manager who will help us accelerate the pace of change in our workforce development efforts and enable better engagement in the future with our member agencies.

## **Engineering Services**

In July, Engineering Services welcomed 13 new intern engineers for the academic year with a visit to the La Verne facilities. The interns are assigned to various units in Engineering including Design, Construction Management, and Project Management. During their internship, they gain practical engineering experience that rounds out their education and contributes to their future careers. Several previous Engineering interns have returned as regular employees and continue their contributions to Metropolitan’s success

## **Equal Employment Opportunity Office**

On July 25, the Equal Employment Opportunity Office (EEO) piloted its new two-hour live interactive training for managers titled *Recognizing Discrimination, Harassment and Retaliation*. EEO will begin rolling out this training for all Metropolitan managers in September, with more dates to follow, as an alternative to the video webinar that is available on Metropolitan’s training portal. The training satisfies California’s sexual harassment prevention training requirements pursuant to SB1343. Also, on July 17, EEO conducted a concurrence process training to Metropolitan’s recruitment team. In this training, EEO provided recruitment staff with an overview of recruiting requirements that Metropolitan is required to abide by. This includes CFR 60-1.4(a), 41 CFR 60-300.5(a), and 41 CFR 60-741.5(a). These regulations prohibit discrimination against individuals based on their protected status. EEO will begin rolling out the concurrence process effective in August for positions that have been identified as underutilized and will revisit the concurrence process with recruitment staff in September to address feedback/concerns that come up during implementation. EEO will schedule concurrence process training to hiring managers after addressing feedback or potential concerns discussed at the September meeting.

## External Affairs

Partnered with Inland Empire Utilities Agency in hosting a Community Leader's Briefing, featuring State Senator Rubio (D-Pomona). Chair Ortega provided opening comments and Board Vice Chair Camacho, Director Fellow and AGM Zinke were in attendance. (July 18)

## Human Resources

The Business` Support Team planned, organized, and coordinated a company-wide Employee Appreciation Event. The event was held on Saturday, July 20, 2024, at Whittier Narrows for employees and their families. The day was filled with delicious food, fun activities for all ages, and plenty of opportunities to connect with co-workers and their families. The event was an opportunity to come together as a community in a relaxed and festive atmosphere to express a heartfelt thanks for the hard work and dedication of employees.

## Information Technology

The Information Technology Group played an integral role in collaborating with different departments (HRIS, Benefits, and Payroll) and outside consultants to successfully launch the Roth options for 401(k) and 457(b) Deferred compensation plans. The project team was actively involved in contract creation, project management, requirements criteria, design reviews, development, and user acceptance testing. As part of this initiative, enhancements were made to the MyHR Employee Self Service page, to include the ability to enroll into a deferred compensation plan online, previously done by paper forms. The introduction of Roth plans will also help Metropolitan support current and future compliance with Federal and State laws.

## Safety, Security and Protection

Preparedness and swift response efforts averted a potential disaster in Lake Mathews. Contract security, Metropolitan staff, and first responders coordinated effectively to battle wildfire flames close to the lake, protecting critical infrastructure and natural resources. This incident highlights the crucial role of readiness and quick action in safeguarding our critical infrastructure.

A new Safety Talk on Automatic External Defibrillator (AED) Program guidelines was developed, and a Heat Wave and High Heat Alert message was sent out to all employees reminding them to use preventive measures for heat illness.

Environmental obtained special approval from California Department of Fish and Wildlife to conduct dewatering for the emergency repair at San Diego Pipeline 5 by a member agency and responded to a clean-up of abandoned waste near Skinner/San Diego Canal.

The Apprenticeship Program facilitated a visit at Robert A. Skinner Water Treatment Plant for electrical apprentices to gain understanding of high voltage equipment and testing procedures and created a social media post promoting apprentice recruitment for hire in early 2025.

Technical Training provided crane operators their 5-year re-certification training.

## Sustainability, Resiliency and Innovation

Southern California Edison (SCE) has been issued an entry permit for the placement of electrical infrastructure underground near Lake Matthews. The permit will help facilitate SCE's wildfire mitigation project.

## Water Resource Management

Water Resource Management provided outreach, education, and coordination with the member agencies. This included presentations on the Turf Replacement Program to the City of San Fernando, the Future Supply Funding program, and the array of Metropolitan's storage management programs to the Calleguas Municipal Water District. Staff also provided a presentation on the Antelope Valley East Kern High Desert Water Bank.

## Water System Operations

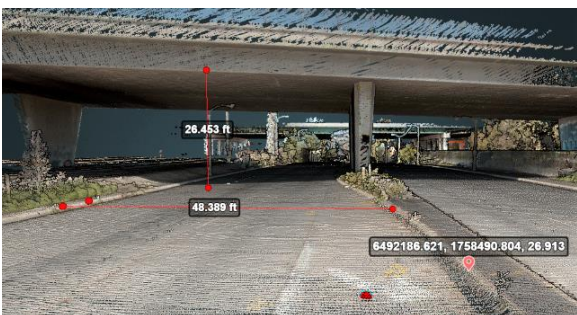
OC-88 Pump Station tripped offline in early July, cutting the flow from 38 to 0 cfs. The Operations Control Center quickly started the backup OC-88A pumps, which can provide a flow of 20 cfs. Staff found that a blown surge arrestor caused the problem and later found that the copper buss and grounding cables were missing. Staff across multiple units responded immediately, including working with Southern California Edison to safely isolate the plant, establish clearances, and investigate the issue. Affected agencies were informed and asked to reduce demand until the repairs were made. Staff quickly replaced the surge arresters, fabricated, and installed new cables, and tested the system before restoring the plant to service. Staff's expertise and immediate response prevented further operational issues and minimized the impact of this incident.



Standing in front of the vehicle-mounted LiDAR equipment, Field Survey Team members (l to r) **Matt Corcoran**, **Travis Mensen** (Team Manager), and **Brian Wiseman**, who were instrumental in implementing the technology.



Colorized point-cloud: looking northerly along Alameda Street. The clearly visible overhead wires are a key benefit provided by the technology.



The technology allows for easily measuring dimensions of features along the survey route.

## PROGRAM DESCRIPTION

Metropolitan's Field Survey Team takes pride in utilizing cutting-edge technologies to accomplish its mission. Recently, the team acquired a mobile LiDAR (light detection and ranging) scanner to assist with preliminary design for the Pure Water Southern California project. The team has used stationary LiDAR successfully for many years and the new mobile technology promises to greatly enhance its capabilities.

## IMPORTANCE TO METROPOLITAN

Pure Water Southern California will potentially include over 60 miles of large diameter pipeline extending to groundwater basins, industrial facilities and potentially to two of Metropolitan's water treatment plants. Successful pipeline design will require a thorough knowledge of the presence and dimensions of existing features along the proposed routes including buildings, bridges, and overhead wires. Collecting this information using traditional survey methods and even stationary LiDAR can be costly, time consuming, and provide incomplete data. The team was aware that mobile LiDAR could provide a solution, but until recently, the technology was not well-developed and was prohibitively costly. The team performed pilot testing of several products including field testing near the La Verne facilities. The testing provided valuable insights into Metropolitan's needs and product capabilities, which the team used to secure equipment for preliminary design of the Pure Water pipeline alignments.

## MEMORABLE MOMENT

Following training and some trial runs with the equipment, the team used the equipment for a LiDAR survey of Pure Water Reaches 1 and 2 (approximately 15 miles). They mounted the equipment on a survey truck along with a 360-degree panoramic camera. In only two days, they were able to survey the 15 miles, a feat which would have taken several weeks using conventional methods. Also, the data was of superior quality and included photographic imagery that greatly simplified data processing and increased the usefulness of the product to designers. The data will also be valuable for documenting existing site conditions prior to construction, can be used for highly efficient and effective construction as-builts, and will be beneficial for implementation impending digital twin modeling of Metropolitan's infrastructure.

**"The new 3D mobil LiDAR mapping system is a game changer and perfect for long corridor projects like Pure Water conveyance."**

*Mike Angelo, Infrastructure Unit Manager*

# Water Supply Conditions Report

Water Year 2023-2024

As of 07/31/2024

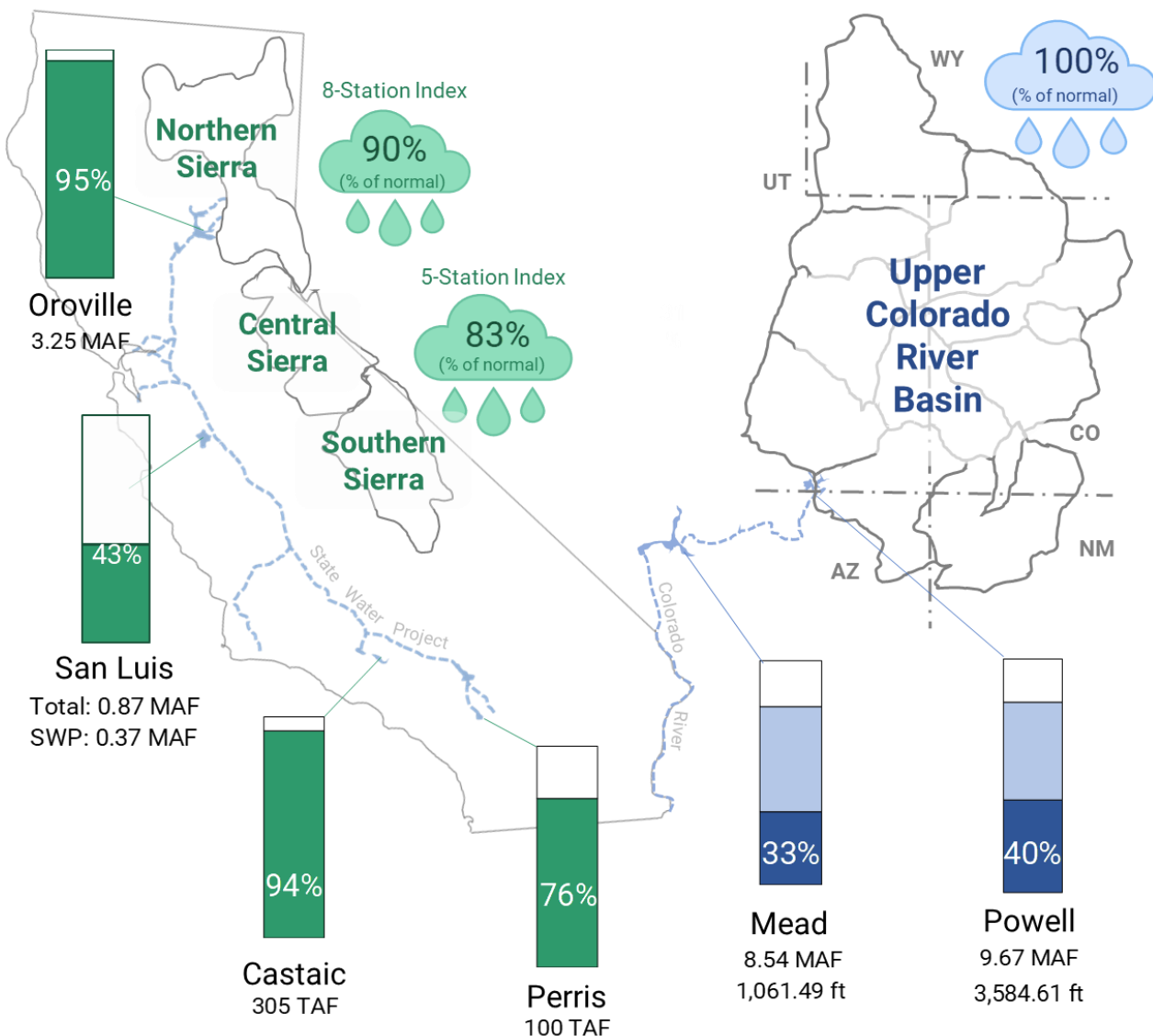
Extended Report: <https://www.mwdh2o.com/WSCR>

## State Water Project Resources

SWP Allocation  
40% Table A: 764,600 acre-feet

## Colorado River Resources

Projected CRA Diversions  
931,000 acre-feet





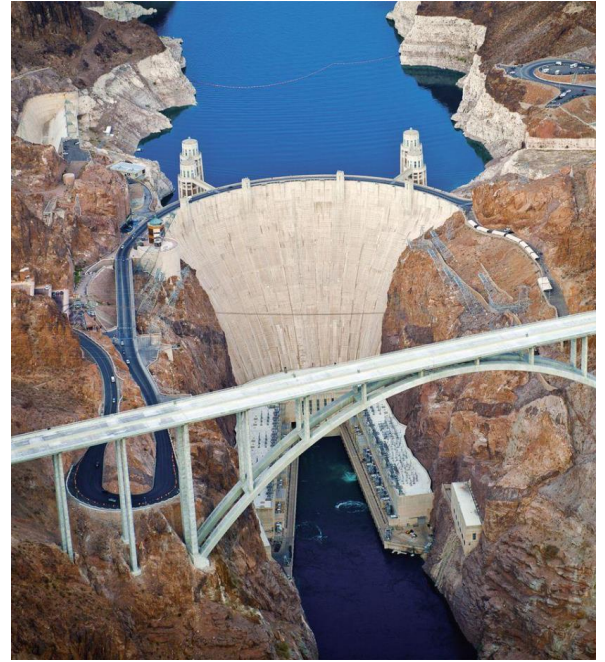
# Reservoir Report

## End of Month Reservoir Report

Monthly Update as of:

7/31/2024

<u>Reservoir</u>	<u>Current Storage</u>	<u>Percent of Capacity</u>
<b><i>Colorado River Basin</i></b>		
Lake Powell	9,654,330	40%
Lake Mead	8,524,000	33%
<b><i>DWR</i></b>		
Lake Oroville	2,737,139	80%
Shasta Lake	3,435,601	75%
San Luis Total	868,522	43%
San Luis CDWR	375,023	35%
Castaic Lake	305,091	94%
Silverwood Lake	69,229	92%
Lake Perris	100,233	76%
<b><i>MWD</i></b>		
DVL	754,358	93%
Lake Mathews	117,417	65%
Lake Skinner	37,519	85%



Hoover Dam



Metropolitan's Mission is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

700 N. Alameda Street, Los Angeles, CA 90012  
General Information (213) 217-6000  
[www.mwdh2o.com](http://www.mwdh2o.com) [www.bewaterwise.com](http://www.bewaterwise.com)

Interim General Manager: Deven Upadhyay  
Office of the GM (213) 217-6139  
[OfficeoftheGeneralManager@mwdh2o.com](mailto:OfficeoftheGeneralManager@mwdh2o.com)



**Metropolitan Cases*****Darren Reese v. Metropolitan*  
(Riverside County Superior Court)**

On June 28, 2024, Metropolitan filed a motion for summary judgment or, in the alternative, summary

adjudication, requesting pre-trial dismissal of the case. A hearing on the motion before Judge Bustamante in Riverside County Superior Court is set for September 11, 2024.

**Matters Concluded and/or Terminated*****AFSCME Local 1902 v. Metropolitan*  
(Hearing Officer Appeal)**

Local 1902 filed a grievance alleging that an employee was denied cost-of-living adjustments during a long-term temporary promotion. After completing the grievance process, Local 1902 filed for a hearing officer appeal and the matter was set for hearing before a neutral hearing officer on May 15, 2024. Prior to the hearing, the parties engaged in extensive settlement discussions and Metropolitan agreed to pay the employee \$4,006 in cost-of-living adjustment backpay. In exchange, Local 1902 withdraw the request for hearing officer appeal and grievance.

***Gustavo Arellano v. Metropolitan*  
(Riverside County Superior Court)**

On July 8, 2024, plaintiff Gustavo Arellano served Metropolitan with a lawsuit alleging personal injury as a result of a bicycle accident which occurred at the Brubaker Park in the city of Hemet. Metropolitan staff determined that Metropolitan does not have any property interest in the accident location. Metropolitan counsel contacted plaintiff's counsel who agreed to request dismissal of Metropolitan from the lawsuit. On July 12, 2024, the court dismissed Metropolitan from the lawsuit.

**Matters Received**

<u>Category</u>	<u>Received</u>	<u>Description</u>
Action in which MWD is a party	2	Complaint for Personal Injury and Premises Liability, filed in Riverside County Superior Court, in the case <i>Gustavo Arellano v. City of Hemet, Hemet Unified School District, County of Riverside, Metropolitan Water District, State of California, California Department of Parks and Recreation</i> , Case No. CVSW2406578, relating to Plaintiff incurring injuries from falling when he rode his bicycle over loose dirt and/or an open hole on Mustang Way in the city of Hemet  Complaint for Motor Vehicle Property Damage and Personal Injury, filed in Orange County Superior Court, in the case <i>Melanie De Leon v. Metropolitan Water District, a Metropolitan employee, The Employees Association of the Metropolitan Water District of Southern California</i> , Case No. 30-2024-01399190-CU-PA-CJC, relating to a motor vehicle accident involving a Metropolitan vehicle
Government Code Claims	3	Claims relating to: (1) scratches on Claimant's vehicle from someone dragging something over the top of the vehicle; and (2) two accidents involving MWD vehicles
Subpoenas	1	Subpoena for employment, wage, medical and workers compensation claim records relating to a matter before the Workers' Compensation Appeals Board



Requests Pursuant to the Public Records Act	17	<u>Requestor</u>	<u>Documents Requested</u>
		3shades design	Winning bid submitted in response to the Request for Proposal for Multimedia Placement Consulting Services for Water Awareness and Outreach Campaign
		Audacy	Submitted proposals, score sheets, and award notification for Multimedia Placement Consulting Services for Water Awareness and Outreach Campaign
		CCS Global Tech	Number of task orders/purchase orders issued under the contract for On-Call Information Technology Services from April 1, 2024 to June 31, 2024
		Center for Contract Compliance	Bid, contact, and payment documents for Live Oak Landscape and Tree Maintenance Services at Live Oak Reservoir
		CivilGrid	GIS data/map of MWD underground water utilities
		Flatiron Construction Corp.	Preliminary electrical and mechanical reports related to the Lake Mathews Forebay Bypass Project
		Kennedy/Jenks Consultants	Prime contractor proposals submitted for Progressive Design-Build Services for the Sepulveda Feeder Pump Station
		Labor Management Compliance Council	Notice of Completion and certified payroll records for Wadsworth Pumping Plant Eastside Pipeline Intertie
		Langan	As-built drawings for existing 51" water main (Palos Verdes feeder) near project in the city of Torrance
		Lee & Ro	Proposal submitted in response to Request for Proposal for Lake Mathews Pressure Control Structure (PCS) and Electrical Upgrades
		Los Angeles Times	Letters and emails received from June 15, 2024-present regarding Adel Hagekhalil
		Private Citizens (2 requests)	(1) Copies of the Colorado River Watershed Sanitary Survey - 2020 Update and the State Water Project Watershed Sanitary Survey - 2021 Update; and (2) emails sent by Liji Thomas during 2023-2024 containing the words liaison, Ramona, or Brenda



<u>Requestor</u>	<u>Documents Requested</u>
Republic	Bid tabulation, award letter, and winning proposal for Multimedia Placement Consulting Services for Water Awareness and Outreach Campaign
Rheia Consulting	Winning proposals submitted in response to Request for Proposal for Preliminary Design for PCCP Rehabilitation of the Calabasas Feeder, On-Call Engineering Services, and Preliminary Design of Conveyance Reaches 1 and 2 for PWSC
Schonbrun Seplow Harris Hoffman & Zeldes	Documents relating to a complaint made to members of the Board in February 2022 and incidents in March 2024
Sherpa Marketing Solutions	Winning proposal submitted in response to Request for Proposal for Multimedia Placement Consulting Services for Water Awareness and Outreach Campaign



#### PLEASE NOTE

- ADDITIONS ONLY IN THE FOLLOWING TWO TABLES WILL BE SHOWN IN RED.
- ANY CHANGE TO THE *OUTSIDE COUNSEL AGREEMENTS* TABLE WILL BE SHOWN IN REDLINE FORM (I.E., ADDITIONS, REVISIONS, DELETIONS).



Bay-Delta and SWP Litigation	
Subject	Status
<b>Delta Conveyance Project CEQA Cases</b>  <i>City of Stockton v. California Department of Water Resources</i>  <i>County of Butte v. California Department of Water Resources</i>  <i>County of Sacramento v. California Department of Water Resources</i>  <i>County of San Joaquin et al. v. California Department of Water Resources</i>  <i>Sacramento Area Sewer District v. California Department of Water Resources</i>  <i>San Francisco Baykeeper, et al. v. California Department of Water Resources</i>  <i>Sierra Club, et al. v. California Department of Water Resources</i>  <i>South Delta Water Agency and Rudy Mussi Investment L.P. v. California Department of Water Resources</i>  <i>Tulare Lake Basin Water Storage District v. California Department of Water Resources</i>  Sacramento County Superior Ct. (Judge Acquisto)	<ul style="list-style-type: none"> <li>DWR is the only named respondent/defendant</li> <li>All alleged CEQA violations</li> <li>Most allege violations of the Delta Reform Act, Public Trust Doctrine and Delta and Watershed Protection Acts</li> <li>Two allege violations of the fully protected bird statute</li> <li>One alleges violations of Proposition 9 (1982) and the Central Valley Project Act</li> <li>Deadline for DWR to prepare the administrative record extended to Sept. 30, 2024</li> <li>Next case management conference Oct. 18, 2024</li> <li>June 20, 2024 trial court issued a preliminary injunction halting pre-construction geotechnical soil testing until DWR certifies that the DCP is consistent with the Delta Plan</li> <li>Aug. 19, 2024 deadline for DWR to appeal the injunction</li> <li><u>Aug. 23, 2024 hearing on DWR's motion to modify or stay the preliminary injunction</u></li> </ul>
<b>Delta Conveyance Project Water Right Permit Litigation</b>  <i>Central Delta Water Agency et al. v. State Water Resources Control Board</i>  Fresno County Superior Court (Judge <u>HamiltonBrickey</u> )	<ul style="list-style-type: none"> <li>Complaint filed April 16, 2024, alleges that the State Water Board must rule on DWR's 2009 petition to extend the time to perfect its State Water Project rights before the State Water Board may begin to adjudicate DWR's petition to change its water rights to add new points of diversion for the Delta Conveyance Project</li> <li><u>Sept. 19</u><del>July 17, 2024</del> hearing date for State Water Resources Control Board demurrer (motion to dismiss) and motion to strike <u>and DWR's demurrer (motion to dismiss)</u></li> </ul>



Subject	Status
<p><b>Consolidated DCP Revenue Bond Validation Action and CEQA Case</b></p> <p><i>Sierra Club, et al. v. California Department of Water Resources</i> (CEQA, designated as lead case)</p> <p><i>DWR v. All Persons Interested</i> (Validation)</p> <p>Sacramento County Superior Ct. (Judge Kenneth C. Mennemeier)</p> <p>3d District Court of Appeal Case No. C100552</p>	<ul style="list-style-type: none"> <li>• <b>Validation Action</b></li> <li>• Final Judgment and Final Statement of Decision issued January 16, 2024 ruling the bonds are not valid</li> <li>• DWR, Metropolitan and other supporting public water agencies filed Notices of Appeal on or before the February 16, 2024 deadline</li> <li>• Eight opposing groups filed Notices of Cross Appeals by March 27, 2024</li> <li>• April 16, 2024 DWR moved to dismiss the cross appeals as untimely</li> <li>• Motion to dismiss cross appeals denied without prejudice to renewing the motion in merits briefing Parties meeting and conferring on briefing schedule</li> </ul>
<p><b>SWP-CVP 2019 BiOp Cases</b></p> <p><i>Pacific Coast Fed'n of Fishermen's Ass'ns, et al. v. Raimondo, et al.</i> (PCFFA)</p> <p><i>Calif. Natural Resources Agency, et al. v. Raimondo, et al.</i> (CNRA)</p> <p>Federal District Court, Eastern Dist. of California, Fresno Division (Judge Thurston)</p>	<ul style="list-style-type: none"> <li>• SWC intervened in both <i>PCFFA</i> and <i>CNRA</i> cases</li> <li>• Federal defendants reinitiated consultation on Oct 1, 2021</li> <li>• March 28, 2024 order extending the Interim Operations Plan and the stay of the cases through the issuance of a new Record of Decision or December 20, 2024, whichever is first</li> </ul>
<p><b>CESA Incidental Take Permit Cases</b></p> <p><b>Coordinated Case Name CDWR Water Operations Cases, JCCP 5117 (Coordination Trial Judge Gevercer)</b></p> <p><i>Metropolitan &amp; Mojave Water Agency v. Calif. Dept. of Fish &amp; Wildlife, et al.</i> (CESA/CEQA/Breach of Contract)</p> <p><i>State Water Contractors &amp; Kern County Water Agency v. Calif. Dept. of Fish &amp; Wildlife, et al.</i> (CESA/CEQA)</p> <p><i>Tehama-Colusa Canal Auth., et al. v. Calif. Dept. of Water Resources</i> (CEQA)</p> <p><i>San Bernardino Valley Municipal Water Dist. v. Calif. Dept. of Water Resources, et al.</i> (CEQA/CESA/ Breach of Contract/Takings)</p> <p><i>Sierra Club, et al. v. Calif. Dept. of Water Resources</i> (CEQA/Delta Reform Act/Public Trust)</p>	<ul style="list-style-type: none"> <li>• Administrative records certified in October 2023</li> <li>• <del>Order entered Parties are conferring on stipulation</del> to delay setting a merits briefing schedule by 90 days and extending the time to bring the action to trial by six months</li> </ul>



Subject	Status
<p><i>North Coast Rivers Alliance, et al. v. Calif. Dept. of Water Resources</i> (CEQA/Delta Reform Act/Public Trust)</p> <p><i>Central Delta Water Agency, et. al. v. Calif. Dept. of Water Resources</i> (CEQA/Delta Reform Act/Public Trust/ Delta Protection Acts/Area of Origin)</p> <p><i>San Francisco Baykeeper, et al. v. Calif. Dept. of Water Resources, et al.</i> (CEQA/CESA)</p>	
<p><b>CDWR Environmental Impact Cases</b> <b>Sacramento Superior Ct. Case No. JCCP 4942,</b> <b>3d DCA Case No. C100302</b> <b>(20 Coordinated Cases)</b></p> <p>Validation Action <i>DWR v. All Persons Interested</i></p> <p>CEQA 17 cases</p> <p>CESA/Incidental Take Permit 2 cases</p> <p>(Judge Arguelles)</p>	<ul style="list-style-type: none"> <li>• Cases dismissed after DWR rescinded project approval, bond resolutions, decertified the EIR, and CDFW rescinded the CESA incidental take permit</li> <li>• January 10, 2020 – Nine motions for attorneys’ fees and costs denied in their entirety</li> <li>• May 11, 2022, court of appeal reversed the trial court’s denial of attorney fees and costs</li> <li>• Coordinated cases remitted to trial court for re-hearing of fee motions consistent with the court of appeal’s opinion</li> <li>• Dec. 26, 2023 order denying fee motions</li> <li>• Six notices of appeal filed</li> </ul>
<p><b>COA Addendum/ No-Harm Agreement</b></p> <p><i>North Coast Rivers Alliance v. DWR</i> Sacramento County Superior Ct. (Judge Rockwell)</p>	<ul style="list-style-type: none"> <li>• Plaintiffs allege violations of CEQA, Delta Reform Act &amp; public trust doctrine</li> <li>• Westlands Water District and North Delta Water Agency granted leave to intervene</li> <li>• Metropolitan &amp; SWC monitoring</li> <li>• Deadline to prepare administrative record last extended to Nov. 18, 2022</li> </ul>
<p><b>Water Management Tools Contract Amendment</b></p> <p><i>California Water Impact Network et al. v. DWR</i> Sacramento County Superior Ct. (Judge Acquisto)</p> <p><i>North Coast Rivers Alliance, et al. v. DWR</i> Sacramento County Super. Ct. (Judge Acquisto)</p>	<ul style="list-style-type: none"> <li>• Filed September 28, 2020</li> <li>• CWIN and Aqualliance allege one cause of action for violation of CEQA</li> <li>• NCRA et al. allege four causes of action for violations of CEQA, the Delta Reform Act, Public Trust Doctrine and seeking declaratory relief</li> <li>• SWC motion to intervene in both cases granted</li> <li>• Dec. 20, 2022 DWR filed notice of certification of the administrative record and filed answers in both cases</li> </ul>



<b><i>San Diego County Water Authority v. Metropolitan, et al.</i></b>		
<b>Cases</b>	<b>Date</b>	<b>Status</b>
<b>2014, 2016</b>	Sept. 30	Based on the Court of Appeal's Sept. 21 opinion (described above), and the Board's Sept. 28 authorization, Metropolitan paid \$35,871,153.70 to SDCWA for 2015-2017 Water Stewardship Rate charges under the Exchange Agreement and statutory interest.
<b>2017</b>	July 23, 2020	Dismissal without prejudice entered.
<b>2018</b>	April 11, 2022	Court entered order of voluntary dismissal of parties' WaterFix claims and cross-claims.
<b>2014, 2016, 2018</b>	June 11, 2021	Deposition of non-party witness.
	Aug. 25	Hearing on Metropolitan's motion for further protective order regarding deposition of non-party witness.
	Aug. 25	Court issued order consolidating the 2014, 2016, and 2018 cases for all purposes, including trial.
	Aug. 30	Court issued order granting Metropolitan's motion for a further protective order regarding deposition of non-party witness.
	Aug. 31	SDCWA filed consolidated answer to Metropolitan's cross-complaints in the 2014, 2016, and 2018 cases.
	Feb. 22	Metropolitan and SDCWA each filed motions for summary adjudication.
	April 13	Hearing on Metropolitan's and SDCWA's motions for summary adjudication.
	May 4	Court issued order granting Metropolitan's motion for summary adjudication on cross-claim for declaratory relief that the conveyance facility owner, Metropolitan, determines fair compensation, including any offsetting benefits; and denying its motion on certain other cross-claims and an affirmative defense.
	May 11	Court issued order granting SDCWA's motion for summary adjudication on cross-claim for declaratory relief in the 2018 case regarding lawfulness of the Water Stewardship Rate's inclusion in the wheeling rate and transportation rates in 2019-2020; certain cross-claims and affirmative defenses on the ground that Metropolitan has a duty to charge no more than fair compensation, which includes reasonable credit for any offsetting benefits, with the court also stating that whether that duty arose and whether Metropolitan breached that duty are issues to be resolved at trial; affirmative defenses that SDCWA's claims are untimely and SDCWA has not satisfied claims presentation requirements; affirmative defense in the 2018 case that SDCWA has not satisfied contract dispute resolution requirements; claim, cross-claims, and affirmative defenses regarding applicability of





Cases	Date	Status
<b>2014, 2016, 2018 (cont.)</b>		Proposition 26, finding that Proposition 26 applies to Metropolitan's rates and charges, with the court also stating that whether Metropolitan violated Proposition 26 is a separate issue; and cross-claims and affirmative defenses regarding applicability of Government Code section 54999.7, finding that section 54999.7 applies to Metropolitan's rates. Court denied SDCWA's motion on certain other cross-claims and affirmative defenses.
	May 16-27	Trial occurred but did not conclude.
	June 3, June 24, July 1	Trial continued, concluding on July 1.
	June 24	SDCWA filed motion for partial judgment.
	July 15	Metropolitan filed opposition to motion for partial judgment.
	Aug. 19	Post-trial briefs filed.
	Sept. 14	Court issued order granting in part and denying in part SDCWA's motion for partial judgment (granting motion as to Metropolitan's dispute resolution, waiver, and consent defenses; denying motion as to Metropolitan's reformation cross-claims and mistake of fact and law defenses; and deferring ruling on Metropolitan's cost causation cross-claim).
	Sept. 21	Metropolitan filed response to order granting in part and denying in part SDCWA's motion for partial judgment (requesting deletion of Background section portion relying on pleading allegations).
	Sept. 22	SDCWA filed objection to Metropolitan's response to order granting in part and denying in part SDCWA's motion for partial judgment.
	Sept. 27	Post-trial closing arguments.
	Oct. 20	Court issued order that it will rule on SDCWA's motion for partial judgment as to Metropolitan's cost causation cross-claim simultaneously with the trial statement of decision.
	Dec. 16	Parties filed proposed trial statements of decision.
	Dec. 21	SDCWA filed the parties' stipulation and proposed order for judgment on Water Stewardship Rate claims for 2015-2020.
	Dec. 27	Court entered order for judgment on Water Stewardship Rate claims for 2015-2020 as proposed by the parties.
	March 14, 2023	Court issued tentative statement of decision (tentatively ruling in Metropolitan's favor on all claims litigated at trial, except for those ruled to be moot based on the rulings in Metropolitan's favor)





Cases	Date	Status
<b>2014, 2016, 2018 (cont.)</b>	March 14	Court issued amended order granting in part and denying in part SDCWA's motion for partial judgment (ruling that Metropolitan's claims for declaratory relief regarding cost causation are not subject to court review).
	March 29	SDCWA filed objections to tentative statement of decision
	April 3	Metropolitan filed response to amended order granting in part and denying in part SDCWA's motion for partial judgment (requesting deletion of Background section portion relying on pleading allegations).
	April 25	Court issued statement of decision (ruling in Metropolitan's favor on all claims litigated at trial, except for those ruled to be moot based on the rulings in Metropolitan's favor)
	Jan. 10, 2024	Parties filed joint status report and stipulated proposal on form of judgment
	Jan. 17	Court issued order approving stipulated proposal on form of judgment (setting briefing and hearing)
	April 3	Court entered final judgment
	April 3	Court issued writ of mandate regarding demand management costs
	April 3	SDCWA filed notice of appeal
	April 17	Metropolitan filed notice of cross-appeal
	May 3	Participating member agencies filed notice of appeal
	May 31	Parties filed opening briefs on prevailing party
	June 28	Parties filed response briefs on prevailing party
	<u>July 17</u>	<u>Court issued tentative ruling that there is no prevailing party due to mixed results</u>
	July 18	Hearing on prevailing party; <u>court took matter under submission, stating it expects to rule in mid-Aug.</u>
<b>All Cases</b>	April 15, 2021	Case Management Conference on 2010-2018 cases. Court set trial in 2014, 2016, and 2018 cases on May 16-27, 2022.
	April 27	SDCWA served notice of deposition of non-party witness.
	May 13-14	Metropolitan filed motions to quash and for protective order regarding deposition of non-party witness.
	June 4	Ruling on motions to quash and for protective order.



Outside Counsel Agreements				
Firm Name	Matter Name	Agreement No.	Effective Date	Contract Maximum
Albright, Yee & Schmit, APC	Employment Matter	211923	05/23	\$60,000
	Employment Matter	216064	06/24	\$100,000
Andrade Gonzalez LLP	MWD v. DWR, CDFW and CDNR Incidental Take Permit (ITP) CESA/CEQA/Contract Litigation	185894	07/20	\$250,000
Aleshire & Wynder	Oil, Mineral and Gas Leasing	174613	08/18	\$50,000
Atkinson Andelson Loya Ruud & Romo	Employee Relations	59302	04/04	\$1,316,937
	Delta Conveyance Project Bond Validation-CEQA Litigation	185899	09/21	\$250,000
	MWD Drone and Airspace Issues	193452	08/20	\$50,000
	AFSCME Local 1902 in Grievance No. 1906G020 (CSU Meal Period)	201883	07/12/21	\$30,000
	AFSCME Local 1902 v. MWD, PERB Case No. LA-CE-1438-M	201889	09/15/21	\$20,000
	MWD MOU Negotiations**	201893	10/05/21	\$100,000
BDG Law Group, APLC	Gutierrez v. MWD	216054	03/24	\$100,000
Best, Best & Krieger	Bay-Delta Conservation Plan/Delta Conveyance Project (with SWCs)	170697	08/17	\$500,000
	Environmental Compliance Issues	185888	05/20	\$100,000
	Grant Compliance Issues	211921	05/23	<del>\$150,000</del> <del>\$75,000</del>
	Pure Water Southern California	207966	11/22	\$100,000
	Progressive Design Build	216053	04/24	\$250,000
Blooston, Mordkofsky, Dickens, Duffy & Prendergast, LLP	FCC and Communications Matters	110227	11/10	\$100,000
Buchalter, a Professional Corp.	Union Pacific Industry Track Agreement	193464	12/07/20	\$50,000



Firm Name	Matter Name	Agreement No.	Effective Date	Contract Maximum
Burke, Williams & Sorensen, LLP	Real Property – General	180192	01/19	\$100,000
	Labor and Employment Matters	180207	04/19	\$75,000
	General Real Estate Matters	180209	08/19	\$200,000
	Rancho Cucamonga Condemnation Actions (Grade Separation Project)	207970	05/22	\$100,000
Law Office of Alexis S.M. Chiu*	Bond Counsel	200468	07/21	N/A
	<u>Bond Counsel</u>	<u>220409</u>	<u>07/24</u>	<u>N/A</u>
Castañeda + Heidelman LLP	Employment Matter	216055	04/24	\$100,000
Cislo & Thomas LLP	Intellectual Property	170703	08/17	\$100,000
Curls Bartling P.C.*	Bond Counsel	200470	07/21	N/A
Duane Morris LLP	SWRCB Curtailment Process	138005	09/14	\$615,422
Duncan, Weinberg, Genzer & Pembroke	Power Issues	6255	09/95	\$3,175,000
Ellison, Schneider, Harris & Donlan	Colorado River Issues	69374	09/05	\$175,000
	Issues re SWRCB	84457	06/07	\$200,000
Erin Joyce Law, PC	Employment Matter	216039	11/23	\$100,000
<u>Glaser Weil Fink Howard Jordan &amp; Shapiro</u>	<u>Employment Matter</u>	<u>220395</u>	<u>7/24</u>	<u>\$150,000</u>
Greines, Martin, Stein & Richland LLP	SDCWA v. MWD	207958	10/22	\$100,000
	Colorado River Matters	207965	11/22	\$100,000
<u>Hackler Flynn &amp; Associates</u>	<u>Government Code Claim Advice</u>	<u>216059</u>	<u>5/24</u>	<u>\$150,000</u>
Haden Law Office	Real Property Matters re Agricultural Land	180194	01/19	\$50,000
Hanna, Brophy, MacLean, McAleer & Jensen, LLP	Workers' Compensation	211926	06/23	\$200,000



Firm Name	Matter Name	Agreement No.	Effective Date	Contract Maximum
Hanson Bridgett LLP	SDCWA v. MWD	124103	03/12	\$1,100,000
	Finance Advice	158024	12/16	\$100,000
	Deferred Compensation/HR	170706	10/17	\$500,000
	Tax Issues	180200	04/19	\$50,000
	Alternative Project Delivery (ADP)	207961	10/22	\$250,000
	Ad Valorem Property Taxes	216042	11/23	\$100,000
<u>Harris &amp; Associates</u>	<u>Employment Matter</u>	<u>220397</u>	<u>7/24</u>	<u>\$100,000</u>
Hausman & Sosa, LLP	Jones v. MWD	216056	05/24	\$100,000
Hawkins Delafield & Wood LLP*	Bond Counsel	193469	07/21	N/A
Hemming Morse, LLP	Baker Electric v. MWD	211933	08/23	\$100,000
<u>Hogan Lovells US LLP</u>	<u>Employment Matter</u>	<u>220400</u>	<u>07/24</u>	<u>\$100,000</u>
Horvitz & Levy	SDCWA v. MWD	124100	02/12	\$1,250,000
	General Appellate Advice	146616	12/15	\$200,000
	Colorado River	203464	04/22	\$100,000
	Delta Conveyance Bond Validation Appeal	216047	03/24	\$25,000
	PFAS Multi-District Litigation – Appeal	216050	03/24	\$200,000
Innovative Legal Services, P.C.	Employment Matter	211915	01/19/23	\$125,000
Internet Law Center	Cybersecurity and Privacy Advice and Representation	200478	04/13/21	\$100,000
	Systems Integrated, LLC v. MWD	201875	05/17/21	\$100,000
Amira Jackmon, Attorney at Law*	Bond Counsel	200464	07/21	N/A
Jackson Lewis P.C.	Employment: Department of Labor Office of Contract Compliance	137992	02/14	\$45,000



Firm Name	Matter Name	Agreement No.	Effective Date	Contract Maximum
Jones Hall, A Professional Law Corp*	Bond Counsel	200465	07/21	N/A
Kronenberger Rosenfeld, LLP	Systems Integrated, LLC v. MWD	211920	04/23	\$250,000
Kutak Rock LLP	Delta Islands Land Management	207959	10/22	\$10,000
Liebert Cassidy Whitmore	Labor and Employment	158032	02/17	\$240,821
	FLSA Audit	180199	02/19	\$50,000
	EEO Advice	216041	12/23	\$100,000
Lieff Cabraser Heimann & Bernstein, LLP	PFAS Multi-District Litigation	216048	03/24	\$200,000
Manatt, Phelps & Phillips	SDCWA v. MWD rate litigation	146627	06/16	\$4,400,000
	Raftelis-Subcontractor of Manatt, Agr. #146627: Per 5/2/22 Engagement Letter between Manatt and Raftelis, MWD paid Raftelis Financial Consultants, Inc.	Invoice No. 23949		\$56,376.64 for expert services & reimbursable expenses in SDCWA v. MWD
Marten Law LLP	PFAS Multi-District Litigation	216034	09/23	\$550,000
Meyers Nave Riback Silver & Wilson	Pure Water Southern California	207967	11/22	\$100,000
Miller Barondess, LLP	SDCWA v. MWD	138006	12/14	\$600,000
Morgan, Lewis & Bockius	SDCWA v. MWD	110226	07/10	\$8,750,000
	Project Labor Agreements	200476	04/21	\$100,000
Musick, Peeler & Garrett LLP	Colorado River Aqueduct Electric Cables Repair/Contractor Claims	193461	11/20	<del>\$3,250,000</del> <del>\$2,500,000</del>
	Arvin-Edison v. Dow Chemical	203452	01/22	\$100,000
	Semitropic TCP Litigation	207954	09/22	\$75,000
	Employment Matter	216063	06/24	\$100,000
Nixon Peabody LLP*	Bond Counsel [re-opened]	193473	07/21	N/A

Date of Report: August 5, 2024



Firm Name	Matter Name	Agreement No.	Effective Date	Contract Maximum
	Special Finance Project	207960	10/22	\$50,000
Norton Rose Fulbright US LLP*	Bond Counsel	200466	07/21	N/A
	<u>Bond Counsel</u>	<u>220407</u>	<u>7/24</u>	<u>N/A</u>
Olson Remcho LLP	Government Law	131968	07/14	\$400,000
	Executive Committee/Ad Hoc Committees Advice	207947	08/22	\$60,000
	Advice/Assistance re Proposition 26/Election Issues	211922	05/23	\$100,000
Pearlman, Brown & Wax, L.L.P.	Workers' Compensation	216037	10/23	\$100,000
Procopio, Cory, Hargreaves & Savitch, LLP	CityWatch Los Angeles Public Records Act Request	216046	02/24	\$75,000
	<u>Public Records Act Requests</u>	<u>220399</u>	<u>7/24</u>	<u>\$75,000</u>
Rains Lucia Stern St. Phalle & Silver, PC	Employment Matter	211919	4/23	\$60,000
Renne Public Law Group, LLP	ACE v. MWD (PERB Case No. LA-CE-1574-M)	203466	05/22	\$100,000
	ACE v. MWD (PERB Case No. LA-CE-1611-M)	207962	10/22	\$50,000
	Employee Relations and Personnel Matters	216045	01/24	\$50,000
Ryan & Associates	Leasing Issues	43714	06/01	\$200,000
	Oswalt v. MWD	211925	05/23	\$100,000
<u>Sanders Roberts LLP</u>	<u>Employment Matter</u>	<u>220401</u>	<u>7/24</u>	<u>\$100,000</u>
Seyfarth Shaw LLP	Claim (Contract #201897)	201897	11/04/21	\$350,000
	Claim (Contract #203436)	203436	11/15/21	\$350,000
	Claim (Contract #203454)	203454	01/22	\$210,000
	Reese v. MWD	207952	11/22	\$750,000





Firm Name	Matter Name	Agreement No.	Effective Date	Contract Maximum
	General Labor/Employment Advice	211917	3/23	\$100,000
	Civil Rights Department Complaint	211931	07/23	\$100,000
	Crawford v. MWD	216035	09/23	\$100,000
	Tiegs v. MWD	216043	12/23	\$250,000
	Zarate v. MWD	216044	01/24	\$250,000
	Lorentzen v. MWD	216036	09/23	\$100,000
Stradling Yocca Carlson & Rauth*	Bond Counsel	200471	07/21	N/A
	<u>Bond Counsel</u>	<u>220408</u>	<u>7/24</u>	<u>N/A</u>
Theodora Oringher PC	Construction Contracts - General Conditions Update	185896	07/20	\$100,000
Thompson Coburn LLP	NERC Energy Reliability Standards	193451	08/20	\$300,000
Van Ness Feldman, LLP	General Litigation	170704	07/18	\$50,000
	Colorado River MSHCP	180191	01/19	\$50,000
	Bay-Delta and State Water Project Environmental Compliance	193457	10/15/20	\$50,000
	Colorado River Issues	211924	05/23	\$100,000

\*Expenditures paid by Bond Proceeds/Finance

\*\*Expenditures paid by another group



## Office of the General Auditor

### • General Auditor's Report for July 2024

#### Summary

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This report highlights significant activities of the Office of the General Auditor for the month ended July 31, 2024.

#### Purpose

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Informational

#### Detailed Report

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##### Audit & Advisory Projects

Twenty-seven projects are in progress:

- Eleven audit projects are in the report preparation phase, including:
  - One final report in progress (IBI Group), expected release August 2024
  - One draft report issued (Surplus Personal Property, management response initially due 8/19)
  - One preliminary draft report pending management comment (Cybersecurity: Inventory & Control of Enterprise Assets)
- Sixteen projects are in the execution phase, including nine audits and seven advisories.

Work priority is being given to the 11 carry-forward audits.

##### Follow-Up Reviews

Nine audits from prior fiscal years are in the follow-up phase:

- Seven follow-up reviews are in progress
- Two follow-up reviews are pending return of the follow-up review form from management (Fleet Management & Maintenance, 10 recommendations, originally due 3/27; Fuel Management, 32 recommendations, originally due 4/19)

##### Other General Auditor Activities

1. **2024 Business Plan**  
**Completed.** The General Auditor's Business Plan, including FY 2023/24 accomplishments and FY 2024/25 goals, was presented to the Board at the July Executive Committee Special Meeting.
2. **Performance Evaluations**  
**Completed.** Staff performance evaluations for FY 2023/24 and goal setting for FY 2024/25 were completed and submitted to Human Resources.
3. **Introduction to Fraud**  
**Completed.** A committee request for information on fraud was fulfilled by a presentation at the July Audit Subcommittee of the Executive Committee on fraud basics and fraud research.

## Board Report (General Auditor's Report for July 2024)

4. **Staffing**

Executive Assistant II Mari Elias joined our office as a full-time Metropolitan employee.

5. **Grant Policy Manual**

Collaborated with the Central Grants Management Office and provided comments on the pending update to the Grant Policy Manual.

6. **Mills Site Visit**

Met with Treatment & Water Quality, Engineering Services, and Information Technology managers for a tour of the facility and an overview of the SCADA replacement system project.

7. **External Auditor Support**

Assistance to external auditor Macias Gini & O'Connell LLP continues in accordance with their work plan.



# Ethics Office Monthly Report

**JULY 2024**

## **EDUCATION**

Provided an ethics education webinar to 263 employees.

At the Ethics, Organization, and Personnel Committee, staff provided a focused presentation to directors about ethics in public service.

Staff presented an Ethics Office overview for new hires at new employee orientations hosted by Human Resources.

## **COMPLIANCE**

Assisted directors and employees with their Annual, Assuming Office, and Leaving Office Form 700 filings. Assistance included filing for multiple positions, troubleshooting the electronic filing system, and notifications of deadlines.

## **ADVICE**

Addressed 34 advice matters related to the following: conflicts of interest, financial disclosure, political activities, and other ethics-related topics.

## **INVESTIGATIONS**

Received 21 complaints involving the following allegations:

- Favoritism by a manager in a recruitment process. (2 complaints)

- Favoritism by a manager in a contracting process.
- Favoritism in a contracting process and improper receipt of gifts by a manager.
- Misuse of authority for personal gain by an official.
- Misuse of authority for personal gain by a manager.
- Misuse of authority for personal gain and improper receipt of gifts by a manager.
- Unprofessional behavior by a manager. (3 complaints)
- Metropolitan official holding incompatible offices.
- Conflict of interest by an official.
- Sexual harassment by a manager. (2 complaints)
- Retaliation by a manager. (2 complaints)
- Non-compliance with safety regulations by a manager.
- Discriminatory language by a manager.
- Discriminatory language by an employee.
- Discriminatory language and behavior by a manager.
- Discriminatory behavior by

## **COMPLAINTS MAY BE FILED AT:**

**ANONYMOUS ETHICS HOTLINE**  
(800) 461-9330  
<http://www.mwdethicshotline.net/>

**ETHICS OFFICE**  
(213) 217-5832  
[ethicsoffice@mwdh2o.com](mailto:ethicsoffice@mwdh2o.com)

managers.

Referred six EEO-related matters to the EEO Office.

#### **ADVICE AND INVESTIGATIVE DATA**

Advice Matters	34
Compliance Assistance	51
Complaints Received	21
Investigations Opened	0
Pending Investigations	3



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

# Board Information

- **Board of Directors**  
***Finance and Asset Management Committee***

8/20/2024 Board Meeting

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## Subject

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Report on list of certified assessed valuations for fiscal year 2024/25 and tabulation of assessed valuations, percentage participation, and vote entitlement of member agencies as of August 20, 2024

## Executive Summary

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Every year, Metropolitan receives the certified assessed valuation from the county auditors for the six counties where Metropolitan provides water service. All county auditors have until the 15<sup>th</sup> day of August to provide the certified assessed valuation to Metropolitan, which is why Metropolitan's Board adjourns its August regular and committee meetings to the third week of the month. Metropolitan received the last of the counties' information for fiscal year (FY) 2024/25 on August 15, 2024, due to complications with one county's new system implementation.

Based on the information received, staff reports that certified assessed valuations (net of homeowners' exemptions) for Metropolitan's six-county service area totaled \$4.06 trillion for FY 2024/25. The percentage participation and vote entitlement by member agencies as of August 20, 2024, have been updated accordingly and are reported in this letter and in **Attachment 1**. Assessed valuation is also used to determine how many representatives an agency has on the Metropolitan Board, but no member agency shall have less directors than it had in January 2019. Based on the assessed valuations for FY 2024/25 and the Metropolitan Water District Act, the number of representatives for each agency remains the same and is also reported in **Attachment 1**.

## Fiscal Impact

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None

## Applicable Policy

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Metropolitan Water District Act Section 52: Additional Directors

Metropolitan Water District Act Section 55: Voting by Board

Metropolitan Water District Act Section 305: Certification of Assessed Valuations; Segregation of Valuations

## Related Board Action(s)/Future Action(s)

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Not applicable

## Details and Background

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### Background

This letter reports the certified assessed valuations for FY 2024/25 and member agency percentage participation, vote, and director entitlement (**Attachment 1**), which become effective for all purposes at the August 20, 2024, adjourned regular Board meeting.




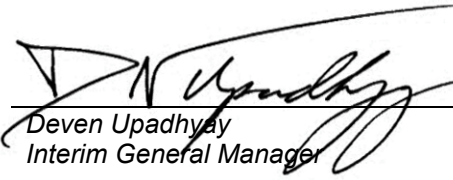
As part of the Metropolitan Water District Act, the process of determining assessed valuation is made each August based on submissions from the auditors of each of the six counties in the Metropolitan service area. Metropolitan uses a weighted voting system based on assessed valuation. Under Section 55 of the Metropolitan Water District Act, each member agency gets one vote for every \$10 million of assessed valuation of property taxable for Metropolitan's purposes. Under Section 52 of the Metropolitan Water District Act, assessed valuation is also used to determine how many representatives an agency has on the Metropolitan Board. Each member agency is entitled to one board member and may appoint an additional representative for each full 5 percent of Metropolitan's assessed valuation of taxable property that is within such member agency's service area. Section 52 also sets the minimum number of representatives for each member public agency as the amount they had as of January 1, 2019. The Section 52 minimum for representatives does not affect voting percentages set by Section 55. Based on the assessed valuations for FY 2024/25, neither the assessed valuations nor Section 52 affects the current number of directors of any member agencies. Although the assessed valuation for Central Basin Municipal Water District would have reduced its number of representatives to one, Section 52 requires it to maintain two representatives as it had on January 1, 2019.

The certificates of the county auditors for the six counties covering Metropolitan's area, certifying the FY 2024/25 assessed valuations of all property used for calculating Metropolitan's FY 2024/25 vote and director entitlement, are on file in the office of the Manager of Treasury and Debt.

The net assessed valuations by the respective county auditors are as follows:

COUNTY	Net Assessed Valuations Taxable by Metropolitan	
Los Angeles	\$	1,953,721,049,851
Orange		807,428,393,161
Riverside		286,081,924,306
San Bernardino		171,026,230,693
San Diego		708,622,100,115
Ventura		136,265,347,031
<b>Total Net A.V.s within MWD</b>	<b>\$</b>	<b>4,063,145,045,157</b>

A comparison of FY 2023/24 and FY 2024/25 net assessed valuations and the percentage of change (**Attachment 2**) and a comparison of FY 2023/24 and FY 2024/25 vote entitlement and the percentage change (**Attachment 3**) are attached for your information.

 _____ Katano Kasaine Assistant General Manager/ Chief Financial Officer	8/16/2024 _____ Date
 _____ Deven Upadhyay Interim General Manager	8/16/2024 _____ Date

**Attachment 1 – Assessed Valuations, Percentage Participation, and Vote and Director Entitlement of Member Public Agencies as of August 20, 2024**

**Attachment 2 – Comparison of Net Assessed Valuations for Fiscal Years 2023/24 and 2024/25**

**Attachment 3 – Comparison of Vote Entitlement Percentage for Fiscal Years 2023/24 and 2024/25**

Ref# cfo12696785

**The Metropolitan Water District of Southern California  
Assessed Valuations, Percentage Participation, and  
Vote and Director Entitlement of Member Public Agencies  
As of August 20, 2024**

<u>Member Agency</u>	<u>*Assessed Valuation Amount Certified</u>	<u>Percent of Total</u>	<u>** Vote Entitlement</u>	<u>*** Director Entitlement</u>
Anaheim	\$ 63,061,211,386	1.55%	6,306	1
Beverly Hills	46,772,567,086	1.15%	4,677	1
Burbank	33,300,809,067	0.82%	3,330	1
Calleguas MWD	136,265,347,031	3.35%	13,627	1
Central Basin MWD	202,654,177,665	4.99%	20,265	2
Compton	6,775,568,934	0.17%	678	1
Eastern MWD	129,194,589,663	3.18%	12,919	1
Foothill MWD	25,427,470,679	0.63%	2,543	1
Fullerton	27,659,493,654	0.68%	2,766	1
Glendale	41,653,292,483	1.03%	4,165	1
Inland Empire Utilities Agency	171,026,230,693	4.21%	17,103	1
Las Virgenes MWD	32,236,107,227	0.79%	3,224	1
Long Beach	68,045,458,026	1.67%	6,805	1
Los Angeles	838,354,311,494	20.63%	83,835	5
MWD of Orange County	681,017,986,705	16.76%	68,102	4
Pasadena	40,423,651,273	0.99%	4,042	1
San Diego County Water Authority	708,622,100,115	17.44%	70,862	4
San Fernando	2,744,395,463	0.07%	274	1
San Marino	8,357,688,920	0.21%	836	1
Santa Ana	35,689,701,416	0.88%	3,569	1
Santa Monica	50,548,359,964	1.24%	5,055	1
Three Valleys MWD	90,192,555,923	2.22%	9,019	1
Torrance	37,806,509,948	0.93%	3,781	1
Upper San Gabriel Valley MWD	140,786,035,631	3.47%	14,079	1
West Basin MWD	287,642,090,068	7.08%	28,764	2
Western MWD	156,887,334,643	3.86%	15,689	1
TOTAL ASSESSED VALUATIONS WITHIN METROPOLITAN	\$ 4,063,145,045,157	100%	406,315	<u>38</u>

Percentage may not foot due to rounding.

**The Metropolitan Water District of Southern California**  
**Comparison of Assessed Valuations Net of HOE for Fiscal Years 2023/24 and 2024/25**

<b>Member Agency</b>	<b>FY 2023/24 Net Assessed Valuation</b>	<b>FY 2024/25 Net Assessed Valuation</b>	<b>Percentage Change</b>
<b>Los Angeles County:</b>			
Beverly Hills	\$ 44,925,471,380	\$ 46,772,567,086	4.1%
Burbank	31,747,985,559	33,300,809,067	4.9%
Glendale	39,846,531,370	41,653,292,483	4.5%
Los Angeles	801,720,255,259	838,354,311,494	4.6%
Pasadena	38,640,474,384	40,423,651,273	4.6%
San Marino	8,004,717,057	8,357,688,920	4.4%
Santa Monica	48,607,667,263	50,548,359,964	4.0%
Long Beach	65,577,549,323	68,045,458,026	3.8%
Torrance	35,904,604,824	37,806,509,948	5.3%
Compton	6,413,398,218	6,775,568,934	5.6%
West Basin MWD	270,636,770,769	287,642,090,068	6.3%
Three Valleys MWD	86,341,467,819	90,192,555,923	4.5%
Foothill MWD	24,094,186,106	25,427,470,679	5.5%
Central Basin MWD	193,242,928,112	202,654,177,665	4.9%
Las Virgenes MWD	30,903,464,678	32,236,107,227	4.3%
Upper San Gabriel Valley MWD	134,179,397,217	140,786,035,631	4.9%
San Fernando	2,596,234,164	2,744,395,463	5.7%
<b>Total Los Angeles County</b>	<b>1,863,383,103,502</b>	<b>1,953,721,049,851</b>	<b>4.8%</b>
<b>Orange County:</b>			
Anaheim	60,384,239,089	63,061,211,386	4.4%
Santa Ana	34,312,996,241	35,689,701,416	4.0%
Fullerton	25,613,995,600	27,659,493,654	8.0%
MWD of Orange County	646,336,513,093	681,017,986,705	5.4%
<b>Total Orange County</b>	<b>766,647,744,023</b>	<b>807,428,393,161</b>	<b>5.3%</b>
<b>Riverside County:</b>			
Eastern MWD	115,592,411,711	129,194,589,663	11.8%
Western MWD	147,747,843,154	156,887,334,643	6.2%
<b>Total Riverside County</b>	<b>263,340,254,865</b>	<b>286,081,924,306</b>	<b>8.6%</b>
<b>San Bernardino County:</b>			
Inland Empire Utilities Agency	160,301,386,680	171,026,230,693	6.7%
<b>San Diego County:</b>			
San Diego County Water Authority	677,016,967,276	708,622,100,115	4.7%
<b>Ventura County:</b>			
Calleguas MWD	130,730,622,244	136,265,347,031	4.2%
<b>Total Within Metropolitan</b>	<b>3,861,420,078,590</b>	<b>4,063,145,045,157</b>	<b>5.2%</b>
<b>Excluded Areas</b>	<b>87,104,636</b>	<b>92,603,444</b>	<b>6.3%</b>
<b>*Total Taxable by Metropolitan</b>	<b>\$ 3,861,507,183,226</b>	<b>\$ 4,063,237,648,601</b>	<b>5.2%</b>

**The Metropolitan Water District of Southern California**  
**Comparison of Vote Entitlement Percentage for Fiscal Years 2023/24 and 2024/25**

<b>Member Agency</b>	<b>FY 2023/24</b>		<b>FY 2024/25</b>		<b>Change</b>	
	<b>Vote Entitlement</b>	<b>Vote Entitlement Percentage</b>	<b>Vote Entitlement</b>	<b>Vote Entitlement Percentage</b>	<b>Vote Entitlement</b>	<b>Vote Entitlement Percentage</b>
Anaheim	6,038	1.56%	6,306	1.55%	268	-0.01%
Beverly Hills	4,493	1.16%	4,677	1.15%	184	-0.01%
Burbank	3,175	0.82%	3,330	0.82%	155	0.00%
Calleguas MWD	13,073	3.39%	13,627	3.35%	554	-0.03%
Central Basin MWD	19,324	5.00%	20,265	4.99%	941	-0.02%
Compton	641	0.17%	678	0.17%	37	0.00%
Eastern MWD	11,559	2.99%	12,919	3.18%	1,360	0.19%
Foothill MWD	2,409	0.62%	2,543	0.63%	134	0.00%
Fullerton	2,561	0.66%	2,766	0.68%	205	0.02%
Glendale	3,985	1.03%	4,165	1.03%	180	-0.01%
Inland Empire Utilities Agency	16,030	4.15%	17,103	4.21%	1,073	0.06%
Las Virgenes MWD	3,090	0.80%	3,224	0.79%	134	-0.01%
Long Beach	6,558	1.70%	6,805	1.67%	247	-0.02%
Los Angeles	80,172	20.76%	83,835	20.63%	3,663	-0.13%
MWD of Orange County	64,634	16.74%	68,102	16.76%	3,468	0.02%
Pasadena	3,864	1.00%	4,042	0.99%	178	-0.01%
San Diego County Water Authority	67,702	17.53%	70,862	17.44%	3,160	-0.09%
San Fernando	260	0.07%	274	0.07%	14	0.00%
San Marino	800	0.21%	836	0.21%	36	0.00%
Santa Ana	3,431	0.89%	3,569	0.88%	138	-0.01%
Santa Monica	4,861	1.26%	5,055	1.24%	194	-0.01%
Three Valleys MWD	8,634	2.24%	9,019	2.22%	385	-0.02%
Torrance	3,590	0.93%	3,781	0.93%	191	0.00%
Upper San Gabriel Valley MWD	13,418	3.47%	14,079	3.47%	661	-0.01%
West Basin MWD	27,064	7.01%	28,764	7.08%	1,700	0.07%
Western MWD	14,775	3.83%	15,689	3.86%	914	0.03%
<b>Total</b>	<b>386,141</b>	<b>100%</b>	<b>406,315</b>	<b>100%</b>	<b>20,174</b>	<b>0.00%</b>

Percentages may not foot due to rounding.



Finance and Asset Management Committee

# Certified Assessed Valuations FY 2024/2025

Item 5-H  
August 20, 2024



Item 5-H

# Certified Assessed Valuations FY 2024/2025

## Subject

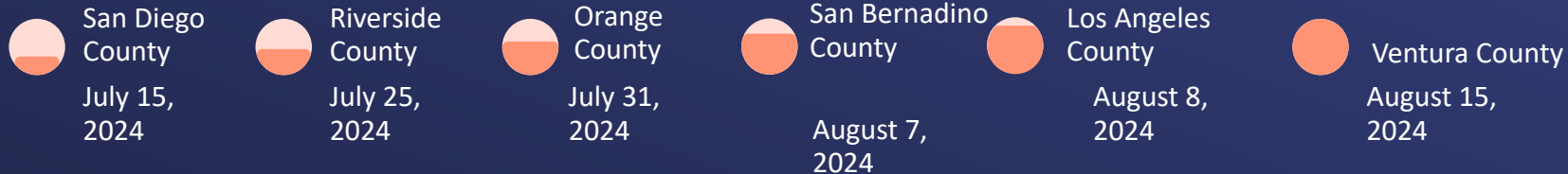
Certified Assessed Valuations FY 2024/2025

## Purpose

To provide Metropolitan's Board with a report of the Vote and Director Entitlements based on FY 2024/25 certified assessed valuations received by the six counties in its district boundary.

# Purpose of Report

- Metropolitan receives certified assessed valuations (AV) from each of the county auditor-controllers, or equivalent, within its service area
- All six counties have provided the requested AV information
- The last submitted AV information arrived on Aug 15<sup>th</sup>

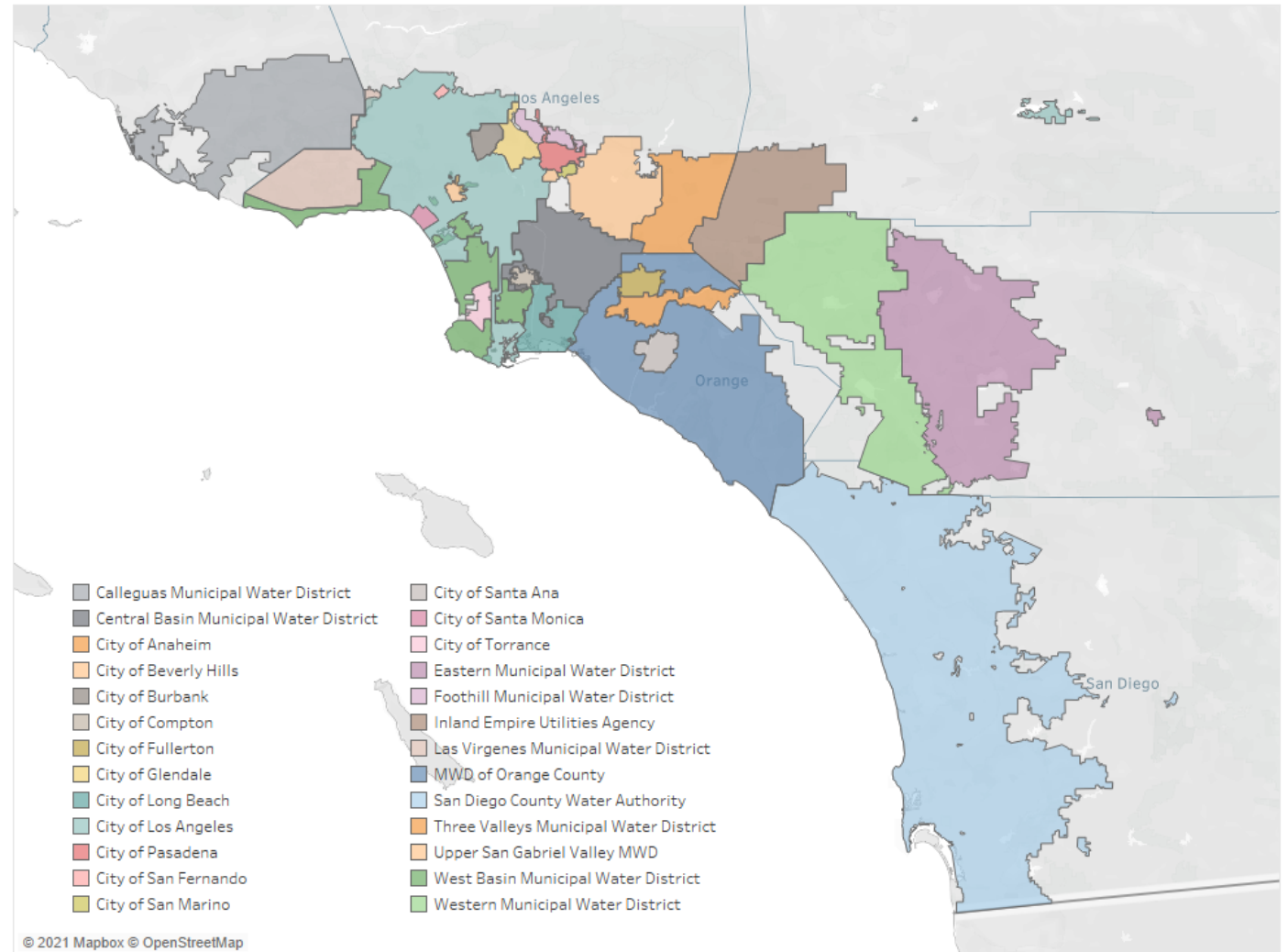


- The last unitary tax data and certifications confirmed on Aug 7<sup>th</sup>
- Assessed valuations are a key component to determining Board Director Entitlement and Member Agency Vote Entitlement

# Background

- Our District boundaries are composed of tax rate areas within each county.
- Our Change of Statement of Boundaries establishes the current legal definition of what tax rate areas fall within our District in a given tax year.

MWD Service Area and Member Agency Boundary Map



# Current Assessed Valuations and Entitlements

## The Metropolitan Water District of Southern California Assessed Valuations, Percentage Participation, and Vote and Director Entitlement of Member Public Agencies As of August 20, 2024

<u>Member Agency</u>	*Assessed Valuation Amount Certified	Percent of Total	** Vote Entitlement	*** Director Entitlement
Anaheim	\$ 63,061,211,386	1.55%	6,306	1
Beverly Hills	46,772,567,086	1.15%	4,677	1
Burbank	33,300,809,067	0.82%	3,330	1
Calleguas MWD	136,265,347,031	3.35%	13,627	1
Central Basin MWD	202,654,177,665	4.99%	20,265	2
Compton	6,775,568,934	0.17%	678	1
Eastern MWD	129,194,589,663	3.18%	12,919	1
Foothill MWD	25,427,470,679	0.63%	2,543	1
Fullerton	27,659,493,654	0.68%	2,766	1
Glendale	41,653,292,483	1.03%	4,165	1
Inland Empire Utilities Agency	171,026,230,693	4.21%	17,103	1
Las Virgenes MWD	32,236,107,227	0.79%	3,224	1
Long Beach	68,045,458,026	1.67%	6,805	1
Los Angeles	838,354,311,494	20.63%	83,835	5
MWD of Orange County	681,017,986,705	16.76%	68,102	4
Pasadena	40,423,651,273	0.99%	4,042	1
San Diego County Water Authority	708,622,100,115	17.44%	70,862	4
San Fernando	2,744,395,463	0.07%	274	1
San Marino	8,357,688,920	0.21%	836	1
Santa Ana	35,689,701,416	0.88%	3,569	1
Santa Monica	50,548,359,964	1.24%	5,055	1
Three Valleys MWD	90,192,555,923	2.22%	9,019	1
Torrance	37,806,509,948	0.93%	3,781	1
Upper San Gabriel Valley MWD	140,786,035,631	3.47%	14,079	1
West Basin MWD	287,642,090,068	7.08%	28,764	2
Western MWD	156,887,334,643	3.86%	15,689	1
TOTAL ASSESSED VALUATIONS WITHIN METROPOLITAN	\$ 4,063,145,045,157	100%	406,315	<u>38</u>

Percentage may not foot due to  
rounding.

Percentage may not fit due to rounding.

# CFY and PFY Vote Entitlements

As a result of these updated certified assessed valuations:

- ✓ Central Basin MWD would have lost one director entitlement; however, no changes occurred due to Assembly Bill No. 1220 minimum requirements
- ✓ Vote Entitlements percentages among Member Agencies have only had modest changes ranging from +0.19% to -0.13%

The Metropolitan Water District of Southern California						
Comparison of Vote Entitlement Percentage for Fiscal Years 2023/24 and 2024/25						
Member Agency	FY 2023/24		FY 2024/25		Change	
	Vote Entitlement	Vote Entitlement Percentage	Vote Entitlement	Vote Entitlement Percentage	Vote Entitlement	Vote Entitlement Percentage
Anaheim	6,038	1.56%	6,306	1.55%	268	-0.01%
Beverly Hills	4,493	1.16%	4,677	1.15%	184	-0.01%
Burbank	3,175	0.82%	3,330	0.82%	155	0.00%
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Glendale	3,985	1.03%	4,165	1.03%	180	-0.01%
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Pasadena	3,864	1.00%	4,042	0.99%	178	-0.01%
San Diego County Water Authority	67,702	17.53%	70,862	17.44%	3,160	-0.09%
San Fernando	260	0.07%	274	0.07%	14	0.00%
San Marino	800	0.21%	836	0.21%	36	0.00%
Santa Ana	3,431	0.89%	3,569	0.88%	138	-0.01%
Santa Monica	4,861	1.26%	5,055	1.24%	194	-0.01%
Three Valleys MWD	8,634	2.24%	9,019	2.22%	385	-0.02%
Torrance	3,590	0.93%	3,781	0.93%	191	0.00%
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Western MWD	14,775	3.83%	15,689	3.86%	914	0.03%
<b>Total</b>	<b>386,141</b>	<b>100%</b>	<b>406,315</b>	<b>100%</b>	<b>20,174</b>	<b>0.00%</b>

Percentages may not foot due to rounding.









THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

# Board Information

- **Board of Directors**

08/20/2024 Board Meeting

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## Subject

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Sufficiency of Credentials for Appointment of a Director from the city of Santa Monica.

## Description

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Credentials (**Attachment 1**) have been received from the city of Santa Monica evidencing that on June 23, 2024 its City Council approved the appointment of Mark Gold as its representative on Metropolitan's Board of Directors to fill a vacancy. The credentials have been examined and found to be in compliance with the Metropolitan Water District Act for his appointment for an indefinite term.

## Policy

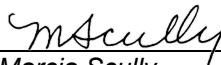
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Board membership

## Board Options

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That the attached credentials evidencing the appointment of Mr. Gold as a Director of The Metropolitan Water District of Southern California representing the city of Santa Monica be received and filed. The oath of office is expected to be given to Mr. Gold on or before the August 20, 2024 board meeting.

  
\_\_\_\_\_  
Marcia Scully  
General Counsel

8/8/2024  
\_\_\_\_\_  
Date

**Attachment 1 – Credentials of Mark Gold**



Records and Election Services – City Clerk's Office

August 2, 2024

The Metropolitan Water District of Southern California

Attn: Brian Tubbs, Senior Administrative Analyst

Post Office Box 54153

Los Angeles, CA 90054-0153

Honorable Members:

I, Nikima S. Newsome, City Clerk of the City of Santa Monica, do hereby certify the following. During the June 23, 2024 City Council meeting Mayor Phil Brock nominated applicant Mark Gold as the City's Delegate on the Metropolitan Water District Board for a term ending June 30, 2028. Mr. Gold was appointed by the following vote, with all members present:

AYES: Councilmembers Davis, de la Torre, Parra, Torosis, Zwick,  
Mayor Brock, Mayor Pro Tem Negrete

NOES: None

ABSENT: None

ATTEST:

DocuSigned by:

7032651F371E430...

8/2/2024

Nikima S. Newsome, City Clerk

Date

**MINUTES**  
**REGULAR MEETING OF THE**  
**BOARD OF DIRECTORS**  
**THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**  
**July 9, 2024**

**53692** The Board of Directors of The Metropolitan Water District of Southern California met in a regular session on Tuesday, July 09, 2024.

Chair Ortega called the meeting to order at 2:06 p.m.

Chair Ortega announced Director Faessel is unable to attend the meeting to do the invocation this month.

**53693** The Pledge of Allegiance was given by Barry D. Pressman, City of Beverly Hills.

**53694** Board Executive Secretary Hudson administered the roll call. Those responding present were: Directors Abdo, Ackerman, Alvarez, Armstrong, Bryant, Camacho, Cordero, Crawford, De Jesus, Dennstedt, Douglas, Erdman, Fellow, Goldberg, Jung (teleconference posted location available for the public), Kassakhian, Kurtz, Luna, McCoy, McMillan, Miller, Morris, Ortega, Petersen, Phan, Pressman, Quinn, Ramos (teleconference posted location available for the public), Seckel, and Sutley.

Those not responding were: Directors Dick, Faessel, Fong-Sakai, Garza, Gray, Lefevre, Lewitt, and Smith.

Board Executive Secretary Hudson declared a quorum present.

Chair Ortega called on Director Bryant to introduce Member Agency Manager Guest Richard Atwater, President and Nina Jazmadarian, General Manager of Foothill Municipal Water District. Chair Ortega, Director Bryant, Mr. Atwater, and Ms. Jazmadarian made remarks.

Chair Ortega welcomed and thanked Mr. Atwater and Ms. Jazmadarian for joining the board and encouraged them to comment on matters important to the Foothill Municipal Water District.

Chair Ortega announced that July is Recreation and Parks Month; Metropolitan will highlight the great recreational opportunities at Diamond Valley Lake and Lake Skinner on social media. Metropolitan will support National Disabilities Independence Day, commemorating the signing of the Americans with Disabilities Act on July 26, 1990, in coordination with our employee resources group VOICE. Metropolitan is launching a social media and digital mini campaign featuring new artwork inspired by the Summer Olympics. The tagline "Conservation is A Team Sport" will link to the many resources and rebates available on BEWATERWISE.COM. Lastly, thank you to Shane Chapman, for stepping in as the Interim General Manager.

**53695** Chair Ortega invited members of the public to address the Board on matters within the Board's jurisdiction (in-person and via teleconference).

	Name	Affiliation	Comment
1.	Jason Martin	Interim General Manager, Rancho California Water District	6B
2.	Justin Breck	Los Angeles Waterkeeper	Employee Investigation
3.	Conner Everts	Statewide Environmental Water Caucus and other organizations	Climate Change
4.	Darcy Burke	Elsinore Valley Municipal Water District Board of Directors and USCA Local Government Advisory Committee	6C
5.	Caty Wagner	Sierra Club California	Employee Investigation
6.	John Mendoza	City of Pomona Resident	Legislation and Communication Meeting
7.	Charmin Evelyn	Sierra Club Chair Water Committee	Employee Investigation
8.	Drew Boronkay	Metropolitan Employee	Employee Investigation
9.	Trish Gonzalez	Metropolitan Retiree	Employee Investigation

Chair Ortega addressed the following: Other Matters and Reports.

**53696** Chair Ortega asked if there were any corrections to the report of events attended by Directors at Metropolitan's expense during the month of June, as previously posted and distributed to the Board. None were made.

Chair Ortega called on Board Vice Chair Abdo. Board Vice Chair Abdo announced that that the Santa Monica City Council will be appointing a new person to the Metropolitan Board. Chair Ortega made remarks.

**53697** Chair Ortega referred to the Chair's monthly report, which was previously posted and distributed to the Board. In addition, the Ad Hoc Committee on EEO investigations has authorized the retention of Gruman Law in order to conduct investigation that was launched in the matter relating to the General Manager and the complaint by the Chief Financial Officer. If anyone has any information related to the investigation they are welcome to contact the independent outside investigator directly. The contact information

can be obtained from a member of the Board and confidentiality will be protected. Lastly, the investigation does not have anything to do with public policy.

**53698** Interim General Manager Chapman provided an update on: the wildfire activity in the service area; the business plan that was previously posted; the workshop on cybersecurity which will be on Thursday, July 11, 2024; the staff appreciation picnic which will be on July 20, 2024; the finance and asset committee discussion on the budget; and lastly, recognizing Peter Von Hamm, the Assistant Ethics Officer's retirement after over twenty-five years of service.

**53699** General Counsel Scully stated she had nothing to add to the written report.

**53700** General Auditor Suzuki stated he had nothing to add to the written report.

**53701** Ethics Officer Salinas reported on Peter Von Hamm, the Assistant Ethics Officer's retirement and describing his public service with Metropolitan.

The following Director(s) asked questions or made comments:

Director(s)

1. Kurtz

Staff responded to the Directors' comments and questions.

**53702** Presentation of Commendatory Resolution for Director Michael Gualtieri representing Central Basin Municipal Water District (Agenda Item 5G). Former Director Michael Gualtieri was unable to attend the meeting, staff mailed the resolution to him.

**53703** Presentation of Commendatory Resolution for Director Glen Peterson representing Las Virgenes Municipal Water District (Agenda Item 5H). Chair Ortega and Former Director Glen Peterson made remarks.

Director McMillan left the meeting.

**53704** Chair Ortega asked the Directors if there were any comments or discussions on the Approval of the Minutes Special Board Meeting for March 26, 2024, the Board of Directors Meeting for June 11, 2024, and the Special Board Meeting for June 13, 2024 (Copies have been submitted to each Director any additions, corrections, or omissions) (Agenda Item 6A). No amendments were made.

**53705** Approve Commendatory Resolution honoring The Rancho California Water District for 2024 recipient of the Outstanding Public Service Announcement Emmy Awards "Be a Water Hero" Campaign (Agenda Item 6B).

**53706** Approve Commendatory Resolution honoring Elsinore Valley Municipal Water District recipient of the American Water Works Association National 2024 Hydrant Hysteria Competition (Agenda Item 6C).

**53707** Approval of Committee Assignments (Agenda Item 6D).

Appoint Director Fellow to the Legal and Claims Committee.

Appoint Director Gray to the Ad Hoc Committee on San Diego Litigation.

Chair Ortega called on Directors who are requesting that any items be pulled from the Consent Calendar Action Items and to state any recusals, abstentions, and disclosures.

Director Camacho disclosed that Items 7-3 and 7-4 are agreements between Metropolitan and Inland Empire Utilities Agency, he is required to disclose for the record that he receives per diem, reimbursements, and other benefits from Inland Empire Utilities for his service on the Board and based on MWD Act Section 56, he will not vote, including abstaining.

Director Sutley on behalf of the Los Angeles delegation (Directors Sutley, Quinn, Douglas, Luna, and Peterson) disclosed that Item 7-7 involves an agreement with the Los Angeles Department of Water and Power, they are required to disclose for the record that they are entitled to receive per diem from the City of Los Angeles for their service on the Board. However, Directors Quinn, Douglas, Luna, and Peterson may participate in the item.

Regarding Director Sutley, the Los Angeles Administrative Code provides for an attendance payment for attending Metropolitan Board meetings. However, she has declined the payment in writing and, therefore, has not received it. She receives income as a city employee because this item involves her employing department, and she will recuse herself from the discussion and voting.

Director Armstrong disclosed that Item 7-8 involves an agreement in which Eastern Municipal Water District is a partner, he would like to disclose for the record that he receives per diem and reimbursement benefits from Eastern for his service on the Board. However, he has been advised that he may participate in the item.

Director Pressman disclosed that Item 7-7 involves an agreement with the Los Angeles Department of Water and Power because the City of Los Angeles is a business client, he is recusing himself from the matter.

Director Miller disclosed that Item 7-5 involves an agreement with Metropolitan and San Diego County Water Authority; he receives per diem and reimbursement benefits for his service on the Board and per diem and related benefits for serving on the Vista Irrigation District Board, as both agencies are involved in the item. Additionally, based on MWD Act Section 56, he will not vote, including abstaining.

Director Cordero disclosed that for Item 7-6 she receives per diem, reimbursements, and other benefits from the City of Long Beach for her service on the Board. Additionally, based on MWD Act Section 56, she will not vote, including abstaining.

Director Goldberg disclosed that Item 7-5 involves the San Diego County Water Authority; she is required to disclose for the record that she receives per diem and reimbursement benefits for her service on the Board. However, she may participate in the item.



Director Phan disclosed pursuant to Regulation 18707 for Items 7-1, 7-5, and 7-6 involve J.F. Shea Construction, Vista Irrigation District Board, City of Escondido, and City of Long Beach clients of her employer which is the source of her income.

**53708** a. Award a \$2,197,460 contract to J.F. Shea Construction Inc. for replacement of steel pipe on the Rialto Pipeline and rehabilitation of Service Connection CB-11; and b. Authorize an increase of \$150,000 to an existing agreement with Brown and Caldwell for a new not-to-exceed amount of \$395,000 to provide construction support services., as set forth in Agenda Item 7-1 board letter.

**53709** Authorize an agreement with Arcadis, U.S. Inc., in an amount not to exceed \$1.525 million for Data Management and Data Analytics Consulting & Implementation Services to implement Phase 1 of the Data Analytics project, as set forth in Agenda Item 7-2 board letter.

**53710** Authorize entering into a not-to-exceed \$401,500 funding agreement with the Inland Empire Utilities Agency under the FSA Program for the Chino Basin Advanced Water Purification Demonstration Facility, as set forth in Agenda Item 7-3 board letter.

**53711** Authorize entering into a not-to-exceed \$298,500 funding agreement with the Inland Empire Utilities Agency under the FSA Program for the Identifying and Removing PFAS Used in Well Drilling Pilot Study, as set forth in Agenda Item 7-4 board letter.

**53712** Authorize entering into a not-to-exceed \$500,000 funding agreement with the San Diego County Water Authority under the FSA Program for the Lake Henshaw Oxygenation Pilot Study, as set forth in Agenda Item 7-5 board letter.

**53713** Authorize entering into a not-to-exceed \$499,802 funding agreement with the City of Long Beach under the FSA Program for the Groundwater Augmentation, Groundwater Collection System and New Wells Site Study, as set forth in Agenda Item 7-6 board letter.

**53714** Authorize entering into a not-to-exceed \$500,000 funding agreement with the Los Angeles Department of Water and Power under the FSA Program for the Headworks Reservoir Complex Direct Potable Reuse Pilot, as set forth in Agenda Item 7-7 board letter.

**53715** Authorize entering into a not-to-exceed \$500,000 funding agreement with Las Virgenes Municipal Water District under the FSA Program for the OceanWell Pilot Study, as set forth in Agenda Item 7-8 board letter.

**53716** Authorize the General Manager to grant a permanent easement to San Diego Gas & Electric for natural gas pipeline purposes on Metropolitan fee-owned property in the County of San Diego and identified as Assessor Parcel Number 102-650-065, as set forth in Agenda Item 7-9 board letter.

**53717** Authorize an additional six-month term to the existing agreement with PFMAM for investment management services in an amount not to exceed \$250,000, as set forth in Agenda Item 7-11 board letter.

Director Fellow moved, seconded by Director Pressman that the Board approve the Consent Calendar Items 6A, 6B, 6C, 6D, and 7-1 through 7-9, and 7-11 as follows:

The following is a record of the vote:

Record of Vote on Consent Item(s):		Items: 6A, 6B, 6C, 6D and 7-1 through 7-9 and 7-11							
Member Agency	Total Votes	Director	Present	Yes	Yes Vote	No	No Vote	Abstain	Abstain Vote
Anaheim	6038	Faessel							
Beverly Hills	4493	Pressman	x	x	4493				
Burbank	3175	Ramos	x						
Calleguas Municipal Water District	13073	McMillan							
Central Basin Municipal Water District	19324	Garza							
		Crawford	x	x	19324				
			Subtotal:		19324				
Compton	641	McCoy	x	x	641				
Eastern Municipal Water District	12060	Armstrong	x	x	12060				
Foothill Municipal Water District	2409	Bryant	x	x	2409				
Fullerton	2561	Jung	x	x	2561				
Glendale	3985	Kassakhian	x	x	3985				
Inland Empire Utilities Agency	16030	Camacho	x	x	16030				
Las Virgenes	3090	Lewitt							
Long Beach	6558	Cordero	x	x	6558				
Los Angeles	80172	Sutley	x	x	16034				
		Petersen	x	x	16034				
		Quinn	x	x	16034				
		Luna	x	x	16034				
		Douglas	x	x	16034				
			Subtotal:		80172				
Municipal Water Dist. of Orange County	64634	Ackerman	x	x	21545				
		Seckel	x	x	21545				
		Dick							
		Erdman	x	x	21545				
			Subtotal:		64634				
Pasadena	3864	Kurtz	x	x	3864				
San Diego County Water Authority	67201	Fong-Sakai							
		Goldberg	x	x	33601				
		Miller	x	x	33601				
		Smith							
			Subtotal:		67201				
San Fernando	260	Ortega	x	x	260				
San Marino	800	Morris	x	x	800				
Santa Ana	3431	Phan	x	x	3431				
Santa Monica	4861	Abdo	x	x	4861				
Three Valleys Municipal Water District	8634	De Jesus	x	x	8634				
Torrance	3590	Lefevre							
Upper San Gabriel Valley Mun. Wat. Dist.	13418	Fellow	x	x	13418				
West Basin Municipal Water District	27064	Alvarez	x	x	27064				
		Gray							
			Subtotal:		27064				
Western Municipal Water District	14775	Dennstedt	x	x	14775				
<b>Total</b>	<b>386141</b>				<b>357175</b>				
<b>Present and not voting</b>	<b>3175</b>								
<b>Absent</b>	<b>25791</b>								

The motion to approve the Consent Calendar Items 6A, 6B, 6C, 6D, and 7-1 through 7-9 and 7-11 (**M.I. No. 53704 through 53717**)\* passed by a vote of 357,175 ayes; 0 noes; 0 abstain; 3,175 not voting; and 25,791 absent.

The motion to approve the Consent Calendar Item 7-1 passed by a vote of 353,744 ayes; 0 noes; 0 abstain; 6,606 not voting; and 25,791 absent.

\*The motion to approve the Consent Calendar Item 7-3 passed by a vote of 341,145 ayes; 0 noes; 0 abstain; 19,205 not voting; and 25,791 absent.

\*The motion to approve the Consent Calendar Item 7-4 passed by a vote of 341,145 ayes; 0 noes; 0 abstain; 19,205 not voting; and 25,791 absent.

\*The motion to approve the Consent Calendar Item 7-5 passed by a vote of 353,744 ayes; 0 noes; 0 abstain; 6,606 not voting; and 25,791 absent.

\*The motion to approve the Consent Calendar Item 7-6 passed by a vote of 347,186 ayes; 0 noes; 0 abstain; 9,733 not voting; and 29,222 absent.

\*The motion to approve the Consent Calendar Item 7-7 passed by a vote of 352,682 ayes; 0 noes; 0 abstain; 7,668 not voting; and 25,791 absent.

Director Phan left the meeting.

**53718** Authorize a \$600,000 increase to an existing design-build services agreement with J.F. Shea Construction Inc. for a new not-to-exceed amount of \$10.4 million to purchase long-lead equipment for the Sepulveda Feeder Pump Stations Project (Agenda Item 8-1).

Director Erdman moved, seconded by Director Morris, that the Board approve the Board Item 8-1 as follows:

Chair Ortega called for a vote on the motion for Agenda Item 8-1 Option 1.

The following is a record of the vote:

Record of Vote on Item:		8-1							
Member Agency	Total Votes	Director	Present	Yes	Yes Vote	No	No Vote	Abstain	Abstain Vote
Anaheim	6038	Faessel							
Beverly Hills	4493	Pressman	x	x	4493				
Burbank	3175	Ramos	x	x	3175				
Calleguas Municipal Water District	13073	McMillan							
Central Basin Municipal Water District	19324	Garza							
		Crawford	x	x	19324				
			Subtotal:		19324				
Compton	641	McCoy	x	x	641				
Eastern Municipal Water District	12060	Armstrong	x	x	12060				
Foothill Municipal Water District	2409	Bryant	x	x	2409				
Fullerton	2561	Jung	x	x	2561				
Glendale	3985	Kassakhian	x	x	3985				
Inland Empire Utilities Agency	16030	Camacho	x	x	16030				
Las Virgenes	3090	Lewitt							
Long Beach	6558	Cordero	x	x	6558				
Los Angeles	80172	Sutley	x	x	16034				
		Petersen	x	x	16034				
		Quinn	x	x	16034				
		Luna	x	x	16034				
		Douglas	x	x	16034				
			Subtotal:		80172				
Municipal Water Dist. of Orange County	64634	Ackerman	x	x	21545				
		Seckel	x	x	21545				
		Dick							
		Erdman	x	x	21545				
			Subtotal:		64634				
Pasadena	3864	Kurtz	x	x	3864				
San Diego County Water Authority	67201	Fong-Sakai							
		Goldberg	x	x	33601				
		Miller	x	x	33601				
		Smith							
			Subtotal:		67201				
San Fernando	260	Ortega	x	x	260				
San Marino	800	Morris	x	x	800				
Santa Ana	3431	Phan							
Santa Monica	4861	Abdo	x	x	4861				
Three Valleys Municipal Water District	8634	De Jesus	x	x	8634				
Torrance	3590	Lefevre							
Upper San Gabriel Valley Mun. Wat. Dis	13418	Fellow	x	x	13418				
West Basin Municipal Water District	27064	Alvarez	x	x	27064				
		Gray							
			Subtotal:		27064				
Western Municipal Water District	14775	Dennstedt	x	x	14775				
<b>Total</b>	<b>386141</b>				<b>356919</b>				
<b>Present and not voting</b>									
<b>Absent</b>	<b>29222</b>								

The motion to approve the Board Item 8-1 (**M.I. No. 53718**) passed by a vote of 356,919 ayes; 0 noes; 0 abstain; 0 not voting; and 29,222 absent.

**53719** By a two-thirds vote, authorize payments of up to \$4.18 million for participation in the State Water Contractors for FY 2024/25 and up to \$4.30 million for FY 2025/26 (Agenda Item 8-2).

Director Quinn moved, seconded by Director Sutley, that the Board approve the Board Item 8-2 as follows:

Chair Ortega called for a vote on the motion for Agenda Item 8-2 Option 1.

The following is a record of the vote:

Record of Vote on Item:		8-2							
Member Agency	Total Votes	Director	Present	Yes	Yes Vote	No	No Vote	Abstain	Abstain Vote
Anaheim	6038	Faessel							
Beverly Hills	4493	Pressman	x	x	4493				
Burbank	3175	Ramos	x	x	3175				
Calleguas Municipal Water District	13073	McMillan							
Central Basin Municipal Water District	19324	Garza							
		Crawford	x	x	19324				
			Subtotal:		19324				
Compton	641	McCoy	x	x	641				
Eastern Municipal Water District	12060	Armstrong	x	x	12060				
Foothill Municipal Water District	2409	Bryant	x	x	2409				
Fullerton	2561	Jung	x						
Glendale	3985	Kassakhian	x	x	3985				
Inland Empire Utilities Agency	16030	Camacho	x	x	16030				
Las Virgenes	3090	Lewitt							
Long Beach	6558	Cordero	x	x	6558				
Los Angeles	80172	Sutley	x	x	16034				
		Petersen	x	x	16034				
		Quinn	x	x	16034				
		Luna	x	x	16034				
		Douglas	x	x	16034				
			Subtotal:		80172				
Municipal Water Dist. of Orange County	64634	Ackerman	x	x	21545				
		Seckel	x	x	21545				
		Dick							
		Erdman	x	x	21545				
			Subtotal:		64634				
Pasadena	3864	Kurtz	x	x	3864				
San Diego County Water Authority	67201	Fong-Sakai							
		Goldberg	x	x	33601				
		Miller	x	x	33601				
		Smith							
			Subtotal:		67201				
San Fernando	260	Ortega	x	x	260				
San Marino	800	Morris	x	x	800				
Santa Ana	3431	Phan							
Santa Monica	4861	Abdo	x	x	4861				
Three Valleys Municipal Water District	8634	De Jesus	x	x	8634				
Torrance	3590	Lefevre							
Upper San Gabriel Valley Mun. Wat. Dist.	13418	Fellow	x	x	13418				
West Basin Municipal Water District	27064	Alvarez	x	x	27064				
		Gray							
			Subtotal:		27064				
Western Municipal Water District	14775	Dennstedt	x	x	14775				
<b>Total</b>	<b>386141</b>				<b>354358</b>				
<b>Present and not voting</b>	<b>2561</b>								
<b>Absent</b>	<b>29222</b>								

The motion to approve the Board Item 8-2 (**M.I. No. 53719**) passed by a vote of 354,358 ayes; 0 noes; 0 abstain; 2,561 not voting; and 29,222 absent.



**53720** Authorize an increase in the maximum amount payable under contract with Musick, Peeler & Garrett LLP, for legal services by \$750,000 to an amount not-to-exceed \$3,250,000; and authorize an increase in the maximum amount payable under contract with Exponent, Inc. for consulting services by \$120,000 to an amount not-to-exceed \$720,000 (Agenda Item 8-3).

Director Lune moved, seconded by Director Morris, that the Board approve the Board Item 8-3 as follows:

Chair Ortega called for a vote on the motion for Agenda Item 8-3 Option 1.

The following is a record of the vote:

Record of Vote on Item:		8-3							
Member Agency	Total Votes	Director	Present	Yes	Yes Vote	No	No Vote	Abstain	Abstain Vote
Anaheim	6038	Faessel							
Beverly Hills	4493	Pressman	x	x	4493				
Burbank	3175	Ramos	x	x	3175				
Calleguas Municipal Water District	13073	McMillan							
Central Basin Municipal Water District	19324	Garza							
		Crawford	x	x	19324				
			Subtotal:		19324				
Compton	641	McCoy	x	x	641				
Eastern Municipal Water District	12060	Armstrong	x	x	12060				
Foothill Municipal Water District	2409	Bryant	x	x	2409				
Fullerton	2561	Jung	x	x	2561				
Glendale	3985	Kassakhian	x	x	3985				
Inland Empire Utilities Agency	16030	Camacho	x	x	16030				
Las Virgenes	3090	Lewitt							
Long Beach	6558	Cordero	x	x	6558				
Los Angeles	80172	Sutley	x	x	16034				
		Petersen	x	x	16034				
		Quinn	x	x	16034				
		Luna	x	x	16034				
		Douglas	x	x	16034				
			Subtotal:		80172				
Municipal Water Dist. of Orange County	64634	Ackerman	x	x	21545				
		Seckel	x	x	21545				
		Dick							
		Erdman	x	x	21545				
			Subtotal:		64634				
Pasadena	3864	Kurtz	x	x	3864				
San Diego County Water Authority	67201	Fong-Sakai							
		Goldberg	x	x	33601				
		Miller	x	x	33601				
		Smith							
			Subtotal:		67201				
San Fernando	260	Ortega	x	x	260				
San Marino	800	Morris	x	x	800				
Santa Ana	3431	Phan							
Santa Monica	4861	Abdo	x	x	4861				
Three Valleys Municipal Water District	8634	De Jesus	x	x	8634				
Torrance	3590	Lefevre							
Upper San Gabriel Valley Mun. Wat. Dist.	13418	Fellow	x	x	13418				
West Basin Municipal Water District	27064	Alvarez	x	x	27064				
		Gray							
			Subtotal:		27064				
Western Municipal Water District	14775	Dennstedt	x	x	14775				
<b>Total</b>	<b>386141</b>				<b>356919</b>				
<b>Present and not voting</b>									
<b>Absent</b>	<b>29222</b>								

The motion to approve the Board Item 8-3 (**M.I. No. 53720**) passed by a vote of 356,919 ayes; 0 noes; 0 abstain; 0 not voting; and 29,222 absent.

**53721** Authorize the execution of an amendment to an existing lease with Nish Noroian Farms to increase the size of the leased premises from 759 acres to 1,760 acres of Metropolitan's fee-owned land in the Palo Verde Valley in Riverside County, California, and to make necessary associated changes (Agenda Item 8-4).

Director Goldberg moved, seconded by Director Camacho, that the Board approve the Board Item 8-4 as follows:

Chair Ortega called for a vote on the motion for Agenda Item 8-4 Option 1.

The following is a record of the vote:

Record of Vote on Item:		8-4							
Member Agency	Total Votes	Director	Present	Yes	Yes Vote	No	No Vote	Abstain	Abstain Vote
Anaheim	6038	Faessel							
Beverly Hills	4493	Pressman	x	x	4493				
Burbank	3175	Ramos	x	x	3175				
Calleguas Municipal Water District	13073	McMillan							
Central Basin Municipal Water District	19324	Garza							
		Crawford	x	x	19324				
			Subtotal:		19324				
Compton	641	McCoy	x	x	641				
Eastern Municipal Water District	12060	Armstrong	x	x	12060				
Foothill Municipal Water District	2409	Bryant	x	x	2409				
Fullerton	2561	Jung	x	x	2561				
Glendale	3985	Kassakhian	x	x	3985				
Inland Empire Utilities Agency	16030	Camacho	x	x	16030				
Las Virgenes	3090	Lewitt							
Long Beach	6558	Cordero	x	x	6558				
Los Angeles	80172	Sutley	x	x	16034				
		Petersen	x	x	16034				
		Quinn	x	x	16034				
		Luna	x	x	16034				
		Douglas	x	x	16034				
			Subtotal:		80172				
Municipal Water Dist. of Orange County	64634	Ackerman	x	x	21545				
		Seckel	x	x	21545				
		Dick							
		Erdman	x	x	21545				
			Subtotal:		64634				
Pasadena	3864	Kurtz	x	x	3864				
San Diego County Water Authority	67201	Fong-Sakai							
		Goldberg	x	x	33601				
		Miller	x	x	33601				
		Smith							
			Subtotal:		67201				
San Fernando	260	Ortega	x	x	260				
San Marino	800	Morris	x	x	800				
Santa Ana	3431	Phan							
Santa Monica	4861	Abdo	x	x	4861				
Three Valleys Municipal Water District	8634	De Jesus	x	x	8634				
Torrance	3590	Lefevre							
Upper San Gabriel Valley Mun. Wat.	13418	Fellow	x	x	13418				
West Basin Municipal Water District	27064	Alvarez	x	x	27064				
		Gray							
			Subtotal:		27064				
Western Municipal Water District	14775	Dennstedt	x	x	14775				
<b>Total</b>	<b>386141</b>				<b>356919</b>				
<b>Present and not voting</b>									
<b>Absent</b>	<b>29222</b>								

The motion to approve the Board Item 8-4 (**M.I. No. 53721**) passed by a vote of 356,919 ayes; 0 noes; 0 abstain; 0 not voting; and 29,222 absent.

**53722** Chair Ortega asked if there were questions or need for discussion on Board Information Items 9-1, 9-2, or 9-3. No requests were made.

**53723** Chair Ortega asked if there were any Follow-Up Items. Chair Ortega thanked Committee Chair McCoy and Committee Vice Chair Cordero for the discussion at the Ethics Organization and Personnel Committee regarding the Spanish language inspection trip that took place in May 2024. In addition, NAACP members will be given a tour of the State Water Project or Colorado River Facilities.

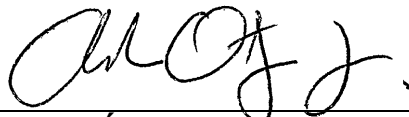
**53724** Chair Ortega asked if there were any Future Agenda Items. There were none.

**53725** There being no objection, the meeting was adjourned at 3:18 p.m.



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**RICKITA HUDSON**  
**BOARD EXECUTIVE SECRETARY**



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**ADÁN ORTEGA, JR.**  
**CHAIR OF THE BOARD**



- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

8/20/2024 Board Meeting

7-1

## Subject

Authorize on-call agreements with AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc., in amounts not to exceed \$1.5 million each, for a maximum of three years for value engineering and related technical services in support of Capital Investment Plan projects; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

Metropolitan conducts value engineering (VE) workshops to improve the overall outcome of projects delivered through the Capital Investment Plan (CIP). These workshops apply industry-accepted best practices to ensure that projects are developed and implemented in a manner that balances functionality and life-cycle costs. The workshops are typically facilitated by certified value specialists as designated by SAVE International, and the consultant typically brings specialized subject-matter experts into the assessment process on an as-needed basis. This action authorizes four professional services agreements to provide VE, constructability reviews, workshop facilitation, and other technical services in support of CIP projects. The four new agreements will be the on-call type, an approach which is typically used for shorter-term, well-defined assignments, and those which require the use of specialized technical expertise. The recommended maximum amounts of these agreements are \$1.5 million each for AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc. The maximum duration of these on-call agreements will be three years.

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

Authorize on-call agreements with AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc., in amounts not to exceed \$1.5 million each, for a maximum period of three years for value engineering and related technical services.

**Fiscal Impact:** None; funding for the work to be assigned to the consultants under on-call agreements and performed this biennium was authorized with the biennial CIP budget. Future costs will be accounted for and appropriated under subsequent biennial budgets. In addition, no work is guaranteed to the consultants under these agreements.

**Business Analysis:** Approval will allow staff to continue to conduct value engineering workshops in support of projects within Metropolitan's CIP.

#### Option #2

Do not authorize the consulting agreements at this time.

**Fiscal Impact:** None

**Business Analysis:** Under this option, Metropolitan would have limited access to specialized VE consultants to conduct these workshops, which would diminish the VE program and its benefits.

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## Alternatives Considered

Alternatives considered for delivering VE services include the use of Metropolitan staff to conduct this work. In-house staff has expert knowledge of Metropolitan projects; however, Metropolitan staff does not have sufficient staff with proficiency in the systematic method of implementing VE services. In addition, Metropolitan's in-house engineering staff is fully occupied handling the baseload of work on capital projects. As the primary need for these agreements is to provide VE study facilitation services, staff recommends the continued use of professional services agreements to deliver these services. This approach will allow for the continued delivery of VE and related workshops by consultant staff.

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## Applicable Policy

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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## Related Board Action(s)/Future Action(s)

By Minute Item 53598, dated April 9, 2024, the Board appropriated a total of \$636.48 million for projects identified in the CIP for Fiscal Year 2024/2025 and 2025/2026.

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## California Environmental Quality Act (CEQA)

### CEQA determination for Option #1:

The proposed actions are not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment. (State CEQA Guidelines Section 15378(b)(4))

Metropolitan, as the Lead Agency, will be responsible for complying with the requirements of CEQA and the State CEQA Guidelines for each project that meets the CIP criteria prior to final approval of that project. As preliminary work and design on CIP projects proceeds, Metropolitan staff will conduct any necessary CEQA review and prepare the appropriate environmental documentation for consideration and approval by the Board or the General Manager, as appropriate.

### CEQA determination for Option #2:

None required

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## Details and Background

### Background

Metropolitan initiated a VE program in 1994 to review capital projects and identify opportunities and alternatives to enhance project performance, optimize the use of funding for CIP projects, and demonstrate responsible use of public funds. The objective of the VE program is to improve the overall value of CIP projects by applying an industry-accepted assessment methodology to examine a project's function, design, equipment, and material selections. This comprehensive assessment is conducted at multiple stages in a project's life cycle. Utilizing this process, staff works to ensure that capital projects deliver the required functionality at a cost consistent with its performance, quality, reliability, and safety objectives. Metropolitan's standard approach is to perform a VE workshop early in project development in accordance with Metropolitan-established guidelines. A second workshop, referred to as a constructability review, is performed prior to advertising a project for construction bids and focuses on reviewing the project's construction documents to ensure buildability and that work requirements are clear for construction bidding.



SAVE International is a professional society devoted to the advancement of the Value Methodology and operates a program to certify practitioners in the application of VE. Metropolitan uses SAVE International-certified VE consultants for a variety of services. Primarily, staff from these firms facilitate project-specific multi-day VE and constructability review workshops with the project teams. The specialized expertise provided by these firms may also facilitate issue-specific project optimization sessions. Specific examples of recent VE-related technical services include: (1) a risk assessment workshop for the Gene Wash Dam Discharge Valve Test; and (2) a technical analysis workshop for the La Verne Water Quality Laboratory building. Past experience has demonstrated the value of these types of studies to ensure the efficient execution of the CIP.

Metropolitan does not have sufficient staff to conduct the VE and constructability reviews needed to support the current CIP. Consequently, consultants are used to deliver these services and augment in-house staff technical capabilities. This approach ensures that projects within the CIP continue to be effectively evaluated during their design development process. The supplemental technical services are typically provided through on-call professional services agreements which provide certified workshop facilitators as well as subject-matter experts to provide a third-party, independent perspective of a project's configuration and design approach.

In December 2019, the General Manager authorized three on-call agreements for five-year terms, each with a maximum amount payable of \$240,000 per agreement year, to provide VE services. In 2022, Metropolitan's Board authorized an annual increase of \$200,000 for an updated annual not-to-exceed total of \$440,000 for each of these on-call agreements for the remainder of their agreement terms. The terms of all three current on-call VE agreements end in November 2024.

Staff reviewed the amount spent on VE consultants in the past, and analyzed how much capacity for these services will be needed to support the CIP over the next three years. Based on this analysis and the number of agreements included in this request, staff recommends a maximum amount of \$1.5 million for each of the four agreements.

**Agreements for Value Engineering Services (AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc.)**

Request for Qualifications No. 1370 was issued in April 2024 to establish a pool of qualified firms to provide VE services by SAVE International-certified VE practitioners and other related specialized technical services. Following the staff evaluation, the four firms that submitted Statements of Qualifications were determined to be qualified. New agreements are recommended for all four firms: AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc.

Services to be performed by the four firms include: (1) facilitation of multi-day project-specific VE constructability review workshops; (2) guiding technical evaluations of project-specific proposed alternatives; (3) development of comprehensive workshop deliverables including detailed reports; and (4) other meeting facilitation to support capital improvement projects which may include risk assessments, cost modeling, or evaluation of life-cycle costs.

**Summary**

This action authorizes on-call agreements with AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc. in amounts not to exceed \$1.5 million each. The maximum duration of each agreement will be three years.

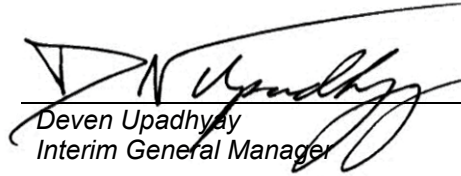
Funds for the work assigned to the consultants under on-call agreements are available within Metropolitan's CIP. No work is guaranteed to the consultants under these agreements. For each of the agreements, Metropolitan has established a Small Business Enterprise participation level of 25 percent.



7/23/2024

Mai M. Hattar  
Interim Manager/Chief Engineer  
Engineering Services

Date



7/24/2024

Deven Upadhyay  
Interim General Manager

Date

Ref# es12697302



Engineering, Operations, & Technology Committee

# Value Engineering On-Call Agreements

Item 7-1

August 19, 2024

## Item 7-1

### Value Engineering On-Call Agreements

#### Subject

Authorize on-call agreements with AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc., in amounts not to exceed \$1.5 million each, for a maximum period of three years for value engineering and related technical services

#### Purpose

Contracting with multiple firms provides flexibility and an efficient means for Metropolitan to obtain needed value engineering and related technical services to support Capital Investment Plan (CIP) projects

#### Recommendation and Fiscal Impact

Authorize agreements for value engineering and related technical services in support of the CIP

Fiscal Impact – None

#### Budgeted

## Value Engineering On-call Agreements

# Value Engineering Program

- History
  - VE Program has been in place for 30 years
  - Hundreds of CIP projects have been examined
- Objectives
  - Enhance overall project performance
  - Optimize use of funding for CIP projects
  - Demonstrate responsible use of public funds
- Workshop Process
  - Apply Value Methodology to examine essential functions of a project relative to costs
  - Focus on achieving required functions at the best possible capital and life cycle cost

## Value Engineering On-call Agreements

# Professional Services Agreements

- Value Engineering Services On-call Agreements
  - Used to provide value engineering, constructability review, risk assessment and related workshops
  - Applied to CIP projects with estimated construction cost  $\geq$  \$5 M
  - On-call agreements typically used for short-term assignments and urgent projects
  - Allows for flexibility and expedited project delivery
  - Work is not guaranteed to consultants



# Value Engineering On-call Agreements

## Scope of Work

- Workshop facilitation
  - Value engineering
  - Constructability reviews
  - Risk assessments
  - Technical evaluations
- Subject matter experts
  - Construction methodologies
  - Cost estimator
  - Specific engineering discipline expertise



Virtual Workshop for  
Foothill Power Plant  
(January 2024)



Site Visit at  
Diemer Water Treatment Plant  
(June 2024)



## Value Engineering On-call Agreements

# Request for Qualification (RFQ) 1370

- Issued April 2024 to establish pool of qualified firms
  - 4 firms responded
  - All firms were determined to be qualified
  - Services to be provided include value engineering and related services
  - SBE participation level – 25%
  - All 4 firms recommended for agreements

## Value Engineering On-call Agreements

### Alternatives Considered

- Use Metropolitan staff
  - Insufficient staff proficient in providing value engineering services
  - Staff fully occupied supporting CIP projects
- Selected Alternative – Utilize On-call Agreements
  - Allows timely completion of work
  - Provides third-party perspective

# Board Options

- Option #1

Authorize on-call agreements with AECOM, RHA LLC, Strategic Value Solutions Inc., and Value Management Strategies Inc., in amounts not to exceed \$1.5 million each, for a maximum period of three years for value engineering and related technical services.

- Option #2

Do not authorize the consulting agreements at this time.

# Staff Recommendation

- Option #1





- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

8/20/2024 Board Meeting

7-2

## Subject

Authorize an agreement with Carollo Engineers Inc. in an amount not to exceed \$1.3 million for owner's advisor services to assist with progressive design-build project delivery on the Lake Mathews Pressure Control Structure and Electrical System Upgrades; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

Lake Mathews is the terminus of the Colorado River Aqueduct (CRA). The Lake Mathews facilities, including the electrical distribution system and forebay discharge facility, were constructed in the 1930s. Water is released from the lake through ten fixed-cone valves into a small forebay discharge facility which supplies feeders that travel to both the F.E. Weymouth Water Treatment Plant and the Robert B. Diemer Water Treatment Plant. All the key structures and a majority of the associated equipment date back to the original construction of the facility. The forebay discharge and outlet structures require significant rehabilitation, and the fixed-cone valves need replacement.

As the existing facility is a single point of failure for deliveries of CRA water to both the Upper and Lower Feeders, staff recommends that a new bypass and pressure control structure (PCS) be constructed to replace the existing structure and eliminate this system vulnerability. Additionally, the aging electrical distribution system is undersized for the facility's current needs and requires upgrading to reliably meet power demands and provide system redundancy. Collectively, these improvements will ensure overall system reliability and resiliency of the Lake Mathews facilities.

This action authorizes an agreement with Carollo Engineers Inc. to serve as the owner's advisor for the development of the Lake Mathews PCS and Electrical System Upgrades project utilizing the progressive design-build (PDB) delivery approach. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the List of Subconsultants, and **Attachment 3** for the Location Map.

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

Authorize an agreement with Carollo Engineers Inc. for a not-to-exceed amount of \$1.3 million to perform owner's advisor services for progressive design-build delivery of the Lake Mathews Pressure Control Structure and Electrical System Upgrades.

**Fiscal Impact:** \$2.8 million in capital funds, which will be incurred in the current biennium and have been previously authorized.

**Business Analysis:** This option will replace aging infrastructure and enhance the reliability of water deliveries from Lake Mathews to the Weymouth and Diemer plants.

**Option #2**

Do not authorize the agreement at this time.

**Fiscal Impact:** None

**Business Analysis:** This option would forego an opportunity to reduce the risk of unplanned electrical outages and interruption of water deliveries from Lake Mathews in a timely manner. This option could lead to higher repair costs, more extensive repairs, and unplanned shutdowns for repairs. Under this option, staff would continue to pursue the two projects separately utilizing a traditional design-bid-build delivery method.

**Alternatives Considered**

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Alternatives considered for completing the conceptual design activities and procurement document planning included assessing the availability and capability of in-house Metropolitan staff to conduct this work.

Metropolitan's staffing strategy for utilizing consultants and in-house Metropolitan staff has been: (1) to assess current work assignments for in-house staff to determine the potential availability of staff to conduct this work; and (2) utilize consultants for long-term rehabilitation projects when resource needs exceed available in-house staffing or require specialized technical expertise.

After assessing the current workload for in-house staff and considering the complexity and magnitude of this project, staff recommends utilizing the services of an owner's advisor to assist with the development of the project's design-build procurement documents. This approach will allow for the completion of not only this project but also other budgeted capital projects within their current schedules and ensure that the work is conducted in the most efficient manner possible.

**Applicable Policy**

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Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

Metropolitan Water District Administrative Code Section 8148: Alternative Project Delivery

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

**Related Board Action(s)/Future Action(s)**

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By Minute Item 49672, dated February 11, 2014, the Board authorized preliminary design phase activities to perform repairs and replace the Howell-Bunger valves at the Lake Mathews forebay facility.

By Minute Item 50756, dated March 14, 2017, the Board authorized preliminary design phase activities for upgrades to the Lake Mathews electrical system.

By Minute Item 53188, dated March 14, 2023, the Board authorized amendments to the Metropolitan Water District Administrative Code to provide for the implementation of new legislation authorizing the use of alternative project delivery methods.

By Minute Item 53598, dated April 9, 2024, the Board appropriated a total of \$636.6 million for projects identified in the Capital Investment Plan (CIP) for Fiscal Years 2024/25 and 2025/26.

**Summary of Outreach Completed**

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Metropolitan highlighted this project at a September 2023 MetWorks event during the Inland Empire Utilities Agency Inland Empire Industry Day to allow adequate time for interested design-build entities to form in advance and prepare to submit proposals.



## California Environmental Quality Act (CEQA)

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### CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities; personnel-related actions; and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5)). Furthermore, the proposed action is exempt from CEQA because it involves only feasibility or planning studies for possible future actions which the Board has not approved, adopted, or funded. (Public Resources Code Section 21080.21; State CEQA Guidelines Section 15262.) In addition, the proposed action also involves basic data collection and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource. This may be strictly for information-gathering purposes, or as part of a study leading to an action, which a public agency has not yet approved, adopted, or funded. Accordingly, the proposed action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines.)

### CEQA determination for Option #2:

None required

## Details and Background

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### Background

Lake Mathews is the terminus of the CRA and delivers water into the Central Pool. The Lake Mathews facilities were initially constructed in 1938 and expanded to their current capacity in 1961. The original facilities included the main dam embankment, the lake's first outlet tower, discharge facilities, and the forebay which has its own outlet tower. In 1961, the main dam embankment was raised, and two dikes were constructed, increasing the lake's volume to its current capacity of 182,000 acre-feet.

The Lake Mathews discharge facility is used to convey water from the lake to the Upper and Lower Feeders to supply the Weymouth and Diemer plants. The facility includes the forebay, its outlet tower, and ten 32-inch-diameter Howell-Bunger fixed-cone valves that control flow from the lake into the forebay to dissipate the excess energy. The forebay is a reinforced concrete reservoir with a storage capacity of 31-acre-feet and includes a 60-foot-tall rectangular concrete outlet tower with steel slide gates.

The ten original Howell-Bunger valves have gradually deteriorated through continuous use and must be replaced. In addition, five 54-inch-diameter butterfly valves within the headworks structure and four large slide gates on the forebay outlet tower need to be refurbished or replaced. The facility's design makes it difficult to access the fixed-cone valves for maintenance or repairs while the facility is in operation. The entire discharge facility and forebay must be shut down and dewatered to perform work on the outlet slide gates. All CRA water deliveries serving the Central Pool portion of the distribution system are funneled through these 85-year-old outlet facilities. Scheduling shutdowns for routine maintenance and repairs has become challenging due to Metropolitan's heavy reliance on these facilities.

Due to the critical nature of this facility and the difficulty getting an adequate shutdown duration to perform the work, staff recommends the construction of a new bypass facility. The bypass would include a new PCS structure to replace the existing Howell-Bunger valves. The bypass and PCS would be constructed in parallel, with a short-duration shutdown to perform the final tie-in. Once completed, the bypass would provide needed system redundancy and allow for routine maintenance or rehabilitation work currently limited by the short shutdown window.

The Lake Mathews power distribution system has undergone numerous modifications and upgrades over the years. The incoming electrical service is 480-volt (V) AC, three-phase from Southern California Edison. The incoming service voltage is stepped up from 480V to 2.4 kilovolts (kV) and distributed to outlying loads through a radial network of overhead and underground cables. At each load, a unit power center with a step-down transformer converts the 2.4kV back to 480V. The loads consist of office buildings, maintenance and repair

shops, reservoir outlet structures, outlet headworks, fire pumps, dam seepage pump structures, chlorination structure, a hydroelectric power plant, and a Communication/Disaster Recovery Building, which is considered a critical facility for Metropolitan operations.

The current electrical system is at capacity and cannot support new equipment loads. The components have also reached the end of their useful life and need replacement. A significant portion of the electrical system upgrade work is located near the planned PCS structure. Since the electrical system upgrades are necessary to supply the new PCS structure, successive design-bid-build contracts with the electrical system upgrades first would be needed to avoid conflict between the two contractors. To reduce the schedule without risking conflict between the two contractors, staff recommends combining the new bypass, PCS, and electrical system upgrades into a single PDB contract.

With the passage of SB 991 in August 2022, Metropolitan was granted authority to utilize PDB delivery for projects over \$5 million. The PDB model utilizes a two-phase process. Under Phase 1, a design-build entity would be selected based on qualifications in response to a Request for Qualifications (RFQ). The selected design-build entity would then progress the design to the point where a guaranteed maximum price could be estimated. Metropolitan would negotiate the guaranteed maximum price with the selected design-build entity before entering Phase 2 for completion of design and construction. If unable to reach an agreement, Metropolitan would discontinue negotiations and select a different design-build entity for negotiations.

This project will combine the new PCS and the electrical system upgrades into a single PDB contract. Metropolitan has one existing PDB contract that is currently underway, the Sepulveda Feeder Pump Stations project. With the complexity and the anticipated sizable contract amount for this project, staff recommends utilizing the services of an owner's advisor. The owner's advisor will assist with development of the project's design-build procurement documents. Metropolitan's current contract documents are tailored to the traditional design-bid-build delivery method. Substantial revisions are needed to convert them into a more performance-based format suitable for PDB. The performance-based format will ensure the project meets Metropolitan's requirements while allowing for more collaboration, innovation, and cost-saving opportunities with the design-build entity. This action authorizes an agreement for a consultant to advise staff and provide support for the preparation of specifications and an RFQ in support of a solicitation for a competitively advertised PDB contract for the Lake Mathews PCS and Electrical System Upgrades. Staff will return to the Board at a future date for award of the Phase 1 design-build contract.

In accordance with the April 2024 action on the biennial budget for fiscal years 2024/25 and 2025/26, the General Manager will authorize staff to proceed with the action described herein, pending board authorization of the agreement described below. Based on the current CIP expenditure forecast, funds for work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2024/25 and 2025/26 (Appropriation No. 15535). This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Distribution System Program.

#### **Lake Mathews Pressure Control Structure and Electrical Upgrades – Progressive Design-Build**

This project will construct a new PCS with a bypass pipeline alongside the existing forebay. Major items include large-diameter control valves, isolation valves to allow maintenance while the facility remains in service, and control systems. The PCS will reside inside an enclosed building with HVAC, a bridge crane, and access hatches. The facility-wide electrical system upgrades include replacing the underground and overhead distribution lines; replacing the existing unit power centers and adding additional unit power centers where needed; and integrating the new electrical system with Metropolitan's supervisory control and data acquisition system.

A total of \$2.8 million is allocated for this work. Allocated funds include \$1.3 million for Carollo Engineers Inc. to provide owner's advisor services as discussed further below. Allocated funds for Metropolitan staff include \$509,000 for technical oversight, development of design and operational criteria, geotechnical support, and review of conceptual plans and specifications, \$766,000 for project management, preparation of procurement documents, environmental investigation, and other owner's costs, and \$225,000 for remaining budget.

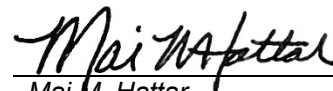
**Owner's Advisor Services (Carollo Engineers Inc.) – New Agreement**

Carollo Engineers Inc. is recommended to provide owner's advisor services for the Lake Mathews PCS and Electrical Upgrades project. Carollo Engineers Inc. was competitively selected via RFP 1364 based on the firm's expertise in design-build contracts for water conveyance and distribution projects. The planned owner's advisor services activities will include: (1) development of engineering documents for the selection of design-build contractor; (2) development of the project schedule; (3) preparation of engineering and construction estimates for the design-build contract; (4) providing plans, procedures, and schedules; and (5) preliminary geotechnical investigations.

This action authorizes a new agreement with Carollo Engineers Inc. with a not-to-exceed amount of \$1.3 million for owner's advisor services during the first phase of PDB for the Lake Mathews PCS and Electrical System Upgrades project. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 10 percent. Carollo Engineers Inc. has agreed to meet this level of participation. See **Attachment 2** for a listing of subconsultants.

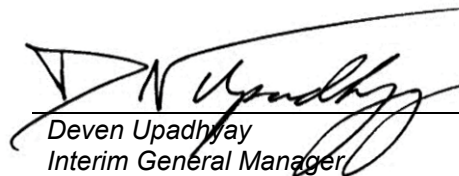
***Project Milestone***

April 2025 – Issue an RFQ for PDB services to construct the new Lake Mathews PCS and upgrades to the electrical system



Mai M. Hattar  
Interim Manager/Chief Engineer  
Engineering Services

8/6/2024

Date

Deven Upadhyay  
Interim General Manager

8/6/2024

Date**Attachment 1 – Allocation of Funds****Attachment 2 – List of Subconsultants****Attachment 3 – Location Map**

Ref# es12701039

## Allocation of Funds for Lake Mathews Pressure Control Structure and Electrical System Upgrades

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	<b>Current Board Action (Aug. 2024)</b>
Labor	
Studies & Investigations	\$ 509,000
Owner Costs (Program mgmt., envir. monitoring)	766,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	
Carollo Engineers Inc.	1,300,000
Right-of-Way	-
Contracts	
Remaining Budget	225,000
<b>Total</b>	<b>\$ 2,800,000</b>

The total amount expended for the Lake Mathews Pressure Control Structure and Electrical System Upgrades is approximately \$6.3 million. The total cost to complete this project, including funds allocated for the work described in this action and future actions, is anticipated to range from \$160 million to \$180 million.

**The Metropolitan Water District of Southern California**  
**Subconsultants for Agreement with Carollo Engineers Inc.**  
**Lake Mathews Pressure Control Structure and Electrical System Upgrades**

<b>Subconsultant and Location</b>	<b>Service Category; Specialty</b>
Schnabel Engineering Boise, ID	Mechanical
ProjectLine Technical Services Costa Mesa, CA	Electrical
Brierley Associates Denver, CO	Geotechnical





Engineering, Operations, & Technology Committee

# Lake Mathews Pressure Control Structure and Electrical Upgrades – Owner's Advisor

Item 7-2

August 19, 2024

## Item 7-2

### Lake Mathews Pressure Control Structure and Electrical Upgrades

#### Subject

Authorize an agreement with Carollo Engineers Inc. in an amount not to exceed \$1.3 million for owner's advisor services to assist with progressive design-build project delivery on the Lake Mathews Pressure Control Structure and Electrical System Upgrades

#### Purpose

Utilize progressive design-build for new pressure control and electrical facilities to replace 85-year-old equipment and enhance system resiliency

#### Recommendation and Fiscal Impact

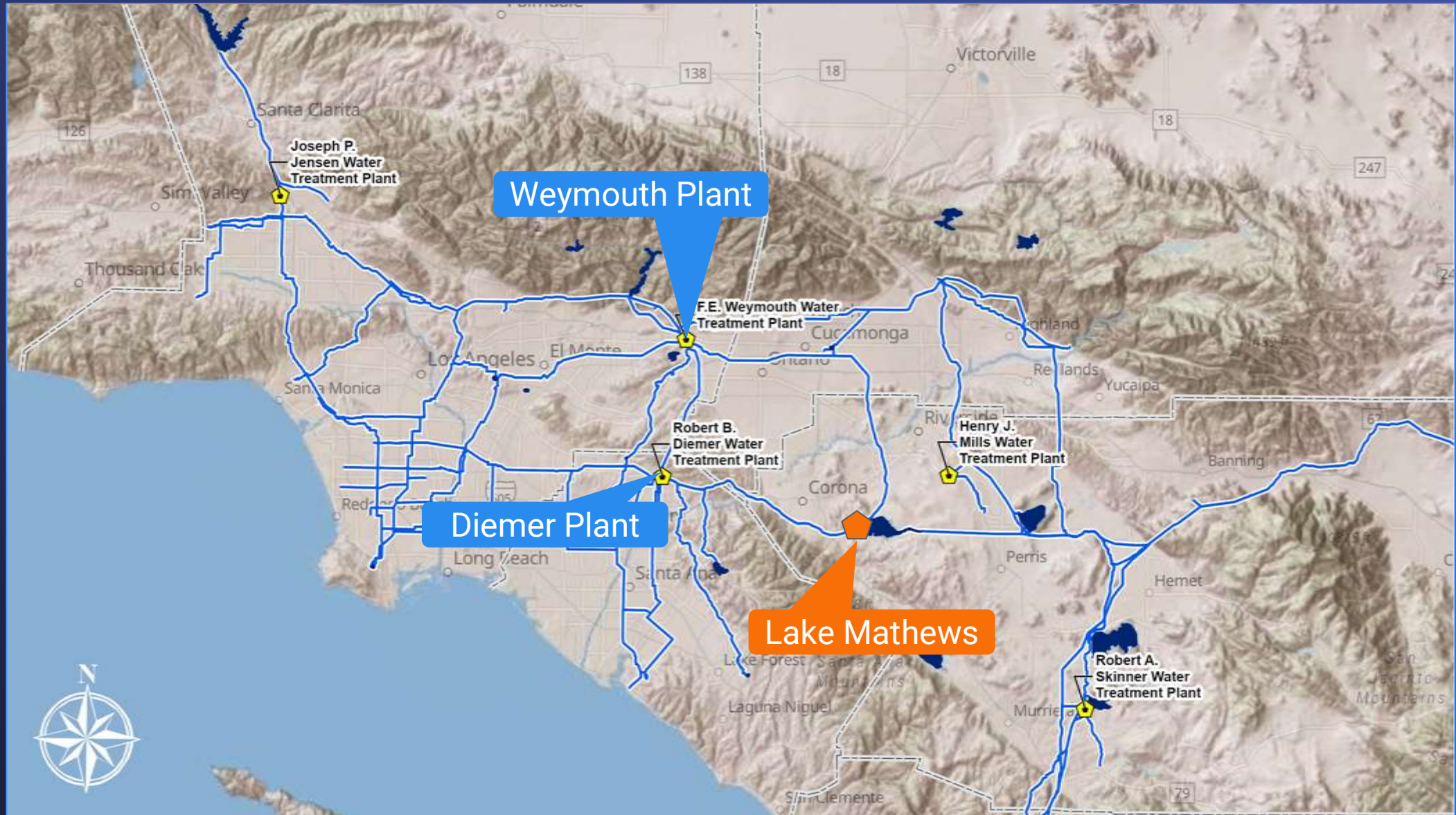
Authorize an agreement for owner's advisor services to assist with progressive design-build project delivery

Fiscal Impact of \$2.8 M

#### Budgeted

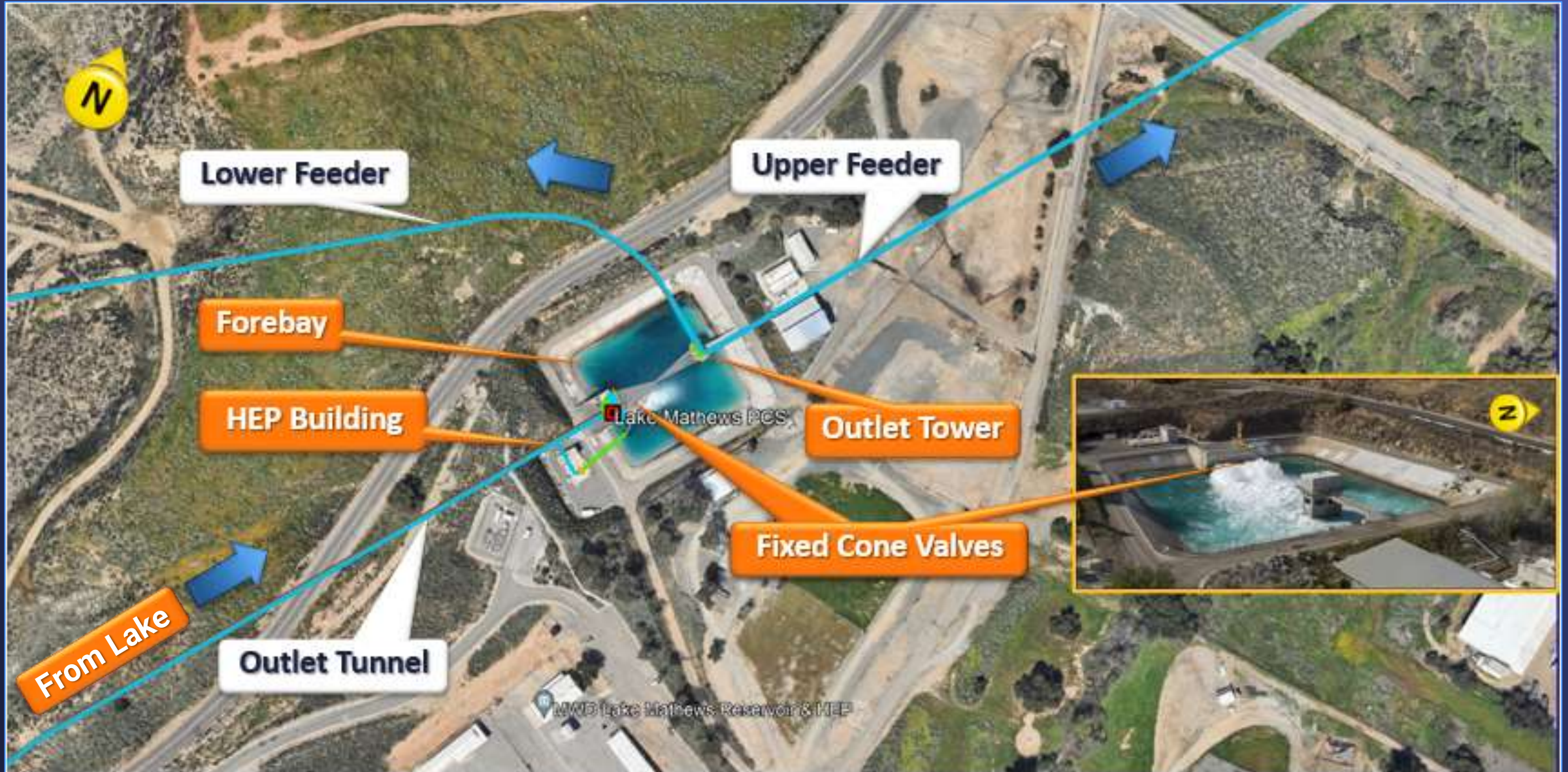


# Location Map





# Current Operation





# Background – Forebay and Headworks

- Constructed in the 1930s
  - Ten 32-inch Howell-Bunger valves
  - Five 54-inch butterfly valves
  - Four outlet tower slide gates
- Repairs required
  - Valves and slide gates deteriorated
  - Concrete cracked and spalling
  - Corroded steel reinforcement and platforms
- Unable to schedule lengthy shutdowns needed to perform rehabilitation



Working on Outlet Tower  
while Forebay in Service

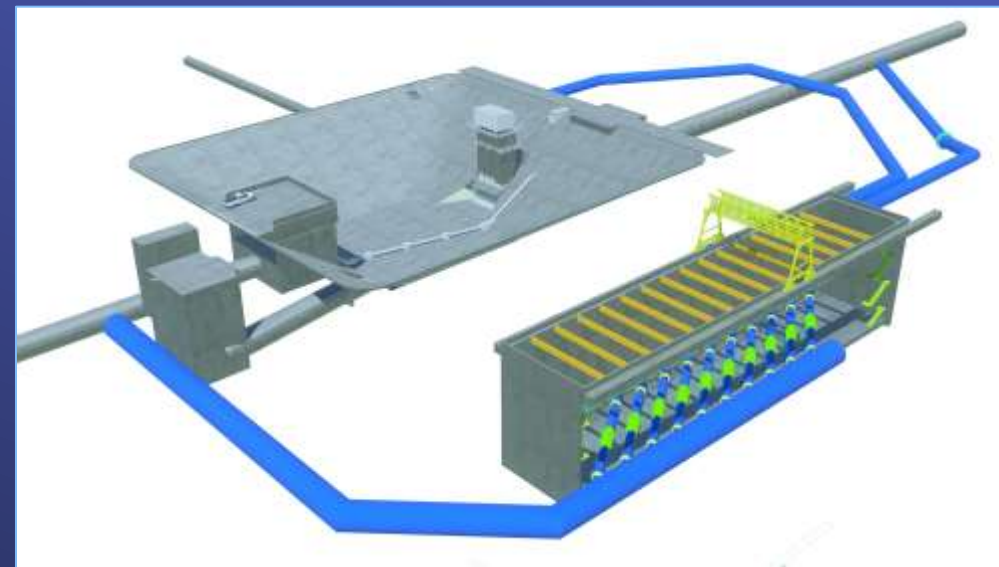
# Background – Electrical Upgrades

- Constructed in the 1930s
  - Expanded in the 1960s
  - Aging distribution system at capacity
- Upgrades required
  - Ability to serve all existing and future loads
  - Provide safer, more reliable and maintainable electrical system
  - Provide redundancy and operational flexibility
- Work located in close proximity to headworks and forebay



## Combined Projects

- Construct new Pressure Control Structure (PCS) alongside existing forebay
  - Allows shutdowns for maintenance
  - Eliminates single point of failure in critical part of system
- Combine new PCS and electrical upgrade projects
  - Avoid conflict between two separate contractors
  - Utilize alternate delivery
  - Potential early procurement could expedite project schedule



3D View of new PCS next to existing forebay



Combine new PCS and Electrical Upgrades



# Progressive Design Build

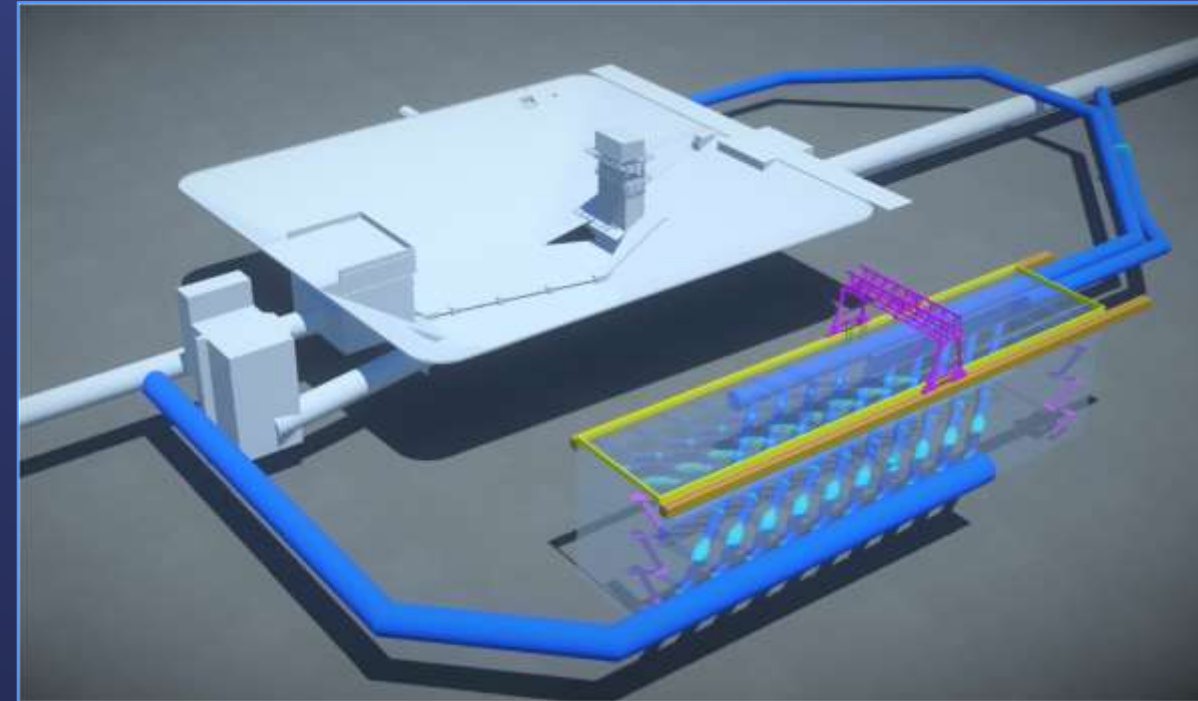
- Senate Bill 991 allows water agencies to utilize Progressive Design Build (PDB) for projects over \$5 M
- PDB model utilizes a two-phase process
  - Qualifications-based selection
  - Owner has a single contract with the Design-Build firm
  - Phase 1: Design-Builder will progress the design collaboratively with Metropolitan to about 70% complete and propose a Guaranteed Maximum Price (GMP)
  - Phase 2: Once GMP is negotiated and upon board approval, Design-Builder will complete design and begin construction

## Alternatives Considered

- Utilize in-house staff to prepare Progressive Design-Build (PDB) solicitation
  - Requires specialized expertise
  - Metropolitan has only limited PDB experience
  - Anticipate large contract with combined projects
- Selected Alternative
  - Engage consultant as Owner's Advisor
  - Similar approach successful for Sepulveda Feeder Pump Stations

# Planned Work

- New Pressure Control Facility
  - Large-diam. control valves and isolation valves
  - Bldg. with stairs, lighting, HVAC, bridge crane and access hatches
- Pipeline bypassing the existing forebay
  - Tunneling and tunnel shaft
  - Open cut and tie-in at depth
- Facility-wide Electrical Upgrades
  - Replace distribution lines
  - Replace & add unit power centers
- Use PDB Delivery Model



3D View of new PCS



Lake Mathews  
Pressure Control  
Structure and  
Electrical  
Upgrades  
Owner's Advisor  
Services

## Carollo Engineers Inc. – Agreement

- Competitively selected under RFP No. 1364
  - Expertise in design-build contracts
- Scope of Work
  - Prepare conceptual design report
  - Procurement planning and document support
  - Develop cost estimates
  - Provide constructability analysis
- NTE amount: \$1.3 million
- SBE participation level: 10%

Lake Mathews  
Pressure Control  
Structure and  
Electrical  
Upgrades  
Owner's Advisor  
Services

## Metropolitan Scope of Work

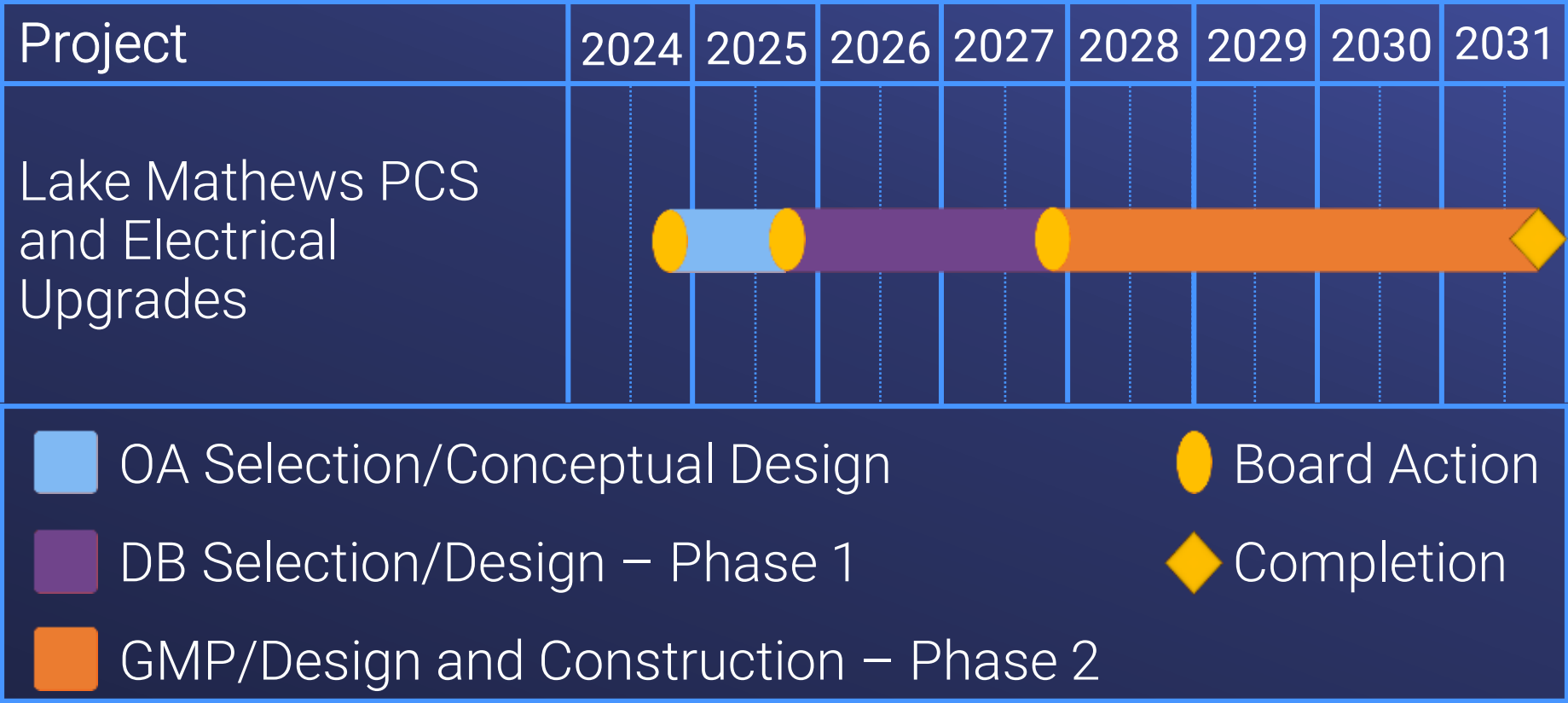
- Develop design and operational criteria
- Prepare procurement documents
- Provide technical oversight
- Environmental analysis
- Conduct project management

# Allocation of Funds

## Lake Mathews Pressure Control Structure & Electrical Upgrades

Metropolitan Labor	
Studies & Investigations	\$ 509,000
Owner Costs (Proj. Mgmt. & Envir. Support)	766,000
Professional/Technical Services	
Carollo Engineers Inc.	1,300,000
Remaining Budget	225,000
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Total	\$ 2,800,000

# Project Schedule



# Board Options

- Option #1

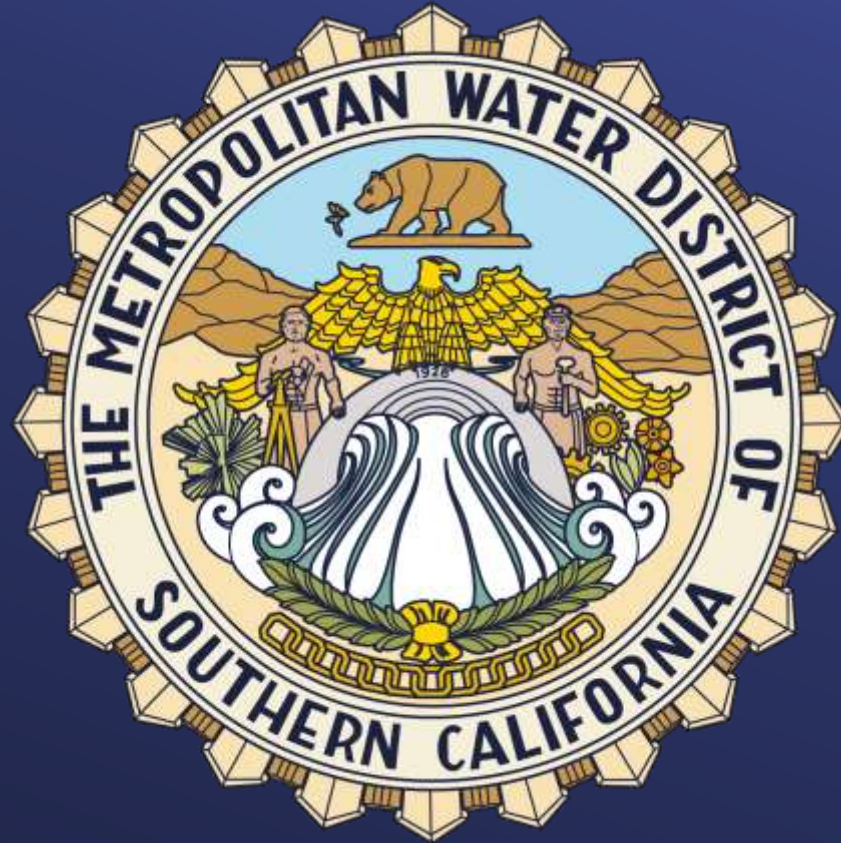
Authorize an agreement with Carollo Engineers Inc. for a not-to-exceed amount of \$1.3 million to perform owner's advisor services for progressive design-build delivery of the Lake Mathews Pressure Control Structure and Electrical System Upgrades.

- Option #2

Do not authorize the agreement at this time.

# Staff Recommendation

- Option #1







- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

8/20/2024 Board Meeting

7-3

## Subject

Authorize an increase of \$840,000 in change order authority to an existing contract with Steve P. Rados for the installation of an isolation valve for the Wadsworth Pump Plant Bypass Pipeline; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (This action is part of a series of projects that are being undertaken to improve the supply reliability for State Water Project dependent member agencies)

## Executive Summary

The Wadsworth Pump Plant Bypass Pipeline project is one of four projects to allow the delivery of water from Diamond Valley Lake (DVL) to the Rialto Pipeline service area. Construction of the Wadsworth Pumping Plant Bypass Pipeline was planned to be implemented in two stages. Under Stage 1, the contractor would install an approximately 600-foot-long, 96-inch-diameter steel pipeline and an isolation valve structure. Under Stage 2, an 84-inch diameter butterfly valve would be installed to improve operational flexibility. In January 2023, the Board awarded a contract to Steve P. Rados for construction of the Stage 1 work.

Coordination with the other Rialto Pipeline service area contracts has created an opportunity to add the Stage 2 work to the existing contract. Utilizing the existing contract to perform this work eliminates an additional shutdown and reduces both shutdown-related and contract-administration costs. Other related work to be performed includes procurement and installation of electrical components for operation of the valve, modifications to the gate at the Wadsworth facility to allow passage of the valve to the project site, and installation of anodes within the Eastside Pipeline to minimize corrosion that was encountered when the pipeline was taken out of service for the tie-in work. This action authorizes increasing the General Manager's authority to execute a change order to an existing contract. See **Attachment 1** for the Allocation of Funds and **Attachment 2** for the Location Map.

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

Authorize an increase of \$840,000 in change order authority for a new maximum change order authority of \$1,581,025 to an existing contract with Steve P. Rados for the installation of an isolation valve at the Wadsworth Pumping Plant Bypass Pipeline.

**Fiscal Impact:** Expenditure of \$1,900,000 in capital funds. All costs will be incurred in the current biennium and have been previously authorized.

**Business Analysis:** This option will reduce overall costs and enhance delivery reliability to member agencies.

#### Option #2

Do not authorize the increase in change order authority at this time.

**Fiscal Impact:** None



**Business Analysis:** Under this option, installation of the isolation valve would be performed under a separate contract. This option would likely result in higher project costs and require an additional facility shutdown.

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### **Alternatives Considered**

In May 2024, while the contractor was interconnecting the Wadsworth Pump Plant Bypass to the Eastside Pipeline, staff discovered cracking, disbanding, and blistering lining damage of a 1,100-foot reach of the 12-foot-diameter Eastside Pipeline. The Eastside Pipeline was constructed in 1997, is eight miles long, and is the most southerly reach of the Inland Feeder. An inspection revealed that the 30-year-old epoxy lining, adjacent to the Wadsworth Pump Plant, is nearing the end of its service life. However, the steel pipe segment is only experiencing light rust at present. Staff considered amending the Capital Investment Plan (CIP) to include the lining rehabilitation as a new unplanned project and adding the lining rehabilitation to the existing contract to expeditiously complete the work in a cost-effective manner.

However, staff selected to defer the Eastside Pipeline lining rehabilitation to the next biennium when the project can be implemented as a planned project. The selected option considers the relative priority of the lining work versus the projects already planned for the current biennium, the cost of lining rehabilitation (approximately \$2 million), and the urgency of the lining work. In the interim, staff will include the installation of approximately 60 sacrificial anodes in the subject change order to protect the Eastside Pipeline from corrosion until the lining can be rehabilitated. The cost of each magnesium anode is approximately \$500.

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### **Applicable Policy**

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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### **Related Board Action(s)/Future Action(s)**

By Minute Item 52938, dated August 16, 2022, the Board awarded a \$5,647,405 contract to Sojitz Machinery Corporation of America to furnish three 84-inch diameter butterfly valves to improve the water supply reliability of the Rialto Pipeline.

By Minute Item 53095, dated January 10, 2023, the Board awarded a total of \$14,820,500 contract to Steve P. Rados Inc. to construct a bypass pipeline at the Wadsworth Pumping Plant as part of water supply reliability improvements in the Rialto Pipeline service area.

By Minute Item 53598, dated April 9, 2024, the Board appropriated a total of \$636.5 million for projects identified in the Capital Investment Plan for Fiscal Years 2024/25 and 2025/26.

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### **California Environmental Quality Act (CEQA)**

#### **CEQA determination for Option #1:**

The proposed action is exempt from CEQA (Public Resources Code Section 21080.21) because it is a project of less than one mile in length within a public street or highway or any other public right-of-way for the installation of a new pipeline or the maintenance, repair, restoration, reconditioning, relocation, replacement, removal, or demolition of an existing pipeline. (Public Resources Code Section 21080.21.) The proposed action is exempt from CEQA because it involves the operation, repair, maintenance, permitting, or minor alteration of existing public structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. (State CEQA Guidelines Section 15301.) The proposed action is exempt from CEQA because it consists of replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. (State CEQA Guidelines Section 15302.)

**CEQA determination for Option #2:**

Not applicable

**Details and Background**

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**Background**

The Rialto Pipeline, constructed in 1972, is approximately 30 miles long with a diameter ranging from 96 inches to 144 inches in diameter. It conveys untreated water from the Department of Water Resources' Lake Silverwood to Metropolitan's Live Oak Reservoir and ultimately into the F.E. Weymouth Water Treatment Plant in La Verne.

Metropolitan's DVL provides emergency storage in the event of a major earthquake, carryover storage as a reserve for drought conditions, and seasonal storage to meet annual member agency demands. DVL is Metropolitan's largest reservoir, with a maximum storage capacity of 810,000 acre-feet. Currently, the Rialto Pipeline cannot access the water stored in DVL due to infrastructure and hydraulic limitations.

In December 2021, the Board authorized four projects (the Wadsworth Pumping Plant Bypass Pipeline, the Inland Feeder/Rialto Pipeline Intertie, the Inland Feeder Badlands Tunnel Surge Protection Facility, and the Inland Feeder/Foothill Pump Station) to improve water supply reliability in the Rialto Pipeline service area. These incremental infrastructure improvements will greatly increase operational flexibility and enhance the ability to move water from DVL, and potentially the Colorado River Aqueduct, into the Rialto Pipeline. Completion of these projects will significantly reduce the dependency of member agencies on State Water Project (SWP) supplies.

The Wadsworth Pumping Plant Bypass Pipeline improves Metropolitan's ability to deliver flows north of the Wadsworth Pumping Plant. Currently, water can be conveyed from DVL by gravity to the Henry J. Mills Water Treatment Plant through the Inland Feeder. The Wadsworth Pumping Plant can also be used to pump water from the DVL forebay into the Inland Feeder toward the Rialto Feeder area, which is at a much higher elevation than the Mills plant. Currently, once the forebay is emptied, pumping to the Inland Feeder must stop so that the forebay can be refilled with DVL water. The bypass pipeline allows the forebay to be filled continuously from DVL without disrupting the pumping operation.

In August 2022, the Board awarded a procurement contract for three 84-inch diameter butterfly valves to be installed as part of water supply reliability improvements in the Rialto Pipeline service area. Moving forward with valve procurement early allows time for the long fabrication and delivery cycle associated with these large valves. One of these valves is planned to be installed at the Wadsworth Pumping Plant Bypass Pipeline.

Construction of the Wadsworth Pumping Plant Bypass Pipeline was then planned to be implemented in two stages. Under Stage 1, the contractor would install an approximately 600-foot-long, 96-inch-diameter steel pipeline with an isolation valve structure. Under Stage 2, one 84-inch diameter butterfly valve would be installed within the valve structure to improve operational flexibility. Due to the long lead time to procure the valve, Metropolitan had planned the Stage 2 contract and shutdown to install the valve. In January 2023, the Board awarded a contract to Steve P. Rados for construction of the Wadsworth Pumping Plant Bypass Pipeline (Stage 1). Stage 1 construction is approximately 83 percent complete. Although initially planned to be completed by July 2024, the contractor is experiencing delays in procuring long-lead-time electrical equipment. The revised completion date is now July 2025. Additionally, the 84-inch valve was delivered to Metropolitan in July 2024 and is now available for installation.

With the Stage 1 contractor currently mobilized at the site and idled by procurement delays, staff decided to negotiate a favorable price for Stage 2 work as a change order under the existing contract. The Stage 2 work to be completed under the change order is similar in nature and scope to the Stage 1 work that was previously competitively bid. Adding the valve installation by change order to the existing contract also eliminates an additional shutdown and the costs for preparing, advertising, and administering a second contract, as well as additional contractor mobilization. The valve would be installed during the planned February 2025 shutdown for the Inland Feeder/Rialto Pipeline Intertie.

Metropolitan's Administrative Code authorizes the General Manager to execute change orders on construction contracts in an aggregate amount not to exceed five percent of the initial amount of the contract or \$250,000, whichever is greater. If changes occur on a construction contract that will exceed this total, additional authorization from Metropolitan's Board is required.

In accordance with the April 2024 action on the biennial budget for fiscal years 2024/25 and 2025/26, the General Manager will authorize staff to proceed with the additional work at the Wadsworth Pump Plant Bypass, pending approval of the increased contract change order authority described below. Based on the current CIP expenditure forecast, funds for the work to be performed pursuant to the subject contracts during the current biennium are available within the CIP Appropriation for fiscal years 2024/25 and 2025/26 (Appropriation No. 15535). This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Drought Mitigation – SWP Dependent Areas Program.

***Wadsworth Pump Plant Bypass Pipeline– Increase in Change Order Authority (Contract 2020)***

The recommended work to be added to the contract includes the installation of a Metropolitan-furnished 84-inch diameter isolation valve, testing, and commissioning. At the entrance to the Wadsworth Pump Plant facility, the contractor will need to relocate the operator and card reader from the automated security gate from the center island to the side of the gate to allow entry of the 84-inch diameter butterfly valve. A programmable logic controller will be supplied and installed by the contractor to control valve operations. Finally, as mentioned above in the Alternatives Considered section, anodes will be installed inside the Eastside Pipeline to protect the steel pipe from corrosion.

Per Metropolitan's Administrative Code, the General Manager has the authority to execute change orders for this contract in an aggregate amount not to exceed five percent of the initial amount of the contract or \$250,000, whichever is greater. For this contract, the maximum change order authority is \$741,025. To date, staff has executed change orders on this contract for \$347,000. To perform the needed extra work, staff recommends that the change order authority be increased by \$840,000 for a new maximum change order authority of \$1,581,025 for the Wadsworth Pumping Plant Bypass Pipeline contract. This action authorizes an increase in change order authority to an existing contract with Steve P. Rados for the installation of an isolation valve.

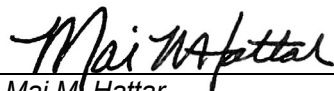
***Wadsworth Pump Plant Bypass Pipeline– Metropolitan Staff Activities***

In order to install the isolation valve, additional Metropolitan staff activities will be required including: (1) shutdown of the feeder and establishment of clearances; (2) final disinfection and water quality testing; (3) return of the pipeline to service; and (4) construction inspection and technical support during construction. A total of \$1.9 million is required for this work. The increase to the existing contract amount for the work described above is approximately \$840,000, with other budgeted funds including the following: \$429,000 for shutdown-related activities and materials by Metropolitan staff; \$373,000 for construction inspection; \$69,000 for submittals review, technical support during construction, responding to requests for information, and preparation of record drawings; \$121,000 for contract administration, and project management; and \$68,000 for remaining budget.

As described above, Metropolitan staff will perform construction management and inspection. For this change order, the performance metric goal for inspection is 11.8 percent of the total construction cost (\$3,152,000), which includes the construction contract (\$840,000), the cost of the isolation valve (\$1,883,000) and Metropolitan force construction (\$429,000).

***Project Milestone***

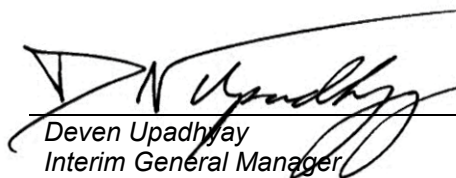
July 2025 – Completion of Construction



7/24/2024

Mai M. Hattar  
Interim Manager/Chief Engineer  
Engineering Services

Date



8/1/2024

Deven Upadhyay  
Interim General Manager

Date

**Attachment 1 – Allocation of Funds****Attachment 2 – Location Map**

Ref# es12699719

### Allocation of Funds for Wadsworth Pump Plant Bypass Pipeline Intertie

	<b>Current Board Action (Aug. 2024)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	121,000
Submittals Review & Record Drwgs.	69,000
Construction Inspection & Support	373,000
Metropolitan Force Construction	429,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Contracts	
Steve P. Rados	840,000
Remaining Budget	68,000
<b>Total</b>	<b>\$ 1,900,000</b>

The total amount expended for the Wadsworth Pumping Plant-Eastside Pipeline Intertie is approximately \$19.6 million. The estimated cost to complete this project, including funds allocated for the work described in this action and remaining construction work, is \$22.1 million.





Engineering, Operations, & Technology Committee

# Wadsworth Pump Plant Bypass Pipeline Valve Installation

Item 7-3

August 19, 2024

## Item 7-3

### Wadsworth Pump Plant Bypass Pipeline Valve Installation

#### Subject

Authorize an increase of \$840,000 in change order authority to an existing contract with Steve P. Rados for the installation of an isolation valve for the Wadsworth Pump Plant Bypass Pipeline

#### Purpose

This action is part of a series of drought-response projects that are being undertaken to improve the supply reliability for State Water Project dependent member agencies

#### Recommendation and Fiscal Impact

Metropolitan staff recommends authorizing this increase to change order authority

Fiscal Impact of \$840,000

#### Budgeted



# Location Map



# Wadsworth Pump Plant Bypass Pipeline Valve Installation

## Background

Wadsworth P.P. Bypass planned to be constructed in two stages:

- Stage 1 (Contract Awarded January 2023)
  - Install approx. 600 feet 96-inch pipe
  - Construct valve structure
- Stage 2 (Planned Future Contract)
  - Install 84-inch Metropolitan furnished butterfly valve
  - Valve expected to be long-lead item with lengthy fabrication schedule

# Wadsworth Pump Plant Bypass Pipeline



A Section of the Bypass Pipeline  
Being Installed

## Contractor Scope – Stage 1

- Contract awarded to Steve P. Rados - Jan. 2023
- Contract Amount - \$14,820,500
- Contract Scope
  - Install approx. 600 feet 96-inch pipe
  - Encase pipeline in concrete
  - Construct valve structure
  - Restore access roads & parking area
- Construction is approx. 85% complete
  - Contractor experiencing delays in procuring long-lead time electrical equipment
  - Expected completion date is July 2025



# Wadsworth Pump Plant Bypass Pipeline Valve Installation



MWD Valve Inspection

## Background – Valve Procurement

- Awarded procurement contract to Sojitz Machinery Corporation of America - Aug 2022
- Contract Amount – \$5,647,405
- Contract Scope
  - Fabricate three 84-inch butterfly valves
  - One valve will be used at Wadsworth P.P. Bypass Pipeline
- Fabrication is complete
  - Valves delivered July 2024

## Wadsworth Pump Plant Bypass Pipeline Valve Installation

### Opportunity for Beneficial Change Order

- Utilizing existing contract offers an opportunity to negotiate a favorable contract for Stage 2 work
  - Contractor is mobilized onsite
  - Work is similar in nature to Stage 1 work
  - Eliminates the need to prepare, advertise & award a second contract
  - Will allow completion of Stage 2 work one year ahead of schedule
    - Valve will be installed in Feb 2025
    - Eliminates additional shutdown in 2026

## Wadsworth Pump Plant Bypass Pipeline Valve Installation

### Change Order Authority Limits

- Change order authority determined by Admin. Code (Section 8123)
  - GM authority to execute change orders is the greater of:
    - 5% of the original contract amount
    - \$250,000
- \$741,025 for this contract

# Wadsworth Pump Plant Bypass Pipeline Valve Installation



Security Gate w/  
Center Island

## Scope of Work - Contractor

- Install 84-inch diameter isolation valve
  - Relocate the operator & card reader from the Wadsworth Pump Plant automated security gate
  - Furnish & install a programmable logic controller
  - Install anodes inside the Eastside Pipeline
- Amount of Contract - \$14,820,500
- Maximum Change Order Authority - \$741,025
- Executed Change Orders - \$347,000
- Recommended Increase - \$840,000
- New Maximum Change Order Authority - \$1,581,025

# Wadsworth Pump Plant Bypass Pipeline Valve Installation

## Scope of Work - Metropolitan

- Shutdown of the feeder & establishment of clearances
- Final disinfection & water quality testing
- Return of pipeline to service
- Construction inspection & technical support



Pipe Installation by Contractor



# Wadsworth Pump Plant Bypass Pipeline Valve Installation

## Alternatives Considered

- Staff considered adding re-lining of Eastside Pipeline to the proposed change order
  - Deterioration of a 1,100-foot reach of the Eastside Pipeline discovered while interconnecting the Wadsworth P.P. Bypass
  - 30-year-old epoxy lining is nearing the end of its service life
  - Steel pipe is experiencing light rust
- Selected Alternative – Initiate new capital project next biennium
  - Considers relative priority of lining work & urgency
  - In the interim, 60 sacrificial anodes will be installed as part of contract to limit corrosion

# Allocation of Funds

## Wadsworth Pump Plant Bypass Pipeline

Construction Support		
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$	121,000
Construction Inspection & Support		373,000
Force Construction		429,000
Submittals Review, Tech. Support, Record Dwgs.		69,000
Contracts		
Steve P. Rados		840,000
Remaining Budget		68,000
Total		\$ 1,900,000

# Project Schedule



# Board Options

- Option #1

Authorize an increase of \$840,000 in change order authority for a new maximum change order authority of \$1,581,025 to an existing contract with Steve P. Rados for the installation of an isolation valve at the Wadsworth Pumping Plant Bypass Pipeline.

- Option #2

Do not authorize the increase in change order authority at this time.

# Staff Recommendation

- Option #1





- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

8/20/2024 Board Meeting

7-4

## Subject

Adopt the Mitigated Negative Declaration for the Inland Feeder-Foothill Pump Station Intertie Project and take related CEQA actions; adopt a resolution to accept \$5 million in funding from U.S. Bureau of Reclamation's WaterSMART Drought Response Program: Drought Resiliency Projects grant for Fiscal Year 2024 to support the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie project; and authorize the General Manager to accept grant funds, if awarded; designate Metropolitan's Group Manager of Engineering Services to be the signatory to execute actions for reimbursement by U.S. Bureau of Reclamation

## Executive Summary

The Foothill Pump Station Intertie project is one of four projects currently underway to provide the ability to directly deliver water from Diamond Valley Lake (DVL) to the Rialto Pipeline and improve water supply reliability for this State Water Project-dependent area. This action adopts a resolution supporting a \$5 million grant application to the U.S. Bureau of Reclamation (USBR) for the WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, authorizes the General Manager to accept funding of up to \$5 million to be used for the project, and designates the Group Manager of Engineering Services (Group Manager) to be the signatory with USBR to execute actions related to the funds. See **Attachment 1** for the Board Resolution.

In accordance with the California Environmental Quality Act (CEQA), this action also proposes the adoption of a Mitigated Negative Declaration (MND) for the Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pump Station Intertie Project. See **Attachment 2** for the Initial Study and MND.

**Attachment 3** includes comment letters received during the public review period and Metropolitan's responses to those comments, and **Attachment 4** includes the Mitigation Monitoring and Reporting Program.

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

- Adopt the Mitigated Negative Declaration for the Inland Feeder-Foothill Pump Station Intertie Project and take related CEQA actions.
- Adopt a resolution to accept \$5 million in funding from the U.S. Bureau of Reclamation to support the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie Project.
- Designate the Group Manager of Engineering Services to be the signatory to execute actions related to the funds.
- Appropriate \$5 million in funding from the U.S. Bureau of Reclamation for use on the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie Project.

**Fiscal Impact:** Savings of approximately \$5 million in Metropolitan Capital Investment Plan (CIP) funds or allows additional CIP projects to proceed in the current biennium as a result of applying grant funds toward the project.



**Business Analysis:** This option will improve the operational reliability of water deliveries to member agencies with connections to the Rialto Pipeline. Adoption of the MND allows Metropolitan to move forward with obtaining additional project clearances and approvals.

### Option #2

Do not proceed with adoption of the MND and the use of grant funds at this time.

**Fiscal Impact:** None

**Business Analysis:** Without adoption of the MND, Metropolitan would not be able to move forward with obtaining additional project clearances and approvals. This option would also forego the opportunity to receive external funding for the project.

### Alternatives Considered

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Not applicable

### Applicable Policy

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Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11100: Environmental Matters

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

### Related Board Action(s)/Future Action(s)

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By Minute Item 52581, dated November 9, 2021, the Board adopted a resolution declaring a Regional Drought Emergency.

By Minute Item 52626, dated December 14, 2021, the Board authorized amending the current CIP to include projects to improve water supply reliability in the Rialto Pipeline service area.

By Minute Item 52937, dated August 16, 2022, the Board authorized an agreement with HDR Engineering, Inc. for a not-to-exceed amount of \$1,300,000 for final design of the Inland Feeder/Foothill Pump Station Intertie.

By Minute Item 53252, dated May 9, 2023, the Board awarded a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America to furnish two large diameter butterfly valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie project.

By Minute Item 53565, dated March 12, 2024, the Board awarded a procurement contract for a 132-inch diameter butterfly valve to be installed at the Foothill Pump Station.

### California Environmental Quality Act (CEQA)

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#### CEQA determination for Option #1:

Acting as the Lead Agency, Metropolitan conducted an Initial Study for the proposed action. The Initial Study indicated that, with the incorporation of appropriate mitigation measures, the proposed action would not have a significant impact on the environment. Accordingly, Metropolitan prepared an MND, which together with the Initial Study, was circulated for a 30-day public review period beginning on May 20, 2024. Metropolitan also prepared a program for reporting on and monitoring the changes that are required to mitigate or avoid significant environmental effects (MMRP).

**Attachment 2** includes the Initial Study and MND. **Attachment 3** contains comment letters received during the public review period and Metropolitan's responses to those comments, and **Attachment 4** contains the MMRP. These documents, as well as any other materials that constitute the record of proceedings upon which the Lead Agency decision is based, are on file at Metropolitan's headquarters located at 700 North Alameda Street, Los Angeles, CA 90012.

The Board has reviewed and considered all the materials described above. Based on the whole record before it, the Board finds that there is no substantial evidence that the proposed action will have a significant impact on the

environment, and that the MND reflects the Lead Agency's independent judgment and analysis. Therefore, the Board adopts the MND and MMRP for the proposed action. (State CEQA Guidelines Sections 15070-15075.)

### **CEQA determination for Option #2:**

None required

## **Details and Background**

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### **Background**

The Rialto Pipeline, constructed in 1972, is approximately 30 miles long with a diameter ranging from 96 to 144 inches. It conveys untreated water from California Department of Water Resources' (DWR's) Lake Silverwood to Metropolitan's Live Oak Reservoir in La Verne. Under normal conditions, the Rialto Pipeline relies on raw water deliveries from the East Branch of the State Water Project (SWP) via DWR's Devil Canyon Afterbay. Member agencies with Rialto Pipeline service connections include the Inland Empire Utilities Agency, Three Valleys Municipal Water District, and the Upper San Gabriel Valley Municipal Water District.

The Board authorized the Rialto Pipeline water supply reliability improvements in December 2021. It consists of four separate projects: Wadsworth Pumping Plant Bypass Pipeline, Inland Feeder/Rialto Pipeline Intertie, Inland Feeder – Badlands Tunnel Surge Protection, and Inland Feeder/SBVMWD Foothill Pump Station Intertie. These incremental infrastructure improvements will greatly increase operational flexibility and enhance the ability to move water from DVL, and potentially the Colorado River Aqueduct, into the Rialto Pipeline. Completion of these projects will significantly reduce the dependency of member agencies on SWP supplies.

The Inland Feeder/SBVMWD Foothill Pump Station Intertie is an important component of this four-project effort. Without this project, the Rialto Pipeline water supply reliability benefits would be limited to a series of low-volume water exchanges between Metropolitan and SBVMWD. The Foothill Pump Station is in the City of Highland and is connected to SBVMWD's Foothill Pipeline, which usually delivers water for groundwater recharge during high SWP supplies and is therefore available in times of drought. This pump station will provide the lift needed to permit the direct delivery of approximately 107 cubic feet per second from DVL to the Rialto Pipeline. Final design of the Inland Feeder/SBVMWD Foothill Pump Station Intertie is currently underway.

In November 2023, Metropolitan submitted a grant application to USBR requesting \$5 million to support the Inland Feeder/SBVMWD Foothill Pump Station project as part of water supply reliability improvements in the Rialto Pipeline service area. USBR offers funding through its WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024 to water districts in the Western United States to increase water supply reliability through investments in existing infrastructure and increased water management flexibility. The USBR Program funds up to \$5 million per project for projects that can be completed within three years and requires a 50 percent cost-share. If the grant award is \$5 million, Metropolitan would provide at least a 50 percent cost-share (\$5 million). The source of the cost-share funds are budgeted CIP funds that are planned to be expended on the project and will fulfill Metropolitan's grant matching funds requirement. The total cost of this project is estimated to be \$34 million.

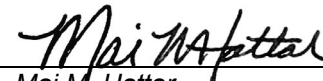
The grant process requires the Board adopt a resolution (**Attachment 1**) that authorizes or delegates legal authority to enter into the grant agreement; recognizes that the board of directors, governing body, or appropriate official has reviewed and supports the application submitted; and that Metropolitan will work with USBR to meet established deadlines. This action adopts a resolution supporting Metropolitan's activities to receive the \$5 million grant funding from USBR; authorizes the General Manager to accept the grant if awarded; and designates the Group Manager to be the signatory with USBR to execute actions related to the funds.

During preliminary design, an endangered species was encountered at the project site, which will necessitate certain environmental permits. Metropolitan must adopt a CEQA determination before applying for permits with regulatory agencies to perform the work. Adoption of the MND and MMRP will allow Metropolitan to initiate the permit process with the appropriate State and Federal agencies. Due to the presence of the endangered species, one of the permits requires formal consultation with the U.S. Fish and Wildlife Service (USFWS). Once submitted, USFWS does not have established deadlines for responding to the permit application. A similar permit for work associated with another endangered species requires several years to obtain. Fortunately, in addition to

deferring project costs, acceptance of the USBR grant also creates an opportunity to reduce the time needed for permitting. The USBR grant creates a nexus with a federal agency, which triggers certain statutory deadlines for the consultation with USFWS. With USBR as a federal partner, permitting for the project is expected to be reduced to approximately one year.

***Project Milestone***

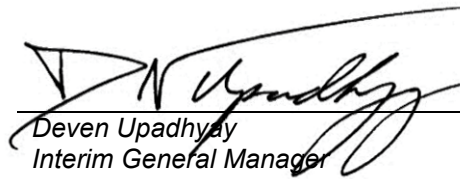
June 2025 – Board action to award construction contract for the Inland Feeder/SBVMWD Foothill Pump Station Intertie



Mai M. Hattar  
Interim Manager/Chief Engineer  
Engineering Services

7/24/2024

Date



Deven Upadhyay  
Interim General Manager

7/30/2024

Date

**Attachment 1 – Board Resolution**

**Attachment 2 – Initial Study and Mitigated Negative Declaration**

**Attachment 3 – Responses to Comments Received**

**Attachment 4 – Mitigation Monitoring and Reporting Program**

Ref# es12703902

**Resolution for WaterSMART Drought Response GRANT****RESOLUTION NO. \_\_\_\_****A RESOLUTION OF THE BOARD OF DIRECTORS OF THE METROPOLITAN  
WATER DISTRICT OF SOUTHERN CALIFORNIA ENDORSING WATERSMART  
DROUGHT RESPONSE PROGRAM:  
DROUGHT RESILIENCY PROJECTS FOR FISCAL YEAR 2024**

**WHEREAS**, the United States Bureau of Reclamation is currently offering grant opportunities through the WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024; and

**WHEREAS**, the WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024 is a cost-shared program emphasizing drought resiliency; and

**WHEREAS**, on November 7, 2023, The Metropolitan Water District of Southern California submitted a grant application for the Foothill Pump Station Intertie project, to the WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024; and

**WHEREAS**, The Metropolitan Water District of Southern California can provide the amount of matching funds of up to \$5,000,000 in cash and/or in-kind contributions specified in the grant application's funding plan; and

**WHEREAS**, if selected for a WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024, The Metropolitan Water District of Southern California will work with the United States Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement or grant.

**NOW, THEREFORE, THE METROPOLITAN WATER DISTRICT OF SOUTHERN  
CALIFORNIA BOARD OF DIRECTORS DOES HEREBY RESOLVE, ORDER AND  
DETERMINE AS FOLLOWS:**

**Section 1:** In the event grant funding is provided by the United States Bureau of Reclamation, the Board authorizes the General Manager of Metropolitan to accept the grant and that the Group Manager of the Engineering Services Group to be designated signatory to execute, authorize, and approve actions related to the fund, and delegate the Chief Financial Officer or his designee to act as a fiscal agent for any grant funding received.

**Section 2:** This resolution shall take effect immediately.

**Section 3:** The Secretary shall certify to the adoption of this resolution and henceforth and thereafter the same shall be in full force and effect.

**PASSED AND ADOPTED** this 20th day of August 2024.

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Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California

# INLAND FEEDER – FOOTHILL PUMP STATION INTERTIE PROJECT

Initial Study/Mitigated Negative Declaration

The Metropolitan Water District of Southern California  
700 North Alameda Street  
Los Angeles, CA 90012



Report Number ER 1694

May 2024





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- F. Noise Calculations and Modeling

# INLAND FEEDER – FOOTHILL PUMP STATION INTERTIE PROJECT

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## Initial Study/Mitigated Negative Declaration

### 1.0 Project Description

#### 1.1 Background

The Metropolitan Water District of Southern California (Metropolitan) is a regional water wholesaler that provides water for 26 public agency members that, in turn, provide water to approximately 19 million people in parts of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. The mission of Metropolitan is to provide its service area with an adequate and reliable supply of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan imports water from the State Water Project (SWP) and from the Colorado River via the Colorado River Aqueduct (CRA). Approximately 45 percent of Southern California's water supply comes from these two sources. In addition to imported water, Metropolitan invests in local resource development along with its member agencies and uses groundwater banking and transfer programs. Metropolitan also manages water demands by promoting and investing in conservation and water use efficiency projects. Water supplies are conveyed through Metropolitan's distribution system, which includes the CRA, 16 small hydroelectric facilities, nine reservoirs, 819 miles of large-scale pipes, and five water treatment plants. On average, Metropolitan conveys approximately 1.7 billion gallons of water daily throughout its distribution system.

The Inland Feeder is owned and operated by Metropolitan, and was constructed between 1997 and 2009. The pipeline is 44 miles long and 12 feet in diameter. The primary purpose of the Inland Feeder is to connect SWP supplies to Metropolitan's Eastern Distribution System. The pipeline begins at the Department of Water Resources' (DWR's) Devil Canyon Afterbay in the city of San Bernardino and terminates at Metropolitan's Diamond Valley Lake (DVL) near the city of Hemet.

In the years since the Inland Feeder was constructed, several drought emergencies have been declared in California. Former Governor Edmund G. Brown Jr. had proclaimed a drought state of emergency from April 2014 to April 2017, and Governor Gavin Newsom declared a drought state of emergency from October 2021 to March 2023. While California is not operating under a declared drought emergency at present, the western region of the United States continues to be in a drought. In response to these drought events, Metropolitan has been developing methods to improve distribution system flexibility to operate more efficiently in both wet years and under the more frequently occurring drought conditions.

## 1.2 Purpose and Need

Metropolitan is proposing to construct an intertie connection between the Inland Feeder and the Foothill Pump Station (proposed Project). The purpose of the proposed Project would be to enhance Metropolitan's water delivery flexibility in response to drought conditions and limited SWP allocations. The proposed Project would allow Metropolitan to pump and deliver water from DVL to the Rialto service area, which is currently only able to receive SWP water. An intertie connection is needed with the San Bernardino Valley Municipal Water District's (SBVMWD) Foothill Pump Station to provide hydraulic lift to allow water delivery from DVL into DWR's Devil's Canyon Afterbay and ultimately Metropolitan's Rialto Pipeline.

## 1.3 Project Location and Land Use

The proposed Project is located on an approximately 10-acre triangular-shaped parcel, immediately south of the intersection of Cone Camp Road and Greenspot Road in Highland, California (Assessor Parcel Nos. 121038124, 121038125, and 029115102; proposed Project Area). The proposed Project Area spans 6.615 acres of the 10-acre parcel and is bounded by Greenspot Road and residential development to the north, a dirt road and open space to the south, and large-lot single-family residences and open space to the east and west. The site is generally accessible from State Route 210 (Foothill Freeway), located roughly 3.5 miles to the west. Local access to the proposed Project Area is provided by Cone Camp Road, with entrance gates immediately north and south of the Foothill Pump Station. Two of the three parcels within the proposed Project Area are designated as Planned Development on the City of Highland Land Use Map (2022) and are zoned for Planned Development/Single Family Residential (PD/R-1) use. The third and southernmost parcel is designated as Open Space and zoned as Open Space (OS). Figure 1-1 shows the proposed Project Area in a regional context, and Figure 1-2 shows the location of existing and proposed Project facilities.

## 1.4 Project Description

The proposed Project consists of the installation of two new pipeline connections, referred to as the supply pipeline and discharge pipeline, between the Inland Feeder and the SBVMWD-Inland Feeder Interconnection Line 1 and Foothill Pump Station. Both new pipelines would have their own valves, valve vault structures, and hydropneumatic surge tanks (surge tanks). A total of four surge tanks would be constructed. A large vault structure with a valve would be installed on the Inland Feeder to control direction of water flow along the Inland Feeder. The supply pipeline would send water from the Inland Feeder to the Foothill Pump Station for pumping. The discharge pipeline would send the pumped water back into the Inland Feeder, allowing it to have enough pressure to flow to its final destination of the Rialto Pipeline.

The majority of the proposed Project components would be constructed underground. This includes both the supply and discharge pipelines, the vault structures, and appurtenant components in the vaults. The four surge tanks would be constructed aboveground on concrete pads, as well as the components connecting the surge tanks to the supply and discharge pipelines. Vault structures would have a small aboveground component consisting of access lids to the vaults (Figure 1-2).

The proposed Project is described in greater detail in the following sections.



SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 1-1**  
Project Location





SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 1-2**  
Proposed Project Components

### **1.4.1 Pipelines**

The proposed Project would include construction of two pipelines. An approximately 500-foot-long, 54-inch supply pipeline would connect the Inland Feeder with the SBVMWD-Inland Feeder Interconnection Line 1. An approximately 50-foot-wide and 25-foot-deep trench would be required to install the supply connection pipeline. Once constructed, the supply connection pipeline would be entirely underground.

The proposed Project would also construct a 1,000-foot-long, 54-inch discharge pipeline from the Foothill Pump Station, connecting back to the Inland Feeder. A 50-foot-wide by 25-foot-deep trench would be required to install the discharge pipeline. If feasible, a 224-foot portion of the discharge pipeline may be contained within the same trench as the supply pipeline in order to reduce excavation activities. Once constructed, the discharge pipeline would be entirely underground.

### **1.4.2 Vault structures, valves, and connections**

#### ***Sectionalizing Valve and Vault***

The proposed Project would construct an approximately 45-foot by 40-foot sectionalizing vault structure on the Inland Feeder. The sectionalizing vault structure would be underground, with an estimated excavation depth of 38 feet in order to connect with the buried Inland Feeder. The sectionalizing vault structure would house a 132-inch butterfly valve within the vault structure to connect with the Inland Feeder in order to control flow to the supply and discharge pipelines. Once constructed, the vault structure would be entirely underground.

#### ***Combined Valves and Vault***

The proposed Project would construct an approximately 50-foot by 40-foot combined valve vault structure for valves needed to control the supply and discharge pipelines. The combined valve vault structure would be underground, with an estimated excavation depth of 29 feet. The combined valve vault structure would require installation of two, 54-inch butterfly valves within the vault. Once constructed, the vault structure would be entirely underground.

#### ***Connections***

A “T” connection on the existing SBVMWD-Inland Feeder Interconnection Line 1 would be installed to connect the proposed supply pipeline with the existing SBVMWD-Inland Feeder Interconnection Line 1. This connection would occur approximately 50 feet south of the proposed combined valve vault structure and would be underground.

A “Y” connection fitting to the existing Foothill Pump Station piping would be installed to connect the supply pipeline to the Foothill Pump Station. The “Y” connection would be located west of the Foothill Pump Station and would be underground.

### **1.4.3 Surge Tanks**

The proposed Project would include the installation of one, 30,000-gallon surge tank and three 50,000-gallon surge tanks on concrete pads. The concrete pads would be approximately 22 feet by 45 feet and would require excavation to a depth of approximately 10 feet for the tank pad footings. The 30,000-gallon surge tank would be approximately 11 feet wide by 40 feet in length by 16.5 feet in height. The three



50,000-gallon surge tanks would be approximately 14 feet wide by 57 feet in length by 19 feet in height. An air compressor located on the tank pads would be required to stabilize the pressure within the tanks, and an 18-foot-deep trench would be excavated to connect the surge tanks to the supply and discharge pipelines. The four surge tanks would be located aboveground, along with small portions of connection piping to the supply and discharge pipelines.

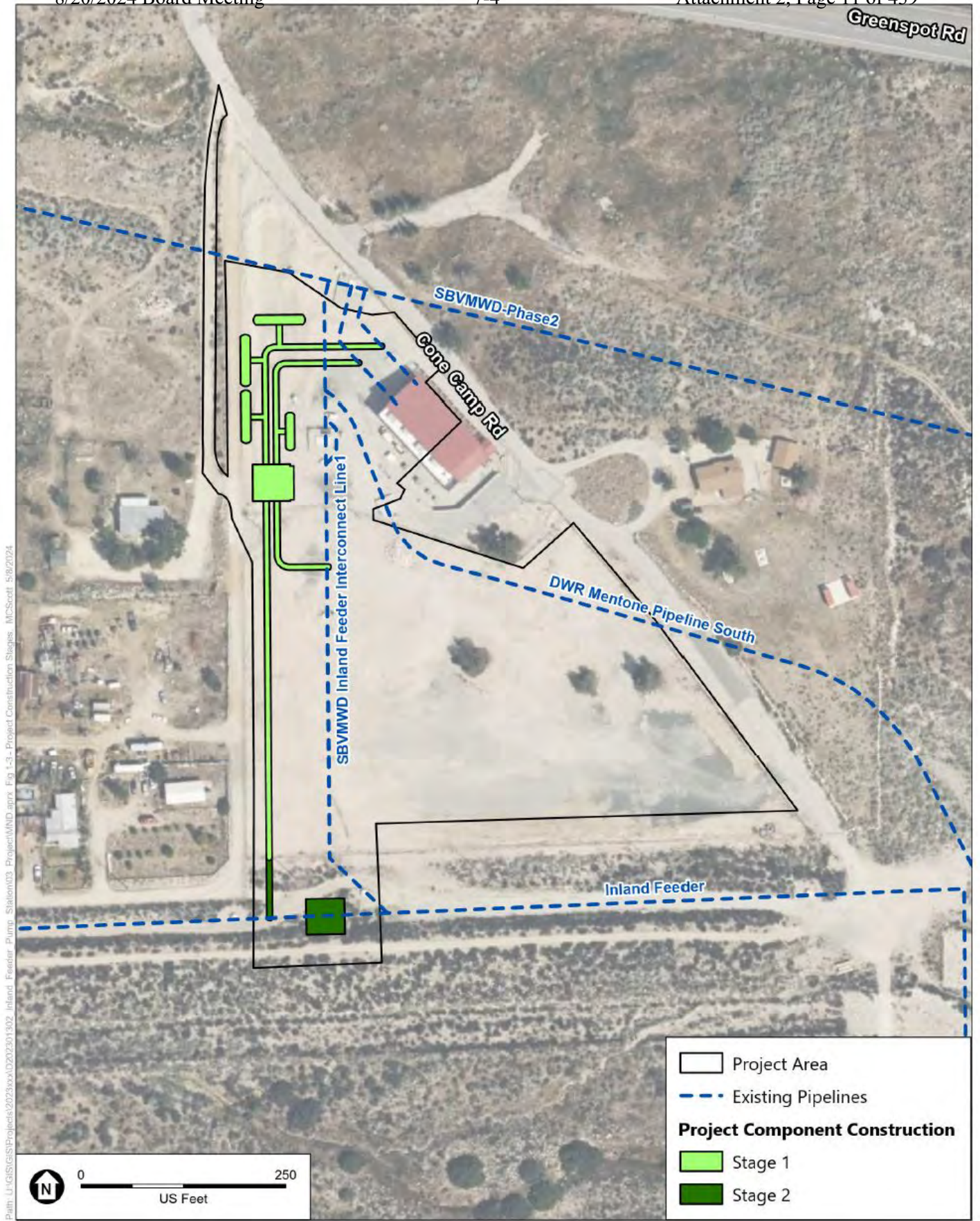
## 1.5 Project Construction

### 1.5.1 Schedule

The proposed Project construction would be performed in two construction stages and would take approximately 12 months to complete, occurring over a 31-month period, with a break in between the two stages. Stage 1 would occur from approximately January 2025 through November 2025; Stage 2 would occur between approximately fall 2026 through July 2027 (see Table 1-1). The work would be staged in order to accommodate the timeline for obtaining permits associated with construction of the Stage 2 components outside of the fenced Foothill Pump Station facility (refer to Table 1-3, Figure 1-3, and Section 3.4, *Biological Resources*).

**TABLE 1-1  
CONSTRUCTION SCHEDULE**

Construction Stages	Construction Start Month	Construction Duration (Months)
Stage 1		
Supply Connection Components		
Pipeline Trenching and Installation	January 2025	1
Vault Structure Excavation	February 2025	1
Vault Structure Installation	March 2025	1
Surge Tank Excavation	April 2025	1
Surge Tank Installation	May 2025	2
Discharge Connection Components		
Pipeline Trenching and Installation	July 2025	1
Surge Tank Excavation	October 2025	1
Surge Tank Installation	November 2025	2
Stage 2		
Discharge Connection Components		
Vault Structure Excavation	October 2026	1
Vault Structure Installation	November 2026	1



SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 1-3**  
Proposed Project Construction Stages

Stage 1 construction activities would take place within the fenced Foothill Pump Station facility. Stage 1 would involve construction and installation of the supply pipeline, surge tanks, combined valve vault structure, pipeline connections, and approximately 900 feet of the discharge pipeline, from the Foothill Pump Station to the southern fence line of the Foothill Pump Station facility. Stage 2 construction activities would occur at the southern portion of the Foothill Pump Station facility, south of the existing property fence. Stage 2 construction activities would involve installation of the sectionalizing valve vault structure, the excavation and installation of the remaining 100 feet of the discharge pipeline, and construction and installation for the 132-inch butterfly valve on the Inland Feeder. The proposed Project components are shown in Figure 1-2.

Construction activities would typically occur Monday through Friday, although work may be conducted on Saturdays as needed with the approval of Metropolitan staff. While most of the construction would occur during daytime hours (between 7 a.m. and 4 p.m.), occasional nighttime construction activities may be required to shut down the Inland Feeder and install the tie-in connection.

### **1.5.2 Construction Staging and Access**

Metropolitan owns 5.47 acres of the proposed Project Area (Figure 1-4) in fee and has easement rights to approximately one acre of the proposed Project Area. The remainder of the proposed Project Area is owned by the SBVMWD and the San Bernardino Valley Water Conservation District (SBVWCD). SBVWCD also owns the parcel located directly south of Metropolitan's triangular-shaped fee property. Metropolitan would obtain additional easement for the SBVWCD property located between Metropolitan's Inland Feeder alignment and its fee property.

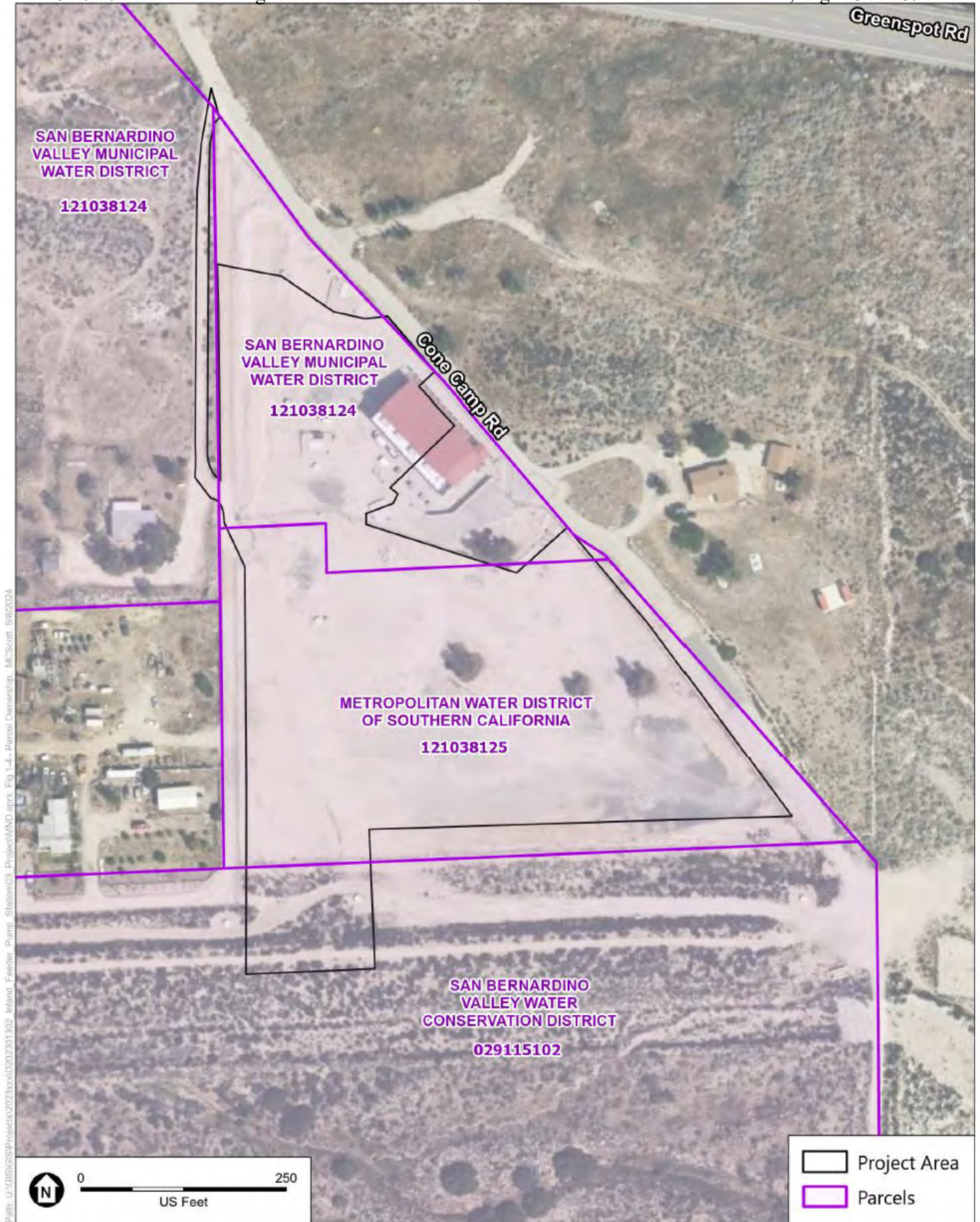
Access to the Foothill Pump Station facility site would be from Cone Camp Road through the access gate located north of the pump station, while access to the Inland Feeder would be through Metropolitan's gate and access road located south end of the proposed Project Area. Temporary construction access is required on SBVMWD's and SBVWCD's properties to construct the connection between the Foothill Pump Station and the Inland Feeder.

Construction staging and storage would occur on the open dirt and gravel space within Metropolitan's fee property in the proposed Project Area. Construction worker parking would primarily occur within the Inland Feeder – Foothill Pump Station facility. If there are space limitations at the site, the proposed Project Contractor(s) would carpool workers to and from the proposed Project Area.

### **1.5.3 Construction Activities**

Construction activities would include approximately 1,086 trucks for 2,172 trips (accounting for approximately 8,680 cubic yards [cy] of soil/material export and 6,500 cy of soil/material import), with a maximum of 44 trucks per day for soil/material import/export. The proposed Project would also include concrete import requiring approximately 924 trucks for 1,848 trips, with a maximum of approximately 34 trucks per day. The proposed Project would require a total of 58 workers, with a maximum of approximately 9 workers per day. Proposed Project construction equipment are listed in Table 1-2.





SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 1-4**  
Parcel Ownership

**TABLE 1-2  
CONSTRUCTION EQUIPMENT**

<b>Construction Equipment</b>	<b>Total</b>
Air Compressors	4
Tractors/Loaders/Backhoes	12
Cement /Mortar Mixers	2
Compactors	12
Cranes	4
Excavators	6
Forklifts	2
Generator Sets	6
Graders	2
Sweepers/Scrubbers	10
Welders	4
Water/Vendor Truck	22

## 1.6 Operation and Maintenance

Operations and maintenance activities, including the frequency of staff visits, maintenance, and shutdowns, would be similar to existing conditions once construction activities are completed. The Inland Feeder, Foothill Pump Station, and all pipelines and structures within the proposed Project Area are unmanned. Any operations and maintenance activities to the Inland Feeder and proposed Project infrastructure would be completed by existing Metropolitan employees.

## 1.7 Project Approvals

Table 1-3 lists the anticipated permits and approvals which may be required for proposed Project-related activities. The table also lists the types of activities that would be subject to these requirements.

**TABLE 1-3  
DISCRETIONARY PERMITS AND EASEMENTS POTENTIALLY REQUIRED**

<b>Agency</b>	<b>Permits and Authorizations Required</b>	<b>Activities Subject to Regulations</b>
San Bernardino Valley Water Conservation District (SBVWCD)*	Easement and Right-of-Entry Permit	Obtain permanent easement for new vault facility. Access through or use of SBVWCD property.
San Bernardino Valley Municipal Water District (SBVMWD)	Right-of-Entry Permit	Access through or use of SBVMWD property.
California Department of Fish and Wildlife	Fish and Game Code Section 2081 Incidental Take Permit	Take of California Endangered Species Act (CESA) listed species [San Bernardino Kangaroo Rat ( <i>Dipodomys merriami parvus</i> ; SBKR)]
U.S. Fish and Wildlife Service	Federal Endangered Species Act (ESA) Section 7 or Section 10 Incidental Take Permit	Take of ESA listed species [SBKR, Coastal California gnatcatcher ( <i>Polioptila californica californica</i> ; CAGN)]

**NOTE:**

\* Portions of the land currently owned by SBVWCD would be subject to a land exchange with the Bureau of Land Management as described in the Final EIR/Environmental Impact Statement (EIS) and Section 10 HCP for the Upper Santa Ana River Wash Plan and as authorized by the Natural Resources Management Act (S. 47), signed into law March 2019, which included specific guidelines directing the land exchange between the BLM and the Conservation District.

## 2.0 Initial Study and Environmental Checklist Form

This document is a proposed Initial Study (IS)/Mitigated Negative Declaration (MND), which addresses the potential environmental effects resulting from the proposed Project.

### 2.1 Legal Authority and Findings

This Initial Study was prepared in accordance with the California Environmental Quality Act (CEQA) Guidelines and relevant provisions of CEQA of 1970, as amended.

**Initial Study.** Section 15063 of the CEQA Guidelines describes an Initial Study as a preliminary method for analyzing the potential environmental consequences of a project. The purposes of an Initial Study include:

1. Providing the Lead Agency with the necessary information to decide whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration;
2. Enabling the Lead Agency to modify a project during the planning stage by mitigating adverse impacts prior to preparation of CEQA documentation, thus avoiding the need to prepare an EIR; and
3. Providing documentation of the factual basis for the finding in a Mitigated Negative Declaration that the significant environmental impacts of a project have been mitigated to a less-than-significant level.

**Negative Declaration or Mitigated Negative Declaration.** Section 15070 of the CEQA Guidelines states that a public agency shall prepare a Negative Declaration or Mitigated Negative Declaration for a project subject to CEQA when:

- a. The Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment; or
- b. The Initial Study identifies potentially significant effects but:
  - i. Revisions in the project plans or proposals made by, or agreed to by, the applicant before a proposed Mitigated Negative Declaration and Initial Study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and
  - ii. There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

An IS/MND may be used to satisfy the requirements of CEQA when a proposed project would have no significant unmitigable effects on the environment. As discussed further in subsequent sections of this document, implementation of the proposed Project would not result in any significant effects on the environment that cannot be reduced to below the level of significance with the mitigation measures included herein.

### 2.2 Impact Analysis and Significance Classification

The following sections of this IS/MND provide discussions of the possible environmental effects of the proposed Project for specific resource areas as identified on the CEQA Environmental Checklist Form in Appendix G of the CEQA Guidelines (as updated in December 2018). For each resource area, potential effects are discussed and evaluated.

A “significant effect on the environment” is defined by Section 15382 of the CEQA Guidelines as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by a project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment” but “may be considered in determining whether the physical change is significant.”

Following the evaluation of each environmental effect determined to be potentially significant is a discussion of mitigation measures and the residual effects or level of significance remaining after the implementation of the measures.

## 2.3 Initial Study

1. **Project Title:** Inland Feeder – Foothill Pump Station Intertie
2. **Lead Agency Name and Address:** The Metropolitan Water District of Southern California  
700 North Alameda St  
Los Angeles, CA 90012
3. **Contact Person and Phone Number:** Michelle Morrison, Environmental Planning Section  
The Metropolitan Water District of Southern California  
(213) 217-7906
4. **Project Location:** Highland, CA (see Figure 1-1)
5. **Project Sponsor’s Name and Address:** The Metropolitan Water District of Southern California  
700 North Alameda St  
Los Angeles, CA 90012
6. **General Plan Designation(s):** Planned Development and Open Space
7. **Zoning:** Planned Development/Single Family Residential (PD/R-1) and Open Space (OS)
8. **Description of Project:** The proposed Project would construct an intertie, including pipes, valves, and other appurtenances, between Metropolitan’s Inland Feeder Pipeline and San Bernardino Valley Municipal Water District’s Foothill Pump Station. See Section 1.0, *Project Description*, for more information.
9. **Surrounding Land Uses and Setting:** The Project Area is bounded by Greenspot Road and residential development to the north, open space to the south, and large-lot single-family residences and open space to the east and west. See Section 1.3, *Project Location and Land Use*.



- 10. Other public agencies whose approval is required:**
- San Bernardino Valley Water Conservation District, San Bernardino Valley Municipal Water District, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service. See Table 1-3.
- 11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**
- Yes, Metropolitan has conducted consultation pursuant to PRC Section 21080.3.1 and has made an impact determination. See Section 3.18, *Tribal Cultural Resources*.

## 2.4 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality                                   |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Energy  |
| <input type="checkbox"/> Geology/Soils                   | <input type="checkbox"/> Greenhouse Gas Emissions           | <input type="checkbox"/> Hazards & Hazardous Materials                 |
| <input type="checkbox"/> Hydrology/Water Quality         | <input type="checkbox"/> Land Use/Planning                  | <input type="checkbox"/> Mineral Resources                             |
| <input checked="" type="checkbox"/> Noise                | <input type="checkbox"/> Population/Housing                 | <input type="checkbox"/> Public Services                               |
| <input type="checkbox"/> Recreation                      | <input type="checkbox"/> Transportation                     | <input type="checkbox"/> Tribal Cultural Resources                     |
| <input type="checkbox"/> Utilities/Service Systems       | <input type="checkbox"/> Wildfire                           | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

### DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

*Jennifer Harriger*

Jennifer Harriger

Manager, Environmental Planning Section

05-13-2024

Date

### 3.0 Evaluation of Environmental Impacts

#### 3.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

#### a. Have a substantial adverse effect on a scenic vista?

**Less-Than-Significant Impact.** No, the proposed Project would not have a substantial adverse effect on a scenic vista. A scenic vista is defined as a viewpoint that provides panoramic or focused views of a highly valued landscape or scenic resource for the benefit of the general public. The city of Highland is situated at the base of the San Bernardino Mountains; however, the City does not regulate private views (City of Highland 2006a). The proposed Project Area is located on an approximately 10-acre triangular-shaped parcel, immediately south of the intersection of Cone Camp Road and Greenspot Road. The proposed Project would construct a supply and discharge pipeline and associated vault structures, which would be located underground. The proposed Project would also construct four surge tanks that would be approximately 16.5 to 19 feet tall and above ground. However, these structures would not block views or substantially affect a scenic vista. During construction, physical signs of the proposed Project would include the presence of construction equipment, materials, and personnel at staging and access areas, including fencing for safety and security purposes. These areas would be visible to local residents and motorists on nearby roads; however, construction activities would be temporary and would be removed following the end of construction activities. The proposed Project would not result in adverse visual changes to the surrounding area because the proposed Project components would be added within the existing Foothill Pump Station facility. In addition, the proposed Project components would be constructed mainly underground or would be consistent with the visual character of the existing facility. Therefore, impacts would be less than significant.

- b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?*

**No Impact.** No, the proposed Project would not substantially damage scenic resources within a State scenic highway. There are no designated State scenic highways near the proposed Project. The nearest eligible State scenic highway is State Route 10 Redlands/ State Route 18, located approximately 2.5 miles south of the proposed Project (Caltrans 2018). Thus, the proposed Project would not be located within or adjacent to a State-designated scenic highway and would not result in damage to scenic resources within a state scenic highway. No impact would occur.

- c. *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?*

**No Impact.** No, the proposed Project would not substantially degrade the existing visual character or quality of public views of the proposed Project Area or conflict with applicable zoning or other regulations governing scenic quality. The proposed Project would be located in an urbanized area and would include an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. The proposed Project would be located in an area zoned as Planned Development/Single Family Residential (PD/R-1) and Open Space (OS). The portion of the proposed Project within the PD/R-1 zone would be constructed entirely within the Foothill Pump Station facility. The portion of the proposed Project located outside of the Foothill Pump Station facility would be constructed within an area zoned as OS, and would be constructed below ground within an existing right of way. The proposed Project facilities would not conflict with local zoning or other regulations governing scenic quality, nor would it substantially degrade the existing visual character or quality of public views of the Project Area and its surroundings, and no impact would occur.

- d. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**Less-Than-Significant Impact.** No, the proposed Project would not create new sources of substantial light or glare which would adversely affect day or nighttime view in the area. The proposed Project does not propose permanent lighting. While most of the construction would occur during daytime hours, occasional nighttime construction activities may be required to shutdown the Inland Feeder and install the tie-in connection. Temporary construction lighting would be placed at various locations along the proposed Project Area, including construction access points and staging areas.

The proposed Project Area is bounded by Greenspot Road and residential development to the north, a dirt road and open space to the south, and large-lot single-family residences and open space to the east and west. Any nighttime lighting would be located directly in the areas where work is being conducted and would be shielded to prevent light from spilling over into adjacent areas. Construction lights would be removed following the completion of construction activities. As outlined in Appendix A (Metropolitan Standard Practices), floodlights would be directed to shine downward and shielded to avoid a nuisance to the surrounding areas, no lighting would be directed toward a residence or natural areas. No new sources of substantial light or glare are proposed; therefore, impacts would be less than significant.

## REFERENCES

California Department of Transportation (Caltrans), 2018. California State Scenic Highway System Map. Available:  
<https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>, accessed December 14, 2023.

City of Highland, 2006a. General Plan Conservation and Open Space Element. Available:  
<https://www.cityofhighland.org/DocumentCenter/View/148/Conservation-and-Open-Space-Element-PDF>, accessed December 14, 2023.

### 3.2 Agriculture and Forestry Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

- a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*
- b. *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*
- c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*



- d. Result in the loss of forest land or conversion of forest land to non-forest use?*
- e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

**No Impact.** No, the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; nor conflict with existing zoning for agricultural, Williamson Act, forest land, or Timberland; nor result in the loss of forest land, conversion of forest land to non-forest use, or involve other changes in the existing environment which could result in conversion of Farmland or forest land to non-agricultural or non-forest use. The proposed Project would be located on an approximately 10-acre triangular-shaped parcel, immediately south of the intersection of Cone Camp Road and Greenspot Road, and would not be located on land identified as Prime or Unique Farmland, or Farmland of Statewide Importance (California Department of Conservation 2023). Furthermore, there are no lands enrolled under the Williamson Act and no forest land or timberland within the proposed Project Area. Therefore, the proposed Project would not convert farmland or forest land to other uses and no impact would occur.

## REFERENCES

California Department of Conservation, 2023. California Important Farmland Finder, 2023. Available online at <https://www.conservation.ca.gov/dlrp/fmmp>. Accessed December 7, 2023.

### 3.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

The following discussion is based on air quality emissions calculations and modeling prepared for the proposed Project and included in Appendix B.

## REGULATORY FRAMEWORK

The Southern California area is divided into a number of geographical air basins for the purpose of air quality planning and management.

### **South Coast Air Basin**

The proposed Project Area is located in the South Coast Air Basin (SCAB). The SCAB includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside counties. The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency for the SCAB. The SCAQMD has primary responsibility for regulating stationary sources of air pollution within its jurisdictional boundaries, implementing air quality programs required by state and federal mandates, and enforcing rules and regulations based on air pollution laws.

The federal and state Clean Air Acts mandate the control and reduction of certain air pollutants. Under these laws, the United States Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for “criteria pollutants” and other pollutants, which are summarized in Table 3.3-1. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide (CO), volatile organic compounds (VOC)/reactive organic gases (ROG),<sup>1</sup> nitrogen oxides (NO<sub>x</sub>), particulate matter with diameters of 10 microns or less (PM<sub>10</sub>) and 2.5 microns or less (PM<sub>2.5</sub>), sulfur dioxide, and lead. Other pollutants are created

<sup>1</sup> CARB defines VOC and ROG similarly as “any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate,” with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term VOC is used in this document.

indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between VOC and NO<sub>x</sub>. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). The local air quality management agency, SCAQMD, is required to monitor air pollutant levels to ensure that the NAAQS and CAAQS are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the SCAB is classified as being in “attainment” or “nonattainment.” The attainment status of the SCAB for each pollutant regulated by the NAAQS and CAAQS is summarized in Table 3.3-1.

**TABLE 3.3-1**  
**AIR QUALITY STANDARDS AND AIR BASIN ATTAINMENT STATUS**

<b>Pollutant</b>	<b>Federal Standard (NAAQS)</b>	<b>California Standard (CAAQS)</b>	<b>SCAB Attainment Status</b>
Ozone	0.070 ppm (8-hr average)	0.09 ppm (1-hr average) 0.070 ppm (8-hr average)	Nonattainment (federal and state)
Carbon Monoxide	35.0 ppm (1-hr average) 9.0 ppm (8-hr average)	20.0 ppm (1-hr average) 9.0 ppm (8-hr average)	Attainment (federal) Attainment (state)
Nitrogen Dioxide	0.100 ppm (1-hr average) 0.053 ppm (annual average)	0.18 ppm (1-hr average) 0.030 ppm (annual average)	Attainment (federal) Nonattainment (state) <sup>1</sup>
Sulfur Dioxide	0.075 ppm (1-hr average) 0.5 ppm (3-hr average) 0.14 ppm (24-hr average) 0.030 ppm (annual average)	0.25 ppm (1-hr average) 0.04 ppm (24-hr average)	Unclassified (federal) Attainment (state)
Lead	0.15 µg/m <sup>3</sup> (rolling 3-month average) 1.5 µg/m <sup>3</sup> (calendar quarter)	1.5 µg/m <sup>3</sup> (30-day average)	Nonattainment (federal) <sup>2</sup> Attainment (state)
Particulate Matter (PM <sub>10</sub> )	150 µg/m <sup>3</sup> (24-hr average)	50 µg/m <sup>3</sup> (24-hr average) 20 µg/m <sup>3</sup> (annual average)	Nonattainment (federal and state) <sup>3</sup>
Particulate Matter (PM <sub>2.5</sub> )	35 µg/m <sup>3</sup> (24-hr average) 12 µg/m <sup>3</sup> (annual average)	12 µg/m <sup>3</sup> (annual average)	Nonattainment (federal and state)
Sulfates	No Federal Standards	25 µg/m <sup>3</sup> (24-hr average)	Attainment (state)
Hydrogen Sulfide	No Federal Standards	0.03 ppm (1-hr average)	Unclassified (state)
Vinyl Chloride	No Federal Standards	0.01 ppm (24-hr average)	Unclassified (state)

**NOTES:**

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; SCAB = South Coast Air Basin; ppm = parts per million; hr = hour; µg/m<sup>3</sup> micrograms per cubic meter.

1. Only the portion of the SCAB along State Route 60 between U.S. Highway 60 and the western limit of Riverside County is designated nonattainment for nitrogen dioxide CAAQS.

2. Only the Los Angeles County portion of the SCAB is designated nonattainment for lead NAAQS.

3. Only the San Bernardino County portion of the SCAB is designated nonattainment for PM<sub>10</sub> CAAQS

SOURCE: CARB 2016 and 2019a through 2019j; USEPA 2021a through 2021g

The SCAQMD has developed air quality management plans (AQMPs) to meet the requirements of the federal Clean Air Act. The most recent plan is the SCAQMD Final 2022 Air Quality Management Plan (SCAQMD 2022). The 2022 AQMP presents a combined state and County strategy (including related mandated elements) to attain the 2015 federal 8-hour ozone standard by August 2038, as required by the federal Clean Air Act Amendments of 1990 and applicable USEPA clean air regulations. San Bernardino County is anticipated to attain the 2015 federal 8-hour ozone standard, using local, state, and federal clean air programs (SCAQMD 2022). This plan addresses various federal nonattainment and

attainment/maintenance planning requirements, is incorporated into the State Implementation Plan by the CARB, and is approved or disapproved by the USEPA.

### SCAQMD

The SCAQMD has identified significance thresholds for short-term construction emissions and for long-term operational emissions for criteria air pollutants within its jurisdictional boundaries, as shown in Table 3.3-2.

**TABLE 3.3-2  
SCAQMD SIGNIFICANCE THRESHOLDS**

Thresholds	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Construction Thresholds (pounds per day)	75	100	550	150	150	55
Operational Thresholds (pounds per day)	55	55	550	150	150	55

**NOTES:**

VOC = volatile organic compounds; NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide; SO<sub>x</sub> = sulfur oxides; PM<sub>10</sub> = particulate matter with diameters of 10 microns or less; PM<sub>2.5</sub> = particulate matter with diameters of 2.5 microns or less.

SOURCE: SCAQMD 2023

### METHODOLOGY

Air pollutant emissions associated with the proposed Project were estimated using California Emissions Estimator Model (CalEEMod) version 2022.1.1. CalEEMod uses project-specific information, including the project's land uses and location, to estimate a project's emissions. For the purposes of the air quality analysis, construction activities were modeled for the earliest potential time frame to provide for a conservative analysis. If construction is delayed and begins after 2025, the emissions presented in this IS/MND would be conservative, as emissions occurring in future years would be lower than those analyzed herein due to the use of a more energy-efficient and cleaner-burning construction vehicle fleet mix, pursuant to State regulations that require vehicle fleet operators to phase-in less polluting heavy-duty equipment. Construction activities associated with the proposed Project would be limited to Mondays through Fridays, 7:00 a.m. to 4:00 p.m., with occasional work on Saturday. Some nighttime construction may also be required. Construction activities are not expected on Sundays or during federal holidays. Assumptions, including detailed phasing, construction employee vehicles, haul trucks, concrete trucks, and vendor trucks and equipment list and modeling output are included in Appendix B. The proposed Project is a water infrastructure project that would not increase water supply, but rather enhance water delivery flexibility in response to drought conditions. Operations and maintenance activities associated with the proposed Project, including the frequency of Metropolitan employee visits, maintenance, and shutdowns, would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources (SCAQMD 1993).<sup>2</sup> The only source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities. Due to the minimal emissions that would result from these periodic vehicle trips by Metropolitan employees to the proposed Project Area, no

<sup>2</sup> Criteria pollutant emissions are not required to be estimated for electricity as it is not a source of Project criteria air pollutant emissions as defined by SCAQMD.

operational emissions would be generated at the site that would exceed the SCAQMD's regional operational thresholds. As such, the proposed Project's operational emissions are evaluated qualitatively.

## ANALYSIS OF IMPACTS

### *a. Conflict with or obstruct implementation of the applicable air quality plan?*

**Less-Than-Significant Impact.** No, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. The proposed Project would be subject to the SCAQMD 2022 AQMP. A significant air quality impact may occur if a project is not consistent with the applicable AQMP adopted by the SCAQMD or if it would in some way represent a substantial hindrance to employing the policies or obtaining the goals of that plan.

The proposed Project must comply with CARB and/or the USEPA-mandated mobile source emissions regulations outlined in the applicable AQMPs. These regulations are related to on-road vehicle emissions standards, off-road equipment fleet standards, and fuel sulfur standards. The proposed Project would result in temporary construction activities and does not include permanent stationary emissions sources regulated by the SCAQMD. Therefore, regulations pertaining to permanent stationary emission sources do not apply to the proposed Project. Construction industry jobs generally have no regular place of business, as construction employees commute to job sites throughout the region, which may change throughout the year. Moreover, these jobs would be temporary in nature, generally lasting up to the duration of proposed Project construction, which would take approximately 12 months to complete, occurring over a 31-month period, with a break in between two construction stages (see Section 1.5.1, *Schedule*, for additional details).

The AQMP also includes control strategies applicable to short-term emissions from construction activities. The proposed Project would be required to comply with the CARB Airborne Toxic Control Measures that limits heavy-duty diesel motor vehicle idling to no more than 5 minutes at any given location with certain limited exceptions defined in the regulation for equipment in which idling is integral to the function of the equipment or activity (such as concrete trucks and concrete pouring) as seen in Section 2485 in Title 13 of the California Code of Regulations (CCR) (Title 13 CCR, Section 2485). In addition, contractors would be required to comply with required CARB In-Use Off-Road Diesel Vehicle Regulation to use lower-emitting equipment in accordance with the phased-in compliance schedule for equipment fleet operators (Title 13 CCR, Section 2449). In addition, with respect to temporary construction emission sources, such as fugitive dust, the proposed Project would comply with all applicable SCAQMD rules and regulations, such as Rule 403, which ensures that fugitive dust emissions are reduced. Additionally, as discussed in Appendix A (Metropolitan Standard Practices), the Project Contractor(s) would be required to comply with Metropolitan standard practices related to air pollution control and dust control, including the submittal of a Dust Control Plan, the use of water trucks in construction areas, and implementation of the Best Available Control Measures listed in Table 1 of the SCAQMD Rule 403, and that off-road diesel-fueled construction equipment greater than 25 horsepower (hp) shall be compliant with federally mandated clean diesel engines (USEPA Tier 4 Final), as outlined in the construction contractor specifications. Furthermore, as detailed in Section 3.3 (b), below, the projected construction emissions for criteria pollutants would not exceed the SCAQMD's regional significance thresholds for construction activities.

The proposed Project would be located on an approximately 10-acre parcel (see Section 1.0, *Project Description*, for additional details). The proposed Project Area spans 6.615 acres of the 10-acre parcel. The proposed Project is a water infrastructure project that would not increase water supply, but rather would enhance water delivery flexibility in response to drought conditions and limited SWP allocations. Metropolitan is proposing an intertie connection between the Inland Feeder and Foothill Pump Station and would not otherwise directly or indirectly cause growth. As described above, operations and maintenance activities would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources.<sup>3</sup> The only source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. Therefore, the proposed Project would not conflict with or obstruct the applicable 2022 AQMP. Impacts would be less than significant.

- b. Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard?*

**Less-Than-Significant Impact.** No, the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the proposed Project region is in nonattainment under an applicable federal or State ambient air quality standard. The proposed Project would generate short-term construction-related emissions through the use of construction equipment and vehicles, grading and the disturbance of soil materials, and transport of construction employees and materials to and from the work site. Travel on unpaved surfaces and processing of soil material would produce fugitive dust. As mentioned above, with respect to temporary construction emission sources, such as fugitive dust, the proposed Project would comply with all applicable SCAQMD rules and regulations, such as Rule 403, which ensures that fugitive dust emissions are reduced. Additionally, as discussed in Appendix A (Metropolitan Standard Practices), the Project Contractor(s) would be required to comply with Metropolitan standard practices related to air pollution control and dust control, including the submittal of a Dust Control Plan, the use of water trucks in construction areas and implementation of the Best Available Control Measures listed in Table 1 of the SCAQMD Rule 403, and that off-road diesel-fueled construction equipment greater than 25 hp shall be compliant with federally mandated clean diesel engines (USEPA Tier 4 Final), as outlined in the construction contractor.

The SCAQMD has quantified thresholds of significance for short-term construction emissions for criteria air pollutants within the SCAB, as described above in Table 3.3-2. The SCAQMD recommends that projects with construction-related emissions that exceed any of the identified emission thresholds be considered as potentially significant air quality impacts. The construction emissions associated with the proposed Project and the applicable emissions thresholds are presented in Table 3.3-3.

<sup>3</sup> Criteria pollutant emissions are not required to be estimated for electricity as it is not a source of Project criteria air pollutant emissions as defined by SCAQMD.

**TABLE 3.3-3  
MAXIMUM REGIONAL CONSTRUCTION EMISSIONS (POUNDS PER DAY)<sup>A</sup>**

Source	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub> <sup>b</sup>	PM <sub>2.5</sub> <sup>b</sup>
<b>Supply Connection Components</b>						
Pipeline Trenching and Installation	0.48	7.10	11.55	0.03	3.41	0.55
Vault Structure Excavation	0.17	3.42	7.66	0.02	1.92	0.29
Vault Structure Installation	0.45	7.46	12.25	0.04	4.96	0.73
Surge Tank Excavation	0.15	2.56	7.18	0.01	0.99	0.16
Surge Tank Installation	0.53	8.48	16.78	0.04	4.85	0.73
<b>Discharge Connection Components</b>						
Pipeline Trenching and Installation	0.54	9.12	13.17	0.04	5.88	0.88
Vault Structure Excavation	0.16	3.56	7.73	0.02	2.14	0.32
Vault Structure Installation	0.43	7.30	12.15	0.04	4.84	0.72
Surge Tank Excavation	0.23	4.48	8.84	0.02	3.17	0.47
Surge Tank Installation	0.52	8.65	16.62	0.04	4.85	0.73
<b>Maximum Daily Emissions</b>	<b>0.54</b>	<b>9.12</b>	<b>16.78</b>	<b>0.04</b>	<b>5.88</b>	<b>0.88</b>
Significance Thresholds	75	100	550	150	150	55
Significant Impact?	No	No	No	No	No	No

## NOTES:

a. Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B.

b. Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.

SOURCE: ESA 2024

As shown in Table 3.3-3 the maximum daily construction emissions generated by the proposed Project's worst-case construction scenario would not exceed SCAQMD's daily significance threshold for any of the criteria pollutants. Therefore, the proposed Project's construction emission impacts would be less than significant, and no mitigation is required.

As discussed above, operational activities associated with the proposed Project would be similar to existing conditions and would only slightly increase the demand for electricity resources.<sup>4</sup> The only source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. Therefore, once construction is complete, the proposed Project would result in minimal operational emissions associated with maintenance, and would not result in a cumulatively considerable net increase of any criteria pollutant. Impacts would be less than significant.

*c. Expose sensitive receptors to substantial pollutant concentrations?*

**Less-Than-Significant Impact.** No, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are land uses that are considered more sensitive to air pollutants than typical receptors. Schools, hospitals, residential uses, and convalescent homes are

<sup>4</sup> Criteria pollutant emissions are not required to be estimated for electricity as it is not a source of Project criteria air pollutant emissions as defined by SCAQMD.



considered sensitive receptors. As stated above, the proposed Project Area spans 6.61 acres of a 10-acre parcel. The nearest sensitive receptors to the proposed Project Area are single-family residences located approximately 30 feet and 275 feet to the west past Weaver Street, a single-family residence approximately 40 feet to the east along Cone Camp Road, and single-family residences located approximately 250 feet to the north across Greenspot Road.

The localized construction air quality analysis was conducted using the methodology prescribed in the SCAQMD Final Localized Significance Threshold (LST) Methodology (SCAQMD 2008). The screening criteria provided in the Final LST Methodology were used to determine localized construction emissions thresholds for the proposed Project. The localized significance thresholds are applicable to NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. For NO<sub>x</sub> and CO, the thresholds are based on the ambient air quality standards. For PM<sub>10</sub> and PM<sub>2.5</sub>, the thresholds are based on requirements in SCAQMD Rule 403 (Fugitive Dust) for construction and Rule 1303 (New Source Review Requirements) for operations. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project area, and (3) the distance between the project area and the nearest sensitive receptor.

SCAQMD's Methodology clearly states that "off-site mobile emissions from the proposed Project should not be included in the emissions compared to LSTs." Therefore, for purposes of the LST analysis, only on-site emissions were considered, including emissions from heavy-duty construction equipment and on-site truck travel. The closest existing sensitive receptors to the proposed Project's construction area are located approximately 30 feet to the west of the proposed Project Area. The LST used for the localized significance impact analysis were conservatively based on a 5-acre project construction area in the Central San Bernardino Valley Source-Receptor Area (SRA 34) and based on the SCAQMD screening criteria for sensitive receptors located within 25 meters away (SCAQMD 2008).<sup>5,6</sup>

The maximum daily localized emissions for each of the construction components and the localized significance thresholds are presented in Table 3.3-4. The same phasing and equipment assumptions, including compliance with SCAQMD Rule 403, were used as for the regional emissions calculations discussed above.

<sup>5</sup> Appendix C of the SCAQMD *Final Localized Significance Threshold Methodology* (2008) provides screening levels at distances of 25, 50, 100, 200, and 500 meters. Interpolation between distances is permissible; however, for ease of calculation and to provide a conservative analysis, the 25-meter distance is used, which is equivalent to approximately 82 feet. Because actual sensitive receptors are located approximately 30 feet from the Project's construction area, the 25-meter distance was used since the SCAQMD, *Final Localized Significance Threshold Methodology*, suggests "Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.", June 2003 and revised July 2008, p. 33.

<sup>6</sup> Using the screening criteria applicable for a 5-acre site is conservative because the localized significance thresholds are project site dependent, and the allowable thresholds increase with increasing project size. Therefore, using a 5-acre site threshold instead of the Project area's full 6.615 acres yields a more stringent analysis.

**TABLE 3.3-4**  
**MAXIMUM LOCALIZED CONSTRUCTION EMISSIONS (POUNDS PER DAY)<sup>A</sup>**

Source	NO <sub>x</sub>	CO	PM <sub>10</sub> <sup>b</sup>	PM <sub>2.5</sub> <sup>b</sup>
<b>Supply Connection Components</b>				
Pipeline Trenching and Installation	4.89	9.36	2.69	0.34
Vault Structure Excavation	1.99	6.44	1.50	0.17
Vault Structure Installation	4.18	9.92	4.09	0.48
Surge Tank Excavation	1.87	6.34	0.76	0.09
Surge Tank Installation	5.34	14.27	3.99	0.48
<b>Discharge Connection Components</b>				
Pipeline Trenching and Installation	5.19	9.61	4.73	0.55
Vault Structure Excavation	2.02	6.47	1.69	0.18
Vault Structure Installation	4.15	9.90	3.98	0.47
Surge Tank Excavation	2.15	6.57	2.43	0.26
Surge Tank Installation	5.37	14.29	3.99	0.48
<b>Maximum Daily Emissions</b>	<b>5.37</b>	<b>14.29</b>	<b>4.73</b>	<b>0.55</b>
Significance Thresholds	270.0	1746.0	14.0	8.0
Significant Impact?	No	No	No	No

## NOTES:

- Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B.
- Emissions include fugitive dust control measures consistent with SCAQMD Rule 403.
- The SCAQMD LSTs are based on Source Receptor Area 34 (Central San Bernardino Valley) for a 5-acre site with sensitive receptors conservatively assumed to be located within 25 meters (approximately 82 feet) away from the construction area.

SOURCE: ESA 2024

As shown in Table 3.3-4 above, the proposed Project's maximum localized construction emissions would be below the localized screening thresholds for NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> for the closest air quality sensitive receptors are the single-family residential uses located west of the proposed Project Area approximately 30 feet away. Therefore, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations during construction and impacts would be less than significant.

Operations and maintenance activities for the proposed Project would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources.<sup>7</sup> The only source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities. The proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. Therefore, once construction is complete, the proposed Project would result in minimal operational emissions associated with maintenance, and would not expose sensitive receptors to substantial pollutant concentrations during operations, and impacts would be less than significant.

<sup>7</sup> Criteria pollutant emissions are not required to be estimated for electricity as it is not a source of Project criteria air pollutant emissions as defined by SCAQMD.

**CO Hotspots**

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO decreased dramatically in the SCAB with the introduction of the automobile catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the SCAB in recent years and the SCAB is currently designated as a CO attainment area for both the CAAQS and NAAQS. As discussed below, it is not expected that CO levels at proposed Project-impacted intersections would rise to such a degree as to cause an exceedance of these standards.

Proposed Project construction would result in temporary additional construction employee vehicles and truck trips to the proposed Project Area but the additional vehicles and trips would cease after construction, which would take approximately 12 months to complete, occurring over a 31-month period, with a break in between two construction stages (see Section 1.5.1, *Schedule*, for additional details). The proposed Project would construct an intertie connection between the Inland Feeder and Foothill Pump Station consisting of pipelines, vaults, and surge tanks. As explained above, the proposed Project would not increase water supply and would not otherwise directly or indirectly cause growth beyond the AQMP growth projections. The proposed-Project Area is not within an area with poor circulation or heavy traffic. Therefore, Project-related construction would not cause or contribute to potential temporary CO hotspots, and construction activities would not expose sensitive receptors to substantial concentrations of carbon monoxide. Impacts would be less than significant.

Operations and maintenance activities associated with the proposed Project would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources.<sup>8</sup> The only source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. Therefore, once construction is complete, the proposed Project would result in minimal operational emissions associated with maintenance activities. Therefore, Project-related operations and maintenance activities would not cause or contribute to potential temporary CO hotspots, and would not expose sensitive receptors to substantial concentrations of carbon monoxide. Impacts would be less than significant.

**Toxic Air Contaminants (TACs)**

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes, automotive repair facilities, and dry-cleaning facilities. The proposed Project would not include any of these potential sources. Temporary TAC emissions associated with diesel particulate matter (DPM) emissions from heavy construction equipment would occur during construction activities. According to Office of Environmental Health Hazard Assessment and SCAQMD's Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (SCAQMD 2003), health effects from TACs are described in terms of individual cancer risk based on a lifetime (i.e., 70-year) resident exposure duration. Given the temporary construction schedule of approximately 12 months to complete, occurring over a 31-month period, with a break in between two

<sup>8</sup> Criteria pollutant emissions are not required to be estimated for electricity as it is not a source of Project criteria air pollutant emissions as defined by SCAQMD.

construction stages (see Section 1.5.1, *Schedule*, for additional details), the proposed Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of construction activities.

The emissions modeling analysis presented in Section 3.3 (b), above, provides for a conservative assessment of the proposed Project's construction activities by assuming construction at the earliest time frame, which assumes the use of the most conservative emission factors. Furthermore, the analysis assumes heavy-duty equipment usage for each day of the various construction components. In reality, not all equipment would necessarily be used over the whole of the construction period, they may be used for individual construction components or sub-components with some equipment used only periodically. In addition, the proposed Project would be consistent with the applicable 2022 AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. The proposed Project would comply with the CARB Airborne Toxic Control Measures that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these CARB regulations would minimize emissions of TACs during construction. Based on the short-term duration of proposed Project construction and compliance with regulations that would minimize emissions, construction of the proposed Project would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

As noted above, operations and maintenance activities, including the frequency of staff visits, maintenance, and shutdowns, would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources.<sup>9</sup> The only source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. In addition, maintenance and employee trucks would be subject to the five-minute regulatory idling limitation and proposed Project trucks would be required to comply with the applicable provisions of the CARB 13 CCR, Section 2025 (Truck and Bus regulation) to minimize and reduce PM and NO<sub>x</sub> emissions from existing diesel trucks. Therefore, proposed Project operations would not be considered a substantial source of diesel particulates and proposed Project operations would only result in minimal emissions of TAC from maintenance activities. Based on expected use, potential long-term operational impacts associated with the release of TACs would be minimal, regulated, and controlled. Therefore, operation and maintenance activities associated with the proposed Project would not expose sensitive receptors to substantial TAC concentrations, and impacts would be less than significant.

*d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

**No Impact.** No, the proposed Project would not result in other emissions, such as those leading to odors, adversely affecting a substantial number of people. During construction activities, emissions would result from the use of construction equipment and vehicles, grading and the disturbance of soil materials, and architectural coatings, solvents, and transport of employees and materials to and from the work site. While these emissions may generate temporary odors, they would be limited to the construction period and would not be noticeable beyond the proposed Project boundaries. Operations and maintenance activities for the Metropolitan facility would not change from existing conditions, and would include few maintenance trips,

<sup>9</sup> Criteria pollutant emissions are not required to be estimated for electricity as it is not a source of Project criteria air pollutant emissions as defined by SCAQMD.

which would not emit new emissions, such as odors, which would be noticeable at the nearest residence. Therefore, no impact would occur.

## REFERENCES

- SCAQMD (South Coast Air Management District), November 1993. CEQA Air Quality Handbook. Accessed April 3, 2024. Available: [https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)).
- SCAQMD (South Coast Air Management District), 2003. Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis. Accessed April 3, 2024. Available: <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.aqmd.gov%2Fdocs%2Fdefault-source%2Fceqa%2Fhandbook%2Fmobile-source-toxics-analysis.doc%3Fsfvrsn%3D2&wdOrigin=BROWSELINK>.
- SCAQMD(South Coast Air Management District), 2008. Final Localized Significance Threshold Methodology. Accessed April 3, 2024. Available: <https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>.
- SCAQMD(South Coast Air Management District), 2022. Final 2022 Air Quality Management Plan. Accessed April 3, 2024. Available: <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16>.
- SCAQMD(South Coast Air Management District), 2023. South Coast AQMD Air Quality Significance Thresholds. Accessed April 3, 2024. Available: [south-coast-aqmd-air-quality-significance-thresholds.pdf](#)

### 3.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

Regulated or sensitive biological resources studied and analyzed herein include special-status plant and wildlife species, nesting birds and raptors, sensitive plant communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees. The following discussion is based on a Biological Resources Assessment prepared for the proposed Project and included in Appendix C. The Biological Resources Assessment documents the existing biological conditions of the proposed Project Area and evaluates the potential for impacts to biological resources during construction of the proposed Project. Operations and maintenance activities at the Foothill Pump Station facility would be similar to existing conditions once construction activities are completed and would not result in impacts to biological resources; therefore, operations will not be discussed further in this section.

### REGULATORY FRAMEWORK

The following is a summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. Many federal and state statutes provide a regulatory structure that

guides the protection of biological resources. Agencies with the responsibility for protection of biological resources include:

- Regional Water Quality Control Board (RWQCB) (waters of the State);
- United States Fish and Wildlife Service (USFWS) (federally listed species and migratory birds); and;
- California Department of Fish and Wildlife (CDFW) (fish and wildlife resources of the State, riparian areas and other waters of the State, state-listed species).

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g., USFWS), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California, pursuant to the California Endangered Species Act (CESA) or the California Native Plant Protection Act. Species are also considered rare under CEQA if they are not formally listed but exist in such small numbers throughout a significant portion of their range that they may become endangered if their environment worsens or are likely to become endangered throughout all or a significant portion of their range.

California Fish and Game Code Section 2081 allows CDFW the authority to authorize take of species listed as endangered, threatened, candidate, or a rare plant in the State of California, if that take is incidental to otherwise lawful activities and if certain conditions are met.

Migratory birds, including raptors and passerines (perching birds), are protected under the federal Migratory Bird Treaty Act (MBTA). The MBTA makes it illegal to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations Part 10, including feathers or other parts, nests, eggs, or products, unless authorized under a permit. California Fish and Game Code Sections 3505, 3503.5, 3511, 3513, and 3800 prohibit the take, possession, or destruction of birds, their nests, or eggs with limited exceptions.

Sensitive habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife.

Chapter 8.36 of the City of Highland Municipal Code prevents the removal, relocation, or destruction of any heritage tree within City of Highland's city limits without proper tree removal permit and associated environmental review (Chapter 8.36, Heritage Trees). Section 8.36.020 of the City of Highland Municipal Code defines heritage trees as any tree that meets the following criteria:

- A. All woody plants in excess of 15 feet in height and having a single trunk circumference of 24 inches or more, as measured four and one-half feet above ground level; or
- B. Multi-trunk tree(s) having a total circumference of 30 inches or more, measured four and one-half feet from ground level; or
- C. A stand of trees, the nature of which makes each dependent upon the others for survival; or
- D. Any other tree as may be deemed historically or culturally significant by the community development director or designee because of size, condition, location, or aesthetic qualities.

The definition of historic landmark includes any tree designated as an historic landmark by city council action. Trees which bear fruit or nuts (with the exemption of trees planted in a grove) and trees planted,



grown, and/or held for sale by licensed nurseries and/or tree farms are exempt from the provisions of the City's code.

Tree removal is defined by the City's code as an act which will cause a heritage tree to die, as determined by a tree expert, including, acts that inflict damage upon root systems, bark or other parts of tree by fire, application of toxic substances or operation of equipment or machinery, improper watering, changing the natural grade of the drip line area around the trunk, or attachment of signs or artificial material piercing the bark of the tree by means of nails, spikes, or other piercing objects. A Tree Removal Permit is required for the removal of all heritage trees within the city limits. In addition to a Tree Removal Permit, a Landmark Alteration Permit is required for the removal of all trees designated as historic landmarks. The permit requirement may be waived in the case that the tree is determined to be a public health, safety, and welfare concern. Chapter 16.64.040 (Heritage Tree Preservation Requirements) further outlines the requirements of this provision, including the protection of existing trees. No trees are proposed to be removed or impacted during project activities.

Chapter 16.64.050 (Riparian Plant Conservation) establishes regulations to promote healthy and abundant riparian habitats within the City of Highland and works alongside existing regulations enforced by CDFW. This ordinance generally prohibits the removal of any riparian vegetation within 25 feet of the dripline of riparian vegetation adjacent to a "blueline stream" as indicated by the USGS Quadrangle (topographic map) or identified as a protected riparian area in a community or specific plan. The removal of any vegetation within 25 feet of the drip line of riparian vegetation along a blueline stream requires a tree removal permit and shall be subject to environmental review. The provisions of this section apply to both private and public lands within the City limits, with exceptions for emergency flood control operations and authorized water conservation measures established and authorized by an appropriate independent special district with such responsibility. No riparian vegetation is proposed to be removed during project activities.

## **METHODOLOGY**

Biological conditions were evaluated by confirming applicable regulations, policies, and standards; reviewing biological literature and querying available databases pertinent to the proposed Project Area and vicinity including CDFW's California Natural Diversity Data Base (CNDDB) (CDFW 2023a), CDFW's California Sensitive Natural Communities List (CDFW 2023b), CNPS's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2023), Natural Resource Conservation Service's (NRCS) Web Soil Survey (NRCS 2023), USFWS's Critical Habitat Portal (USFWS 2023a), USFWS's National Wetland Inventory (USFWS 2023b); and conducting a reconnaissance-level biological survey of the proposed Project Area. Refer to the Biological Resources Assessment for a full list of reviewed literature (Appendix C). The reconnaissance-level biological resources survey was conducted within the 59.96-acre Study Area, which includes the approximately 6.61-acre proposed Project Area and a 500-foot buffer area surrounding the proposed Project Area.

On December 22, 2023, a reconnaissance-level biological survey of the proposed Project Area was conducted by ESA. The survey was performed by walking meandering transects throughout the proposed Project Area to document existing site conditions and the potential presence of regulated biological resources, including special-status plant and wildlife species, sensitive plant communities, jurisdictional waters and wetlands, and habitat for nesting birds. Weather conditions were overcast with temperatures at 64 (degrees Fahrenheit) with variable winds ranging from 0 to 7 miles per hour.

Additional surveys have been conducted within the general proposed Project Area since 2022, including a focused San Bernardino kangaroo rat (*Dipodomys merriami parvus*) presence/absence trapping survey conducted by ECORP in 2022 (ECORP 2022), a San Bernardino kangaroo rat burrow survey conducted by ESA in 2023 (ESA 2023a), and small mammal nighttime activity survey conducted by ESA in 2023 (ESA 2023b). The results of these additional surveys were integral to refining the understanding of potential impacts to special-status biological resources.

## EXISTING BIOLOGICAL CONDITIONS

The proposed Project Area includes a portion of an existing fenced and graded triangular property that encompasses the Metropolitan and SBVMWD facilities. Existing dirt access roads occur along the western and southern extent of the proposed Project Area, with remnant California buckwheat – brittle bush scrub habitat interspersed between the existing graded roads. The surrounding Study Area, which includes the proposed Project Area and a 500-foot buffer around the proposed Project Area, is bounded by Greenspot Road and residential development to the north, a dirt road and open space to the south, and large-lot single-family residences and open space to the east and west.

### **Topography and Soils**

Topography within the Study Area generally slopes from east to west and soils consist of alluvium derived from granite. The majority of the Study Area is mapped as Soboba stony loamy sand, 2-9% slopes, which consists of stony loamy sand 0–10 inches, very stony loamy sand 10–24 inches, and very stony sand 24–60 inches. Hanford coarse sandy loam, 2-9% slopes was mapped in the northern portion of the Study Area outside of the proposed Project Area and consists of sandy loam 0–12 inches and fine sandy loam 12–60 inches.

### **Existing Vegetation and Land Cover Types**

Natural communities and land cover types mapped within the Study Area include annual grasses and forbs, brittle bush scrub, disturbed brittle brush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, disturbed chamise chaparral – brittle bush scrub, hairy yerba santa scrub, mustard fields, developed, and disturbed. However, the proposed Project Area is dominated by developed land cover (5.84 acres) within the triangular fenced area, followed by disturbed land cover (0.40 acre) comprised of existing dirt roads, and California buckwheat – brittle bush scrub (0.37 acre) within the southern portion of the Study Area. The Study Area is mapped by CDFW as occurring within the Riversidean alluvial fan sage scrub habitat with a State rank of S1.1. However, the Riversidean alluvial fan sage scrub habitat indicator species, scale broom (*Lepidospartum squamatum*), was not observed as a dominant species within any of the observed natural communities. Only one scale broom individual was observed within the Study Area, but outside of the proposed Project Area. Therefore, none of the natural communities present within the Study Area meet the criteria for Riversidean alluvial fan sage scrub. As a result, and based on review of CDFW's California Sensitive Natural Communities List, no sensitive natural communities were mapped within the Study Area.

### **Observed Plant and Wildlife Species**

Common plant species identified within the Study Area include California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), brittlebush (*Encelia farinosa*), California sagebrush (*Artemisia californica*), yerba santa (*Eriodictyon* sp.), black mustard (*Brassica nigra*), cheeseweed mallow (*Malva*

*paviflora*), filaree (*Erodium* spp.), oat (*Avena* spp.), and bromes (*Bromus* spp.). Common wildlife species detected within the Study Area during the site visit, include Eurasian collared dove (*Streptopelia decaocto*), mourning dove (*Zenaida macroura*), common raven (*Corvus corax*), house finch (*Haemorhous mexicanus*), Bewick's wren (*Thryomanes bewickii*), yellow-rumped warbler (*Setophaga coronata*), black phoebe (*Sayornis nigricans*), California towhee (*Melospiza crissalis*), and white-crowned sparrow (*Zonotrichia leucophrys*). Additionally, two listed and two non-listed special-status wildlife species were present during the site assessment or previous studies conducted within the Study Area: coastal California gnatcatcher (*Poliophtila californica californica*; federally threatened [FT], CDFW species of special concern [SSC]); San Bernardino kangaroo rat (*Dipodomys merriami parvus*; federally endangered [FE], state endangered [SE], SSC); coastal western whiptail (*Aspidoscelis tigris* ssp. *stejnegeri*; SSC); and northwestern San Diego pocket mouse (*Chaetodipus fallax* ssp. *fallax*; CDFW special animal [SA]).

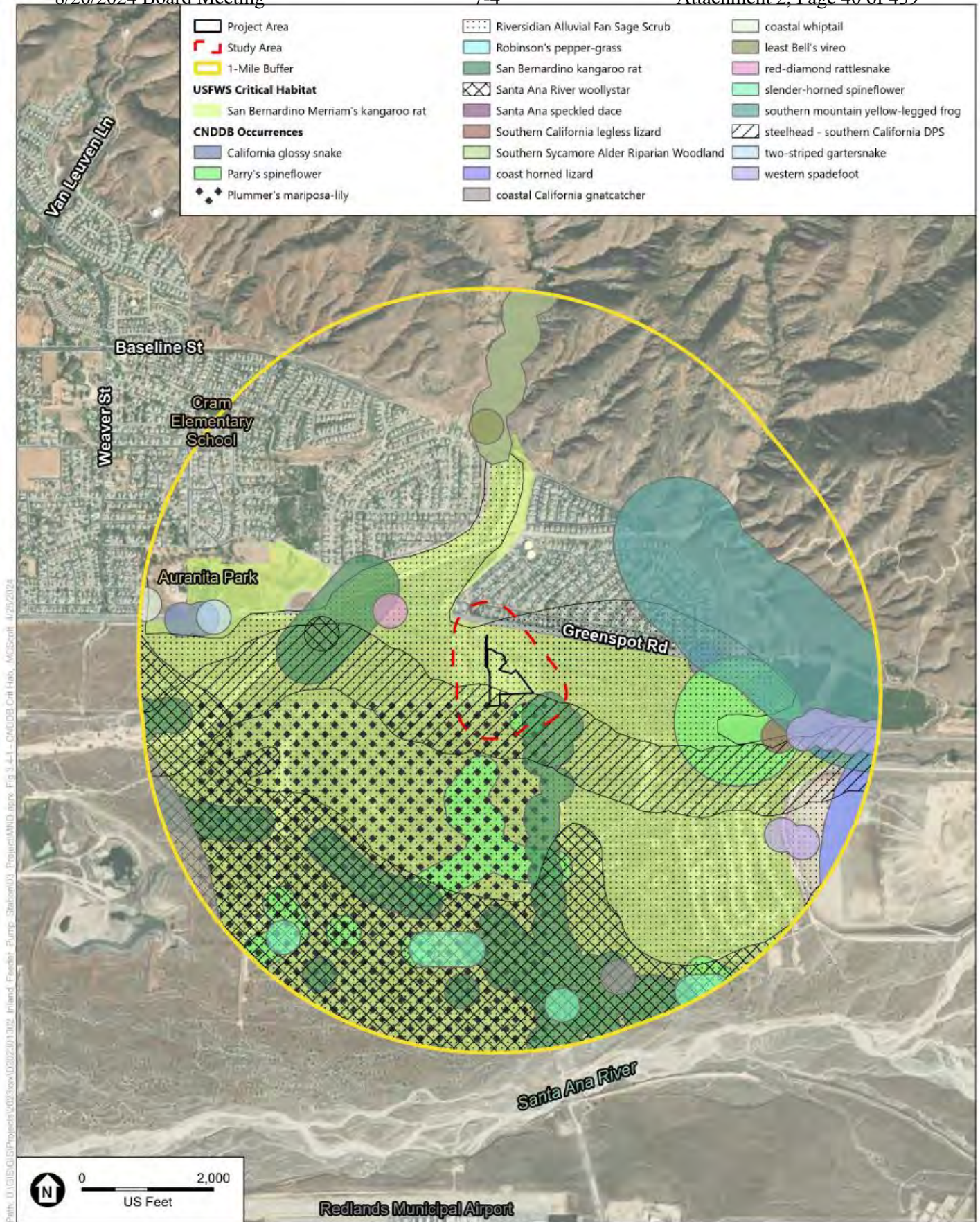
### **Special-Status Plant and Wildlife Species with Potential to Occur**

Special-status species are legally protected under the state and federal ESAs or other regulations or are considered sufficiently rare by the scientific community to qualify for such listing. These species are classified under the following categories:

- Species listed or proposed for listing as threatened or endangered or are candidates for possible future listing as threatened or endangered, under the FESA or the CESA.
- Species that meet the definitions of rare or endangered under State CEQA Guidelines Section 15380.
- Plants considered by the CNPS to be rare, threatened, or endangered (Rank 1A, 1B, 2A, and 2B plants) in California.
- Plants considered by the CNPS to be plants about which more information is needed and plants of limited distribution (Rank 3 and 4 plants) that may be significant locally and are recommended for consideration under CEQA.
- Plants listed as rare under the California Native Plant Protection (Fish and Game Code 1900 et seq.).
- Wildlife designated by CDFW as species of special concern, CDFW Watch List species, or have a state rank of S1-S3 on CDFW's Special Animals List (CNDDDB 2024).
- Wildlife "fully protected" in California (Fish and Game Code [FGC] Sections 3511, 4700, and 5050).
- Bird species protected by the MBTA.
- Bat species considered priority by the Western Bat Working Group (WBWG).

A query of the CDFW California Natural Diversity Database (CNDDDB), the CNPS Inventory of Rare and Endangered Plants, and the USFWS Information for Planning and Consultation Online System was conducted to identify special-status species that have been previously recorded in the Redlands USGS 7.5-minute quadrangle and eight surrounding quadrangles including San Bernardino North, Harrison Mtn, Keller Peak, Yucaipa, El Casco, Sunnymead, Riverside East, and San Bernardino South. A list of plant and wildlife species detected during biological studies conducted by ESA in 2023 are provided in the respective technical report in Appendix C. A map depicting the results of the CNDDDB and USFWS Critical Habitat database queries is provided in Appendix C and shown on Figure 3.4-1 (CDFW 2023a, USFWS 2023a).





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**Figure 3.4-1**  
CNDDDB and Critical Habitat Map

The potential for special-status wildlife species to occur within the Study Area is based on vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences and geographic ranges.

- **Low Potential:** The Study Area supports limited habitat for a particular species. For example, the appropriate vegetation assemblage may be present while the substrate preferred by the species may be absent.
- **Moderate Potential:** Marginal habitat for a particular species may exist. For example, the habitat may be heavily disturbed and/or may not support all stages of a species' life cycle; or may not fit all preferred habitat characteristics; however, still supports important components, such as a particular soil or community type.
- **High Potential:** The Study Area provides suitable habitat conditions for a particular species and/or known populations occur in the immediate vicinity.
- **Present:** The species was observed within the Study Area during the biological resources assessment.

### **Special-Status Plants**

Based on the condition of the vegetation and habitats that were characterized during the site visit, it was determined that five special-status plant species have a moderate or high potential to occur within the California buckwheat – brittle bush scrub habitat within the proposed Project Area, as well as within the natural communities within the surrounding Study Area: Plummer's mariposa lily (*Calochortus plummerae*; California Rare Plant Rank [CRPR] 4.2), Parry's spineflower (*Chorizanthe parryi* var. *parryi*; CRPR 1B.1), slender-horned spineflower (*Dodecahema leptoceras*; FE, SE, CRPR 1B.1), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*; FE, SE, CRPR 1B.1), and Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3) (Appendix C). All of these species have the potential to occur within the coastal sage scrub and chaparral habitats mapped within the Study Area (i.e., brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, disturbed chamise chaparral – brittle bush scrub, and hairy yerba santa scrub). Additionally, Plummer's mariposa lily has the potential to occur within the annual grasses and forbs habitat mapped in the Study Area.

### **Special-Status Wildlife**

In addition to the four special-status wildlife species observed within the Study Area (coastal California gnatcatcher, San Bernardino kangaroo rat, coastal western whiptail, and northwestern San Diego pocket mouse), a total of 16 special-status wildlife species were determined to have a moderate to high potential to occur within the Study Area, including: Crotch bumble bee (*Bombus crotchii*; state candidate as endangered [SCE]), western spadefoot (*Spea hammondi*; federal candidate as threatened [FCT], SSC), Southern California legless lizard (*Anniella stebbinsi*; SSC), California glossy snake (*Arizona elegans occidentalis*; SSC), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*; CDFW watch list [WL]), red-diamond rattlesnake (*Crotalus ruber*; SSC), coast horned lizard (*Phrynosoma blainvillii*; SSC), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*; WL), Bell's sparrow (*Artemisiospiza belli belli*; WL), burrowing owl (*Athene cunicularia*; USFWS birds of conservation concern [BCC], SSC), California horned lark (*Eremophila alpestris actia*; WL), loggerhead shrike (*Lanius ludovicianus*; SSC), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*; SA), San Diego desert



woodrat (*Neotoma lepida intermedia*; SSC), southern grasshopper mouse (*Onychomys torridus ramona*; SSC), and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*; SSC) (Appendix C).

### **Critical Habitat**

Pursuant to Section 4(a)(3) and (b)(2) of the FESA, the USFWS is required to designate critical habitat for endangered and threatened species to the extent feasible. Critical habitat includes areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species, and is defined as (1) areas within the geographic range of a species that are occupied by individuals of that species and contain the primary constituent elements (PCEs; physical and biological features) essential to the conservation of the species; thus, warranting special management consideration or protection, and (2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species. Designated critical habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter that are essential to the survival and recovery of the species, whether the habitat is currently occupied by the species or not. Designated critical habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types.

The entire proposed Project Area and the majority of the Study Area, aside from the residential development to the north, is located within designated Critical Habitat Unit 1 (Santa Ana River Wash) for San Bernardino kangaroo rat (USFWS 2023a, 2008). The California buckwheat – brittle bush scrub habitat within the proposed Project Area, as well as the brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral-hairy yerba santa scrub, and disturbed chamise chaparral – hairy yerba santa scrub habitats within the surrounding Study Area provide suitable habitat for San Bernardino kangaroo rat.

### **Wildlife Movement**

Migration corridors are navigable pockets or strips of land that connect larger tracts of open space together, allowing them to function as a greater habitat complex. These “passages” can exist on a small scale, allowing wildlife to pass through or under an otherwise uninhabitable area including a roadway, housing development, or city through drainage culverts, green belts and waterways; or on a larger scale, providing an opportunity for wildlife to skirt large topographical features (e.g., mountains, lakes, streams) by utilizing adjacent canyons, valleys and upland swaths when migrating.

The majority of the developed portion of the proposed Project Area is bordered by chain-link fencing. Rural residential development surrounds the proposed Project Area to the north, east, and west, likely deterring wildlife movement through the proposed Project Area. The land surrounding the proposed Project Area to the south is undeveloped land in which wildlife likely utilizes to forage and breed, and to some extent, travel locally and regionally. Numerous species of birds, reptiles, invertebrates, and small mammals would be expected in the Study Area, as well as larger mammals such as the coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and grey fox (*Urocyon cinereoargenteus*), who likely utilize the area for hunting and movement. While the proposed Project Area provides some refuge for wildlife, it does not provide linkages to other habitats and is not expected to function as an important migration corridor.

### **Aquatic Features**

Although a formal aquatic resources delineation was not conducted as part of the biological field reconnaissance, five aquatic resource features (Features 1 through 5) were identified within the Study Area (Figure 3.4-2) (Appendix C). Only one feature, Feature 1, occurs within the proposed Project Area, the remaining four aquatic resource features identified during the site visit occur within the surrounding Study Area, outside of the proposed Project Area. None of these features support wetland and/or riparian habitat.

**Feature 1: Constructed Basin.** Feature 1 consists of a constructed basin and ephemeral drainage located within the western portion of the proposed Project Area. This feature is unvegetated and situated in an upland area. The drainage appears to capture surface water runoff flowing from the existing road that runs from south to north across Metropolitan's fee parcel. This road appears to capture surface water runoff flowing from the existing access road and functions as an unintended stormwater pathway due to its regular use. As a result, concentrated stormwater flows along the road, ultimately draining northward into the constructed basin located on the northwestern extent of the proposed Project Area.

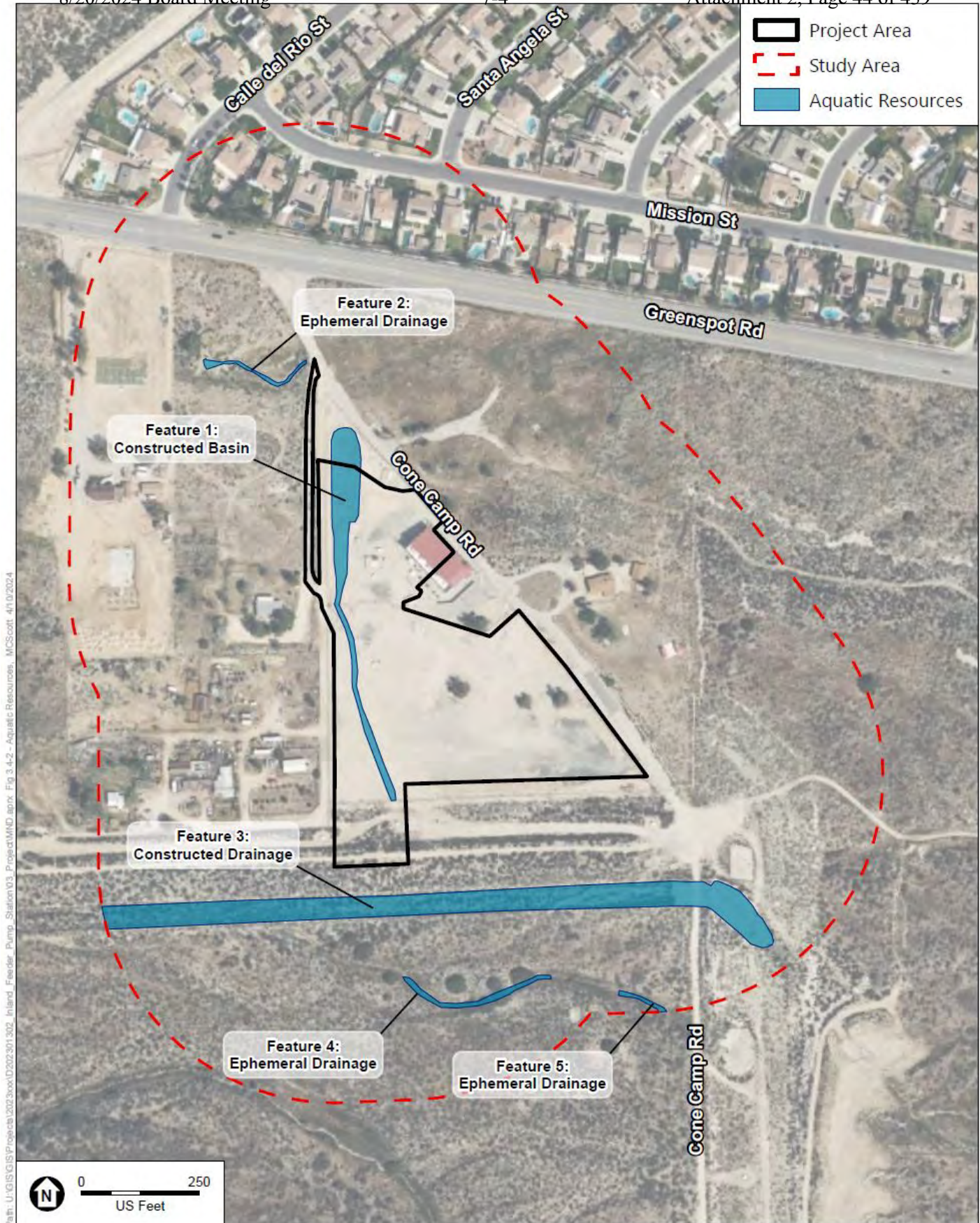
**Feature 2: Ephemeral Drainage.** Feature 2 is an ephemeral drainage located within the northern portion of the Study Area just west of the northernmost corner of the proposed Project Area and is dominated by upland vegetation (California buckwheat – brittle bush scrub). This drainage receives and captures surface water runoff from the surrounding landscape and flows westward for approximately 245 feet before dissipating into the ground. Surface flows are confined to the Study Area due to higher elevations on the neighboring property, which acts as a natural barrier preventing the flow from continuing or connecting with any other aquatic features downstream.

**Feature 3: Constructed Drainage.** Feature 3 is a constructed drainage within the southern portion of the Study Area (south of the proposed Project Area and north of Features 4 and 5). It is dominated by upland vegetation including California buckwheat – brittle bush scrub, with an individual sandbar willow (*Salix exigua*) and a couple of mulefat (*Baccharis salicifolia*) individuals identified within the eastern portion of the drainage. The constructed drainage is located in an upland area and receives flows through a culvert located at the easternmost extent of the feature where it is connected to a large, constructed basin located outside of the Study Area. The water travels east to west through the constructed drainage during high flows, and converges with Plunge Creek approximately 0.67 mile west of the Study Area, and ultimately connecting to the Santa Ana River west of I-210.

**Feature 4: Ephemeral Drainage.** Feature 4 is an ephemeral drainage located within the southern portion of the Study Area and outside of the proposed Project Area. This ephemeral drainage is comprised of upland vegetation, specifically chamise chaparral-hairy yerba santa scrub. Feature 4 dissipates into the ground at its western extent and does not appear to connect with any other aquatic features at its downstream extent.

**Feature 5: Ephemeral Drainage.** Feature 5 is an ephemeral drainage located within the southern portion of the Study Area and outside of the proposed Project Area. It contains upland vegetation, specifically hairy yerba santa scrub. Based on aerial review, Features 4 and 5 appear to have once formed a single, ephemeral aquatic feature. However, recent disturbances in the area have caused a separation, severing the connection between them. Consequently, due to the surrounding higher elevation, drainage from this feature dissipates into the ground at its western extent.





SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 3.4-2**  
Aquatic Resources

## ANALYSIS OF IMPACTS

- a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

**Less-Than-Significant Impact with Mitigation Incorporated.** No, the proposed Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

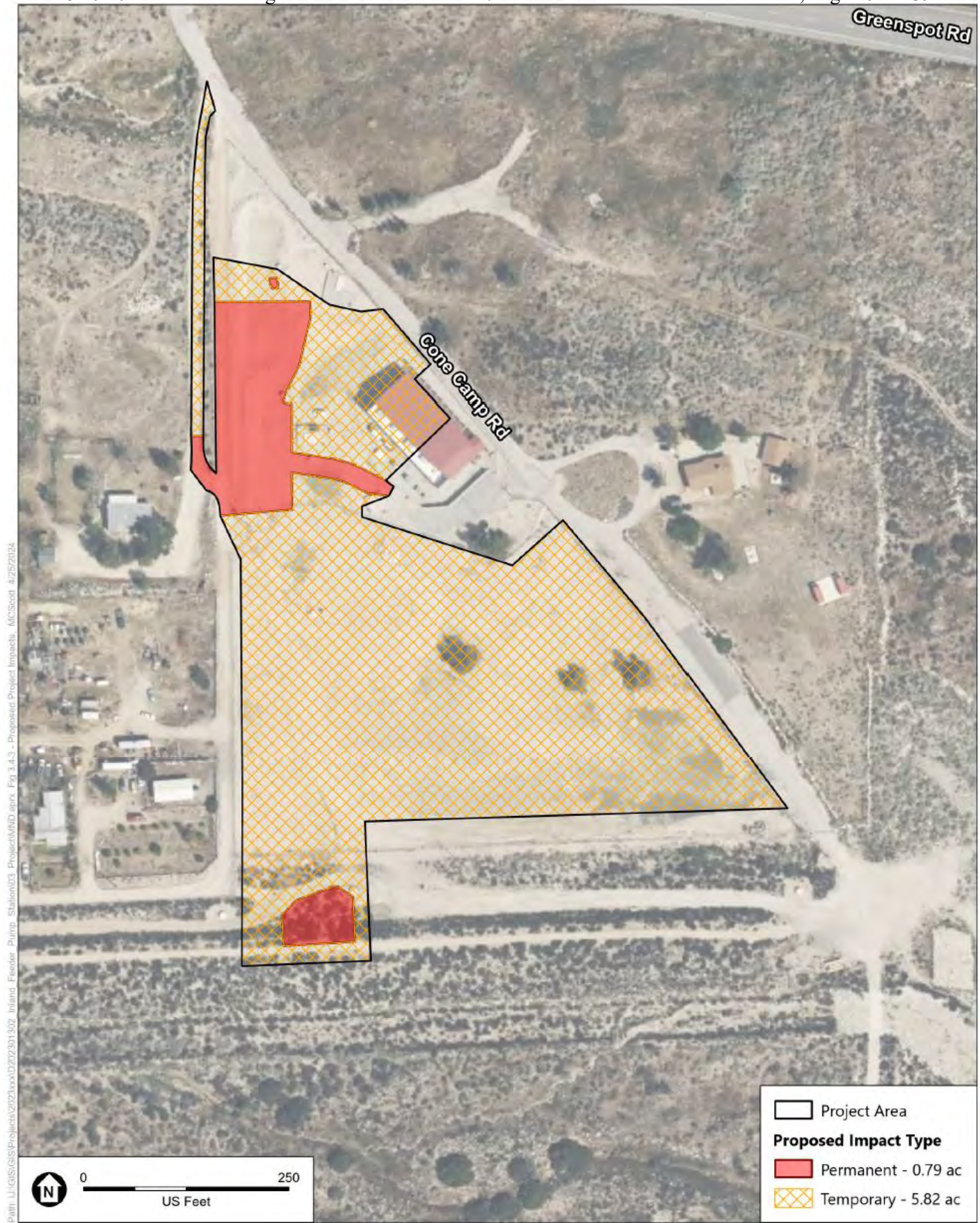
### ***Special-Status Plants***

The proposed Project would result in 5.82 acres of total temporary and 0.79 acre of total permanent impacts within the Project Area (Figure 3.4-3). The Study Area provides suitable habitat for five special-status plant species, including Parry's spineflower (CRPR 1B.1), Plummer's mariposa lily (CRPR 4.2), Robinson's pepper-grass (CRPR 4.3), Santa Ana River woollystar (FE, SE, CRPR 1B.1), and slender-horned spineflower (FE, SE, CRPR 1B.1) (Appendix C). While these five special-status plants have the potential to occur within the coastal sage scrub and chaparral habitats mapped in the Study Area (i.e., brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, disturbed chamise chaparral – brittle bush scrub, and hairy yerba santa scrub), Plummer's mariposa lily also has the potential to occur within the annual grasses and forbs habitat mapped in the Study Area.

The proposed Project would result in the permanent removal of 0.12 acre and temporary removal of 0.25 acre of California buckwheat – brittle bush scrub habitat within the Project Area. In areas where excavation and soil disturbance would occur within the proposed Project Area, direct or indirect impacts to special-status plants or their seed banks could occur. Direct impacts could result from vegetation removal and soil disturbance, while indirect impacts could result from increased fugitive dust, erosion, increased run-off, trampling of vegetation outside of construction areas, and/or introduction of invasive plants.

Metropolitan would implement Standard Practices, as outlined in Appendix A, which requires that environmental permits be attained prior to construction, construction activities remain within designated construction limits, construction staff are trained of potential special-status biological resources prior to construction, hazardous materials are contained, implementation of best management practices, and compliance with requirements of the General Construction Activity Stormwater Permit issued by the State Water Resources Control Board (which outlines measures to control stormwater runoff and erosion, thereby minimizing potential indirect impacts on nearby vegetation from increased runoff or erosion). Implementation of **Mitigation Measure BIO-2**, requiring focused plant surveys and the preparation and implementation of a dedicated salvage, seed collection, and replanting plan if special-status plants are observed on-site would avoid and/or minimize impacts to special-status plants. Implementation of **Mitigation Measure BIO-3**, outlining mitigation replacement requirements, would further reduce potential impacts to special-status plants to less than significant. Therefore, impacts to special-status plants would be less than significant with mitigation incorporated.





SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 3.4-3**  
Proposed Project Impacts

### ***Special-Status Wildlife***

While the proposed Project Area is compacted and surrounded by graded roads, providing limited suitable habitat to support special-status wildlife species, the surrounding Study Area supports and provides potentially suitable habitat for special-status wildlife species (Appendix C). Two listed and two non-listed special-status wildlife species were present during the site assessment conducted in 2023 or previous studies conducted within the Study Area: coastal California gnatcatcher (FT, SSC); San Bernardino kangaroo rat (FE, SE, SSC); coastal western whiptail (SSC); and northwestern San Diego pocket mouse (SA). Although not observed on-site during the site assessment or during previous studies, the Study Area also provides suitable habitat to support an additional 16 special-status wildlife species including: Crotch bumble bee (SCE); western spadefoot (FCT, SSC); Belding's orange-throated whiptail (WL); California glossy snake (SSC); coast horned lizard (SSC); red-diamond rattlesnake (SSC); Southern California legless lizard (SSC); Bell's sparrow (WL); burrowing owl (BCC, SSC); California horned lark (WL); loggerhead shrike (SSC); Southern California rufous-crowned sparrow (WL); Los Angeles pocket mouse (SSC); San Diego black-tailed jackrabbit (SA); San Diego desert woodrat (SSC); and southern grasshopper mouse (SSC). Special-status wildlife species and/or their habitat within proposed construction areas (i.e., excavation, trenching, material installation, and grading) would be subject to direct impacts such as vegetation removal, soil disturbance, and potential injury to individuals. Additionally, special-status wildlife species located near direct impact areas could potentially be subject to indirect impacts including increased noise, vibration, human activity, erosion, and fugitive dust. These factors could temporarily disrupt wildlife behavior and/or damage suitable habitat for these species. Impacts and mitigation for special-status wildlife species are discussed in greater detail below.

### ***Nesting and Foraging Birds/Raptors and Special-Status Birds***

Six special-status avian species (Bell's sparrow, burrowing owl, California horned lark, coastal California gnatcatcher, loggerhead shrike, and Southern California rufous-crowned sparrow) were present or have a moderate or high potential to nest and/or forage within the Study Area. Suitable habitat for these species occurs within the annual grasses and forbs, brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral-hairy yerba santa scrub, disturbed chamise chaparral – hairy yerba santa scrub, and hairy yerba santa scrub habitats, as well as the disturbed land cover type, within the Study Area. The proposed Project Area is heavily compacted and provides very limited suitable foraging habitat along its southern boundary. Additionally, there is ample, suitable foraging habitat present in the surrounding area, which would not be impacted by the proposed Project activities. Thus, the temporary loss of up to 0.25 acre and permanent loss of up to 0.12 acre of potentially suitable foraging habitat due to the proposed Project activities is not considered a likely adverse impact to Bell's sparrow, California horned lark, loggerhead shrike, and Southern California rufous-crowned sparrow if present during construction. Coastal California gnatcatcher and burrowing owl have additional requirements and are discussed in detail below. In addition, Metropolitan would implement Standard Practices (Appendix A), such as limiting the area of disturbance. Impacts to foraging habitat for Bell's sparrow, California horned lark, loggerhead shrike, and Southern California rufous-crowned sparrow would be less than significant.

The Study Area provides suitable nesting habitat for a variety of native resident and migratory bird and raptor species protected under the federal Migratory Bird Treaty Act of 1918 (MBTA) and Sections 3503.5, 3505, and 3511 of the California Fish and Game Code, including the special-status avian species mentioned

above (Appendix C). The proposed Project (i.e., vegetation removal and construction activities) may result in direct and/or indirect impacts to these migratory bird and raptor species through the removal of active nests or disruption of breeding/nesting behavior, such as copulation, nest building, or incubation if present during construction activities. Implementation of Metropolitan's Standard Practices outlined in Appendix A requires a Worker Environmental Awareness Program (WEAP) training and clear demarcation of proposed Project limits, and implementation of best management practices during proposed Project construction. In addition, implementation of **Mitigation Measure BIO-1**, requiring prevention of inadvertent entrapment, and **Mitigation Measure BIO-4**, requiring the implementation of a preconstruction nesting bird survey and establishment of an avoidance buffer around active nests, would ensure that impacts to nesting birds would be avoided and/or minimized. Therefore, impacts to nesting birds and raptors would be less than significant.

### ***Coastal California Gnatcatcher***

As determined in the Biological Resources Report (Appendix C), the Study Area supports suitable coastal sage scrub habitat for coastal California gnatcatcher. A coastal California gnatcatcher individual was visually and audibly identified approximately 250 feet south of the proposed Project Area within the California buckwheat – brittle bush scrub habitat in the southern portion of the Study Area during the site visit and has the potential to nest and/or forage within suitable coastal sage scrub habitat (i.e., brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral-hairy yerba santa scrub, disturbed chamise chaparral – hairy yerba santa scrub, and hairy yerba santa scrub habitats) within the Study Area. While the proposed Project Area contains limited coastal sage scrub habitat (e.g., California buckwheat – brittle bush scrub habitat) suitable for coastal California gnatcatcher, impacts to this habitat could be significant if occupied. Ground disturbance and vegetation removal activities may result in “take” of this species through the disruption of breeding/nesting behavior (such as copulation, nest building, or incubation) and through the removal of occupied habitat for this species. Metropolitan would implement its Standard Practices as outlined in Appendix A, which requires obtaining required permits prior to construction, delineation of construction boundaries, implementation of best management practices, and WEAP training during proposed Project construction. Implementation of **Mitigation Measure BIO-1**, requiring prevention of inadvertent entrapment, and **Mitigation Measure BIO-4**, requiring a preconstruction nesting bird survey, would avoid and/or minimize impacts. In addition, implementation of **Mitigation Measure BIO-3**, outlining mitigation replacement requirements, would further reduce potential direct and indirect impacts to coastal California gnatcatcher to a less than significant level. Therefore, impacts to coastal California gnatcatcher would be less than significant with mitigation incorporated.

### ***Crotch Bumble Bee***

Crotch bumble bee has the potential to forage and/or nest within the California buckwheat – brittle bush scrub habitat in the southern portion of the proposed Project Area and may use all the natural communities, aside from the disturbed and developed land cover types, for nesting and foraging within the remainder of the Study Area. Ground disturbance and vegetation clearing activities may result in direct and indirect impacts to this species through the removal of the species' preferred plants for nectaring and removal of nest burrows. Metropolitan would implement Standard Practices as outlined in Appendix A, which provides general avoidance and minimization measures, including the development and implementation of a WEAP, demarcation of proposed Project limits, and best management practices. Implementation of **Mitigation**



**Measure BIO-5**, which requires conducting preconstruction surveys and includes restoration requirements, would avoid and/or minimize impact. In addition, implementation of **Mitigation Measure BIO-3**, which outlines mitigation replacement requirements, would reduce potential impacts to Crotch bumble bee to less than significant. Therefore, impacts to Crotch bumble bee would be less than significant with mitigation incorporated.

### ***Western Spadefoot***

Western spadefoot may use small mammal burrows within the California buckwheat – brittle bush scrub habitat in the southern portion of the proposed Project Area and all the natural communities, aside from the disturbed and developed land cover types, for aestivating and foraging within the remainder of the Study Area. This species is not expected to use the proposed Project Area for breeding since it is disturbed and there are limited suitable breeding pools present. If present, ground disturbance and vegetation clearing activities may result in direct impacts to aestivating toads. Potential indirect impacts from human presence, noise, and/or ground vibration generated by heavy equipment or adjacent construction activities may affect western spadefoot toads. Metropolitan would implement their Standard Practices as outlined in Appendix A, which provides general avoidance and minimization measures, demarcation of proposed Project limits, hazardous waste containment, and hydrologic requirements, along with the implementation of preconstruction clearance surveys. In addition, implementation of **Mitigation Measure BIO-1**, requiring prevention of inadvertent entrapment, and **Mitigation Measure BIO-6**, requiring avoidance/exclusion measures, monitoring, and relocation, would avoid and/or minimize impacts. Therefore, impacts to western spadefoot would be less than significant.

### ***San Bernardino Kangaroo Rat***

The Study Area supports potentially occupied San Bernardino kangaroo habitat and occurs within designated critical habitat (Critical Habitat Unit 1: Santa Ana River Wash) for San Bernardino kangaroo rat (Appendix C). San Bernardino kangaroo rat was identified within the southern portion of the proposed Project Area during a protocol-level presence/absence trapping survey conducted for this species within the Study Area in 2022 (ECORP 2022). Additionally, suitable kangaroo rat burrows were mapped in the proposed Project Area in 2023 and kangaroo rat species were identified in the southern portion of the proposed Project Area during a nighttime small mammal activity survey conducted in 2023 (ESA 2023a, 2023b). Thus, San Bernardino kangaroo rat may burrow, forage, and breed within the brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and disturbed chase chaparral – hairy yerba santa scrub habitats within the Study Area, including the California buckwheat – brittle bush scrub habitat within the southern portion of the proposed Project Area. Ground disturbance and vegetation removal activities may result in “take” of this species through the removal of a nest or burrows, injury, or mortality. Indirect impacts may result from human presence, ground vibration and noise generated by heavy equipment, increased predation, and artificial lighting.

Metropolitan would implement their Standard Practices outlined in Appendix A, including obtaining all required permits prior to construction, the development and implementation of a WEAP, demarcation of proposed Project limits, best management practice, and lighting restrictions, which would reduce impacts to San Bernardino kangaroo rat. Additionally, the implementation of **Mitigation Measure BIO-1**, requiring prevention of inadvertent entrapment, **Mitigation Measure BIO-3**, establishing mitigation requirements for impacts to listed species, **Mitigation Measure BIO-7**, requiring pre-construction presence/absence

trapping surveys, **Mitigation Measure BIO-8**, requiring implementation of exclusionary fencing, and **Mitigation Measure BIO-9**, requiring San Bernardino kangaroo rat monitoring, would reduce potential impacts to San Bernardino kangaroo rat to less than significant. Therefore, impacts to San Bernardino kangaroo rat would be less than significant with mitigation incorporated.

### ***Special-Status Ground Dwelling Wildlife***

Belding's orange-throated whiptail, California glossy snake, coast horned lizard, coastal western whiptail, Los Angeles pocket mouse, northwestern San Diego pocket mouse, red-diamond rattlesnake, San Diego black-tailed jackrabbit, San Diego desert woodrat, Southern California legless lizard, and southern grasshopper mouse may occupy annual grasses and forbs, California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and/or hairy yerba santa scrub habitat, including disturbed areas, of the proposed Project Area and surrounding Study Area. Although the proposed Project Area is heavily compacted and provides very limited suitable habitat for these species along its southern boundary, the proposed Project may result in direct impact to these species through injury or mortality or the removal of a nest burrow/den. Indirect impacts may result from human presence, ground vibration and noise generated by heavy equipment, and increased predation. Metropolitan would implement their Standard Practices outlined in Appendix A, including the development and implementation of a WEAP, demarcation of proposed Project limits, containment of hazardous materials, best management practices, and lighting restrictions, which would reduce impacts to special-status ground dwelling wildlife. In addition, **Mitigation Measure BIO-1**, requiring prevention of inadvertent entrapment, and **Mitigation Measure BIO-10**, requiring preconstruction survey and trapping/relocation methods, would avoid and/or minimize potential impacts to special-status ground dwelling wildlife species. Therefore, impacts to special-status ground dwelling wildlife species would be less than significant.

### ***Burrowing Owl***

No burrowing owls were observed within the Study Area during the site assessment conducted in 2023 or previous studies conducted within the Study Area. However, focused burrowing owl surveys were not conducted, and suitable foraging and nesting habitat is present throughout the annual grasses and forbs and disturbed scrub habitats within the Study Area. Suitable ground squirrel burrows were observed but lacked burrowing owl sign (i.e., freshly excavated dirt, prey remains, whitewash, or nest material). This species has been previously observed in the San Bernardino International Airport approximately 4.1 miles west of the proposed Project Area (CNDDDB 2023a). If present, breeding or wintering burrowing owls may be impacted by direct injury or mortality or indirectly affected from human presence or ground vibration and noise generated by heavy equipment. The implementation of Metropolitan's Standard Practices outlined in Appendix A, including the development and implementation of a WEAP, demarcation of proposed Project limits, construction monitoring, and implementation of best management practices, on-site overnight storage requirements, trash/debris removal, and maintaining required speed limits, would reduce potential impacts to burrowing owl. Additionally, implementation of **Mitigation Measure BIO-1**, requiring prevention of inadvertent entrapment and **Mitigation Measure BIO-11**, requiring preconstruction surveys and monitoring, would avoid and/or minimize potential impacts to burrowing owl. Therefore, impacts to burrowing owl would be less than significant.

Additionally, as discussed in Appendix A, the Project Contractor(s) would be required to comply with Metropolitan Standard Practices for related biological resources, including standard practices for applicable avoidance and minimization requirements (i.e., WEAP trainings, hazardous material containment, and



lighting restrictions). In addition, implementation of **Mitigation Measures BIO-1** through **BIO-11** would reduce potential impacts to special-status species to less than significant. Therefore, impacts would be less than significant with mitigation incorporated.

### **Mitigation Measures**

**BIO-1: Prevention of Inadvertent Entrapment.** To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered with tarp, plywood or similar materials at the close of each working day and shall be inspected visually to confirm animals would be excluded, to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife is observed, escape ramps or structures will be installed immediately to allow escape.

**BIO-2: Special-Status Plants.** Prior to construction activities that could potentially remove special-status plants, a qualified botanist shall conduct a pre-construction floristic inventory and focused rare plant survey to determine and map the location and extent of special-status plant species populations within disturbance areas within suitable habitat. This survey shall occur during the typical blooming periods of special-status plants with the potential to occur: Parry's spineflower (*Chorizanthe parryi* var. *parryi*; CRPR 1B.1; blooming period April – June), Plummer's mariposa lily (*Calochortus plummerae*; CRPR 4.2; blooming period May – July), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3; blooming period January – July), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*; FE, SE, CRPR 1B.1; blooming period April – September), and slender-horned spineflower (*Dodecahema leptoceras*; FE, SE, CRPR 1B.1; blooming period April–June). The plant survey shall follow the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018).

If special-status plants are not identified within the proposed Project Area, then ground-disturbing activities may commence. If special-status plants are detected and Project-related impacts are unavoidable, then the preparation and implementation of a special-status species salvage, seed collection, and replanting plan would be required, and consultation with the regulatory agencies would be required to address potential take of listed plant species. The salvage, seed collection, and replanting plan shall include measures to salvage, collect seed, replant, and monitor the disturbance area until native vegetation is re-established.

Pre-construction special-status plant surveys are scheduled to be conducted in 2024. If construction does not begin by 2027, a qualified botanist shall conduct an additional pre-construction floristic inventory and focused rare plant survey in accordance with the guidance above during the appropriate blooming period the year prior to the commencement of proposed Project activities.

**BIO-3: Compensation for Impacts to Federally and State-Listed Plant and Wildlife Species Habitat.** Direct temporary and permanent impacts to suitable habitat for federally or state-listed species shall be mitigated through purchase of credits from an approved mitigation bank, payment to an in-lieu fee program, or in another form of mitigation approved by the regulatory agencies.

**Temporary Impacts.** Mitigation for direct temporary impacts to suitable habitat for federally or state-listed species shall be provided through on-site restoration. Areas temporarily impacted shall be returned to similar conditions to those that existed prior to grading and/or ground-disturbing activities.

**Permanent Impacts.** Metropolitan shall purchase credits from an approved mitigation bank, payment to an in-lieu fee program, or in another form of mitigation approved by the regulatory agencies to compensate for all permanent loss of suitable habitat for federally or state-listed species (including critical habitat), if available, at a 1:1 ratio.<sup>10</sup>

**BIO-4: Nesting Birds/Raptors and Special-Status Birds.** Proposed Project activities could negatively impact nesting birds that are protected in accordance with the MBTA and FGC, as well as other special-status avian species, such as the Bell's sparrow, burrowing owl, California horned lark, coastal California gnatcatcher, loggerhead shrike, and Southern California rufous-crowned sparrow. No physical disturbance of vegetation, operational structures, buildings, or other potential habitat (e.g., open ground, gravel, construction equipment or vehicles, etc.) that may support nesting birds protected by the MBTA and FGC shall occur in the breeding season, except as necessary to respond to public health and safety concerns, or otherwise authorized by the Engineer. The breeding season extends from February 15 through August 31 for passerines and general nesting and from January 1 through August 31 for raptors.

- If nesting habitat (including annual grasses and forbs, brittle bush scrub, California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and hairy yerba santa scrub habitats, as well as the disturbed land cover types within the Study Area) must be cleared or proposed Project activities must occur within 500 feet of nesting habitat within the breeding season as defined above, a qualified biologist shall perform a nesting bird survey no more than three days prior to clearing or removal of nesting habitat or start of proposed Project activities. Surveys will be performed in all Metropolitan accessible areas (fee property and easements) and inaccessible areas will be visually surveyed to their full extent without trespassing.
- If active nests for sensitive species, raptors and/or migratory birds are observed, an adequate buffer zone or other avoidance and minimization measures, as appropriate, shall be established, as identified by a qualified biologist and approved by the Engineer. Construction avoidance buffers are generally 300 feet for non-listed passerines and 500 feet for listed avian species (i.e., coastal California gnatcatcher) and raptors; however, avoidance buffers may be modified at the discretion of the biologist, depending on the species, location of the nest and species tolerance to human presence and construction-related noises and vibrations. The buffer shall be clearly marked in the field by the Contractor, as directed by the Engineer, and construction or clearing shall not be conducted within this zone until the young have fledged and are no longer reliant on the nest.
- Additional measures may include (but are not limited to): construction avoidance until the nest is no longer active, noise attenuation measures to reduce construction noise levels to below 60 dBA Leq (an hourly measurement of A-weighted decibels) or ambient (if existing ambient levels are above 60 dBA), and biological monitoring during construction activities to ensure the species is not harmed during proposed Project implementation.
- A qualified biologist shall monitor active nests or nesting bird habitat within or immediately adjacent to the proposed Project construction areas, and the Engineer shall provide necessary recommendations to the Contractor to minimize or avoid impacts to protected nesting birds.

<sup>10</sup> Any 'take' of federally listed species' occupied habitat shall be addressed through either the Section 7 or Section 10(a)(1)(B) process under the federal Endangered Species Act (ESA) of 1973, as amended. Additionally, direct impacts to federally designated critical habitat that cannot be avoided shall be addressed through either the ESA Section 7 or Section 10(a)(1)(B) process. Any 'take' of state-listed species shall be addressed through the California Fish and Game Code Section 2081(b) incidental take permit process. The two permits and authorization by the agencies with jurisdiction over these resources may require additional measures (e.g., avoidance, conservation, etc.) beyond what is being proposed under this CEQA analysis.

**BIO-5: Crotch Bumble Bee.** If removal of suitable Crotch bumble bee foraging and/or nesting habitat within the California buckwheat – brittle bush scrub is required, the following measures shall be implemented:

- A qualified entomologist familiar with the species' behavior and life history shall conduct surveys to determine presence/absence of the Crotch bumble bee within the year prior to vegetation removal and/or grading in areas that provide suitable habitat for this species. A minimum of three surveys, ideally 2-4 weeks apart, should also be conducted during peak flying season when the species is most likely to be detected above ground, between March 1 to September 1 and during peak bloom of nectaring resources (Thorp et al. 1983; CDFW 2023c). At minimum, a survey report should provide the following:
  - A description and map of the survey area, focusing on areas that could provide suitable habitat for Crotch bumble bee.
  - Field survey conditions that should include name(s) of qualified entomologist(s) and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched.
  - Map(s) showing the location of nests/colonies.
  - A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover, and abundance) within impacted habitat (e.g., species list separated by vegetation class; density, cover, and abundance of each species).
- If Crotch bumble bee is detected, the qualified entomologist should identify the location of all nests within and adjacent to the proposed Project Area. A 15-meter (50-foot) no disturbance buffer zone should be established around any identified nest(s) to reduce the risk of disturbance or accidental take. A qualified entomologist should expand the buffer zone as necessary to prevent disturbance or take.
- If Crotch bumble bee impacts cannot be feasibly avoided, Metropolitan would obtain appropriate take authorization from CDFW (pursuant to FGC, § 2080 et seq), and replace habitat at a 1:1 ratio, or as determined in consultation with CDFW.

**BIO-6: Western Spadefoot.** Although limited suitable breeding habitat is present within the constructed basin and associated drainage located in the proposed Project Area, proposed Project activities could negatively impact suitable western spadefoot upland habitat, including all of the natural communities and excluding the disturbed and developed land cover, within the small mammal burrows located in the proposed Project Area. Therefore, the following measures are required to avoid impacts to this species.

- A qualified biologist shall survey areas of suitable habitat for western spadefoot in the proposed Project Area, including ruts, small pools, and the constructed basin and associated drainage. The survey shall be conducted during the active season of western spadefoot (which corresponds with the rainy season).
- If surveys result in the observation of western spadefoot within proposed Project Area, observed individuals and/or eggs shall be removed from proposed Project Area and be relocated to pre-determined suitable habitat in an appropriate area that will not be impacted.
- For work during the western spadefoot toad migration and breeding season (November 1 to May 31), a qualified biologist will survey the active work areas (including access roads) in the

mornings following measurable precipitation events. Construction may commence upon confirmation from the biologist that no western spadefoot toads are in the work area.

- When feasible, a 50-foot avoidance buffer will be maintained around burrows that provide suitable upland habitat for western spadefoot toad, as identified by a qualified biologist. The biologist will delineate and mark the no-disturbance buffer.
- If western spadefoot toad is found within the construction footprint, it will be allowed to move out of harm's way on its own accord or a qualified biologist will relocate it to the nearest suitable burrow outside of the construction impact area.
- Prior to beginning work, a qualified biologist will inspect underneath equipment and stored pipes greater than 1.2 inches (3 cm) in diameter for western spadefoot toad. If found, they will be allowed to move out of the construction area on their own accord.

**BIO-7: San Bernardino Kangaroo Rat Pre-Construction Presence/Absence Trapping Surveys.** Prior to ground disturbing activities within areas with potential habitat for SBKR or other sensitive small mammals, a qualified SBKR biologist with a required Section 10(a) permit will conduct pre-construction presence/absence trapping surveys. These surveys will follow protocols and trapping methods approved by the regulatory agencies to determine the presence/absence of SBKR and other sensitive small mammals on-site.

- If pre-construction presence/absence trapping surveys within the Stage 1 area are negative, then exclusionary fencing (Mitigation Measure BIO-8) will be installed.
- If results from the trapping surveys demonstrate that SBKR are present within the Stage 1 proposed Project Area, an ITP will need to be obtained. Construction within occupied habitat areas will not proceed until appropriate authorization (i.e., FESA and/or CESA Incidental Take Permit (ITP) is obtained.
- Stage 2 construction will not commence until appropriate authorization (i.e., FESA and/or CESA ITP) is obtained. Implementation of protection measures and compensatory mitigation for SBKR, in addition to those identified in this document, will be required as conditions of federal and state take permits.

**BIO-8: San Bernardino Kangaroo Rat Exclusionary Fencing.** Exclusionary fencing will be erected in construction areas with potential to be occupied by SBKR or containing kangaroo rat sign (e.g., burrows, scat, tail drag, or dust baths) as determined by a preconstruction survey conducted by a qualified biologist.

- A qualified biologist or approved biological monitor will be present on-site when the fence is installed to minimize disturbance of SBKR burrows from fence installation.
- The integrity of the fencing will be checked by a qualified biologist at the end of each workday. Any gaps will be repaired immediately.
- Construction access openings will be closed and secured at the end of each workday using the at-grade fencing method.
- The fence will remain in place for the duration of construction activities and removed at the completion of the relevant proposed Project activity.
- Stage 1 exclusionary fencing will be installed at grade to minimize the risk of unauthorized take.

**BIO-9: San Bernardino Kangaroo Rat and General Construction Monitoring.**

**SBKR Biologist.** A qualified biologist or approved biological monitor shall visually inspect trenches and steep-walled holes before the onset of daily construction for presence of SBKR. If SBKR are discovered, the biologist shall supervise the movement or relocation of the equipment until the animal has left the area on its own.

- To the extent feasible, soil stockpiles in SBKR habitat will be located within the construction area inside the exclusionary fence or within the existing facility in areas devoid of vegetation.
- Nighttime work shall be avoided as much as possible. If nighttime work is necessary, all lighting shall be directed exclusively at the work area to avoid areas that support local wildlife movement, such as ephemeral drainages, to the greatest extent practical. Any nighttime lighting shall be shielded downward to avoid light spillage into the surrounding areas.

**Limits of Disturbance.** Prior to construction in or adjacent to habitats for special-status species, and under the direction of a qualified biologist, Metropolitan shall clearly delineate the construction right-of-way (stake, flag, fence, etc.) that restricts the limits of construction to the minimum necessary to implement the proposed Project.

**Biological Monitoring.** Prior to the start of construction, Metropolitan shall retain a qualified biological monitor(s) to be on-site during the initial ground disturbance and during construction activities to monitor habitat conditions and impacts. The biological monitor will ensure compliance with mitigation measures and will have the authority to halt or suspend all activities until appropriate corrective measures have been taken. The biological monitor shall be a qualified biologist with species expertise appropriate for the proposed Project.

**On-Site Overnight Storage.** All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for birds and other wildlife before the pipe is subsequently buried, capped, or otherwise used or moved.

**BIO-10: Special-Status Ground-Dwelling Wildlife.** A qualified biologist shall conduct a preconstruction clearance survey throughout the proposed Project Area. If any special-status ground-dwelling wildlife, protected in accordance with CESA and FGC, such as the Belding's orange-throated whiptail, California glossy snake, coast horned lizard, coastal western whiptail, Los Angeles pocket mouse, northwestern San Diego pocket mouse, red-diamond rattlesnake, San Diego black-tailed jackrabbit, San Diego desert woodrat, Southern California legless lizard, and southern grasshopper mouse are observed during the survey, a qualified biologist should relocate the individual to suitable habitat adjacent to the proposed Project Area.

**BIO-11: Burrowing Owl.** Prior to the initiation of any ground disturbing activities within 500 feet of suitable burrowing owl habitat, including all of the natural communities and land cover types within the Study Area, focused surveys for burrowing owl shall be conducted by a qualified biologist throughout the Study Area following the most current CDFW required protocol for the species. If the qualified biologist finds evidence of burrowing owls during the burrowing owl breeding season (February 1 through August 31), all Project-related activities shall avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance includes establishment of a minimum 300-foot buffer zone around nests. Construction and other proposed Project-related activities may occur outside of the 300-foot buffer zone. Construction and other proposed Project-related activities may be allowed inside of the

300-foot avoidance buffer during the breeding season if the nest is not disturbed, and the proposed Project activities are monitored by a qualified biologist.

- b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

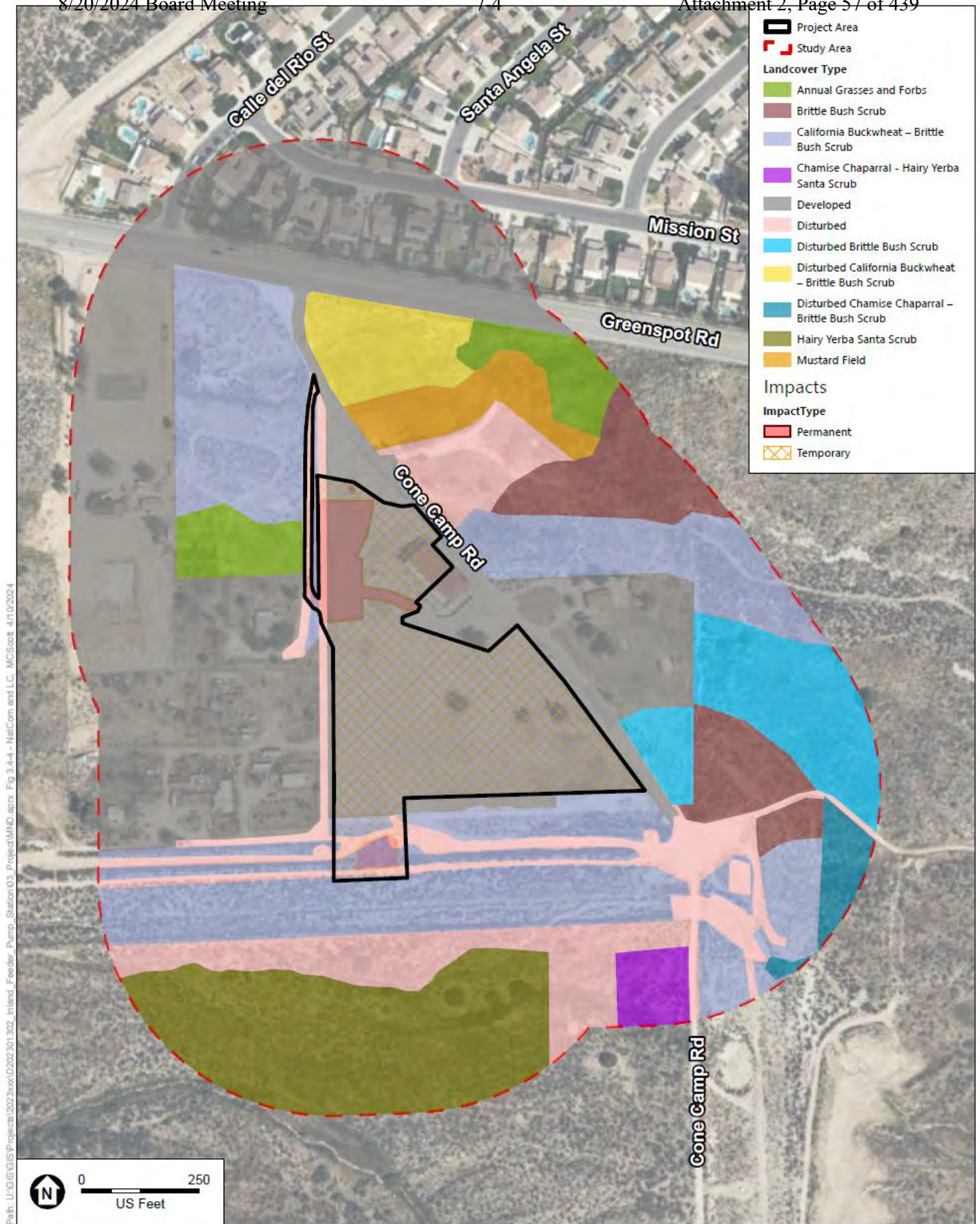
**No Impact.** No, the proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. No riparian habitat or other sensitive natural communities have been identified within the Study Area (Figure 3.4-2). Feature 1, comprised of an unvegetated constructed basin and ephemeral drainage/roadway, occurs along the western extent of the proposed Project Area, and four additional Features (2 through 5) comprised of three ephemeral drainages, and a constructed drainage occur within the Study Area (outside of the proposed Project Area). However, these aquatic features do not support riparian vegetation. While the Study Area is mapped by CNDDB as occurring within Riversidean alluvial fan sage scrub habitat with a State rank of S1.1, the Riversidean alluvial fan sage scrub habitat indicator species, scale broom (*Lepidospartum squamatum*), was not observed as a dominant species within any of the observed natural communities (Figure 3.4-4). Only one scale broom individual was observed within the Study Area. As a result, no natural communities present within the Study Area or proposed Project Area meet the criteria for Riversidean alluvial fan sage scrub and there are no other sensitive natural communities within the Study Area based on a review of CDFW's California Sensitive Natural Communities List. Therefore, no impact to riparian habitat or other sensitive natural community would occur.

- c. *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

**No Impact.** No, the proposed Project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. Five features (Features 1, 2, 3, 4, and 5) were identified in the Study Area. No state or federally protected wetlands were identified within the Study Area.

Features 2, 3, 4, and 5 are located outside of the proposed Project Area; however, Features 2 and 3 are potentially jurisdictional under CDFW and RWQCB. The proposed Project would be required to comply with the implementation of Metropolitan's Standard Practices outlined in Appendix A which requires a WEAP training, clear demarcation or proposed Project limits, proper containment of hazardous materials, adherence to hydrology and water quality requirements, and Stormwater Pollution Prevention Plan (SWPPP) requirements; therefore, no indirect impacts would occur to these features.





SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 3.4-4**  
Natural Communities and  
Land Cover Types



Feature 1 is the only aquatic resource identified within the proposed Project Area and consists of a constructed basin and an associated drainage feature/road which captures stormwater runoff along an existing access road. The basin was constructed in an upland area within the northwestern portion of the proposed Project Area to capture surface water runoff and allow it to infiltrate into the ground within the basin. Feature 1 is less than one acre in size and is used and maintained for the detention, retention, and infiltration of stormwater runoff. This feature does not meet the definition of a water of the state and does not contain or support wetland or riparian habitat, and therefore, is not likely to be considered jurisdictional by the USACE, CDFW and RWQCB. Therefore, no impacts would occur.

- d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

**Less-Than-Significant Impact with Mitigation Incorporated.** No, the proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The proposed Project Area and Study Area do not overlap with designated or recognized wildlife corridors (Spencer et al. 2010). The proposed Project would occur along an existing pipeline infrastructure alignment and would not introduce new barriers to wildlife movement. While wildlife likely use the Study Area to forage, breed, and to some extent, for local and regional movement, the proposed Project Area does not link large areas of contiguous, intact habitat together, and is not expected to function as an important migration corridor. Existing chain-link fencing is present along the perimeter of the majority of the developed and compacted portion of the proposed Project Area and rural residential development surrounds the proposed Project Area to the north, east, and west likely deterring wildlife movement. The land surrounding the proposed Project Area to the south is comprised of undeveloped land that wildlife likely utilizes to forage and breed, and to some extent, travel locally and regionally. The proposed Project components to be constructed outside of the fenced Foothill Pump Station facility would be mainly underground with an aboveground hatch to allow for access to the vault.

The proposed Project may result in both direct and indirect impacts to nesting migratory and special-status birds, herps, and small mammals (e.g., dispersal and/or breeding habitat for Crotch bumble bee, coastal California gnatcatcher, western spadefoot, or San Bernardino kangaroo rat within this region) that may utilize the Study Area for foraging, denning, and/or nesting. While the proposed Project would permanently impact 0.12 acre and temporarily impact 0.25 acre of California buckwheat – brittle bush scrub habitat, the proposed Project would avoid 28.41 acres of natural communities suitable to support wildlife in the surrounding Study Area, outside of the proposed Project Area (Figure 3.4-4). In addition, areas temporarily impacted by the proposed Project would be restored to their original condition following proposed Project completion. Nevertheless, ground disturbance and vegetation clearing activities may disrupt foraging and breeding/nesting behavior, such as copulation, nest building or incubation, or result in the removal of an active nest or burrow.

Implementation of Metropolitan's Standard Practices outlined in Appendix A requires a WEAP training, clear demarcation of proposed Project limits, proper containment of hazardous materials, trash/debris removal, maintaining required speed limits, and lighting restrictions to prevent unintended impacts during proposed Project construction. In addition, implementation of **Mitigation Measure BIO-1, and Mitigation**

**Measures BIO-3 through BIO-11** would reduce potential impacts to less than significant. Therefore, impacts to the movement of wildlife would be less than significant with mitigation incorporated.

- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**No Impact.** No, the proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The City of Highland Municipal Code, Chapter 8.36 (Heritage Trees) and Chapter 16.64.040 (Heritage Tree Preservation Requirements) provides regulations and guidelines for the removal, relocation, or destruction of any heritage tree or historic landmark tree within the City of Highland's city limits, requiring proper tree removal permit and associated environmental review prior to impacting protected trees. Additionally, Chapter 16.64.050 (Riparian Plant Conservation) establishes regulations to promote healthy and abundant riparian habitats within the City of Highland, working alongside existing regulations enforced by CDFW, prohibiting the removal of any riparian vegetation within 5 feet of the dripline of riparian vegetation adjacent to a "blueline stream" as indicated by the USGS Quadrangle (topographic map) or identified as a protected riparian area in a community or specific plan. The proposed Project would not impact regulated trees or riparian vegetation identified in the City of Highland Municipal Code. No other applicable local policies or ordinances would be applicable to the proposed Project. Therefore, no impact to local policies or ordinances protecting biological resources would occur.

- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?*

**Less-Than-Significant Impact with Mitigation Incorporated.** No, the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. The southwestern portion of the proposed Project Area, and the southern and southeastern portions of the surrounding Study Area, are situated within the boundaries defined by the adopted Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan HCP).

The Wash Plan HCP was prepared by SBVWCD and officially adopted in 2022. Its primary objective is to effectively manage ground-disturbing activities related to water conservation, aggregate mining, recreational activities, and other public services within the Plan Area while concurrently conserving natural ecosystems and populations of special-status species. A total of five special-status species are covered by the Wash Plan HCP including: slender-horned spineflower, Santa Ana River woolly-star, cactus wren, coastal California gnatcatcher, and San Bernardino kangaroo rat. Metropolitan is not a signatory to the Wash Plan HCP. Consequently, the proposed Project is not a Covered Activity within the Wash Plan HCP.

The southwestern portion of the proposed Project Area overlaps with the District Conserved Lands. District Conserved Lands include lands owned by the Conservation District and Redlands and lands included in land exchange between BLM and the Conservation District, which will be permanently conserved for the five species covered by the HCP. The HCP (and HCP Preserve) will be implemented in two phases linked to the BLM land exchange. Phase 1 will occur pre-BLM land exchange (within 10 years after the issuance of the ITP) and Phase 2 will occur post-BLM land exchange (no later than 28 years after the issuance of the ITP). The District Conserved Lands that overlap with the proposed Project Area are projected to be adopted

for conservation during Phase 2. Minor temporary impact to 0.25 acre and permanent impact to 0.12 acre of California buckwheat – brittle bush scrub habitat within the District Conserved Lands (Phase 2) area is proposed to occur from the proposed Project activities. However, implementation of **Mitigation Measure BIO-3** would ensure that the habitat would be fully restored before conservation efforts begin under the HCP Preserve implementation timeline.

While the proposed Project boundary overlaps with the adopted Wash Plan HCP and shares the potential to support some of the same special-status species, the implementation of **Mitigation Measures BIO-1** through **BIO-11** would ensure that impacts to Covered Species addressed in the Wash Plan HCP remain less than significant and do not conflict with its provisions. Therefore, impacts would be less than significant with mitigation incorporated.

## REFERENCES

- CDFW (California Department of Fish and Wildlife). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. March 20, 2018.
- CDFW (California Department of Fish and Wildlife). 2023a. California Natural Diversity Data Base (CNDDB). Database. Accessed December 21, 2023.
- CDFW (California Department of Fish and Wildlife). 2023b. California Sensitive Natural Communities List. Sacramento, CA: CDFW, Natural Heritage Division, June 1, 2023. Accessed December 21, 2023. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline>.
- CDFW (California Department of Fish and Wildlife). 2023c. Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. June 6, 2023.
- CNDDB (California Natural Diversity Database). 2024. Special Animals List. California Department of Fish and Wildlife. Sacramento, CA. January 2024.
- CNPS (California Native Plant Society). 2023. Inventory of Rare and Endangered Vascular Plants of California. Database. Accessed December 21, 2023.
- ECORP. 2022. Results of a Focused San Bernardino Kangaroo Rat Trapping Survey Conducted for the Metropolitan Water District of Southern California's Foothill Pump Station Project, Highland, San Bernardino, California. November 18, 2022.
- ESA (Environmental Science Associates). 2023a. Results of a San Bernardino Kangaroo Rat Burrow Survey for Metropolitan's Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California. April 13, 2023.
- ESA (Environmental Science Associates). 2023b. Results of Nighttime Small Mammal Activity Surveys for Metropolitan's Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California. November 16, 2023.
- NRCS (Natural Resource Conservation Service). 2023. Web Soil Survey. Accessed December 21, 2023. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

- Spencer, W. D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.
- Thorp, R. W., Horning, D. S., and Dunning, L. L. 1983. Bumble bees and cuckoo bumble bees of California (Hymenoptera, Apidae) Vol. 23). Univ of California Press.
- USFWS (U.S. Fish and Wildlife Service). 2008. Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*). 50 CFR Part 17. [FWS-R8-ES-2007-0008]; [92210-1117-0000 B4]. RIN 1018-AV07. Vol. 73, No. 74. April 16, 2008.
- USFWS (U.S. Fish and Wildlife Service). 2023a. Critical Habitat Portal. Accessed December 21, 2023. <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>.
- USFWS (U.S. Fish and Wildlife Service). 2023b. National Wetland Inventory. Accessed December 21, 2023. <https://www.fws.gov/wetlands/data/Mapper.html>.

### 3.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

Cultural resources include buildings, sites, districts, structures, or objects having historical, architectural, archaeological, or cultural importance. Cultural resources can include structures in the built environment (such as buildings or infrastructure) or buried resources, including archaeological sites and human remains. This section provides an analysis of proposed Project impacts on cultural resources, including historical and archaeological resources as well as human remains, and is based on the Cultural Resource Assessment attached as Appendix D.

### REGULATORY FRAMEWORK

CEQA requires a Lead Agency to determine whether a project may have a significant effect on historical resources (Public Resources Code (PRC) Section 21084.1) and archaeological resources (PRC Section 21083.2). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR); a resource included in a local register of historical resources; or any object, building, structure, site, area, place, record, or manuscript that a Lead Agency determines to be historically significant (CEQA Guidelines Section 15064.5[a][1-3]). Resources listed on the National Register of Historic Places are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys. In addition, a resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

## METHODOLOGY

A search of the California Historical Resources Information System (CHRIS) was conducted to identify any previously recorded cultural resources within a 0.5-mile radius of the proposed Project Area. The CHRIS records are maintained by nine Information Centers located across California and organized by county. Cultural resource records for San Bernardino County are maintained at the South Central Coastal Information Center (SCCIC), housed at California State University, Fullerton. The records search was conducted on December 15, 2023, and included a review of all recorded archaeological resources and previous studies within the proposed Project Area.

The SCCIC records search indicated that 13 cultural resources studies have been previously conducted within a 0.50-mile radius of the proposed Project Area. Of these 13 studies, two overlap nearly 90 percent of the proposed Project Area. Additionally, eighteen cultural resources were previously recorded within a 0.50-mile radius of the proposed Project Area. Of the 18 resources, eight are historic-period archaeological sites, two are historic isolates, and eight are historic built environment structures. One built environment resource (P-36-010681) was previously recorded within the proposed Project Area. P-36-010681 was a historic ranch complex and chicken farm. It was destroyed in 2002 during the construction for the Inland Feeder. No previously recorded prehistoric archaeological resources were identified during the records search.

A Sacred Lands File (SLF) search was completed by the Native American Heritage Commission (NAHC) with positive results for the proposed Project Area (Appendix D). The SLF results do not provide specific details on the nature or precise location of the Sacred Lands or whether they are related to any cultural resource recorded by the CHRIS at the SCCIC; thus, additional details cannot be provided. The NAHC provided a list of tribal contacts and recommended that they be contacted to obtain additional information.

A pedestrian field survey for cultural resources was conducted on December 20, 2023. The previously recorded site within the proposed Project Area (P-36-010681) was not relocated during the survey given that it was removed before 2005. No new cultural resources were observed during the survey.

## ANALYSIS OF IMPACTS

- a. *Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

**No Impact.** No, the proposed Project would not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. The previously recorded resource within the proposed Project Area, P-36-010681, was determined ineligible for listing in the California Register of Historical Resources or the National Register of Historic Places (Horne and Inoway 2002). No other potential historical resource were identified within the proposed Project Area from the record search and no additional resources were identified during the pedestrian survey of the proposed Project Area. Therefore, the proposed Project would not cause a substantial adverse change in the significance of a historical resource, and no impact would occur.



- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

**No Impact.** No, the proposed Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. The cultural resources record search and pedestrian field survey did not identify any prehistoric archaeological resources within the proposed Project Area. One historic-period archaeological site, P-36-010681, was previously recorded within the proposed Project Area, but evaluated and destroyed during the construction of the Inland Feeder. The proposed Project Area is highly disturbed from the previous construction of the Inland Feeder and other subsurface water infrastructure located within the proposed Project Area. The possibility that previously undiscovered buried archeological resources could be encountered during ground-disturbing activities is low. Furthermore, Metropolitan Standard Practices (Appendix A) require that in the event unanticipated archaeological resources are discovered during proposed Project construction, all work would cease within 50 feet of the discovery to protect the area until a qualified archaeologist can evaluate the discovery and recommend additional measures for proper handling and treatment. In addition, Metropolitan Standard Practices also require that a WEAP training would be conducted for all construction personnel. There would be no additional ground-disturbance during proposed Project operation. Therefore, there would be no impact to archaeological resources.

- c. *Disturb any human remains, including those interred outside of formal cemeteries?*

**Less-Than-Significant Impact.** No, the proposed Project would not disturb any human remains, including those interred outside of formal cemeteries. The proposed Project Area has been previously disturbed by the construction and installation of pipeline infrastructure associated with the Inland Feeder, and no human remains had been identified during previous excavations in or within the vicinity of the proposed Project Area during Inland Feeder ground-disturbing activities. Should previously undiscovered human remains be encountered, Metropolitan would comply with the State of California's Health and Safety Code Section 7050.5, which states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition of the remains pursuant to PRC Section 5097.98. Adherence to State of California's Health and Safety Code Section 7050.5 would result in the proper handling and treatment of unexpected human remains. Therefore, impacts would be less than significant.

## REFERENCES

Horne, M., and C. Inoway, 2002. Archaeological Site Record Update for P-36-010681. On file at the South-Central Coastal Information Center.

### 3.6 Energy

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

- a. *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?*

**Less-Than-Significant Impact.** No, the proposed Project would not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during proposed Project construction or operation. Energy use during the proposed Project construction would include fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, haul trucks, and generators for lighting. Electrical power used during proposed Project construction would be supplied from existing electrical infrastructure at the Foothill Pump Station facility. Use of natural gas would not be needed during proposed Project construction or operation. Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, the Project Contractor(s) would be required to restrict the idling of heavy-duty diesel motor vehicles in accordance with Title 13 California Code of Regulations Section 2449(d)(3) and Section 2485 and utilize fleets that comply with CARB's Regulation of In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles, which governs the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Construction activities would utilize fuel-efficient equipment consistent with state and federal regulations and comply with state measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. Project Contractor(s) would be required to comply with applicable regulatory construction waste management practices to divert construction and demolition debris. Overall, these practices would result in efficient use of energy, and proposed Project construction activities would require the minimum necessary electricity and transportation fuel consumption and would not have an adverse impact on available electricity or transportation fuel supplies or infrastructure.

The proposed Project is a water infrastructure project that would not increase water supply. The proposed Project would allow Metropolitan to pump and deliver water from DVL to the Rialto service area, which is currently only able to receive SWP water. This allows for greater water infrastructure reliability to the Rialto service area by improving the water distribution system flexibility to operate more efficiently in both wet years and under the more frequently occurring drought conditions. Operations and maintenance activities associated with the proposed Project would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources. Therefore, the only source of emissions would be associated with periodic vehicle trips by Metropolitan employees

for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. Operational energy consumption as a result of the use of transportation fuels (e.g., diesel and gasoline) associated with occasional maintenance vehicles traveling to and from the proposed Project Area would be minimal due to the infrequent recurrence of operational maintenance events. Additionally, proposed Project operational equipment installed would be new and designed to meet applicable current energy standards for such equipment and would only slightly increase the demand for electricity resources. Accordingly, proposed Project construction and operation would not result in the wasteful, inefficient, or unnecessary consumption of energy resources and impacts would be less than significant.

*b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

**No Impact.** No, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Metropolitan has a Climate Action Plan, which was adopted in May 2022, but none of the energy efficiency and conservation measures outlined in Metropolitan's CAP are applicable to the proposed Project (Metropolitan 2022a). In addition, Metropolitan is not subject to the County of San Bernardino *Greenhouse Gas Emissions Reduction Plan Update*, because this plan does not address greenhouse gas emissions and associated energy usage related to Metropolitan's activities (County of San Bernardino 2021). Indirectly, on-road vehicles used during operational maintenance activities would be required to meet the ongoing state fuel efficiency requirements. Therefore, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and no impact would occur.

## REFERENCES

County of San Bernardino, June 2021. County of San Bernardino *Greenhouse Gas Emissions Reduction Plan Update*. Accessed April 3, 2024. Available: GHG Reduction Plan Update-Greenhouse Gas Reduction Plan Update - Adopted 9-21-2021.pdf (sbcounty.gov)

Metropolitan (The Metropolitan Water District of Southern California), May 2022a. Climate Action Plan (CAP). Accessed April 3, 2024. Available: mwdh2o.com/media/12469/final-cap.pdf.

### 3.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic groundshaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on geologic units or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

## ANALYSIS OF IMPACTS

a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

**No Impact.** No, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving rupture of a known earthquake fault. Based on review of available literature and online maps, no active faults are known to traverse the proposed Project Area, and the site is not located within a designated Alquist-Priolo Earthquake Fault Zone (HDR Engineering 2022; U.S. Geological Survey 2022). The nearest Alquist-Priolo Earthquake Fault Zone is located approximately 0.5 miles northeast of the proposed Project Area (California Geological Survey 2021). Therefore, the potential for surface fault rupture is considered low (HDR Engineering 2022). The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. Additionally, the proposed Project Area is not occupied by people, and no permanent or temporary structures that would be occupied by people would be constructed and/or operated as part of the proposed Project. Therefore, the proposed Project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death associated with rupture of a known earthquake fault and no impact would occur.

- ii) *Strong seismic ground shaking?*

**No Impact.** No, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking. Several active faults are located in the proximity of the proposed Project Area including the San Andreas Fault, Crafton Hills Fault, and San Jacinto Fault. The nearest active fault is the San Bernardino Mountains section of the San Andreas Fault, located approximately 1.1 miles from the proposed Project Area (HDR Engineering 2022). The proposed Project includes implementation of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. The proposed Project does not contain habitable structures, and the proposed Project does not propose the construction of new habitable structures. Therefore, the proposed Project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving seismic ground shaking. All work conducted for the proposed Project would conform to the current seismic design provisions of the California Building Code (California Code of Regulations Title 24). Therefore, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking and no impact would occur.

- iii) *Seismic-related ground failure, including liquefaction?*

**No Impact.** No, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure, including liquefaction. Soil liquefaction is the process in which saturated soil experiences a temporary loss of strength due to the buildup of excess pore water pressure resulting from earthquake ground motions. Liquefaction

may damage structures on saturated, granular soils such as silt or sand, during an earthquake. The proposed Project Area has not been evaluated for liquefaction potential per the California Earthquake Hazards Zone Application (California Geological Survey 2021) or the San Bernardino County Land Use, Geologic Hazards Map (County of San Bernardino 2010). Groundwater is estimated to be deeper than 50 feet below ground surface (bgs) and the subsurface soils are anticipated to mainly consist of dense to very dense granular material. Based on the geotechnical report prepared for the proposed Project, the liquefaction potential for the proposed Project Area is considered low (HDR Engineering 2022). The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. There would be no construction of habitable or occupied structures. Therefore, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure, including liquefaction and no impact would occur.

*iv) Landslides?*

**No Impact.** No, the proposed Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving landslides. Landslides and other forms of mass wasting, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides are frequently triggered by intense rainfall and/or seismic shaking. Because the proposed Project Area is located in a relatively flat area without any major slopes, the potential for landslides and slope instability is considered to be low at the proposed Project Area (HDR Engineering 2022). None of the proposed Project components would increase or alter landslide potential. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. There would be no construction of habitable or occupied structures. Therefore, the proposed Project would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death, as a result of landslides and no impact would occur.

*b. Result in substantial soil erosion or the loss of topsoil?*

**No Impact.** No, the proposed Project would not result in substantial soil erosion or the loss of topsoil. Earthmoving and grading activities during construction of the proposed Project have the potential to cause erosion. The Construction General Permit requires the implementation of a SWPPP for impacts to more than one acre to reduce erosion and topsoil loss from stormwater runoff during construction activities. Compliance with the requirements set forth in this permit would require the Project Contractor(s) to implement best management practices (BMPs) during construction to prevent substantial soil erosion or the loss of topsoil. Furthermore, operations and maintenance activities would be similar to existing conditions once construction activities are completed. Therefore, the proposed Project would not have the potential to result in substantial soil erosion or loss of topsoil and no impact would occur.

*c. Be located on geologic units or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

**No Impact.** No, the proposed Project would not be located on unstable geologic units or unstable soil, or that would become unstable as a result of the proposed Project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. The proposed Project would include

construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. The proposed Project does not include changes that would result in new instability in the geologic units. As described in responses 3.7(a)(iii) and (a)(iv) above, the proposed Project would not cause or be located in geologic units or soil that is or would become unstable or susceptible to liquefaction or landslides. As described in impact iii, the liquefaction potential for the proposed Project Area is considered low and the site does not contain major slopes, therefore, the potential for lateral spreading at the proposed Project Area is considered low (HDR Engineering 2022). Therefore, the proposed Project would not be located on unstable geologic units or unstable soil, or that would become unstable as a result of the proposed Project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse and no impact would occur.

- d. *Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2010), creating substantial direct or indirect risks to life or property?*

**No Impact.** No, the proposed Project would not be located on expansive soils as defined in Section 1803.5.3 of the California Building Code (2010). The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. There would be no construction of habitable or occupied structures. Based on geotechnical report prepared for the proposed Project, the on-site soils primarily consist of dense sands, sandy gravels, cobbles, and boulders which are not considered to be expansive (HRD Engineering 2022). Additionally, expansion test result from near-surface soils indicate that the on-site soils are non-expansive and the potential for expansive soils at the proposed Project Area is considered low (HRD Engineering 2022). Therefore, no impact would occur.

- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

**No Impact.** No, the proposed Project does not require the installation or use of septic tanks or other alternative wastewater disposal systems. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. There would be no construction of habitable or occupied structures. Portable toilet systems for Metropolitan and construction employees would be provided during proposed Project construction activities, and no permanent septic or wastewater disposal systems would be installed. Therefore, the proposed Project would have no impact related to septic tanks and alternative wastewater systems.

- f. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**Less-Than-Significant Impact.** No, the proposed Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. This analysis of proposed Project impacts on paleontological resources is based on the *Paleontological Resources Assessment Report* attached as Appendix E. Per review of the geotechnical report prepared for the proposed Project, a total of three test pits were excavated in the proposed Project Area down to a depth of 49.6 feet bgs. The first 5 to 11 feet of the test pit units yielded artificial fill. Quaternary-age alluvial soils were found beneath the artificial fill and consist of poorly graded sand mixed with gravel, cobbles, and boulders (HDR Engineering 2022). A paleontological resources database search was conducted by the Natural History Museum of Los Angeles County (LACM) on January 7, 2024. Results of the paleontological resources records search conducted by



the LACM indicated that no fossil localities lie directly within the proposed Project Area; however, four fossil localities (LACM VP 1782, 4540, 4619, and 7811) were identified nearby from sedimentary deposits that may be found in the subsurface in the proposed Project Area. LACM VP 1782 produced fossil specimens of the camel family (*Camelidae*) at an unknown depth. LACM VP 4540 yielded specimens of the horse family (*Equidae*) at an unknown depth. LACM VP 4619 produced a fossil specimen of mammoth (*Mammuthus*) at 9 and 11 feet bgs., and LACM VP 7811 produced a fossil specimen of whip snake (*Masticophis*) at 100 feet bgs.

The Quaternary-age alluvial soils in the proposed Project Area are likely less than 5,000 years old and unlikely to contain fossils based on the age of the soils. Therefore, the Quaternary alluvium underlying the proposed Project Area is of low paleontological sensitivity, increasing to higher sensitivity with depth. While the exact depths of the alluvial soils is not known, it is likely deeper than the planned excavation.

Per Metropolitan's Standard Practice (Appendix A), a Project-specific WEAP training would be prepared and given to all construction personnel. The training would include all potential concerns and considerations related to paleontological resources, including types of paleontological resources that may be encountered and the proper procedures to be enacted in the event of an inadvertent discovery of paleontological resources. As outlined in Appendix A, if unanticipated paleontological resources are discovered during construction activities, all work would cease within 50 feet of the discovery to protect the area until a qualified paleontologist can evaluate the discovery and recommend additional measures for the proper handling and treatment. Due to the lack of unique paleontological resources previously recorded within the proposed Project Area, age of soils, and relatively shallow construction excavation depths, impacts would be less than significant.

## REFERENCES

- California Geological Survey (CGS), 2021. The California Earthquake Hazards Zone Application (EQ Zapp) September 23, 2021. Available online at: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>. Assessed: December 8, 2023.
- County of San Bernardino, 2010. San Bernardino County Land Use, Geologic Hazard Maps. Available online at: <https://lus.sbcounty.gov/planning-home/zoning-and-overlay-maps/geologic-hazard-maps/>. Accessed: December 12, 2023.
- HDR Engineering, 2022. Geotechnical Report Inland Feeder-Foothill Pump Station Project. Accessed: December 12, 2023.
- U.S. Geological Survey, 2022. U.S. Quaternary Faults Map. Available online at: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>. Accessed: December 12, 2023.

### 3.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. Climate change is the result of numerous, cumulative sources of GHG emissions contributing to the "greenhouse effect," a natural occurrence that takes place in Earth's atmosphere and helps regulate the temperature of the planet. GHG emissions occur both naturally and as a result of human activities, such as fossil fuel burning, decomposition of landfill wastes, raising livestock, deforestation, and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The global warming potential of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO<sub>2</sub>) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO<sub>2</sub>e), which is the amount of GHG emitted multiplied by its global warming potential.

#### REGULATORY FRAMEWORK

In response to climate change, California implemented Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 required the reduction of statewide GHG emissions to 1990 emissions levels (essentially a 15 percent reduction below 2005 emission levels) by 2020 and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the Governor signed Senate Bill (SB) 32 into law, extending AB 32 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged).

In 2022, AB 1279 was passed which requires the State to both achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. In December 2022, CARB adopted the 2022 *Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) (CARB 2022). The 2022 Scoping Plan relies on the continuation and expansion of existing policies and regulations, but also responds to AB 1279, outlining a technologically feasible, cost-effective, and equity-focused path to achieve the state's climate target of reducing anthropogenic emissions

to 85 percent below 1990 levels by 2045 and achieving carbon neutrality<sup>11</sup> by 2045 or earlier (CARB 2022). The 2022 Scoping Plan outlines the strategies the state will implement to achieve carbon neutrality by reducing GHG emissions to meet the anthropogenic target, and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches. The major element of the 2022 Scoping Plan is the decarbonization of every sector of the economy. This effort requires the following key actions: (1) rapidly move to zero-emissions transportation for cars, buses, trains, and trucks; (2) phase out the use of fossil-fuel gas for heating; (3) clamp down on chemicals and refrigerants; (4) provide communities with sustainable options such as walking, biking, and public transit to reduce reliance on cars; (5) continue to build out solar arrays, wind turbine capacity, and other resources to provide clean, renewable energy to displace fossil-fuel-fired electrical generation; and (6) scale up new options such as renewable hydrogen for hard-to-electrify end uses and biomethane where needed.

Despite these efforts, some residual emissions will remain from hard-to-abate industries such as cement, internal combustion vehicles still on the road, and other GHG emissions sources, including high-GWP chemicals used as refrigerants (CARB 2022). The 2022 Scoping Plan addresses the remaining emissions by re-envisioning natural and working lands (such as forests, shrublands/chaparral, croplands, and wetlands) to ensure that they incorporate and store as much carbon as possible. However, the modeling for the 2022 Scoping Plan indicates that natural and working lands, on their own, will not provide enough sequestration and storage to address all residual emissions. Therefore, it will be necessary to research, develop, and deploy additional methods of capturing CO<sub>2</sub> that include pulling it from smokestacks of facilities, or drawing it out of the atmosphere itself and then safely and permanently utilizing and storing it (CARB 2022).

The SCAQMD has not formally adopted a significance threshold for GHG emissions generated by a proposed project for which the SCAQMD is not the lead agency, nor has it adopted a uniform methodology for analyzing impacts related to GHG emissions on global climate change. In the absence of any industry-wide accepted standards, the SCAQMD's significance threshold of 10,000 metric tons per year (MT/year) CO<sub>2</sub>e for projects in which it is the lead agency is the most relevant air district-adopted GHG significance threshold and is used as a benchmark for the proposed project. It should be noted that the SCAQMD's significance threshold of 10,000 MT/year CO<sub>2</sub>e for industrial projects is intended for long-term operational GHG emissions. The SCAQMD has developed guidance for the determination of the significance of GHG construction emissions that recommends that total emissions from construction be amortized over 30 years and added to operational emissions and then compared to the threshold (SCAQMD 2008). The GHG impacts of the proposed project would be evaluated based on the recommended methodologies from the SCAQMD in this EIR.

In May 2022, Metropolitan adopted a Climate Action Plan (CAP) and certified the associated Program EIR (Metropolitan 2022a; 2022b). Metropolitan's CAP complies with the requirements of CEQA Guidelines Section 15183.5(b)(1) for a qualified greenhouse gas (GHG) reduction plan, and as such, can be used to streamline and tier CEQA GHG analysis and mitigate for GHG impacts associated with construction and operational activities (Metropolitan 2022a). The CAP includes a baseline GHG emissions inventory of

<sup>11</sup> *Carbon neutrality* means "net zero" emissions of GHGs. In other words, it means that GHG emissions generated by sources such as transportation, power plants, and industrial processes must be less than or equal to the amount of CO<sub>2</sub> that is stored, both in natural sinks and through mechanical sequestration. AB 1279 uses the terminology "net zero" and the 2022 Scoping Plan uses the terminology "carbon neutrality" or "carbon neutral." For purposes of this MND, these terms mean the same thing and are used interchangeably.

Metropolitan's operations from 1990 through 2020 and a GHG emissions forecast through 2045. The CAP established Metropolitan's GHG emissions reduction targets to be consistent with SB 32 (40 percent reduction below 1990 levels by 2030) and AB 1279, which codifies the State's goal of achieving carbon neutrality by 2045. The CAP also establishes actions and policies that Metropolitan could implement to achieve its GHG reduction targets. The CAP includes a suite of GHG emissions reduction measures to be implemented that would reduce Metropolitan's GHG emissions to achieve the adopted emissions reduction targets established in the CAP. By following these emissions reduction measures, Metropolitan would exceed the State's target of 40 percent below 1990 levels by 2030 and make significant progress toward ultimately achieving carbon neutrality by 2045 (Metropolitan 2022a).

## METHODOLOGY

Similar to the air pollutant emissions modeling, GHG emissions associated with the proposed Project were estimated using CalEEMod (Version 2022.1.1). CalEEMod uses Project-specific information, including the Project's land uses and location, to estimate a Project's emissions (Refer to Appendix B for the air quality and greenhouse gas emissions modeling). Operations and maintenance activities, including the frequency of staff visits, maintenance, shutdowns, would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources. The only source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities. Due to the minimal emissions that would result from these periodic vehicle trips by Metropolitan employees to the proposed Project Areas, the proposed Project's operational emissions are evaluated qualitatively in this MND.

## ANALYSIS OF IMPACTS

- a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

**Less-Than-Significant Impact.** No, the proposed Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. As outlined in Section 1.1 of Metropolitan's CAP, the CAP meets the requirements of CEQA Guidelines Section 15183.5(b)(1) for a qualified GHG emissions reduction plan (Metropolitan 2022a). As a result, pursuant to CEQA Guidelines Section 15183.5(a) and 15183.5(b), Metropolitan can streamline the CEQA review of its projects using the GHG emissions analysis completed for the CAP if the proposed program is consistent with the adopted CAP. Therefore, this analysis relies upon the streamlining provisions of CEQA Guidelines Section 15183.5 to determine whether the proposed Program would generate GHG emissions that may have a significant impact on the environment by evaluating whether the proposed Program would be consistent with the CAP.

Proposed Project construction activities would generate temporary GHG emissions through the use of construction vehicles and equipment, haul trips, and transport of employees and materials to and from the work site, electricity from construction trailers and water usage for fugitive dust control. Proposed Project construction emissions were modeled consistent with construction modeling in Section 3.3, *Air Quality*. Table 3.8-1 represents the greenhouse gas emissions for construction of the proposed Project.

**TABLE 3.8-1  
PROPOSED PROJECT CONSTRUCTION GHG EMISSIONS**

<b>Source</b>	<b>Maximum GHG Emissions (MTCO<sub>2</sub>e/year)</b>
Construction Equipment and On-Site Trucks	192
On-Road Mobile Sources	175
Water + Construction Office	16
<b>Total Construction CO<sub>2</sub>e</b>	<b>383</b>
Amortized Construction Emissions	13
SOURCE: ESA 2024	

Industry standards recommend that construction project GHG emissions should be amortized over a 30-year project lifetime, so that construction GHG emissions are included as part of the operational GHG life cycle. Per the recommendation, GHG emissions from construction were amortized over the 30-year lifetime of the proposed Project (SCAQMD 2008). Total estimated construction related GHG emissions for the proposed Project are estimated at approximately 379 MTCO<sub>2</sub>e. This would equal to approximately 13 MTCO<sub>2</sub>e per year after amortization over 30 years.

As explained above, the proposed Project is a water infrastructure project that would not increase water supply, but rather enhance water delivery flexibility in response to drought conditions and limited SWP allocations. Metropolitan is proposing an intertie connection between the Inland Feeder and Foothill Pump Station and would not directly or indirectly cause growth (see Section 1.0, *Project Description*, for additional details). Operations and maintenance activities at the Foothill Pump Station facility, including the frequency of staff visits, maintenance, shutdowns, would be similar to existing conditions once construction activities are completed and would only slightly increase the demand for electricity resources. The main source of emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities.

Emissions reduction measures listed in the CAP would be incorporated into the proposed Project, if applicable and proposed Project GHG emissions would be quantified as part of the CAP annual reporting. As noted previously, Metropolitan adopted a CAP to address and mitigate organization-wide GHG emissions associated with construction and operational activities. Metropolitan's annual 2022 CAP Progress Report states approximately 9,678,470 MT of CO<sub>2</sub>e remains in the carbon budget for years 2022 through 2045 years (Metropolitan 2023). Pursuant to the annual CAP GHG emissions inventory and reporting procedures, GHG emissions generated by proposed Project activities would be tracked as part of Metropolitan's overall carbon budget through data collected from construction contractors, utility and service providers (electricity, natural gas, water, wastewater, and solid waste), and the employee commute survey. In addition, organization-wide CAP measures would be implemented to reduce Metropolitan's GHG emissions over time such that GHG emissions remain within the carbon budget. As shown in Table 3.8-1, the construction of the Project would generate approximately 13 metric tons of CO<sub>2</sub>e per year, which would be less than the SCAQMD 10,000 metric tons of CO<sub>2</sub>e per year quantitative significance threshold for industrial projects. In addition, as discussed above, Project operational GHG emissions were

discussed qualitatively because the main source of Project operations emissions would be associated with periodic vehicle trips by Metropolitan employees for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. Therefore, once constructed, the proposed Project would result in minimal operational emissions associated with operations and maintenance, and no long-term GHG impact would occur. As such, due to the Project's minimal construction and operational GHG emissions, the Proposed Project would result in a less than significant impact related to GHG emissions.

*b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?*

**No Impact.** No, the proposed Project would not conflict with an applicable plan, policy or regulation of an agency adopted for the purposes of reducing GHG emissions. Applicable plans, policies, and regulations consist of Metropolitan's CAP, SB 32, EO B-55-18, the 2022 Scoping Plan, and AB 1279. As discussed under Threshold GHG-A, the proposed Project would be consistent with Metropolitan's CAP because 1) GHG emissions generated by proposed Project activities would be tracked as part of Metropolitan's overall carbon budget implementing its organization-wide CAP measures to reduce Metropolitan's GHG emissions over time such that GHG emissions remain within the carbon budget; and 2) the proposed Project would incorporate applicable CAP measures. Also, by being consistent with the CAP, the proposed Project would also be consistent with state GHG emission reduction plans, policies, and regulations, such as the 2022 Scoping Plan, SB 32, EO B-55-18, and AB 1279, because the GHG emission reduction targets established by these plans, laws, and policies are incorporated into and consistent with Metropolitan's GHG emissions reduction targets. Therefore, the proposed Project would not conflict with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions, and no impact would occur.

## REFERENCES

- CARB (California Air Resource Board), November 16, 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. Accessed April 3, 2022. Accessed: [https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp\\_1.pdf](https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf).
- Metropolitan (The Metropolitan Water District of Southern California), May 2022a. Climate Action Plan (CAP). Accessed April 3, 2024. Available: [mwdh2o.com/media/12469/final-cap.pdf](http://mwdh2o.com/media/12469/final-cap.pdf).
- Metropolitan (The Metropolitan Water District of Southern California), May 2022b. Final Program Environmental Impact Report. Accessed April 3, 2024. Available: [mwdh2o.com/media/12469/final-cap.pdf](http://mwdh2o.com/media/12469/final-cap.pdf).
- Metropolitan (The Metropolitan Water District of Southern California), April 2024. Final Program Environmental Impact Report. Accessed May 6, 2024. Available: [https://www.mwdh2o.com/media/xo5ilx4l/metropolitan\\_climate\\_action\\_plan\\_2023\\_annual\\_progress\\_report.pdf](https://www.mwdh2o.com/media/xo5ilx4l/metropolitan_climate_action_plan_2023_annual_progress_report.pdf).
- SCAQMD (South Coast Air Quality Management District), December 5, 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, page 5. Accessed 3 April, 2024. Available: [https://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](https://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2).

### 3.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

- a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

**Less-Than-Significant Impact.** No, the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The proposed Project does not involve routine or permanent transport, use, storage, or disposal of hazardous materials. Construction of the proposed Project would require the temporary transport of hazardous materials to and from the proposed Project Area and the use and storage of these materials. Construction activities would occur in two stages as described in Section 1.0, *Project Description*. The proposed Project's construction equipment and materials would include fuels, oils and lubricants, cement, and concrete, which are all commonly used in construction. Proposed Project construction activities would be required to comply with numerous regulations to ensure that construction-related fuels and other hazardous materials



are transported, used, stored, and disposed of safely to protect employee safety, and to reduce the potential for such fuels or other hazardous materials to be released into the environment, including stormwater and downstream receiving water bodies. In addition, construction contractors would be required to acquire coverage under the National Pollutant Discharge Elimination System (NPDES) General Stormwater Permit, which requires the preparation and implementation of a SWPPP for construction activities. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, and equipment and fuel storage; describe protocols for responding immediately to spills; and describe BMPs for controlling site run-on and runoff. Details regarding BMPs designed to minimize erosion are discussed in Appendix A.

Proposed Project operations would not change from existing conditions. In addition, as outlined in Appendix A (Metropolitan Standard Practices), the Project Contractor(s) would be required to follow regulations related to the proper handling, storage, application, disposal, and clean-up of hazardous materials, install drip pans on stationary equipment, and dispose of contaminated materials consistent with all applicable federal, state, and local laws and regulations.

The temporary nature of any hazardous material transport, compliance with federal, state, and local laws and regulations, and implementation of Metropolitan Standard Practices, would ensure that the proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, storage, or disposal of hazardous materials. Impacts would be less than significant.

- b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

**Less-Than-Significant Impact.** No, the proposed Project would not create a significant hazard to the public through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As discussed in Section 3.9 (a) above, the proposed Project would require the temporary use and storage of hazardous materials at the proposed Project Area during construction activities for use in equipment operation, cleaning, and maintenance. The transport, use, storage, and disposal of hazardous materials during proposed Project construction would be conducted in accordance with applicable state and federal laws, as discussed above. As outlined in Appendix A, the Project Contractor(s) would be required to clean up all spills in accordance with all applicable environmental laws and regulations and notify the Engineer immediately in the event of a spill.

The proposed Project does not involve changes to roadways, traffic conditions, permanent ingress or egress, or routine transport of hazardous materials that would create a foreseeable upset or accident conditions. Metropolitan would also comply with their Standard Practices as outlined in Appendix A for requirements related to hazardous materials storage. Compliance with federal, state, and local laws and regulations, Metropolitan Standard Practices, and temporary nature of hazardous materials handling would ensure that the proposed Project would not create a significant hazard to the public or the environment through upset and accident conditions involving the release of hazardous materials. Impacts would be less than significant.

- c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

**No Impact.** No, the proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The nearest school to the proposed Project Area would be approximately one mile to the northwest. No schools are located within one-quarter mile of the proposed Project Area. The proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur.

- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

**No Impact.** No, the proposed Project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. No known hazardous material sites are located within or adjacent to the proposed Project Area, including sites that are on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Department of Toxic Substances Control 2023; State Water Resources Control Board 2023). Therefore, no impact would occur.

- e. *For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?*

**Less-Than-Significant Impact.** No, the proposed Project would not result in a safety hazard or excessive noise for people residing or working in the proposed Project Area due to an airport land use plan or location within two miles of a public airport or public use airport. The nearest airport is Redlands Municipal Airport, located approximately 1.5 miles south of the proposed Project. The proposed Project Area would not be located within the Redlands Municipal Airport Influence Area or Area of Special Compatibility Concern (City of Highland 2006b). The proposed Project would include temporary construction within the existing Foothill Pump Station facility. The proposed Project would not include habitable structures and construction employees would not experience impacts associated with airport safety and excessive noise from aircraft. Therefore, impacts would be less than significant.

- f. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**Less-Than-Significant Impact.** No, the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The City of Highland General Plan Public Health, Safety, and Environmental Justice Element includes an Emergency Preparation and Response section, which includes information on emergency response facilities and evacuation routes. In the event of an extreme fire, flood, or other circumstances, evacuation may be necessary. To preserve the lives of Highland residents, it is important to ensure that the routes used for evacuation are unobstructed and in good condition. Depending on the hazard, evacuation routes in Highland may involve a variety of highways and arterials. Interstates and highways that could be used by residents to evacuate the area include Interstates 10, 15, and 215, as well as State Routes 30, 31, 38, 60, 66, and 210. Major east/west roads within Highland that could be used for evacuation include Greenspot Road, Base

Line Street, East Highland Avenue, and Pacific Street (City of Highland 2006b). The proposed Project Area would be located south of Greenspot Road which is identified as a possible evacuation route. Proposed Project construction would occur mainly within a Metropolitan right-of-way and would not permanently alter public roadways or change the existing access points at the proposed Project Area. Construction vehicles carrying construction equipment and materials would utilize local roadways and freeways to bring equipment and materials to the site. These activities would be temporary, during construction, and provide direct access to the proposed Project Area. The proposed Project would not require lane or road closures. Based on the temporary nature of the construction activities, the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

- g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

**Less-Than-Significant Impact.** No, the proposed Project would not expose people or structures to a significant risk of loss, injury or death involving wildfires. The proposed Project would not be located in or near a State Responsibility Area or lands classified as a Very High Fire Hazard Severity Zone (CAL FIRE 2023). The proposed Project would be located at the existing Foothill Pump Station facility and immediately south of the facility. As outlined in Appendix A the Project Contractor(s) would be required to comply with Metropolitan standard practices related to fire protection including requirements for standard exhaust control and muffling devices that would act as spark arrestors on gasoline- or diesel-powered construction machinery, and the presence of fire containment and extinguishing equipment on-site during construction activities. All vehicles would contain fire extinguishers, and staff are trained in fire suppression in accordance with Metropolitan's standard protocols. The proposed Project does not propose the construction of habitable structures. Following construction activities, maintenance of the Foothill Pump Station facility would be the same as current maintenance activities and would not result in the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, impacts would be less than significant.

## REFERENCES

- California Department of Forestry and Fire Protection (CAL FIRE), 2023. Fire Hazard Severity Zones in State Responsibility Area. Available online at <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008>. Accessed December 11, 2023.
- California Department of Toxic Substances Control (DTSC). 2023. DTSC's Hazardous Waste and Substances Site List—Site Cleanup (Cortese List). Available: <https://calepa.ca.gov/sitecleanup/corteselist/>. Accessed December 12, 2023.
- City of Highland, 2006b. General Plan *Public Health, Safety, and Environmental Justice Element*. March 2006. Available online at: <https://www.cityofhighland.org/DocumentCenter/View/4193/Public-Health-Safety-and-Environmental-Justice-Element-PDF>
- State Water Resources Control Board (SWRCB), 2023. GeoTracker database. Available: <https://geotracker.waterboards.ca.gov/>. Accessed December 12, 2023.

### 3.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate Regional Water Quality Control Board water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

## REGULATORY FRAMEWORK

The Clean Water Act (CWA) is the primary federal legislation governing water quality. Sections 303 and 304 of the CWA provide water quality standards, criteria, and guidelines. Section 402 of the CWA establishes the National Pollution Elimination Discharge System (NPDES), a permitting system for the discharge of pollutants (except for dredged or fill material) into Waters of the United States. The California State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) administer the NPDES Project in California. Each RWQCB has Projects for implementing individual and general permits related to construction activities, municipal stormwater discharge, and various kinds of non-stormwater discharges.

The NPDES Project controls water pollution by regulating point sources that discharge pollutants into Waters of the United States. The NPDES Project is a federal project that has been delegated to the SWRCB

and the nine RWQCBs to implement and regulate. The majority of NPDES permits are issued by the RWQCBs, which ensure compliance with their permits through compliance inspections, monitoring report reviews, and enforcement actions, if necessary. In California, NPDES permits are also referred to as waste discharge requirements (WDR) that regulate discharges to waters of the United States.

The Porter-Cologne Water Quality Control Act is the primary water quality control act for the State of California. The Porter-Cologne Act is implemented by the SWRCB and the nine RWQCBs and applies to Waters of the State, which includes any surface water or groundwater, including saline waters, within the boundaries of the state (Water Code Section 13050(e)). The Porter-Cologne Act requires a report of Water Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair beneficial use of surface or groundwater of the State. For discharges directly to surface water, an NPDES permit is required. For waste discharges to land (such as spoils disposal and storage), erosion from soil disturbance, or discharges to Waters of the State, Waste Discharge Requirements (WDRs) are required.

## ANALYSIS OF IMPACTS

- a. *Violate Regional Water Quality Control Board water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

**Less-Than-Significant Impact.** No, the proposed Project would not violate RWQCB water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality. The proposed Project would not involve work within surface waterbodies, as no surface waterbodies are present, or to groundwater, nor would it create waste that would be subject to regulation under a WDR. If groundwater is encountered and extraction is required, these construction activities would be temporary and short-term in nature. Earthmoving activities associated with the proposed Project would include excavation, trenching, grading, and construction over an area that would be more than one acre. These activities could expose soils to erosion processes; the extent of erosion, if any, would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions.

Projects that disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one acre or more, are required to obtain coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2022-0057-DWQ, NPDES No. CAS000002 (Construction General Permit)). Construction activity subject to this permit includes clearing, grading, excavation, and stockpiling of excavated soil. The proposed Project would be required to prepare and implement a SWPPP. Limited quantities of common materials such as vehicle/equipment fuels/lubricants and sealants would be used during construction. This use would include standard measures to ensure appropriate handling (e.g., temporary containment to avoid spills), proper disposal of associated wastes, and describe BMPs to control run-on and runoff from the construction site. Following completion of construction, the proposed Project Area would be returned to pre-Project conditions in areas where underground facilities are constructed. Operations of the facility would be similar to existing conditions and would be implemented by existing Metropolitan staff. Compliance with the NPDES Construction General Permit, required SWPPP, and identified BMPs would ensure that construction and operation of the proposed Project would not violate water quality standards or waste discharge requirements.

As shown in Appendix A, per Metropolitan's Standard Practices, any Project Contractor(s) shall not create a nuisance or pollution as defined in the California Water Code, or cause a violation of any applicable water quality standards for receiving waters, as required by the CWA. Therefore, the potential for proposed Project activities to violate RWCQB water quality standards, waste discharge requirements or cause erosion or the downstream transport of sediment (sedimentation) that could adversely affect water quality would be less than significant.

- b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?*

**No Impact.** No, the proposed Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the proposed Project may impede sustainable groundwater management of the basin. The proposed Project includes implementation of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. The proposed Project would not affect or propose the use of groundwater. The proposed Project would not result in any increased use or extraction of local groundwater. In addition, no sole source aquifers would be located within the proposed Project Area (US EPA 2023). Therefore, there would be no impact.

- c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
- i) Result in substantial erosion or siltation on- or off-site?*
  - ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
  - iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
  - iv) Impede or redirect flood flows?*

**Less-Than-Significant Impact.** No, the proposed Project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff water; or impede or redirect flood flows. The proposed Project is an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. Construction of the proposed Project would temporarily alter the localized drainage pattern in the proposed Project Area due to ground-disturbing activities, such as grading, trenching, and excavation. Such alternations in the drainage pattern may temporarily result in erosion or siltation and/or increase the rate or amount of surface runoff if substantial drainage is rerouted. As discussed in *Geology and Soils*, potential construction-related erosion and sedimentation impacts would be avoided or reduced below a level of significance through conformance with the existing NPDES Construction General Permit and related requirements). Specifically, the proposed Project would implement a SWPPP and Project-specific BMPs would be identified to control erosion and

sedimentation impacts. BMPs would be implemented, as required, during the construction of the proposed Project to ensure that erosion and sedimentation impacts would be less than significant.

As discussed above, construction of the proposed Project could temporarily alter seasonal flow within the proposed Project Area due to ground disturbing activities. However, with implementation of the required Project-specific SWPPP and associated BMPs, construction of the proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff. Metropolitan would also comply with their Standard Practices, (Appendix A) requiring that the Contractor not allow any equipment or vehicle storage within any drainage course or channels and any material placed in areas where it could be washed into a drainage course or channel would be removed prior to the rainy season. Once construction is completed, the components of the proposed Project located within a flood zone would be located underground and the proposed Project Area would be returned to similar existing conditions. Therefore, the proposed Project would not impede or redirect flood flows and impacts would be less than significant.

*d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?*

**Less-Than-Significant Impact.** No, the proposed Project would not risk release of pollutants due to inundation in a flood hazard, tsunami, or seiche zone. The southern portion of the proposed Project Area, generally outside of the existing facility, would be located within an area determined by FEMA to be Zone X, an area protected from flooding from the 100-year storm event (FEMA 2016). Components of the proposed Project that would be located within the flood zone include a portion of the discharge pipeline and one vault structure. Once constructed, the proposed Project components within the flood zone would be located mainly belowground. Due to the components being located underground, impacts would be less than significant relative to being located in a flood zone.

The proposed Project Area would be located approximately 75 miles away from the Pacific Ocean and would not be subject to tsunamis. Seiches are defined as wave-like oscillatory movements in enclosed or semi-enclosed bodies of water such as lakes or reservoirs and are most typically associated with seismic activity. The nearest lake to the proposed Project Area would be the Seven Oaks Reservoir located approximately 2.5 miles to the northeast. According to the United States Geological Survey (USGS) Flood Inundation Mapper, the proposed Project Area would be located outside of the inundation zone (USGS 2024). During proposed Project construction activities, minor pollutants would be present at the proposed Project Area. The proposed Project would not result in impacts associated with flood, tsunami, or seiche hazards during long-term operation of the proposed Project, as operations of the Foothill Pump Station facility would be a continuation of existing activities at the facility and the proposed Project would not result in operational changes at the facility. Therefore, impacts due to potential release of pollutants due to proposed Project inundation in a flood hazard, tsunami, or seiche zones would be less than significant.

*e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

**Less-Than-Significant Impact.** No, the proposed Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. The Project consists of temporary construction activities to implement an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks, and would not require



the use of groundwater and therefore would not conflict with a sustainable groundwater management plan. The proposed Project would require preparation of a SWPPP, including implementation of BMPs to minimize soil erosion and water quality impacts. The proposed Project would not result in impacts associated with groundwater recharge or a groundwater management plan. With conformance to applicable regulatory requirements, including the NPDES Project, preparation of a SWPPP, and implementation of BMPs, impacts would be less than significant.

## REFERENCES

Federal Emergency Management Agency (FEMA), 2016. FEMA Flood Map Service Center, Available online at: <https://msc.fema.gov/portal/home>, Accessed on February 23, 2024.

U.S. Environmental Protection Agency (US EPA), 2023. Map of Sole Source Aquifer Locations, Available online at: <https://www.epa.gov/dwssa/map-sole-source-aquifer-locations>, Accessed on February 23, 2024.

United States Geological Survey (USGS), 2024. USGS Flood Inundation Mapper, Available online at: <https://fim.wim.usgs.gov/fim/>, Accessed on March 12, 2024.

### 3.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

### ANALYSIS OF IMPACTS

*a. Physically divide an established community?*

**No Impact.** No, the proposed Project would not physically divide an established community. The proposed Project would be located mainly within the existing Foothill Pump Station facility, with a small portion of the construction of the discharge pipeline and one vault being constructed belowground just to the south of the facility. The Project consists of improvements to an existing Metropolitan facility and does not include new components that would physically divide a community. Temporary work staging areas and construction areas would occur along or within the proposed Project Area. The proposed Project would not result in changes to the existing land use or any surrounding land use. Therefore, no impact would occur.

*b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

**No Impact.** No, the proposed Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The proposed Project would be located under the jurisdiction of the City of Highland. There are no land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect at or within the vicinity of the proposed Project Area. Therefore, the proposed Project would not cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and no impact would occur.

### 3.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

### ANALYSIS OF IMPACTS

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?*

**No Impact.** No, the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. The proposed Project would be located within the existing Foothill Pump Station facility and contains existing Metropolitan infrastructure. The City of Highland, due to its large washes and stream channels, contains regionally significant construction aggregate and mineral resources. The primary minerals found in the area are iron, decorative rocks, clay, limestone, sand and gravel (City of Highland 2006a). The proposed Project Area would be located mainly on developed land within the existing Foothill Pump Station facility, with a small portion of the footprint extending to the south. The proposed Project Area would not be utilized for mineral extraction activities, nor is it planned for mineral extraction activities, and would not result in the loss of availability of known mineral resources. Therefore, no impact would occur.

- b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

**No Impact.** No, the proposed Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. The proposed Project would be located within the existing Foothill Pump Station facility which contains existing Metropolitan infrastructure. The proposed Project Area would not be used or zoned for mineral resource recovery (USGS 2023). The proposed Project would not result in loss of known mineral resources of local importance. Therefore, no impact would occur.

### REFERENCES

City of Highland, 2006a. General Plan Conservation and Open Space Element. Available: <https://www.cityofhighland.org/DocumentCenter/View/148/Conservation-and-Open-Space-Element-PDF>, accessed December 14, 2023.

United States Geological Survey (USGS), 2023. Mineral Resources On-Line Spatial Data Interactive Map. Available online at <http://mrddata.usgs.gov/general/map.html>. Accessed on December 8, 2023.

### 3.13 Noise

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

This section provides an analysis of proposed Project impacts associated with noise and is based on Noise emissions calculations and modeling, attached as Appendix F.

#### OVERVIEW OF NOISE AND VIBRATION

Sound is a vibratory disturbance created by a moving or vibrating source that is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007).

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas sound is simply carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). Typically, groundborne vibration generated by manmade activities attenuates rapidly as distance from the source of the vibration increases. Groundborne vibration is a concern almost exclusively inside buildings and is based on a number of factors, including foundation type, building construction characteristics, and acoustical adsorption of building materials (Federal Transit Administration [FTA] 2018).

Vibration amplitudes are usually expressed in peak particle velocity (PPV) for buildings and Root Mean Square (RMS) vibration velocity for people and are normally described in inches per second (in/sec). PPV

is defined as the maximum instantaneous positive or negative peak of a vibration signal (Caltrans 2020). RMS is generally the equivalent to 71 percent of the PPV. Thus, evaluating human annoyance to vibration usually results in a more restrictive vibration limit than structural damage limits. Table 3.13-1 summarizes the vibration limits recommended by the American Association of State Highway and Transportation Officials to avoid structural damage to buildings.

**TABLE 3.13-1**  
**MAXIMUM VIBRATION LEVELS FOR PREVENTING BUILDING DAMAGE**

Type of Situation	Vibration Level (in/sec PPV)
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2–0.3
Residential buildings in good repair with gypsum board walls	0.4–0.5
Engineered structures, without plaster	1.0–1.5
NOTES: in/sec (inches per second), PPV (peak particle velocity)	
SOURCE: ESA 2024	

The vibration annoyance potential criteria recommended for use by Caltrans, which are based on the general human response to different levels of groundborne vibration velocity levels, are described in Table 3.13-2.

**TABLE 3.13-2**  
**VIBRATION ANNOYANCE POTENTIAL CRITERIA FOR HUMANS (IN/SEC PPV)**

Human Response	Transient Sources	Continuous/Frequent Intermittent Sources
Severe	2.0	0.4
Strongly Perceptible	0.9	0.10
Distinctly Perceptible	0.25	0.04
Barely Perceptible	0.04	0.01
NOTES: in/sec (inches per second), PPV (peak particle velocity)		
SOURCE: Caltrans 2020		

## REGULATORY FRAMEWORK

### ***National Institute for Occupational Safety and Health***

The National Institute for Occupational Safety and Health (NIOSH) establishes Recommended Exposure Limits (REL) for noise based on the best available science and practice. The NIOSH REL for noise is 85 decibels, using the A-weighted frequency response (dBA) over an 8-hour average, usually referred to as Time-Weighted Average (TWA). Exposures at or above this level are considered hazardous.

### ***California Government Code***

California Government Code Section 53091(d) states that building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

California Government Code Section 53091(e) states that zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, or for the production or generation of electrical energy, facilities that are subject to Section 12808.5 of the Public Utilities Code, or electrical substations in an electrical transmission system that receives electricity at less than 100,000 volts.

### ***City of Highland Municipal Code***

The municipal code sets forth the standards, guidelines and procedures concerning the regulation of noise use in the City of Highland. Specifically, the code includes Title 8, Health and Safety, which includes Chapter 8.50, Noise Control, and Title 16, Land Use and Development. Title 8 directly regulates noise while Title 16 lays out land use standards that indirectly regulate noise-generating and sensitive land uses. These regulations are intended to implement the goals, objectives and policies of the General Plan; protect property values and the health and general well-being of the public; and ensure that any negative effects of noise are minimized or completely avoided. The City of Highland categorizes land uses into designated noise zones to assign appropriate interior and exterior noise standards. The appropriate interior and exterior noise standards are identified in Tables 3.13-3 and 3.13-4, respectively.

**TABLE 3.13-3  
CITY OF HIGHLAND INTERIOR NOISE STANDARDS**

<b>Type of Land Use</b>	<b>CNEL (dBA)</b>
Residential	45
Educational/churches, other institutional uses	45
General offices	50
Retail stores, restaurants	55
Manufacturing, warehousing	65
Agricultural	55
Sand and Gravel Operations	75
NOTES: CNEL – community noise equivalent level, dBA – A-weighted scale SOURCE: Chapter 8.50.Noise Control, City of Highland Municipal Code	

**TABLE 3.13-4  
CITY OF HIGHLAND EXTERIOR NOISE STANDARDS**

<b>Type of Land Use</b>	<b>Time Interval</b>	<b>CNEL (dBA)</b>
Residential	10:00 p.m. – 7:00 a.m.	55
	7:00 a.m. – 10:00 p.m.	60
Agricultural/Equestrian	10:00 p.m. – 7:00 a.m.	60
	7:00 a.m. – 10:00 p.m.	65
Commercial	10:00 p.m. – 7:00 a.m.	65
	7:00 a.m. – 10:00 p.m.	70
Manufacturing or Industrial	Any Time	75
Open Space	Any Time	75
NOTES: CNEL – community noise equivalent level, dBA – A-weighted decibel scale SOURCE: Chapter 8.50, Noise Control, City of Highland Municipal Code		

City of Highland Municipal Code Chapter 8.50.060 Exemptions, lists the activities and noise sources that shall not be subject to the provisions of Title 8.50, Noise Control. Chapter 8.50.060(K) states construction, operation, maintenance and repair of equipment, apparatus or facilities of the park and recreation department, public work projects or essential public services and facilities, including trash collection and those of public utilities subject to the regulatory jurisdiction of the Public Utilities Commission are exempt from Chapter 8.50, Noise Control.

City of Highland Municipal Code Chapter 15.48.020 establishes the allowable hours of operation of construction activities where it states construction activities shall not commence prior to 7:00 a.m. and construction activity shall terminate no later than 7:00 p.m. Monday through Saturday with no construction activities performed during city or federal observed holidays. City of Highland Municipal Code 15.48.020(B)(4) exempts construction activities not regulated by the City of Highland from the established construction hours.

## METHODOLOGY

The proposed Project construction would take approximately 12 months to complete, occurring over a 31-month period, with a break in between two construction stages. Stage 1 would occur from approximately January 2025 through November 2025, Stage 2 would occur between approximately fall 2026 through July 2027 (see Section 1.5.1, *Schedule*, for additional details). Construction activities would include pipeline trenching and installation vault and surge tank excavation, and vault and surge tank installation for both the supply and discharge pipelines. Project construction would require soil import and export during the pipeline trenching and vault and surge tank excavation components and concrete import during the vault and surge tank installation components. Construction equipment would include air compressors, cement and mortar mixers, cranes, excavators, forklifts, graders, generator sets, plate compactors, sweeper/scrubbers, tractor/loader/backhoes, and welders. Assumptions, including detailed phasing, construction employee vehicle, haul truck, concrete truck and vendor trucks and equipment list and modeling output are included in Appendix F. Noise from on-site construction activities would be generated by the use of equipment involved during various stages of the construction activities. The noise levels generated by construction equipment would vary depending on factors such as the type and number of equipment, the specific model (horsepower rating), the construction activities being performed, and the maintenance condition of the equipment. Individual pieces of construction equipment anticipated to be used during the proposed Project construction could produce maximum noise levels of 73 dBA to 85 dBA  $L_{max}^{12}$  at a reference distance of 50 feet from the noise source, as shown in Table 3.13-5. These maximum noise levels would occur when equipment is operating under full power conditions. The estimated usage factor for the equipment is also shown in Table 3.13-5. The usage factors are based on the Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide (FHWA 2006). Table 3.13-5 below provides a list of the anticipated construction equipment for the Project and typical noise emission levels at a distance of 50 feet.

<sup>12</sup>  $L_{max}$ : The maximum, instantaneous noise level.



**TABLE 3.13-5  
CONSTRUCTION EQUIPMENT AND ESTIMATED NOISE LEVELS**

<b>Source</b>	<b>Reference Noise Level at 50 feet (dBA Lmax)</b>	<b>Estimated Usage Factor (%)</b>
Air Compressor	80	40%
Cement and Mortar Mixer	80	50%
Cranes	85	16%
Excavator	85	40%
Forklifts	75	10%
Graders	85	40%
Generator Sets	82	50%
Plate Compactors	80	20%
Sweeper/Scrubbers	80	10%
Tractors/Loaders/Backhoes	80	40%
Welders	73	40%
NOTES: dBA – A-weighted decibel scale, Lmax – maximum, instantaneous noise level SOURCE: FHWA 2006		

To characterize construction-period noise levels, the hourly Leq noise level associated with each construction component is estimated based on the quantity, type, and usage factors for each type of equipment used during each construction component and are typically attributable to multiple pieces of equipment operating simultaneously.<sup>13</sup> Over the course of a construction day, the highest noise levels would be generated when multiple pieces of construction equipment are operated concurrently. The estimated noise levels at noise sensitive receptors were calculated using the FHWA's RCNM and were based on a maximum concurrent operation of construction equipment, which is considered a worst-case evaluation.<sup>14</sup> This is considered a worst-case scenario because the Project would typically use less equipment simultaneously, and as such would generate lower noise levels during construction.

## ANALYSIS OF IMPACTS

- a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

**Less-Than-Significant Impact with Mitigation Incorporated.** No, the proposed Project would not generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Metropolitan, as a regional public water purveyor and utility, is exempt from local zoning and building ordinances. Despite this exemption from local land use planning jurisdiction, for purposes of full disclosure of potential impacts on the environment from the Project, the Project's compatibility with relevant general plans and local policies was analyzed.

<sup>13</sup> Leq = (Equivalent Energy Level). The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically one, eight or 24 hours.

<sup>14</sup> FHWA, Roadway Construction Noise Model, 2006.

Metropolitan is exempt from compliance with City of Highland Municipal Code Chapter 8.50, Noise Control under City of Highland Municipal code 8.50.060(K) that exempts construction, operation, maintenance and repair of equipment, apparatus or facilities of the park and recreation department, public work projects or essential public services and facilities, including trash collection and those of public utilities subject to the regulatory jurisdiction of the Public Utilities Commission. Metropolitan is also exempt from City of Highland Municipal Code 15.48.020, where it states construction activities shall not commence prior to 7:00 a.m. and construction activity shall terminate no later than 7:00 p.m. Monday through Saturday with no construction activities performed during city or federal observed holidays, under City of Highland Municipal Code 15.48.020(B)(4) that exempts construction activities not regulated by the City of Highland from the established construction hours. Nevertheless, noise impacts are further analyzed herein. Construction activities associated with the proposed Project would be limited to Mondays through Fridays, 7:00 a.m. to 4:00 p.m., with occasional work on Saturday and nighttime activities that may be required, which would be consistent with the City's codes. Construction activities would not occur on Sundays or federal holidays. The nearest noise sensitive receptors to the proposed Project Area are R1: single-family residences located approximately 30 feet to the west past Weaver Street, R2: a single-family residence approximately 40 feet to the east along Cone Camp Road, R3: single-family residences located approximately 250 feet to the north across Greenspot Road, and R4: a single-family residence approximately 275 feet to the west of the proposed Project Area south of Greenspot Road.<sup>15</sup>

Project construction would be located approximately 30 feet from the nearest noise sensitive receptors. Noise levels attenuate (reduce) from a source at a rate between 6 dBA for acoustically "hard" sites and 7.5 dBA for "soft" sites for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical surface (e.g., for hard surfaces, 80 dBA at 50 feet attenuates to 74 dBA at 100 feet, 68 dBA at 200 feet, etc.). Noise modeling was conducted based on the types of equipment that would be used for construction of the Project. To characterize construction-period noise levels more accurately, the average (Leq) noise levels associated with each construction stage at the listed sensitive receptors above is provided in Table 3.13-6. These average noise levels are based on the quantity, type, and usage factors for each type of equipment that would likely be used during each construction stage and are typically attributable to multiple pieces of equipment operating simultaneously.

As shown in Table 3.13-6, the Project construction noise levels would range from approximately 68 to 89 dBA at the sensitive receptor locations. As described in detail above, Metropolitan is exempt from the City's noise regulations for construction. However, exposure of sensitive receptors would potentially exceed the NIOSH's 85 dBA REL over an 8-hour period. Exposures at or above this level are considered hazardous resulting in a potentially significant impact. As the proposed Project construction would result in temporary increases in ambient noise that would meet or exceed the thresholds of significance at nearby noise sensitive receptors, construction noise impacts would be potentially significant, and mitigation measures would be required.

<sup>15</sup> The distance to vibration sensitive receptors is based on the distance to the receptor building footprint from the Project area to the receptor building footprint, whereas the distance to distance to noise sensitive receptors is based on the distance to the receptor property line to the Project area. Thus, for the same sensitive receptor, the distance to determine vibration impacts is generally greater than the distance to determine noise impacts.

**TABLE 3.13-6  
CONSTRUCTION AVERAGE LEQ NOISE LEVELS BY DISTANCE AND CONSTRUCTION COMPONENT**

Construction Component	Sound Level in dBA (Leq) at Sensitive Receptor			
	R1	R2	R3	R4
<b>Supply Connection / Discharge Connection Components</b>				
Pipeline Trenching and Installation	89	86	71	70
Vault Structure Excavation	87	84	69	68
Vault Structure Installation	87	84	69	68
Vault Structure Installation – Concrete	87	84	69	68
Surge Tank Excavation	89	86	71	70
NOTE: Assumes a hard surface propagation path drop-off rate of 6 dB per doubling of distance (sound level at distance X = sound level at 50 feet - 20LOG [x/50]), which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation. SOURCE: ESA 2024				

Implementation of **Mitigation Measure NOI-1**, as described below, would reduce the Project's on-site construction noise impacts at noise sensitive receptors. Table 3.13-7 presents the estimated, conservative construction noise levels at the off-site receptor locations with implementation of mitigation measures. As indicated in Table 3.13-7, the construction noise levels at all receptor locations would be reduced below the significance threshold. Therefore, with implementation of **Mitigation Measure NOI-1**, impacts from construction noise would be less than significant.

**TABLE 3.13-7  
CONSTRUCTION AVERAGE LEQ NOISE LEVELS BY DISTANCE AND CONSTRUCTION COMPONENT WITH MITIGATION**

Construction Component	Sound Level in dBA (Leq) at Sensitive Receptor			
	R1	R2	R3	R4
<b>Supply Connection Components</b>				
Pipeline Trenching and Installation	84	81	71	70
Vault Structure Excavation	82	79	69	68
Vault Structure Installation	82	79	69	68
Vault Structure Installation – Concrete	82	79	69	68
Surge Tank Excavation	84	81	71	70
<b>Discharge Connection Components</b>				
Pipeline Trenching and Installation	84	81	71	70
Vault Structure Excavation	82	79	69	68
Vault Structure Installation	82	79	69	68
Vault Structure Installation – Concrete	82	79	69	68
Surge Tank Excavation	84	81	71	70
NOTE: Assumes a hard surface propagation path drop-off rate of 6 dB per doubling of distance (sound level at distance X = sound level at 50 feet - 20LOG [x/50]), which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation. SOURCE: ESA 2024				

Regarding construction truck and vehicle trips, construction employee commutes and trucks hauling materials and debris to and from the proposed Project Area would be the primary generator of off-site mobile sources. A maximum of approximately 18 employee trips per day, and up to 44 haul truck trips, resulting in approximately 6 haul truck trips per hour, and 6 material truck trips per day during construction (based on the air quality modeling included in Appendix B). Therefore, only a minimal increase in traffic would be entering and leaving the site would occur at any given time of construction activities. Construction of the proposed Project would temporarily generate additional truck and vehicle trips within San Bernardino and the regional circulation system. Due to the proposed Project's location, construction traffic would primarily utilize Greenspot Road to Cone Camp Road. However, as noted above, traffic levels would not substantially increase and would be temporary in nature and traffic levels would return to pre-construction conditions once construction is complete. Thus, the proposed Project's construction traffic noise impact would be less than significant.

Operational and maintenance noise would be approximately the same as that already occurring at the proposed Project Area which includes the SBVMWD Foothill Pump Station. In addition, operation and maintenance activities would generally occur between 7 am to 4 pm. Metropolitan is exempt from compliance with the local San Bernardino County noise abatement and control regulations under San Bernardino County Code Section 24.0707(e) that states that noise sources associated with maintenance and repair operations conducted by utility companies or their contractors which are deemed necessary to serve the best interest of the public and to protect the public health, welfare, and safety are exempt, including both stationary and mobile sources. Furthermore, Metropolitan is exempt from compliance with City of Highland Municipal Code Chapter 8.50, Noise Control under City of Highland Municipal code 8.50.060(K) that exempts construction, operation, maintenance and repair of equipment, apparatus or facilities of the park and recreation department, public work projects or essential public services and facilities, including trash collection and those of public utilities subject to the regulatory jurisdiction of the Public Utilities Commission from Chapter 8.50, Noise Control of the City of Highland Municipal Code. Thus, while the proposed Project and associated operational activities are exempt from applicable County and City codes, the proposed Project would not be expected to generate significant operational noise. The stationary equipment associated with the proposed Project would mainly be located below ground. Surge tanks would be located aboveground and would not be a source of noise. Thus, on-site noise sources from proposed Project operations would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed Project in excess of established standards.

As described above, operations and maintenance activities at the Foothill Pump Station facility, including the frequency of staff visits, maintenance, shutdowns, would be similar to existing conditions once construction activities are completed. Operational activities associated with the proposed Project would involve periodic vehicle trips by Metropolitan employees for maintenance activities and the proposed Project would not increase the number of Metropolitan employees required for operations and maintenance activities. On days of proposed Project maintenance trips, proposed Project related trips would increase average daily trips on these roads by approximately 2 one-way vehicle trips, which would result in a minimal increase in traffic on proposed Project Area roadways. Consequently, proposed Project maintenance trips would not result in a perceptible increase in roadway noise, and this impact would be less than significant.

## Mitigation Measures

**NOI-1: Temporary Noise Barriers.** Temporary noise barriers shall be used along the western and eastern property boundaries to block the line-of-sight between the construction equipment and the noise sensitive receptors.

*b. Generation of excessive groundborne vibration or groundborne noise levels?*

**Less-Than-Significant Impact.** No, the proposed Project would not generate excessive groundborne vibration or groundborne noise levels. Construction activities would require the use of heavy equipment and heavy truck haul trips that may produce short-term vibration. Typically, groundborne vibrations generated by construction activities attenuate rapidly with distance from the source. Therefore, construction vibration issues are typically confined to short distances from the source. Additionally, groundborne vibration is a concern almost exclusively inside buildings (FTA 2018).

The nearest vibration sensitive receptor to the proposed Project Area would be a residential use located approximately 50 feet from the proposed Project Area. The distance to vibration sensitive receptors is based on the distance from the Project area to the receptor building footprint, whereas the distance to noise sensitive receptors is based on the distance to the receptor property line to the Project area. Thus, for the same sensitive receptor, the distance to determine vibration impacts is generally greater than the distance to determine noise impacts. All other vibration sensitive receptors are located at greater distances from the proposed Project Area and would be less impacted by proposed Project vibration impacts. Proposed Project work would be temporary in nature, with activities occurring in a specific location for a short period of time. The longest construction component, surge tank installation, would occur over a two-month period. The proposed Project would utilize construction equipment such as use of loaded trucks, which would generate groundborne vibration during construction activities. The vibration velocities at various distances for loaded trucks that can generate perceptible vibration levels are identified in Table 3.13-8. Based on the information presented in Table 3.13-8, vibration velocities at the nearest sensitive receptor would be 0.027 PPV (in/sec) at 50 feet from the source of activity. At this distance, groundborne vibration generated by proposed Project construction would be below the American Association of State Highway and Transportation Official's building damage vibration level thresholds for residential buildings, as well as below the most stringent vibration threshold for historic sites or other critical locations. In addition, at this distance, groundborne vibration generated by proposed Project construction would be above the barely perceptible, but below the distinctly perceptible thresholds for continuous/frequent intermittent sources from Caltrans' Vibration Annoyance Potential Criteria for Humans. Therefore, proposed Project vibration impacts from heavy construction equipment impacts would be less than significant.

**TABLE 3.13-8  
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT**

Equipment	Approximate PPV (in/sec)				
	25 Feet	50 Feet	60 Feet	75 Feet	100 Feet
Loaded Trucks	0.076	0.027	0.020	0.015	0.010

Truck haul trips would occur during the construction period. These trucks would utilize area roadways in the proposed Project vicinity. Trucks would utilize the Greenspot Road which is paved and then turn onto

Cone Camp Road which is also paved. The nearest vibration sensitive receptors to the proposed Project Area are single-family residences located approximately 50 feet to the west of the Project Area, past Weaver Street.<sup>16</sup> All other vibration sensitive receptors are located at greater distances from the proposed Project Area, and would be less impacted by proposed Project vibration impacts. Sensitive receptors along the construction route would be subject to temporary effects; however, these effects would be short-term during the construction period; and similar to other heavy vehicles passing on existing roadways.

Proposed Project operational activities would not generate excessive groundborne vibration or groundborne vibration noise levels. The proposed Project's day-to-day operations would include typical commercial-grade stationary mechanical equipment, which would produce vibration at low levels that would not cause structural damage, vibration impacts, or human annoyance impacts to the proposed Project structures or to the off-site environment. Groundborne vibration generated by such equipment would generate approximately up to 0.005 in/sec PPV adjacent to the proposed Project Area (FTA 2018).<sup>17</sup> In addition, the primary sources of transient vibration would result from periodic vehicle trips by Metropolitan employees for maintenance activities where maintenance activities at the Foothill Pump Station facility, including the frequency of staff visits, maintenance, shutdowns, would be similar to existing conditions once construction activities are completed. Operations and maintenance activities for the Inland Feeder intertie would require approximately one to two vehicles during a day with maintenance activities that would visit the proposed Project Area. Therefore, structural damage and human annoyance vibration impacts from the proposed Project operation would be less than significant.

Based on the above discussions, the proposed Project would not generate excessive groundbourne vibration or groundborne noise levels at sensitive receptors. Construction and operational groundbourne vibration and noise levels would result in less-than-significant impacts.

- c. For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels?*

**No Impact.** No, the proposed Project would not expose people residing or working in the proposed Project Area to excessive noise levels. The nearest airport to the proposed Project Area would be the Redlands Municipal Airport, located approximately 1.5 miles south of the proposed Project Area. The proposed Project consists of temporary construction activities and would not result in the presence people working in the area beyond the temporary construction period, which would take approximately 12 months to complete, occurring over a 31-month period, with a break in between two construction stages (see Section 1.5.1, *Schedule*, for additional details). Additionally, the proposed Project would not result in people residing in the proposed Project Area. Based on the lack of people that would reside or work in the area as a result of the proposed Project, no impact would occur.

<sup>16</sup> The distance to vibration sensitive receptors is based on the distance from the Project area to the receptor building footprint, whereas the distance to noise sensitive receptors is based on the distance to the receptor property line to the Project area. Thus, for the same sensitive receptor, the distance to determine vibration impacts is generally greater than the distance to determine noise impacts.

<sup>17</sup> This vibration estimate is based on data presented in the USDOT Federal Transit Administration, 2018

## REFERENCES

Crocker, Malcolm J. Crocker (Editor), 2007. Handbook of Noise and Vibration Control Book, ISBN: 978-0-47139599-7, Wiley-VCH, October.

Caltrans (California Department of Transportation), 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September. Accessed April 3, 2024. Available: Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol.

Caltrans (California Department of Transportation), 2020. Transportation and Construction Vibration Guidance Manual. April. Accessed April 3, 2024. Available: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>

FTA (Federal Transit Administration), 2018. Transit Noise and Vibration Impact Assessment Manual. September. Accessed April 3, 2024. Available: [https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123\\_0.pdf](https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf).

FHWA (Federal Highway Administration), August 2006. Roadway Construction Noise Model User's Guide. Accessed April 3, 2024. Available: [https://www.fhwa.dot.gov/environment/noise/construction\\_noise/handbook/](https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/)



### 3.14 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

- a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

**No Impact.** No, the proposed Project would not directly or indirectly induce substantial unplanned growth, either directly or indirectly. The proposed Project does not propose construction of new homes or businesses. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. The proposed Project is a water infrastructure project that would not increase water supply. The proposed Project would allow for greater water infrastructure reliability by improving the water distribution system flexibility to operate more efficiently in both wet years and under drought conditions.. There would be no construction of habitable or occupied structures. Operations and maintenance activities would remain similar to existing and would not require additional Metropolitan employees. Thus, the proposed Project would not directly or indirectly induce substantial unplanned population growth, and no impact would occur.

- b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

**No Impact.** No, the proposed Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. The proposed Project would be located along existing Metropolitan infrastructure and is owned by Metropolitan. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. The majority of the proposed Project construction would occur within the existing Foothill Pump Station facility. The proposed Project does not propose occupied dwelling units. As such, the proposed Project would not displace any people or housing, and no impact would occur.

### 3.15 Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

### ANALYSIS OF IMPACTS

*Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:*

- a. Fire protection?*
- b. Police protection?*
- c. Schools?*
- d. Parks?*
- e. Other public facilities?*

**No Impact.** No, the proposed Project would not result in substantial adverse physical impacts associated with the provision of fire protection services, police protection services, schools, parks, and other public facilities. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. Operation and maintenance associated with the proposed Project would be similar to existing conditions. As discussed in Population and Housing, the proposed Project would not directly or indirectly induce population growth and thus would not increase demand for fire protection services, police protection services, schools, parks, or other public facilities. Thus, the proposed Project would not result in a need for new or physically altered fire protection services, police protection services, schools, parks, or other public facilities to maintain acceptable service ratios, response times, or other performance objectives, and no impact would occur.

### 3.16 Recreation

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*Significance criteria established by CEQA Guidelines, Appendix G.*

### ANALYSIS OF IMPACTS

- a. *Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

**No Impact.** No, the proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. As discussed in *Population and Housing*, the proposed Project is a water infrastructure project that would not increase water supply. The proposed Project would allow for greater water infrastructure reliability by improving the water distribution system flexibility to operate more efficiently in both wet years and under drought conditions. Therefore, the proposed Project would not increase water supply to the region or otherwise indirectly induce population growth. As no population growth would occur, the proposed infrastructure improvements would not result in increased use of existing neighborhood and regional parks and would not result in substantial deterioration of existing recreational facilities. No impact would occur.

- b. *Does the Project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?*

**No Impact.** No, the proposed Project would not include recreational facilities or require the construction or expansion of recreational facilities. The proposed Project would not include growth-inducing components. The proposed Project would not include the construction of recreational facilities and no expansion of recreational facilities would occur. No impact would occur.

### 3.17 Transportation

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a Project, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

- a. *Conflict with a project, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

**No Impact.** No, the proposed Project would not conflict with a project, plan, ordinance, or policy addressing the circulation system. The San Bernardino County Transportation Authority's Transportation Plan Update of 2021 identifies no major improvements to Greenspot Road. The City of Highland Circulation Element of the General Plan identifies Greenspot Road as a Major Highway and identifies goals and policies to maintain roads and level of service. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks and would be located within a Metropolitan right-of-way. The proposed Project would be accessed via Greenspot Road and Cone Camp Road, but would not involve construction within these roadways or increase traffic in ways that would increase delays. Any operations and maintenance activities to the Inland Feeder and new interconnection pipelines would be similar to existing conditions once construction activities are completed. The proposed Project would result in temporary traffic trips on local roadways during the construction period, but would not result in any changes to transit, roadways, bicycle systems, or pedestrian facilities. As a result, the proposed Project would not conflict with any project, plan, ordinance, or policy related to transit, roadway, bicycle, or pedestrian facilities in the vicinity of the proposed Project Area, and no impact would occur.

- b. *Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?*

**Less-Than-Significant Impact.** No, the proposed Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The Governor's Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* prepared in 2018, provides screening thresholds to screen out less-than-significant Vehicle Miles Traveled (VMT) impacts using project size, maps, transit availability, and the provision of affordable housing. Although the proposed Project is not a land use development project, OPR identifies a screening threshold for small projects, which indicates that

projects that generate fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. The proposed Project would generate temporary construction traffic trips over the course of the construction period. Construction activities would typically occur Monday through Friday during daytime hours, although work may be conducted on Saturdays, as needed. Nighttime construction activities may be required to shut down the Inland Feeder and install the tie-in connection. As discussed in Section 1.0, *Project Description*, the proposed Project would result in a maximum amount of approximately 44 truck trips per day. Following completion of construction activities, maintenance and operational activities at the Foothill Pump Station facility would not change and would not result in new traffic trips. As such, the proposed Project would not generate more the 110 daily trips during the construction or operational period and would not result in significant VMT impacts. Therefore, the proposed Project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), and impacts would be less than significant.

- c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

**No Impact.** No, the proposed Project would not increase hazards due to a geometric design feature or incompatible uses. The proposed Project would not include reconfiguration of existing roadways, driveways, or intersections. Additionally, the proposed Project would not include the construction of new roadways, driveways, or intersections. The proposed Project and construction staging areas would be located mainly within the existing Foothill Pump Station facility and just outside of the fenced area to the south. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. Proposed Project components outside of the fenced area would be mainly underground. The proposed Project would not result in increased hazards due to geometric design feature or incompatible uses. No impact would occur.

- d. Result in inadequate emergency access?*

**No Impact.** No, the proposed Project would not result in inadequate emergency access. Proposed Project access would be provided via Greenspot Road and Cone Camp Road. Proposed Project construction would occur within Metropolitan's fee property and rights-of-way and would not alter public roadways or change the existing access points at the proposed Project Area. Construction vehicles, including oversize vehicles carrying construction equipment and materials would utilize local roadways and freeways to bring equipment and materials to the site. The proposed Project would not require lane or road closures. As outlined in Appendix A, per Metropolitan's Standard Practices, the Contractor shall provide flagmen at intersections to assist trucks entering/exiting the work limits as appropriate. Based on the location of the proposed Project Area within a fenced water treatment facility or Metropolitan patrol road areas that are not accessible to the public, the proposed Project would not impede emergency access to either the proposed Project Area or the public. As such, the proposed Project would not result in inadequate emergency access and no impact would occur.

### 3.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ANALYSIS OF IMPACTS

- a. *Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:*
- i) *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*
- ii) *A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe?*

**No Impact.** No, the proposed Project would not cause a substantial adverse change in the significance of a tribal cultural resource (TCR). Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the CRHR. A formal consultation process with California Native American tribes regarding tribal cultural resources must commence prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project.

On December 7, 2023, Metropolitan sent letters via certified mail to four Native American tribes that had previously requested to be informed through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with those tribes under Public Resource Code Section 21080.3.1. Tribes notified include the Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians), Soboba Band of Luiseño Indians, Gabrieleño Band of Mission Indians-Kizh Nation, and San Gabriel Band of Mission Indians.

Yuhaaviatam of San Manuel Nation Tribal Archaeologist, Ms. Kristen Tousto, responded on December 12, 2023, that the proposed Project Area would be located with Yuhaaviatam of San Manuel Nation ancestral territory and requested copies of the proposed Project cultural resources report, geotechnical report, and project plans. Metropolitan Senior Environmental Specialist Michelle Morrison, MA, RPA, replied on December 13, 2023, and provided the proposed Project geotechnical report and the cultural resources report created for the construction of the Inland Feeder, which includes surveys and findings for the entire proposed Project Area. Ms. Tousto of the Yuhaaviatam of San Manuel Nation responded and noted that the Tribe does not have concerns with the proposed Project implementation, but requested the inclusion of three cultural resources mitigation measures, which consisted of the following:

- In the event cultural resources are discovered during Program activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease until the find can be assessed by a qualified archaeologist. Additionally, if discovered, the Tribe shall be notified regarding any pre-contact and/or historic-era cultural resources, so as to be provided the opportunity to provide input for significance and treatment.
- Implementation of a Monitoring and Treatment Plan with archaeological monitoring in the event a significant pre-contact and/or historic-era cultural resource is identified with review by the Tribe.
- Implementation of procedures in the event human remains or funerary objects are encountered pursuant to California Health and Safety Code Section 7050.5.

The Yuhaaviatam of San Manuel nation also requested mitigation measures for TCRs, which consisted of the following:

- Tribal notification and input with regard to significance and treatment if any pre-contact and/ cultural resources are discovered during proposed Project implementation and implementation of a cultural resources Monitoring and Treatment Plan with Native American monitoring in the event a significant resource is identified.
- Submittal of all archaeological/cultural documentation prepared for the proposed Project to Yuhaaviatam of San Manuel Nation and consultation with Yuhaaviatam of San Manuel Nation throughout the life of the proposed Project.

On December 19, 2023, Ms. Morrison contacted Ms. Tousto via telephone to discuss the Tribe's proposed mitigation measures. Ms. Morrison stated that some of the mitigation measures proposed by the Tribe are generally consistent with the standard procedures Metropolitan implements for all projects (Section 01065 of Metropolitan's construction contractor specifications), including procedures to follow in the event archaeological resources are unexpectedly encountered during construction and procedures to follow in the event human remains are unexpectedly encountered, pursuant to California Health and Safety Code Section 7050.5. Ms. Morrison also clarified that a cultural or tribal resource must be identified in the vicinity of the proposed Project Area in order to mitigate for potential impacts to a resource. Ms. Tousto concurred with



the use of Metropolitan's standard procedures pertaining to cultural resources to be incorporated into the proposed Project construction contractor specifications. The telephone conversation was summarized in a December 19, 2023, email to the Tribe.

No additional tribal cultural resource consultation requests were received during the consultation period. Metropolitan's cultural resource and archaeological resource identification efforts did not identify the presence of any prehistoric archaeological resources or resources eligible for or listed on the CRHR or local register within the proposed Project Area. Because no tribal cultural resources have been identified on or near the proposed Project Area, the proposed Project would not cause a substantial adverse change in the significance of a tribal cultural resource as defined, and no impact would occur.

### 3.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

- a. *Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction of which could cause significant environmental effects?*

**No Impact.** No, the proposed Project would not require or result in the relocation or construction of new or expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. Once construction activities are completed, operations and maintenance would not require any expanded wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities. Therefore, no impacts related to new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities would occur.

- b. *Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

**No Impact.** Yes, the proposed Project would have sufficient water supplies available to serve the proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years. The proposed Project would include construction of an intertie connection between the Inland Feeder and

Foothill Pump Station through construction of pipelines, vaults, and surge tanks. Temporary water usage would be required during the construction period for dust control and other construction activities. Water usage for proposed Project construction would be temporary and would not require a long-term supply of water over multiple years. Once construction activities are completed, operations would not require additional water. Therefore, there would be no impact.

- c. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?*

**No Impact.** No, the proposed Project would not result in a determination by the wastewater treatment provider which serves or may serve the proposed Project, that it has adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments. The proposed Project would include construction of an intertie connection between the Inland Feeder and Foothill Pump Station through construction of pipelines, vaults, and surge tanks. Wastewater generated during construction of the proposed Project would be minimal, consisting of portable toilet waste generated by construction employees. No new demand on an existing wastewater treatment provider would occur and no impact would occur.

- d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

**Less-Than-Significant Impact.** No, the proposed Project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure. The proposed Project would generate solid waste during construction activities, including general construction debris and employee personal waste. The construction contractor would be required to dispose of solid waste in accordance with local solid waste disposal requirements. In compliance with the California Integrated Waste Management Act of 1989 and the California Green Building Code, the proposed Project would be required to divert 50 percent of its construction waste from landfills. The remaining construction solid waste would be taken to a nearby landfill to the proposed Project Area to be determined by the construction contractor. The closest landfill to the proposed Project would be the California Street Landfill, which is located in the city of Redlands approximately 4.5 miles southwest of the proposed Project Area. California Street Landfill has a permitted throughput of 829 tons per day and has a remaining capacity of 5,168,182 cubic yards (CalRecycle 2024). The landfill's cease operation date is anticipated to be in the year 2042. Therefore, the landfill would have sufficient capacity to accommodate the proposed Project's disposal needs. Following construction activities, the operation of the proposed connection pipelines would be similar to existing conditions, and no new sources of operational solid waste generation would occur as a result on the proposed Project. Based on the existing landfill capacity at the California Street Landfill and the temporary nature of solid waste generation associated with the proposed Project, impacts would be less than significant.

- e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

**Less-Than-Significant Impact.** Yes, the proposed Project would comply with federal, state, and local management and regulations to reduce solid waste. Construction activities associated with the proposed Project would generate solid waste, including general construction debris and employee personal waste. Federal solid waste regulations are codified under the Resource Conservation and Recovery Act (RCRA).

These regulations generally provide guidelines and procedures for selecting regions and agencies to handle solid waste management problems under RCRA and delegate solid waste management responsibility down to the state or local level where possible. In California, solid waste management and recycling is overseen by the California Department of Resources Recycling and Recovery (known as CalRecycle), a department within the California Environmental Protection Agency. CalRecycle's Waste Permitting, Compliance, and Mitigation Division is responsible for solid waste, waste tire, recycled content product and local government regulatory mandates and activities. The State of California has delegated solid waste management responsibility to the local level. The City of Highland contracts with Burrtec Waste Industries, Inc. to collect trash and assist the City in meeting mandated diversion goals established by the State of California.

The majority of state and local laws regarding solid waste management and reduction (AB 1826, AB 341, AB 1383, Government Code Title 7.97 68055-68055.9) pertain to state agencies or businesses, and therefore do not apply to Metropolitan as a public agency and water utility. The Project Contractor(s) would be required to comply with federal, state, and local statutes and regulations related to solid waste and would not dispose of solid waste in a manner that differs from any federal, state, or local management plans. Therefore, impacts would be less than significant.

## REFERENCES

CalRecycle. 2024. SWIS Facility/Site Activity Details: California Street Landfill. Available at <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1855?siteID=2637>. Accessed February 7, 2024.

### 3.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

## ANALYSIS OF IMPACTS

*If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the Project:*

- Substantially impair an adopted emergency response plan or emergency evacuation plan?*
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

**No Impact.** No, the proposed Project would not be located in or near a State Responsibility Area or lands classified as a Very High Fire Hazard Severity Zone (CAL FIRE, 2023). Therefore, no impacts related to wildfire in or near State Responsibility Areas or lands classified as VHFHSZ would occur.

## REFERENCES

California Department of Forestry and Fire Protection (CAL FIRE), 2023. Fire Hazard Severity Zones in State Responsibility Area. Available online at <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d00>  
8. Accessed December 11, 2023.

### 3.21 Mandatory Findings of Significance

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ( <i>Cumulatively considerable</i> means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

### ANALYSIS OF IMPACTS

- a. *Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?*

**Less-Than-Significant Impact with Mitigation Incorporated.** No, the proposed Project would not substantially degrade or impact biological resources or eliminate important examples of the major period of California history or prehistory. As discussed in Section 3.4, *Biological Resources* and Appendix C, construction of the proposed Project has the potential to affect threatened, endangered, candidate, or special status species. However, implementation of **Mitigation Measures BIO-1 through BIO-11** would ensure that impacts to biological resources are mitigated to a less than significant level. Therefore, impacts are considered less than significant with mitigation.

As discussed in Section 3.5, *Cultural Resources* and Appendix D, the proposed Project would not cause a substantial adverse change in the significance of a historical resource or of an archaeological resource, and no impacts would occur. Operations and maintenance of the proposed Project would be similar to existing conditions, and no long-term permanent impacts to biological or cultural resources would occur.

#### **Mitigation Measures**

Implement Mitigation Measures BIO-1 through BIO-11.

- b. *Does the Project have impacts that are individually limited, but cumulatively considerable? (Cumulatively considerable means that the incremental effects of a Project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

**Less-Than-Significant Impact with Mitigation Incorporated.** No, the proposed Project would not have impacts that are individually limited, but cumulatively considerable. A cumulative impact could occur if the proposed Project would result in an incrementally considerable contribution to a significant cumulative impact in consideration of past, present, and reasonably foreseeable future projects for each resource area. No direct or indirect significant impacts were identified for the proposed Project that could not be mitigated to a less than significant level. However, when combined with other projects within the vicinity, the proposed Project could result in a contribution to a potentially significant cumulative impact when combined with other projects in the area. The proposed Project would result in no impacts to agriculture and forestry resources, land use and planning, mineral resources, population and housing, public services, recreation, tribal cultural resources, and wildfire. As a result, cumulative impacts related to these resources would not occur.

In addition, impacts would be less than significant, either with or without mitigation, for aesthetics, air quality, biological resources, cultural resources, energy, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, and utilities and service systems. The impacts to these environmental resource areas would be localized to the Project Area, would be able to be reduced to a less than significant level with mitigation measures. The proposed Project would occur within the existing Foothill Pump Station facility and immediately south of the facility, which is surrounded by sparse residential properties to the east and west and open space to the south. The proposed Project when considered with other projects would not result in cumulatively considerable impacts with incorporation of mitigation measures.

Operations and maintenance activities associated with the proposed Project would be similar to existing conditions and would not add to cumulative impacts. No cumulative impacts would occur.

### ***Mitigation Measures***

Implement Mitigation Measures BIO-1 through BIO-11 and NOI-1.

- c. *Does the Project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?*

**Less-Than-Significant Impact with Mitigation Incorporated.** No, the proposed Project would not result in environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly. Based on the analysis contained within Section 3.0, *Evaluation of Environmental Effects*, the proposed Project, with implementation of mitigation measures, would not exceed any significance thresholds or result in significant impacts creating direct or indirect impacts to human beings. Impacts would be less than significant with mitigation incorporated.

### ***Mitigation Measures***

Implement Mitigation Measure NOI-1.



## **4.0 List of Preparers**

### **4.1 Metropolitan Water District of Southern California**

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Elizabeth Florence, Associate Environmental Specialist

Alfredo Aguirre, Environmental Specialist

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### **4.2 Environmental Science Associates**

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Fatima Clark: Paleontological Resources

Sara Dietler: Cultural, Paleontological, and Tribal Cultural Resources

Amanda French: Biological Resources

Gary Gick: 508 Compliance

Aaron Guzman: Publications

Elbert Hsiung: Air Quality, Greenhouse Gas Emissions, Energy, Noise

Brandon Mukogawa: Biological Resources

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Alan Sako: Air Quality, Greenhouse Gas Emissions, Energy, Noise

Nicole Sanchez-Sullivan: Technical Editing

Chance Scott: GIS

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## 5.0 Acronyms List

AB	Assembly Bill
AQMP	air quality management plan
BMP	best management practice
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CNDDDB	California Natural Diversity Database
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
CRA	Colorado River Aqueduct
CRHR	California Register of Historical Resources
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
DVL	Diamond Valley Lake
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	qualified greenhouse gas
IS	Initial Study
ITP	Incidental Take Permit
LACM	History Museum of Los Angeles County
LST	localized significance threshold
MBTA	Migratory Bird Treaty Act of 1918
MND	Mitigated Negative Declaration
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission

NIOSH	National Institute for Occupational Safety and Health
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollution Elimination Discharge System
NRCS	Natural Resource Conservation Service
OPR	Governor's Office of Planning and Research
OS	Open Space
PM <sub>10</sub>	particulate matter with a diameter of 10 microns or less
PPV	peak particle velocity
PRC	Public Resources Code
RCRA	Resource Conservation and Recovery Act
REL	recommended exposure limit
RMS	root mean square
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SBVMWD	San Bernardino Valley Municipal Water District
SBVWCD	San Bernardino Valley Water Conservation District
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SLF	Sacred Lands File
SWP	State Water Project
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCR	tribal cultural resource
TWA	time-weighted average
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	vehicle miles traveled
VOC	volatile organic compound
WBWG	Western Bat Working Group
WDR	waste discharge requirement
WEAP	worker environmental awareness program

# INLAND FEEDER – FOOTHILL PUMP STATION INTERTIE PROJECT

## Initial Study/Mitigated Negative Declaration APPENDIX

The Metropolitan Water District of Southern California  
700 North Alameda Street  
Los Angeles, CA 90012



Report Number ER 1694

May 2024



# Appendix A

## **Metropolitan Standard Practices**





## APPENDIX A

# Metropolitan Standard Practices

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The following are Metropolitan standard practices that are carried out as part of Section 01065 (Environmental Requirements) and Section 01565 (Noise Control) of the construction contractor specifications for all projects (Metropolitan 2022).

### General

1. The Contractor shall obtain necessary local, state and federal environmental permits and shall comply with the requirements of all such permits and laws, regulations, acts, codes and ordinances.
2. The Contractor shall perform all construction activities only within the construction boundaries shown on the drawings. The construction boundaries shall be fenced, unless otherwise directed by the Engineer. Any request to use any area outside the construction boundaries for any activity will require review and approval by the Engineer.

### Air Quality

1. The Contractor shall not discharge smoke, dust, or other air contaminants into the atmosphere in a quantity that exceeds the legal limit.
2. The Contractor shall use low sulfur fuels (0.5 percent by weight) for all construction vehicles and equipment.
3. The Contractor shall shut-off all idling vehicles when not in use.
4. Construction equipment shall be maintained, and properly tuned and operated in a manner so as to reduce peak emission levels.
5. Construction methods shall include dust reduction activities, including the use of water trucks in construction areas. The Contractor shall spray water on all unpaved roads as often as required to minimize dust and particulates, and as determined by Engineer. Paved streets shall be swept if silt is carried over to these roads from construction activities.
6. The Contractor shall use low emission mobile construction equipment during site preparation, grading, excavation, and construction of the project.
7. The Contractor shall use existing on-site power sources (e.g., power poles) rather than portable generators when feasible and as directed by the Engineer; or clean fuel generators shall be used rather than temporary power generators when feasible.
8. All off-road diesel-fueled construction equipment greater than 25 horsepower (hp) shall be compliant with federally mandated clean diesel engines (USEPA Tier 4), where available, in accordance with the California Air Resources Board's (CARB) In-use Off-road Diesel-fueled Fleet Regulation (Title 13 California Code of Regulations, Division 3, Chapter 9, Article 4.8). The Contractor shall provide a current copy of each unit's certified tier specifications, best available control technology

documentation, and CARB Registrations or SCAQMD operating permit, or the CARB Certificate of Reported Compliance Validation, at the time of mobilization of each unit of equipment.

9. The Contractor shall cover all trucks transporting earthen material or maintain at least two feet of freeboard.
10. The Contractor shall implement the Best Available Control Measures listed in Table 1 of the SCAQMD Rule 403 (Fugitive Dust).
11. When wind speeds, including instantaneous gusts, exceed 25 miles per hour, the Contractor shall implement and record Contingency Control Measures listed in Table 3 in SCAQMD Rule 403.

## Biological Resources

1. As part of the project, the following procedures will be implemented to avoid adverse impacts to trees located within the project work limits:
  - a. Impacts to any trees located within the project work limits shall be avoided, when possible.
  - b. No trees within project work limits shall be removed, cut, or trimmed unless identified for removal on project drawings.
    - i. If trees must be removed, cut or trimmed, this activity shall be conducted per any applicable local tree ordinances and any required permits must be obtained prior to any tree removal, cutting or trimming.
  - c. The Contractor shall avoid stockpiling of materials, and driving or parking vehicles and equipment under the canopy of existing trees to protect tree root systems and avoid damage to the trees.
2. No physical disturbance of vegetation, operational structures, buildings, or other potential habitat (e.g., open ground, gravel, construction equipment or vehicles, etc.) that may support nesting birds protected by the federal Migratory Bird Treaty Act and California Fish and Game Code shall occur in the breeding season, except as necessary to respond to public health and safety concerns, or otherwise authorized by the Engineer. The breeding season extends from February 15 through August 31 for passerines and general nesting and from January 1 through August 31 for raptors.
  - a. If nesting habitat must be cleared or project activities must occur in the vicinity of nesting habitat within the breeding season as defined above, a qualified biologist shall perform a nesting bird survey no more than three days prior to clearing or removal of nesting habitat or start of project activities.
  - b. If active nests for sensitive species, raptors and/or migratory birds are observed, an adequate buffer zone or other avoidance and minimization measures, as appropriate, shall be established, as identified by a qualified biologist and approved by the Engineer. The buffer shall be clearly marked in the field by the Contractor, as directed by the Engineer, and construction or clearing shall not be conducted within this zone until the young have fledged and are no longer reliant on the nest.
  - c. A qualified biologist shall monitor active nests or nesting bird habitat within or immediately adjacent to project construction areas, and the Engineer shall provide necessary recommendations to the Contractor to minimize or avoid impacts to protected nesting birds.

## Biological Resources – Desert

1. Metropolitan conducts Desert Tortoise Awareness Training for all Metropolitan staff and contractors working at Metropolitan's desert facilities or on the CRA. Desert Tortoise Awareness Training consists of a presentation and handout discussing the protected status of the desert tortoise and its habitat, predators, and avoidance measures. Avoidance measures include, but are not limited to the following:
  - a. Work areas shall be delineated with flagging if determined necessary by the qualified staff person.
  - b. Access to project sites shall be restricted to designated existing routes of travel.
  - c. Workers shall inspect for tortoises under vehicles and equipment prior to use. If a tortoise is present, workers would only move the vehicle when the tortoise would not be injured by the vehicle or would wait for the tortoise to move out from under the vehicle.
2. Work areas shall be limited to previously disturbed ground and boundaries delineated with flagging or other marking to minimize surface disturbance associated with vehicle straying. Special habitat features such as burrows, identified by the qualified biologist, shall be avoided.
3. Access to the project sites shall be restricted to existing routes of travel as shown on the drawings, or as designated by the Engineer in the field. A qualified biologist will select and flag any access way in addition to established roads, to avoid burrows and to minimize disturbance of vegetation. Driving off-road is prohibited at all times.
4. Prior to commencing construction or mobilization activities, a qualified biologist will survey for desert tortoise burrows or other desert tortoise sign at each of the work sites and laydown areas. Surveys shall be conducted according to the U.S. Fish and Wildlife Service document "Preparing for Any Action that May Occur Within the Range of the Mojave Desert Tortoise. Any desert tortoise burrows located during these surveys will be flagged and fenced to ensure avoidance during construction activities.
5. Immediately prior to commencing any dewatering operations, the Contractor shall arrange a survey of the dewatering route with Metropolitan's biological monitors to ensure that no desert tortoises are at risk along the dewater route.
6. All workers shall inspect for tortoises under vehicles or stationary equipment prior to moving them. If a desert tortoise is present, the worker shall carefully move the vehicle or equipment only when the desert tortoise would not be injured or shall wait for the desert tortoise to move away on its own.
7. The Contractor shall cover all open trenches when not in use at the end of each workday, where feasible and necessary.
8. Dogs or any other pets or animals shall not be allowed in any work area.
9. All trash and food items shall be promptly contained within closed, raven-proof containers. These shall be regularly removed from the site to reduce the attractiveness of the area to ravens and other tortoise predators.
10. The Contractor and the Engineer shall review the rough grading plans, fencing, and staking to ensure that the grading is within the project footprint as described in the drawings. All temporary fencing or other markers shall be clearly visible to construction personnel.
11. The monitor will be empowered to temporarily halt construction activities and make recommendations to ensure impact minimization, compliance with the relevant provisions of all environmental permits, and that work does not take place in habitat areas outside the clearing limits.

12. Traffic speed limit shall be 20 miles per hour on all unpaved roads. The purpose of this speed limit is to enable drivers sufficient time to identify and to avoid striking and killing desert tortoises. Metropolitan will issue the Contractor a warning for the first violation of the speed limit by any of his/her employees, subcontractors, and/or suppliers. Subsequently, Metropolitan reserves the rights to expel from the project repeat speeding offenders, or a first-time offender depending on the severity of the violation as determined by Metropolitan.

## **Cultural Resources, Paleontological Resources, and Human Remains**

1. If archaeological or paleontological resources are encountered at the project site, the Contractor shall not disturb the resources and shall immediately cease all work within 50 feet of the discovery, notify the Engineer, and protect the discovery area, as directed by the Engineer. The Engineer, with the qualified architectural historian, archaeologist and/or paleontologist, shall make a decision of validity of the discovery and designate an area surrounding the discovery as a restricted area. The Contractor shall not enter or work in the restricted area until the Engineer provides written authorization.
2. In the event that human remains are discovered during excavation/construction activity, Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5(e), and Public Resources Code (PRC) Section 5097.98 will apply. The Contractor shall notify the Engineer at once and not enter or work in the restricted area until the Engineer provides written authorization.

## **Hazardous Materials**

1. The Contractor shall clean up all spills in accordance with all applicable environmental laws and regulations and notify the Engineer immediately in the event of a spill.
2. Stationary equipment such as motors, pumps, and generators, shall be equipped with drip pans.
3. The Contractor shall handle, store, apply, and dispose of chemicals and/or herbicides consistent with all applicable federal, state and local regulations.
4. The Contractor shall dispose of all contaminated materials in a manner consistent with all applicable local, state and federal environmental laws and regulations.
5. Hazardous materials shall be stored in covered, leak-proof containers when not in use, away from storm drains and heavy traffic areas, and shall be protected from rainfall infiltration. Hazardous materials shall be stored separately from non-hazardous materials on a surface that prevents spills from permeating the ground surface, and in an area secure from unauthorized entry at all times. Incompatible materials shall be stored separately from each other.

## **Hydrology and Water Quality**

1. The Contractor shall not allow any equipment or vehicle storage within any drainage course or channels.
2. Any material placed in areas where it could be washed into a drainage course or channel shall be removed prior to the rainy season.
3. The Contractor shall not create a nuisance or pollution as defined in the California Water Code. The Contractor shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Quality Control Board or the SWRCB, as required by the Clean Water Act (CWA).

4. Dewatering activities shall not affect any vegetation outside of the construction limits. The Contractor shall submit proposed dewatering plans to the Engineer for approval prior to any dewatering activities.

## Lighting

1. The Contractor shall exercise special care to direct floodlights to shine downward. These floodlights shall also be shielded to avoid a nuisance to the surrounding areas. No lighting shall include a residence or native area in its direct beam. The Contractor shall correct lighting nuisance whenever it occurs.

## Noise

1. The Contractor shall locate all noise-generating and stationary construction equipment as far as feasible from near-site residential and sensitive receivers and situated so that emitted noise is directed away from the sensitive receivers.
2. To the extent feasible, noise-generating equipment shall be oriented such that the source of noise is facing away from the nearest sensitive receivers.
3. Equipment idling time shall be reduced to five minutes on cranes and construction equipment.
4. Areas where workers gather (e.g., break areas, shift-change areas, meeting areas, and sanitary stations) will be located a minimum of 100 feet away from any residence, if feasible.
5. Parking areas shall be located a minimum of 150 feet from sensitive receivers. Parking areas within 500 feet of sensitive receivers will be posted with signs to prohibit workers from gathering during nighttime hours and to prohibit radios and music at any time.
6. Fuel deliveries shall be a minimum of 500 feet from residences or to the greatest extent feasible.
7. The Contractor shall perform all work without undue noise and shall make every effort to alleviate or prevent noise nuisances.
8. The Contractor's construction vehicles and equipment shall have mufflers. The Contractor shall equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers and intake silencers, consistent with the manufacturer standards. Equipment shall be maintained to a minimum standard that includes engine noise baffles and mufflers that meet or exceed the original manufacturer requirements.
9. The Contractor shall utilize the following types of equipment whenever possible: electrical instead of diesel-powered equipment, hydraulic tools instead of pneumatic tools, and use of electric welders powered by remote generators.

## Traffic

1. The Contractor shall prepare a traffic control plan. This plan shall address temporary traffic control for each construction site in public roadways. The requirements and procedures described in the California Department of Transportation (Caltrans) "Manual of Traffic Controls for Construction and Maintenance Work Zones" or local requirements and procedures that meet or exceed the Caltrans' Manual shall be used in the plan. If required, the Contractor shall submit the plan for review and approval by local and State traffic authorities, as appropriate.
2. As appropriate, the Contractor shall provide flagmen at intersections to assist trucks entering/exiting the work limits.

3. The Contractor shall provide appropriate advance warning signage to alert motorists or pedestrians to the potential for cross construction vehicle traffic from work limits in accordance with Caltrans standards.

## **Wildfire**

1. Gasoline-powered or diesel-powered machinery used during construction shall be equipped with standard exhaust controls and muffling devices that shall also act as spark arrestors.
2. Fire containment and extinguishing equipment shall be located on site and shall be accessible during construction activities. Construction workers shall be trained in use of the fire suppression equipment.

## Appendix B

### **Air Quality and Greenhouse Gas Emissions Calculations and Modeling**

This appendix contains highly detailed technical information which is difficult to translate for screen reading software; therefore, the appendix has not been translated into an auditory format. If you have a disability and/or have difficulty accessing any material in this document, please contact us by mail, email, or telephone, and we will work with you to make all reasonable accommodations. Please indicate 1) the nature of the accessibility need; 2) your preferred format; 3) the material you are trying to access and its location within this document; and 4) how to reach you if questions arise while fulfilling your request. You can direct your requests to:





## **B1 Assumptions**



Inland Feeder  
Assumptions

3/11/2024

## Project Land Uses

Land Use Type	CalEEMod LandUse Type	CalEEMod LandUse Subtype	Amount	Unit	Acres	Landscaping SF	Additional Notes
Project Land Uses							
Other Non-asphalt Surface	Parking	Condo/Townhouse High Rise	6.615	acres	6.615		provided by GIS team

Construction Data<sup>1</sup>

Construction Phase	CalEEMod Phase Type	Start Date	End Date	Workdays (5 days/week)	Worker Vehicles/Day	Workers Trips (In/Out)/Day	Vendor/Material Truck /Day (In/Out)	Vendor/Material Truck Trips/Day (In/Out)	Soil Export (CY)	Soil Import (CY)	Total Debris or Concrete Amount	Daily Debris or Concrete Amount	Total Haul (or Concrete) Trips (In/Out)	Total Haul (or Concrete) Trucks/Day	Haul (or Concrete) Trips/Day (In/Out)	Total Onsite Truck Trips	On-site Haul Truck Travel Miles	Days of Hauling	Notes
Supply Connection Components	Pipeline Trenching and Installation	Trenching	1/1/2025	1/31/2025	23	9	18	3	6	1820	1680	3,500	153	0	0	6	0.25	23	
	Vault Structure Excavation	Grading/Excavation	2/1/2025	2/28/2025	20	4	8			1470	500	1,970	99	0	0	0	0.25	20	
	Vault Structure Installation	Building Construction	3/1/2025	3/31/2025	21	5	10	4	8							8	0.25		
	Vault Structure Installation-Concrete	Building Construction	3/1/2025	3/20/2025	14							2,078	149	462	17	34	0.25	14	From data needs
	Surge Tank Excavation	Grading/Excavation	4/1/2025	4/30/2025	22	3	6									0	0.25		
	Surge Tank Excavation-Haul	Grading/Excavation	4/1/2025	4/2/2025	2					45	45	90	45	0	0	0	0.25	2	Adjusted haul to 2 days
	Surge Tank Installation	Building Construction	5/1/2025	6/30/2025	43	5	10	4	8							8	0.25		
Discharge Connection Components	Surge Tank Installation-Concrete	Building Construction	5/1/2025	5/20/2025	14							2,078	149	462	17	34	0.25	14	From data needs
	Pipeline Trenching and Installation	Trenching	7/1/2025	7/31/2025	23	9	18	3	6	3700	3100	6800	296	0	0	6	0.25	23	
	Vault Structure Excavation	Grading/Excavation	10/1/2026	10/31/2026	22	4	8			1470	1000	2470	113	0	0	0	0.25	22	
	Vault Structure Installation	Building Construction	11/1/2026	11/30/2026	21	5	10	4	8							8	0.25		
	Vault Structure Installation-Concrete	Building Construction	11/1/2026	11/19/2026	14							2,078	149	462	17	34	0.25	14	From data needs
	Surge Tank Excavation	Grading/Excavation	10/1/2025	10/31/2025	23	9	18									0	0.25		
	Surge Tank Excavation-Haul	Grading/Excavation	10/1/2025	10/2/2025	2					175	175	350	175	0	0	0	0.25	2	Adjusted haul to 2 days
Total Work Days				261															
					58	116													

1 From Client Construction Data Needs

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Inland Feeder  
Air Quality and Greenhouse Gas Assessment - Construction Assumptions

last updated: 3/11/2024

Off-Road Heavy-Duty Construction Equipment - Maximum Day

Supply Connection Components

Construction Phase	Heavy-Duty Equipment	No. of Heavy-Duty Equipment	No. of hours/day	Hours of Operation/Week Per Equipment	Emissions Tier Rating or Fuel (After Mitigation if needed)	Notes/Comments
Pipeline Trenching and Installation	Cement Mortar Mixer	1	8	48		
	Excavator	1	8	48	Tier 4	
	Generator Set	1	8	48		
	Plate Compactor	2	8	48		
	Sweeper/Scrubber	1	8	48	Tier 4	
	Tractor/Loader/Backhoe	2	8	48	Tier 4	
	Welder	1	8	48	Tier 4	
Vault Structure Excavation	Excavator	1	8	48	Tier 4	
	Sweeper/Scrubber	1	8	48	Tier 4	
	Tractor/Loader/Backhoe	2	8	48	Tier 4	
Vault Structure Installation	Air Compressor	1	8	48	Tier 4	
	Crane	1	8	48	Tier 4	
	Forklift	1	8	48	Tier 4	
	Generator	1	8	48	Tier 4	
	Plate Compactor	2	8	48		
	Sweeper/Scrubber	1	8	48	Tier 4	
Surge Tank Excavation	Excavator	1	8	48	Tier 4	
	Sweeper/Scrubber	1	8	48	Tier 4	
	Tractor/Loader/Backhoe	2	8	48	Tier 4	
Surge Tank Installation	Air Compressor	1	8	48	Tier 4	
	Crane	1	8	48	Tier 4	
	Generator	1	8	48		
	Grader	1	8	48	Tier 4	
	Plate Compactor	2	8	48		
	Sweeper/Scrubber	1	8	48	Tier 4	
	Welder	1	8	48	Tier 4	

Discharge Connection Components

<b>Pipeline Trenching and Installation</b>	Cement Mortar Mixer	1	8	48		
	Excavator	1	8	48	Tier 4	
	Generator Set	1	8	48		
	Plate Compactor	2	8	48		
	Sweeper/Scrubber	1	8	48	Tier 4	
	Tractor/Loader/Backhoe	2	8	48	Tier 4	
	Welder	1	8	48	Tier 4	
<b>Vault Structure Excavation</b>	Excavator	1	8	48	Tier 4	
	Sweeper/Scrubber	1	8	48	Tier 4	
	Tractor/Loader/Backhoe	2	8	48	Tier 4	
<b>Vault Structure Installation</b>	Air Compressor	1	8	48	Tier 4	
	Crane	1	8	48	Tier 4	
	Forklift	1	8	48	Tier 4	
	Generator	1	8	48	Tier 4	
	Plate Compactor	2	8	48		
	Sweeper/Scrubber	1	8	48	Tier 4	
<b>Surge Tank Excavation</b>	Excavator	1	8	48	Tier 4	
	Sweeper/Scrubber	1	8	48	Tier 4	
	Tractor/Loader/Backhoe	2	8	48	Tier 4	
<b>Surge Tank Installation</b>	Air Compressor	1	8	48	Tier 4	
	Crane	1	8	48	Tier 4	
	Generator	1	8	48		
	Grader	1	8	48	Tier 4	
	Plate Compactor	2	8	48		
	Sweeper/Scrubber	1	8	48	Tier 4	
	Welder	1	8	48	Tier 4	

**Inland Feeder Intertie  
Air Quality Assessment**

**Localized Significance Thresholds**  
***(SCAQMD, Final Localized Significance Threshold Methodology, Appendix C (2008))***

Source Receptor Area 34  
25 meters to Sensitive Receptor

Acres	Screening Values			Project Site
	1	2	5	6.615
Construction LSTs				
NOX	118	170	270	<b>270.0</b>
CO	667	972	1,746	<b>1,746.0</b>
PM10	4	7	14	<b>14.0</b>
PM2.5	3	4	8	<b>8.0</b>

## **B2 Construction Air Quality and Greenhouse Gas Calculations and Modeling**





Inland Feeder  
Air Quality Construction Analysis  
Unmitigated

Phase  
Supply Connection Components

Discharge Connection Components

Regional Maximums Source	ROG	NOX	CO	SO2	Exhaust PM10 lb/day	Fugitive PM10 lb/day	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
Pipeline Trenching and Installation	0.48	7.10	11.55	0.03	0.11	3.30	3.41	0.11	0.44	0.55
Vault Structure Excavation	0.17	3.42	7.66	0.02	0.03	1.89	1.92	0.03	0.25	0.29
Vault Structure Installation	0.45	7.46	12.25	0.04	0.11	4.84	4.96	0.11	0.62	0.73
Surge Tank Excavation	0.15	2.56	7.18	0.01	0.02	0.97	0.99	0.02	0.13	0.16
Surge Tank Installation	0.53	8.48	16.78	0.04	0.13	4.73	4.85	0.12	0.61	0.73
Pipeline Trenching and Installation	0.54	9.12	13.17	0.04	0.13	5.75	5.88	0.12	0.76	0.88
Vault Structure Excavation	0.16	3.56	7.73	0.02	0.03	2.11	2.14	0.03	0.28	0.32
Vault Structure Installation	0.43	7.30	12.15	0.04	0.11	4.73	4.84	0.11	0.61	0.72
Surge Tank Excavation	0.23	4.48	8.84	0.02	0.04	3.13	3.17	0.04	0.43	0.47
Surge Tank Installation	0.52	8.65	16.62	0.04	0.13	4.73	4.85	0.12	0.61	0.73
Project Daily Maximum Emissions	0.54	9.12	16.78	0.04	0.13	5.75	5.88	0.12	0.76	0.88
Threshold	75.0	100.0	550.0	150.0	None	None	150.0	None	None	55.0
Exceed Threshold (Y/N)?	No	No	No	No	No	No	No	No	No	No

Phase  
Supply Connection Components

Discharge Connection Components

Localized Maximum Source	ROG	NOX	CO	SO2	Exhaust PM10 lb/day	Fugitive PM10 lb/day	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
Pipeline Trenching and Installation	0.37	4.89	9.36	0.02	0.09	2.60	2.69	0.08	0.26	0.34
Vault Structure Excavation	0.11	1.99	6.44	0.01	0.02	1.49	1.50	0.02	0.15	0.17
Vault Structure Installation	0.35	4.18	9.92	0.02	0.08	4.01	4.09	0.08	0.40	0.48
Surge Tank Excavation	0.11	1.87	6.34	0.01	0.02	0.74	0.76	0.02	0.07	0.09
Surge Tank Installation	0.43	5.34	14.27	0.02	0.09	3.90	3.99	0.09	0.39	0.48
Pipeline Trenching and Installation	0.39	5.19	9.61	0.02	0.09	4.65	4.73	0.08	0.46	0.55
Vault Structure Excavation	0.11	2.02	6.47	0.01	0.02	1.67	1.69	0.02	0.17	0.18
Vault Structure Installation	0.35	4.15	9.90	0.02	0.08	3.90	3.98	0.08	0.39	0.47
Surge Tank Excavation	0.12	2.15	6.57	0.01	0.02	2.42	2.43	0.02	0.24	0.26
Surge Tank Installation	0.42	5.37	14.29	0.02	0.09	3.90	3.99	0.09	0.39	0.48
Project Daily Maximum Emissions	0.43	5.37	14.29	0.02	0.09	4.65	4.73	0.09	0.46	0.55
Threshold	None	270.0	1746.0	None	None	None	14.0	None	None	8.0
Exceed Threshold (Y/N)?	No	No	No	No	No	No	No	No	No	No

## Inland Feeder

## Air Quality Construction Analysis

## Unmitigated

Phase	Source	Onsite Emissions										Offsite Emissions									
		ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10 lb/day	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
Supply Connection Components	Pipeline Trenching and Installation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Vault Structure Excavation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Vault Structure Installation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Surge Tank Excavation	0.108	1.868	6.340	0.008	0.016	0.743	0.760	0.016	0.074	0.091	0.039	0.689	0.840	0.004	0.007	0.227	0.234	0.007	0.059	0.066
	Surge Tank Installation	0.426	5.340	14.274	0.025	0.092	3.897	3.989	0.087	0.390	0.477	0.103	3.135	2.509	0.018	0.034	0.830	0.863	0.034	0.222	0.256
Discharge Connection Components	Pipeline Trenching and Installation	0.386	5.192	9.614	0.016	0.089	4.645	4.734	0.083	0.465	0.548	0.153	3.930	3.561	0.022	0.041	1.102	1.144	0.041	0.293	0.334
	Vault Structure Excavation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Vault Structure Installation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Surge Tank Excavation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Surge Tank Installation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Regional Emissions		ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5										
Supply Connection Components	Pipeline Trenching and Installation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Vault Structure Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Vault Structure Installation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Surge Tank Excavation	0.15	2.56	7.18	0.01	0.02	0.97	0.99	0.02	0.13	0.16										
Discharge Connection Components	Surge Tank Installation	0.53	8.48	16.78	0.04	0.13	4.73	4.85	0.12	0.61	0.73										
	Pipeline Trenching and Installation	0.54	9.12	13.17	0.04	0.13	5.75	5.88	0.12	0.76	0.88										
	Vault Structure Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Vault Structure Installation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Surge Tank Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Surge Tank Installation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
Project Daily Maximum Emissions		0.54	9.12	16.78	0.04	0.13	5.75	5.88	0.12	0.76	0.88										

## Inland Feeder

## Air Quality Construction Analysis

## Unmitigated

Phase	Winter	Onsite Emissions										Offsite Emissions									
		ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10 lb/day	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5	ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5
Supply Connection Components	Source																				
	Pipeline Trenching and Installation	0.371	4.892	9.355	0.015	0.088	2.601	2.690	0.083	0.260	0.343	0.113	2.206	2.199	0.012	0.022	0.694	0.717	0.022	0.181	0.203
	Vault Structure Excavation	0.111	1.994	6.442	0.009	0.016	1.487	1.503	0.016	0.149	0.165	0.057	1.424	1.219	0.007	0.014	0.401	0.415	0.014	0.106	0.120
	Vault Structure Installation	0.352	4.180	9.917	0.018	0.080	4.014	4.095	0.076	0.401	0.477	0.098	3.278	2.329	0.018	0.034	0.830	0.863	0.034	0.222	0.256
Discharge Connection Components	Surge Tank Excavation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Surge Tank Installation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Pipeline Trenching and Installation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Vault Structure Excavation	0.112	2.022	6.466	0.009	0.016	1.672	1.689	0.016	0.167	0.184	0.050	1.536	1.262	0.008	0.016	0.438	0.454	0.016	0.116	0.132
	Vault Structure Installation	0.350	4.151	9.897	0.018	0.080	3.897	3.977	0.076	0.390	0.465	0.078	3.151	2.249	0.018	0.034	0.830	0.863	0.034	0.222	0.256
	Surge Tank Excavation	0.117	2.146	6.567	0.009	0.017	2.416	2.433	0.017	0.242	0.258	0.114	2.338	2.275	0.012	0.023	0.717	0.740	0.023	0.187	0.210
	Surge Tank Installation	0.423	5.368	14.287	0.025	0.092	3.897	3.989	0.087	0.390	0.477	0.098	3.278	2.329	0.018	0.034	0.830	0.863	0.034	0.222	0.256
Supply Connection Components	Regional Emissions																				
		ROG	NOX	CO	SO2	Exhaust PM10	Fugitive PM10	Total PM10	Exhaust PM2.5	Fugitive PM2.5	Total PM2.5										
	Pipeline Trenching and Installation	0.48	7.10	11.55	0.03	0.11	3.30	3.41	0.11	0.44	0.55										
	Vault Structure Excavation	0.17	3.42	7.66	0.02	0.03	1.89	1.92	0.03	0.25	0.29										
	Vault Structure Installation	0.45	7.46	12.25	0.04	0.11	4.84	4.96	0.11	0.62	0.73										
	Surge Tank Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Surge Tank Installation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Pipeline Trenching and Installation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00										
	Vault Structure Excavation	0.16	3.56	7.73	0.02	0.03	2.11	2.14	0.03	0.28	0.32										
	Vault Structure Installation	0.43	7.30	12.15	0.04	0.11	4.73	4.84	0.11	0.61	0.72										
	Surge Tank Excavation	0.23	4.48	8.84	0.02	0.04	3.13	3.17	0.04	0.43	0.47										
	Surge Tank Installation	0.52	8.65	16.62	0.04	0.13	4.73	4.85	0.12	0.61	0.73										
Project Daily Maximum Emissions		0.52	8.65	16.62	0.04	0.13	4.84	4.96	0.12	0.62	0.73										

## Inland Feeder

## Construction Annual GHG

Year	Metric Tons/Year			Total
	CalEEMod On-Road Mobile Sources	CalEEMod Construction Equipment and Onsite Trucks	Water + Construction Office	
2025	142	165	12	319
2026	33	26	4	63
<b>Total</b>	<b>175</b>	<b>192</b>	<b>16</b>	<b>383</b>
<b>Amortized - 30 years</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>13</b>

Inland Feeder  
Construction GHG  
Construction Water Energy Estimates

	Source	Acreage/Day	Number of Days	Total Construction Water Use (Mgal)	Electricity Demand from Water Conveyance (MWh)	Annual Electricity Demand from Water Conveyance (MWh)
Supply Connection Components	Pipeline Trenching and Installation	6.615	23	0.456	3.1	1.2
	Vault Structure Excavation	6.615	20	0.397	2.7	1.1
	Surge Tank Excavation	6.615	22	0.437	3.0	1.2
Discharge Connection Components	Pipeline Trenching and Installation	6.615	23	0.456	3.1	1.2
	Vault Structure Excavation	6.615	21	0.417	2.8	1.1
	Surge Tank Excavation	6.615	23	0.456	3.1	1.2
<b>Total</b>				<b>2.620</b>	<b>17.8</b>	<b>7.2</b>
CalEEMod Water Electricity Factors			Electricity Intensity Factor To Supply (kWh/Mgal)	Electricity Intensity Factor To Treat (kWh/Mgal)	Electricity Intensity Factor To Distribute (kWh/Mgal)	Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)
			3044	725	1537	1501

Sources and Assumptions:

CalEEMod Appendix G, Table G-32

-Electricity Intensity Factors - California Emissions Estimator Model (CalEEMod).

-Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of

landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%.

Factor is therefore  $(20.94 \text{ GAL/SF/year}) \times (43,560 \text{ SF/acre}) / (365 \text{ days/year}) / (0.85) = 2,940 \text{ gallons/acre/day}$ , rounded up to 3,000 gallons/acre/day.

(U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. "Guidelines for Estimating Unmetered Landscaping Water Use."

July 2010. Page 12, Table 4 - Annual Irrigation Factor - Landscaped Areas with High Water Requirements).

Electricity Emission Factor	Electricity Emission Factor	Total GHG Emissions Per Year
(MT CO <sub>2</sub> /MWh)	(lbs CO <sub>2</sub> /MWh)	1.73
2.41E-01	631.98	
(MT CH <sub>4</sub> /MWh)	(lbs CH <sub>4</sub> /MWh)	
1.50E-05	0.033	
(MT N <sub>2</sub> O/MWh)	(lbs N <sub>2</sub> O/MWh)	
1.81E-06	0.004	

Inland Feeder  
Construction GHG Analysis

Temporary Construction Trailer - Electricity				
Land Use	Square Feet	Energy Use per year (kWh)	Total Energy Use (kWh)	Energy Use per SF
General Office	2,000	40,936	40,936.20	20.5
Note: Energy use per sf is derived from CalEEMod User Guide, Appendix G, Table G-28 for the Statewide average for General Office Building land use				

Electricity Emission Factor (MT CO <sub>2</sub> /MWh)	Electricity Emission Factor (lbs CO <sub>2</sub> /MWh)	Total GHG Emissions Per Year	Year	Proportion of Year Worked	GHG Emissions Per Construction Year
0.24	531.98	9.92	2025	1.00	9.92
(MT CH <sub>4</sub> /MWh)	(lbs CH <sub>4</sub> /MWh)		2026	0.25	2.48
1.50E-05	0.033				
(MT N <sub>2</sub> O/MWh)	(lbs N <sub>2</sub> O/MWh)				
1.81E-06	0.004				

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1.1. Basic Project Information

Data Field	Value
Project Name	Inland Feeder-Con-T4
Construction Start Date	1/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	11.2
Location	8650 Cone Camp Rd, Highland, CA 92346, USA
County	San Bernardino-South Coast
City	Highland
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5168
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Other Non-Asphalt Surfaces	6.62	Acre	6.62	0.00	0.00	—	—	—

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### 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

## 2. Emissions Summary

### 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.99	0.54	9.12	16.8	0.04	0.13	5.75	5.88	0.12	0.76	0.88	—	5,136	5,136	0.46	0.57	8.02	5,291
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.88	0.52	8.65	16.6	0.04	0.13	4.73	4.85	0.12	0.61	0.73	—	5,127	5,127	0.41	0.46	0.16	5,276
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.34	0.23	3.32	7.11	0.02	0.05	1.39	1.44	0.05	0.19	0.23	—	1,815	1,815	0.13	0.13	0.87	1,859
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.04	0.61	1.30	< 0.005	0.01	0.25	0.26	0.01	0.03	0.04	—	300	300	0.02	0.02	0.14	308

### 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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2025	0.99	0.54	9.12	16.8	0.04	0.13	5.75	5.88	0.12	0.76	0.88	—	5,136	5,136	0.46	0.57	8.02	5,291
2026	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.88	0.52	8.65	16.6	0.04	0.13	4.73	4.85	0.12	0.61	0.73	—	5,127	5,127	0.41	0.46	0.16	5,276
2026	0.79	0.43	7.30	12.1	0.04	0.11	4.73	4.84	0.11	0.61	0.72	—	4,452	4,452	0.37	0.44	0.15	4,593
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.34	0.23	3.32	7.11	0.02	0.05	1.39	1.44	0.05	0.19	0.23	—	1,815	1,815	0.13	0.13	0.87	1,859
2026	0.06	0.03	0.57	1.13	< 0.005	0.01	0.32	0.33	0.01	0.04	0.05	—	347	347	0.03	0.03	0.18	357
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.06	0.04	0.61	1.30	< 0.005	0.01	0.25	0.26	0.01	0.03	0.04	—	300	300	0.02	0.02	0.14	308
2026	0.01	0.01	0.10	0.21	< 0.005	< 0.005	0.06	0.06	< 0.005	0.01	0.01	—	57.4	57.4	< 0.005	0.01	0.03	59.1

### 3. Construction Emissions Details

#### 3.1. SC-Vault Structure Excavation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	1.75	6.24	0.01	0.02	—	0.02	0.02	—	0.02	—	894	894	0.04	0.01	—	897

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Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.03	0.01	0.24	0.20	< 0.005	< 0.005	1.48	1.48	< 0.005	0.15	0.15	—	42.0	42.0	0.02	0.01	< 0.005	44.6
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.34	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	49.0	49.0	< 0.005	< 0.005	—	49.2
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	2.29	2.29	< 0.005	< 0.005	< 0.005	2.43
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.11	8.11	< 0.005	< 0.005	—	8.14
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.38	0.38	< 0.005	< 0.005	< 0.005	0.40
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	103	103	< 0.005	< 0.005	0.01	105
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.14	0.02	1.38	0.75	0.01	0.01	0.30	0.31	0.01	0.08	0.10	—	1,107	1,107	0.12	0.18	0.06	1,164

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Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.74	5.74	< 0.005	< 0.005	0.01	5.82
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.08	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.6	60.6	0.01	0.01	0.06	63.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.95	0.95	< 0.005	< 0.005	< 0.005	0.96
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.0	10.0	< 0.005	< 0.005	0.01	10.6

## 3.3. SC-Surge Tank Excavation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	1.75	6.24	0.01	0.02	—	0.02	0.02	—	0.02	—	894	894	0.04	0.01	—	897
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.9	53.9	< 0.005	< 0.005	—	54.1



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Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.92	8.92	< 0.005	< 0.005	—	8.95
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.47	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	84.5	84.5	< 0.005	< 0.005	0.31	85.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.74	4.74	< 0.005	< 0.005	0.01	4.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.80
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
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### 3.5. SC-Surge Tank Excavation-Haul (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.12	0.10	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	20.8	20.8	0.01	< 0.005	0.01	22.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.12
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.02	0.02	< 0.005	< 0.005	< 0.005	0.02

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Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.07	0.01	0.66	0.37	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	553	553	0.06	0.09	1.18	583
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.03	3.03	< 0.005	< 0.005	< 0.005	3.19
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.53

## 3.7. DC-Vault Structure Excavation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	0.10	0.10	1.75	6.24	0.01	0.02	—	0.02	0.02	—	0.02	—	894	894	0.04	0.01	—	897
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.03	0.01	0.27	0.22	< 0.005	< 0.005	1.67	1.67	< 0.005	0.17	0.17	—	46.5	46.5	0.02	0.01	< 0.005	49.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.9	53.9	< 0.005	< 0.005	—	54.1
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.10	0.10	< 0.005	0.01	0.01	—	2.79	2.79	< 0.005	< 0.005	< 0.005	2.95
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.92	8.92	< 0.005	< 0.005	—	8.95
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.49
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.04	0.44	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.01	102

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Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.15	0.02	1.50	0.83	0.01	0.02	0.33	0.35	0.02	0.09	0.11	—	1,222	1,222	0.12	0.20	0.06	1,284
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.19	6.19	< 0.005	< 0.005	0.01	6.27
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.09	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	73.7	73.7	0.01	0.01	0.06	77.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.02	1.02	< 0.005	< 0.005	< 0.005	1.04
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.01	12.8

## 3.9. DC-Surge Tank Excavation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.10	1.75	6.24	0.01	0.02	—	0.02	0.02	—	0.02	—	894	894	0.04	0.01	—	897
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.39	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	56.3	56.3	< 0.005	< 0.005	—	56.5
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.33	9.33	< 0.005	< 0.005	—	9.36
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.06	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	233	233	0.01	0.01	0.02	235
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.03	15.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

## 3.11. DC-Surge Tank Excavation-Haul (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.05	0.01	0.39	0.32	< 0.005	< 0.005	2.41	2.41	< 0.005	0.24	0.24	—	68.2	68.2	0.03	0.01	< 0.005	72.4
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.39
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.07
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.23	0.04	2.25	1.22	0.01	0.02	0.48	0.50	0.02	0.13	0.15	—	1,798	1,798	0.19	0.29	0.10	1,891
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.85	9.85	< 0.005	< 0.005	0.01	10.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.63	1.63	< 0.005	< 0.005	< 0.005	1.72

## 3.13. SC-Vault Structure Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.33	3.52	9.38	0.02	0.08	—	0.08	0.08	—	0.08	—	1,665	1,665	0.07	0.01	—	1,671
Onsite truck	0.01	< 0.005	0.12	0.10	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	21.0	21.0	0.01	< 0.005	< 0.005	22.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.20	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	95.8	95.8	< 0.005	< 0.005	—	96.1
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	1.20	1.20	< 0.005	< 0.005	< 0.005	1.28
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.9	15.9	< 0.005	< 0.005	—	15.9
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.21
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.54	7.54	< 0.005	< 0.005	0.01	7.64
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.2	14.2	< 0.005	< 0.005	0.02	14.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.25	1.25	< 0.005	< 0.005	< 0.005	1.27
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.35	2.35	< 0.005	< 0.005	< 0.005	2.46
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

## 3.15. SC-Vault Structure Installation-Concrete (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.02	0.51	0.42	< 0.005	< 0.005	3.15	3.16	< 0.005	0.32	0.32	—	89.2	89.2	0.04	0.02	< 0.005	94.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.62
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.60
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	0.05	2.94	1.59	0.02	0.03	0.63	0.66	0.03	0.17	0.20	—	2,352	2,352	0.25	0.39	0.13	2,473
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.06	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	90.2	90.2	0.01	0.01	0.08	94.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.01	15.7

## 3.17. SC-Surge Tank Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.40	4.73	13.8	0.02	0.09	—	0.09	0.09	—	0.09	—	2,289	2,289	0.09	0.02	—	2,296
Onsite truck	0.01	< 0.005	0.12	0.10	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	20.8	20.8	0.01	< 0.005	0.01	22.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.56	1.62	< 0.005	0.01	—	0.01	0.01	—	0.01	—	270	270	0.01	< 0.005	—	271
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.61
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	44.6	44.6	< 0.005	< 0.005	—	44.8
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.41	0.41	< 0.005	< 0.005	< 0.005	0.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.04	0.78	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	141	141	0.01	< 0.005	0.52	143
Vendor	0.02	0.01	0.27	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.69	259
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.4	15.4	< 0.005	< 0.005	0.03	15.7
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.1	29.1	< 0.005	< 0.005	0.04	30.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.56	2.56	< 0.005	< 0.005	< 0.005	2.59
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.81	4.81	< 0.005	< 0.005	0.01	5.05
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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## 3.19. SC-Surge Tank Installation-Concrete (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.02	0.49	0.41	< 0.005	< 0.005	3.15	3.16	< 0.005	0.32	0.32	—	88.3	88.3	0.04	0.01	0.06	93.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.62
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.60
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	0.05	2.82	1.58	0.02	0.03	0.63	0.66	0.03	0.17	0.20	—	2,351	2,351	0.25	0.38	4.99	2,477
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

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Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.06	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	90.2	90.2	0.01	0.01	0.08	94.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.01	15.7

## 3.21. DC-Vault Structure Installation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.36	0.33	3.52	9.38	0.02	0.08	—	0.08	0.08	—	0.08	—	1,665	1,665	0.07	0.01	—	1,670
Onsite truck	0.01	< 0.005	0.12	0.10	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	20.7	20.7	0.01	< 0.005	< 0.005	21.9
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.20	0.54	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	95.8	95.8	< 0.005	< 0.005	—	96.1
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.04	0.04	< 0.005	< 0.005	< 0.005	—	1.18	1.18	< 0.005	< 0.005	< 0.005	1.25
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.9	15.9	< 0.005	< 0.005	—	15.9

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Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	0.20	0.20	< 0.005	< 0.005	< 0.005	0.21
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.54	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	127	127	< 0.005	< 0.005	0.01	128
Vendor	0.02	< 0.005	0.27	0.14	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	243	243	0.02	0.04	0.02	254
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.39	7.39	< 0.005	< 0.005	0.01	7.48
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.0	14.0	< 0.005	< 0.005	0.02	14.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.22	1.22	< 0.005	< 0.005	< 0.005	1.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.31	2.31	< 0.005	< 0.005	< 0.005	2.42
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

## 3.23. DC-Vault Structure Installation-Concrete (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.02	0.51	0.42	< 0.005	< 0.005	3.15	3.16	< 0.005	0.32	0.32	—	87.9	87.9	0.04	0.01	< 0.005	93.1
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.35	3.35	< 0.005	< 0.005	< 0.005	3.55
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.59
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.28	0.03	2.83	1.56	0.02	0.03	0.63	0.66	0.03	0.17	0.20	—	2,309	2,309	0.23	0.37	0.12	2,425
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.06	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	88.5	88.5	0.01	0.01	0.08	93.1
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.7	14.7	< 0.005	< 0.005	0.01	15.4



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## 3.25. DC-Surge Tank Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.40	4.73	13.8	0.02	0.09	—	0.09	0.09	—	0.09	—	2,289	2,289	0.09	0.02	—	2,296
Onsite truck	0.01	< 0.005	0.12	0.10	< 0.005	< 0.005	0.74	0.74	< 0.005	0.07	0.07	—	21.0	21.0	0.01	< 0.005	< 0.005	22.3
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	0.56	1.62	< 0.005	0.01	—	0.01	0.01	—	0.01	—	270	270	0.01	< 0.005	—	271
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.08	0.08	< 0.005	0.01	0.01	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.61
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.30	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	44.6	44.6	< 0.005	< 0.005	—	44.8
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.41	0.41	< 0.005	< 0.005	< 0.005	0.43
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Worker	0.05	0.04	0.05	0.59	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	129	129	0.01	< 0.005	0.01	131
Vendor	0.02	0.01	0.29	0.15	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	247	247	0.02	0.04	0.02	259
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.4	15.4	< 0.005	< 0.005	0.03	15.7
Vendor	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	29.1	29.1	< 0.005	< 0.005	0.04	30.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.56	2.56	< 0.005	< 0.005	< 0.005	2.59
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.81	4.81	< 0.005	< 0.005	0.01	5.05
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

## 3.27. DC-Surge Tank Installation-Concrete (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.06	0.02	0.51	0.42	< 0.005	< 0.005	3.15	3.16	< 0.005	0.32	0.32	—	89.2	89.2	0.04	0.02	< 0.005	94.7
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.62
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.60
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.30	0.05	2.94	1.59	0.02	0.03	0.63	0.66	0.03	0.17	0.20	—	2,352	2,352	0.25	0.39	0.13	2,473
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.01	< 0.005	0.11	0.06	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	90.2	90.2	0.01	0.01	0.08	94.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.01	15.7

## 3.29. SC-Pipeline Trenching and Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	0.36	4.47	9.01	0.01	0.09	—	0.09	0.08	—	0.08	—	1,331	1,331	0.05	0.01	—	1,335
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.05	0.02	0.42	0.35	< 0.005	< 0.005	2.60	2.60	< 0.005	0.26	0.26	—	73.5	73.5	0.03	0.01	< 0.005	78.0
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.28	0.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	83.8	83.8	< 0.005	< 0.005	—	84.1
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	0.16	0.16	< 0.005	0.02	0.02	—	4.60	4.60	< 0.005	< 0.005	< 0.005	4.89
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	13.9
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.76	0.76	< 0.005	< 0.005	< 0.005	0.81
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.06	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	233	233	0.01	0.01	0.02	235
Vendor	0.02	< 0.005	0.21	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	185	185	0.01	0.03	0.01	194
Hauling	0.19	0.03	1.90	1.03	0.01	0.02	0.41	0.43	0.02	0.11	0.13	—	1,522	1,522	0.16	0.25	0.08	1,600
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.03	15.1
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.01	12.2
Hauling	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	95.9	95.9	0.01	0.02	0.09	101
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.50
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	2.02
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.9	15.9	< 0.005	< 0.005	0.01	16.7

## 3.31. DC-Pipeline Trenching and Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	0.36	4.47	9.01	0.01	0.09	—	0.09	0.08	—	0.08	—	1,331	1,331	0.05	0.01	—	1,335
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.09	0.03	0.72	0.61	< 0.005	< 0.005	4.64	4.64	< 0.005	0.46	0.46	—	130	130	0.06	0.02	0.09	138

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Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.28	0.57	< 0.005	0.01	—	0.01	0.01	—	0.01	—	83.8	83.8	< 0.005	< 0.005	—	84.1
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.05	0.04	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	8.22	8.22	< 0.005	< 0.005	< 0.005	8.73
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	—	13.9
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	1.36	1.36	< 0.005	< 0.005	< 0.005	1.45
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.08	1.40	0.00	0.00	0.24	0.24	0.00	0.06	0.06	—	254	254	0.01	0.01	0.94	257
Vendor	0.02	0.01	0.21	0.11	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	185	185	0.01	0.03	0.52	194
Hauling	0.39	0.06	3.65	2.05	0.02	0.04	0.82	0.85	0.04	0.22	0.26	—	3,042	3,042	0.32	0.50	6.46	3,205
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.03	15.1
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.7	11.7	< 0.005	< 0.005	0.01	12.2
Hauling	0.02	< 0.005	0.24	0.13	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	192	192	0.02	0.03	0.18	202
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.50
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	2.02
Hauling	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.7	31.7	< 0.005	0.01	0.03	33.4

## 4. Operations Emissions Details

### 4.10. Soil Carbon Accumulation By Vegetation Type

#### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

#### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

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Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



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Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
SC-Vault Structure Excavation	Grading	2/1/2025	2/28/2025	5.00	20.0	—
SC-Surge Tank Excavation	Grading	4/1/2025	4/30/2025	5.00	22.0	—
SC-Surge Tank Excavation-Haul	Grading	4/1/2025	4/2/2025	5.00	2.00	—

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DC-Vault Structure Excavation	Grading	10/1/2026	10/31/2026	5.00	22.0	—
DC-Surge Tank Excavation	Grading	10/1/2025	10/31/2025	5.00	23.0	—
DC-Surge Tank Excavation-Haul	Grading	10/1/2025	10/2/2025	5.00	2.00	—
SC-Vault Structure Installation	Building Construction	3/1/2025	3/31/2025	5.00	21.0	—
SC-Vault Structure Installation-Concrete	Building Construction	3/1/2025	3/20/2025	5.00	14.0	—
SC-Surge Tank Installation	Building Construction	5/1/2025	6/30/2025	5.00	43.0	—
SC-Surge Tank Installation-Concrete	Building Construction	5/1/2025	5/20/2025	5.00	14.0	—
DC-Vault Structure Installation	Building Construction	11/1/2026	11/30/2026	5.00	21.0	—
DC-Vault Structure Installation-Concrete	Building Construction	11/1/2026	11/19/2026	5.00	14.0	—
DC-Surge Tank Installation	Building Construction	11/1/2025	12/31/2025	5.00	43.0	—
DC-Surge Tank Installation-Concrete	Building Construction	11/1/2025	11/20/2025	5.00	14.0	—
SC-Pipeline Trenching and Installation	Trenching	1/1/2025	1/31/2025	5.00	23.0	—
DC-Pipeline Trenching and Installation	Trenching	7/1/2025	7/31/2025	5.00	23.0	—

## 5.2. Off-Road Equipment

## 5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
SC-Vault Structure Excavation	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
SC-Vault Structure Excavation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37

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SC-Vault Structure Excavation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
SC-Surge Tank Excavation	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
SC-Surge Tank Excavation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
SC-Surge Tank Excavation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
DC-Vault Structure Excavation	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
DC-Vault Structure Excavation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
DC-Vault Structure Excavation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
DC-Surge Tank Excavation	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
DC-Surge Tank Excavation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
DC-Surge Tank Excavation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
SC-Vault Structure Installation	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
SC-Vault Structure Installation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
SC-Vault Structure Installation	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
SC-Vault Structure Installation	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
SC-Vault Structure Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
SC-Vault Structure Installation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
SC-Surge Tank Installation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

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SC-Surge Tank Installation	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
SC-Surge Tank Installation	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
SC-Surge Tank Installation	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
SC-Surge Tank Installation	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
SC-Surge Tank Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
SC-Surge Tank Installation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
DC-Vault Structure Installation	Forklifts	Diesel	Tier 4 Final	1.00	8.00	82.0	0.20
DC-Vault Structure Installation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
DC-Vault Structure Installation	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
DC-Vault Structure Installation	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
DC-Vault Structure Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
DC-Vault Structure Installation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
DC-Surge Tank Installation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
DC-Surge Tank Installation	Cranes	Diesel	Tier 4 Final	1.00	8.00	367	0.29
DC-Surge Tank Installation	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
DC-Surge Tank Installation	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
DC-Surge Tank Installation	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41

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DC-Surge Tank Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
DC-Surge Tank Installation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
SC-Pipeline Trenching and Installation	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
SC-Pipeline Trenching and Installation	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
SC-Pipeline Trenching and Installation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
SC-Pipeline Trenching and Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
SC-Pipeline Trenching and Installation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
SC-Pipeline Trenching and Installation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
SC-Pipeline Trenching and Installation	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
DC-Pipeline Trenching and Installation	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
DC-Pipeline Trenching and Installation	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
DC-Pipeline Trenching and Installation	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
DC-Pipeline Trenching and Installation	Plate Compactors	Diesel	Average	2.00	8.00	8.00	0.43
DC-Pipeline Trenching and Installation	Sweepers/Scrubbers	Diesel	Tier 4 Final	1.00	8.00	36.0	0.46
DC-Pipeline Trenching and Installation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
DC-Pipeline Trenching and Installation	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45

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### 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
SC-Vault Structure Excavation	—	—	—	—
SC-Vault Structure Excavation	Worker	8.00	18.5	LDA,LDT1,LDT2
SC-Vault Structure Excavation	Vendor	—	10.2	HHDT,MHDT
SC-Vault Structure Excavation	Hauling	16.0	20.0	HHDT
SC-Vault Structure Excavation	Onsite truck	16.0	0.25	HHDT
SC-Surge Tank Excavation	—	—	—	—
SC-Surge Tank Excavation	Worker	6.00	18.5	LDA,LDT1,LDT2
SC-Surge Tank Excavation	Vendor	—	10.2	HHDT,MHDT
SC-Surge Tank Excavation	Hauling	0.00	20.0	HHDT
SC-Surge Tank Excavation	Onsite truck	—	—	HHDT
SC-Surge Tank Excavation-Haul	—	—	—	—
SC-Surge Tank Excavation-Haul	Worker	0.00	18.5	LDA,LDT1,LDT2
SC-Surge Tank Excavation-Haul	Vendor	—	10.2	HHDT,MHDT
SC-Surge Tank Excavation-Haul	Hauling	8.00	20.0	HHDT
SC-Surge Tank Excavation-Haul	Onsite truck	8.00	0.25	HHDT
DC-Vault Structure Excavation	—	—	—	—
DC-Vault Structure Excavation	Worker	8.00	18.5	LDA,LDT1,LDT2
DC-Vault Structure Excavation	Vendor	—	10.2	HHDT,MHDT
DC-Vault Structure Excavation	Hauling	18.0	20.0	HHDT
DC-Vault Structure Excavation	Onsite truck	18.0	0.25	HHDT
DC-Surge Tank Excavation	—	—	—	—
DC-Surge Tank Excavation	Worker	18.0	18.5	LDA,LDT1,LDT2
DC-Surge Tank Excavation	Vendor	—	10.2	HHDT,MHDT

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DC-Surge Tank Excavation	Hauling	0.00	20.0	HHDT
DC-Surge Tank Excavation	Onsite truck	—	—	HHDT
DC-Surge Tank Excavation-Haul	—	—	—	—
DC-Surge Tank Excavation-Haul	Worker	0.00	18.5	LDA,LDT1,LDT2
DC-Surge Tank Excavation-Haul	Vendor	—	10.2	HHDT,MHDT
DC-Surge Tank Excavation-Haul	Hauling	26.0	20.0	HHDT
DC-Surge Tank Excavation-Haul	Onsite truck	26.0	0.25	HHDT
SC-Vault Structure Installation	—	—	—	—
SC-Vault Structure Installation	Worker	10.0	18.5	LDA,LDT1,LDT2
SC-Vault Structure Installation	Vendor	8.00	10.2	HHDT,MHDT
SC-Vault Structure Installation	Hauling	0.00	20.0	HHDT
SC-Vault Structure Installation	Onsite truck	8.00	0.25	HHDT
SC-Vault Structure Installation-Concrete	—	—	—	—
SC-Vault Structure Installation-Concrete	Worker	0.00	18.5	LDA,LDT1,LDT2
SC-Vault Structure Installation-Concrete	Vendor	0.00	10.2	HHDT,MHDT
SC-Vault Structure Installation-Concrete	Hauling	34.0	20.0	HHDT
SC-Vault Structure Installation-Concrete	Onsite truck	34.0	0.25	HHDT
SC-Surge Tank Installation	—	—	—	—
SC-Surge Tank Installation	Worker	10.0	18.5	LDA,LDT1,LDT2
SC-Surge Tank Installation	Vendor	8.00	10.2	HHDT,MHDT
SC-Surge Tank Installation	Hauling	0.00	20.0	HHDT
SC-Surge Tank Installation	Onsite truck	8.00	0.25	HHDT
SC-Surge Tank Installation-Concrete	—	—	—	—
SC-Surge Tank Installation-Concrete	Worker	0.00	18.5	LDA,LDT1,LDT2

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SC-Surge Tank Installation-Concrete	Vendor	0.00	10.2	HHDT,MHDT
SC-Surge Tank Installation-Concrete	Hauling	34.0	20.0	HHDT
SC-Surge Tank Installation-Concrete	Onsite truck	34.0	0.25	HHDT
DC-Vault Structure Installation	—	—	—	—
DC-Vault Structure Installation	Worker	10.0	18.5	LDA,LDT1,LDT2
DC-Vault Structure Installation	Vendor	8.00	10.2	HHDT,MHDT
DC-Vault Structure Installation	Hauling	0.00	20.0	HHDT
DC-Vault Structure Installation	Onsite truck	8.00	0.25	HHDT
DC-Vault Structure Installation-Concrete	—	—	—	—
DC-Vault Structure Installation-Concrete	Worker	0.00	18.5	LDA,LDT1,LDT2
DC-Vault Structure Installation-Concrete	Vendor	0.00	10.2	HHDT,MHDT
DC-Vault Structure Installation-Concrete	Hauling	34.0	20.0	HHDT
DC-Vault Structure Installation-Concrete	Onsite truck	34.0	0.25	HHDT
DC-Surge Tank Installation	—	—	—	—
DC-Surge Tank Installation	Worker	10.0	18.5	LDA,LDT1,LDT2
DC-Surge Tank Installation	Vendor	8.00	10.2	HHDT,MHDT
DC-Surge Tank Installation	Hauling	0.00	20.0	HHDT
DC-Surge Tank Installation	Onsite truck	8.00	0.25	HHDT
DC-Surge Tank Installation-Concrete	—	—	—	—
DC-Surge Tank Installation-Concrete	Worker	0.00	18.5	LDA,LDT1,LDT2
DC-Surge Tank Installation-Concrete	Vendor	0.00	10.2	HHDT,MHDT
DC-Surge Tank Installation-Concrete	Hauling	34.0	20.0	HHDT
DC-Surge Tank Installation-Concrete	Onsite truck	34.0	0.25	HHDT
SC-Pipeline Trenching and Installation	—	—	—	—



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SC-Pipeline Trenching and Installation	Worker	18.0	18.5	LDA,LDT1,LDT2
SC-Pipeline Trenching and Installation	Vendor	6.00	10.2	HHDT,MHDT
SC-Pipeline Trenching and Installation	Hauling	22.0	20.0	HHDT
SC-Pipeline Trenching and Installation	Onsite truck	28.0	0.25	HHDT
DC-Pipeline Trenching and Installation	—	—	—	—
DC-Pipeline Trenching and Installation	Worker	18.0	18.5	LDA,LDT1,LDT2
DC-Pipeline Trenching and Installation	Vendor	6.00	10.2	HHDT,MHDT
DC-Pipeline Trenching and Installation	Hauling	44.0	20.0	HHDT
DC-Pipeline Trenching and Installation	Onsite truck	50.0	0.25	HHDT

## 5.4. Vehicles

## 5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

## 5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
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## 5.6. Dust Mitigation

## 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
SC-Vault Structure Excavation	1,470	500	6.62	0.00	—
SC-Surge Tank Excavation	—	—	0.00	0.00	—

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SC-Surge Tank Excavation-Haul	45.0	45.0	6.62	0.00	—
DC-Vault Structure Excavation	1,470	1,000	6.62	0.00	—
DC-Surge Tank Excavation	—	—	0.00	0.00	—
DC-Surge Tank Excavation-Haul	175	175	6.62	0.00	—
SC-Pipeline Trenching and Installation	1,820	1,680	6.62	0.00	—
DC-Pipeline Trenching and Installation	3,700	3,100	6.62	0.00	—

## 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

## 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Non-Asphalt Surfaces	6.62	0%

## 5.8. Construction Electricity Consumption and Emissions Factors

## kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	532	0.03	< 0.005
2026	0.00	532	0.03	< 0.005

## 5.18. Vegetation

## 5.18.1. Land Use Change

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## 5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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## 5.18.1. Biomass Cover Type

## 5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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## 5.18.2. Sequestration

## 5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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## 6. Climate Risk Detailed Report

## 6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	27.8	annual days of extreme heat
Extreme Precipitation	4.35	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	24.9	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

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Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

## 6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

## 6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

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Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

## 6.4. Climate Risk Reduction Measures

# 7. Health and Equity Details

## 7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	100
AQ-PM	53.1
AQ-DPM	20.0
Drinking Water	85.2
Lead Risk Housing	1.49
Pesticides	65.6
Toxic Releases	39.4
Traffic	12.6
Effect Indicators	—
CleanUp Sites	40.8
Groundwater	0.00
Haz Waste Facilities/Generators	35.6
Impaired Water Bodies	33.2

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Solid Waste	0.00
Sensitive Population	—
Asthma	61.5
Cardio-vascular	77.6
Low Birth Weights	59.3
Socioeconomic Factor Indicators	—
Education	8.99
Housing	14.7
Linguistic	17.3
Poverty	6.73
Unemployment	78.3

## 7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	76.41473117
Employed	79.81521879
Median HI	79.66123444
Education	—
Bachelor's or higher	62.03002695
High school enrollment	100
Preschool enrollment	21.73745669
Transportation	—
Auto Access	96.70216861
Active commuting	3.721288336
Social	—

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2-parent households	68.31772103
Voting	80.48248428
Neighborhood	—
Alcohol availability	76.9665084
Park access	35.82702425
Retail density	12.48556397
Supermarket access	33.02964199
Tree canopy	13.92275119
Housing	—
Homeownership	92.2751187
Housing habitability	53.70204029
Low-inc homeowner severe housing cost burden	81.45771847
Low-inc renter severe housing cost burden	0.51328115
Uncrowded housing	76.50455537
Health Outcomes	—
Insured adults	85.66662389
Arthritis	0.0
Asthma ER Admissions	27.1
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	76.7
Cognitively Disabled	29.3
Physically Disabled	94.1

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Heart Attack ER Admissions	24.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	45.3
SLR Inundation Area	0.0
Children	79.8
Elderly	81.3
English Speaking	58.4
Foreign-born	17.5
Outdoor Workers	47.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	71.1
Traffic Density	13.5
Traffic Access	23.0
Other Indices	—
Hardship	27.1
Other Decision Support	—
2016 Voting	84.8



7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	43.0
Healthy Places Index Score for Project Location (b)	71.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.  
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	see construction assumptions
Construction: Off-Road Equipment	see construction assumptions
Construction: Dust From Material Movement	see construction assumptions
Construction: Trips and VMT	see construction assumptions

# Appendix C

## **Biological Resources**



## **C1 Biological Resources Technical Report**





March 18, 2024

Ms. Michelle Morrison  
Environmental Planning Section  
The Metropolitan Water District of Southern California  
700 North Alameda Street,  
Los Angeles, California 90012

**Subject:** Inland Feeder - Foothill Pump Station Intertie Project Biological Resources Technical Report

Dear Ms. Michelle Morrison:

This letter report documents the findings of a reconnaissance-level biological resources survey conducted by Environmental Science Associates (ESA) for the Metropolitan Water District of Southern California's (Metropolitan) Inland Feeder Foothill Pump Station Intertie Project (project). This report provides an overview of the proposed project, survey methodology, applicable regulatory framework, existing conditions, conclusions and impact assessments, and recommended avoidance and minimization measures.

## Project Location/Study Area

The approximately 6.61-acre project area is generally located north of the Santa Ana River, south of Greenspot Road, east of State Route 210, and west of State Route 38 in the City of Highland, San Bernardino County, California. More specifically, the project area is bounded by Greenspot Road and residential development to the north, the Santa Ana River and open space to the south, and large-lot, single family residences and open space to the east and west (**Figure 1, Regional Location**). The project area includes an existing fenced and graded triangular property that encompasses Metropolitan and San Bernardino Valley Municipal Water District (SBVMWD) facilities. The 59.96-acre study area includes the project area and a 500-ft buffer surrounding the project area (**Figure 2, Project Location**).

## Project Description

To enhance Metropolitan's water delivery flexibility in response to drought conditions and limited State Water Project (SWP) allocations, Metropolitan is proposing two new pipeline connections between the Inland Feeder and the SBVMWD-Inland Feeder Interconnection Line 1 and SBVMWD's Foothill Pump Station (FPS).

Two new underground pipelines (supply connection and discharge connection), two underground vaults, four aboveground hydropneumatic surge tanks (HST), and associated appurtenant structures would be constructed (Figure 2) in two stages as outlined below.

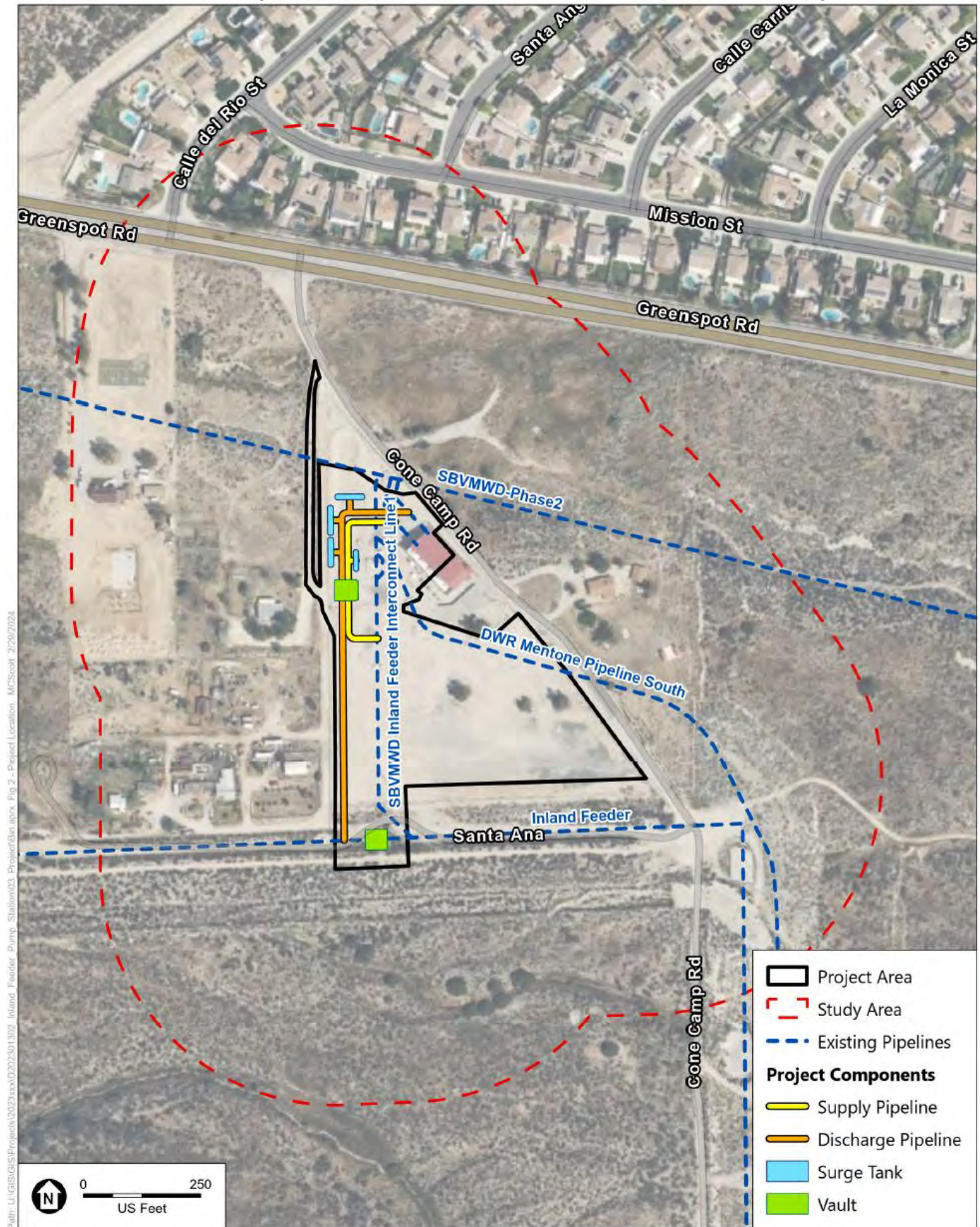


SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 1**  
Regional Location





SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 2**  
Project Location



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Stage 1 would include construction of the components mainly located within the existing fenced facility. This would include construction of an approximately 400-foot long, 54-inch supply connection pipeline, an approximately 750-foot long, 54-inch discharge connection pipeline, a 50-foot by 40-foot underground vault, four aboveground HSTs on concrete pads, and appurtenant structures. Additionally, the proposed project would include installation of a new fence-line along the western boundary of the project area to accommodate the supply and discharge connection components.

Stage 2 construction activities would occur along the southern portion of the project area, located mainly outside of the fenced facility, and would include a 45-foot by 40-foot underground vault, a portion of the 54-inch discharge connection pipeline, all associated appurtenant structures, and final connections to the existing Inland Feeder pipeline.

Most of the construction activities would occur during daylight hours, occasional nighttime construction activities may be required to shutdown the Inland Feeder and install the tie-in connection. Operation and maintenance activities at the FPS and Inland Feeder would be similar to existing conditions.

## Background

In October 2022, ECORP conducted a protocol-level San Bernardino kangaroo rat (SBKR; *Dipodomys merriami parvus*) trapping survey within portions of the proposed project area, and five rodent species were captured: SBKR, San Diego pocket mouse (*Chaetodipus fallax*), Bryant's woodrat (*Neotoma bryanti*), northern Baja deer mouse (*Peromyscus fraterculus*), and deer mouse (*Peromyscus maniculatus*) (ECORP 2022). SBKR is federally listed as endangered, state candidate for listing as endangered, and a species of special concern. As a result, the project team, in coordination with U.S. Fish and Wildlife Service (USFWS), performed additional biological surveys described below.

In March 2023, ESA conducted a SBKR burrow survey to determine if potential SBKR burrows occur within the project area (ESA 2023a). Based on the findings of the SBKR burrow survey conducted within the southern portion of the project area and in coordination with USFWS, subsequent motion-detecting cameras were recommended to identify kangaroo rat presence within the updated temporary and permanent impact areas. Thus, the nighttime activity survey was designed to confirm where exclusionary fencing should be installed within the southern extent of the project site.

The nighttime small mammal activity surveys were conducted in March and July 2023 using nighttime-vision equipment to determine nighttime small mammal activity in the project area (ESA 2023b; **Attachment A, Results of the 2023 Nighttime Small Mammal Activity Surveys**). The March 2023 nighttime small mammal activity survey was conducted within the exclusion fencing areas previously proposed for the project, while the July 2023 nighttime small mammal activity survey was conducted within a larger area and includes burrows where previous SBKR were captured to serve as a control. Although two small mammals, California ground squirrel and desert cottontail, were frequently detected by cameras in the nighttime activity survey area during the

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March 2023 nighttime small mammal activity survey effort, no rodent species were observed. The July 2023 nighttime activity survey effort resulted in the detection of four rodent genus including: deer mouse (*Peromyscus* sp.), kangaroo rat (*Dipodomys* sp.), pocket mouse (*Chaetodipus* sp.), and woodrat (*Neotoma* sp.). Kangaroo rat individuals were confirmed at six of the 15 camera locations. There is no way to confirm the kangaroo rat to species level during the photo captures. Both SBKR and Dulzura kangaroo rat (*Dipodomys simulans*) ranges overlap with the project area and study area. Therefore, additional trapping efforts would be required to confirm the species of kangaroo rat detected during the nighttime small mammal activity survey. However, it should be noted that the 2022 protocol-level SBKR trapping survey captured SBKR individuals (ECORP 2022).

## Methodology

### Database Review

Prior to visiting the site, ESA conducted a query of the following resource inventory databases to analyze the potential for sensitive resources to occur within the study area:

- California Department of Fish and Wildlife (CDFW). 2023a. California Natural Diversity Data Base (CNDDB). Database was queried for special status species records in the Redlands USGS 7.5-minute quadrangle and eight surrounding quadrangles including San Bernadino North, Harrison Mtn, Keller Peak, Yucaipa, El Casco, Sunnymead, Riverside East, and San Bernardino South. Accessed December 21, 2023.
- California Department of Fish and Wildlife (CDFW). 2023b. California Sensitive Natural Communities List. Sacramento, CA: CDFW, Natural Heritage Division, July 5, 2022. Accessed December 21, 2023. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline>.
- California Native Plant Society (CNPS). 2023. Inventory of Rare and Endangered Vascular Plants of California. Database was queried for special status species records in the Redlands USGS 7.5-minute quadrangle and eight surrounding quadrangles including San Bernardino North, Harrison Mtn, Keller Peak, Yucaipa, El Casco, Sunnymead, Riverside East, and San Bernardino South. Accessed December 21, 2023.
- ECORP. 2022. Results of a Focused San Bernardino Kangaroo Rat Trapping Survey Conducted for the Metropolitan Water District of Southern California's Foothill Pump Station Project, Highland, San Bernardino, California. November 18, 2022.
- ESA. 2023a. Results of a San Bernardino Kangaroo Rat Burrow Survey for Metropolitan's Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California. April 13, 2023.
- ESA. 2023b. Results of Nighttime Small Mammal Activity Surveys for Metropolitan's Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California. November 16, 2023.

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- Natural Resource Conservation Service (NRCS). 2023. Web Soil Survey. Accessed December 21, 2023. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.
- U.S. Fish and Wildlife Service (USFWS). 2023a. Critical Habitat Portal. Accessed December 21, 2023. [https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265\\_ad4fe09893cf75b8dbfb77](https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265_ad4fe09893cf75b8dbfb77).
- USFWS (U.S. Fish and Wildlife Service). 2023. National Wetland Inventory. Accessed December 21, 2023. <https://www.fws.gov/wetlands/data/Mapper.html>.

## Biological Resources Assessment

The reconnaissance-level biological resources survey was conducted by ESA biologists Brandon Mukogawa and Amanda French on December 22, 2023. Weather conditions were overcast and included a low of 64° Fahrenheit (F) and high of 64°F with wind speeds between 0-7 miles per hour. The survey was conducted within the project area and a surrounding 500-foot buffer, collectively referred to as the study area (Figure 2). The survey consisted of meandering transects throughout the study area to characterize and map plant communities and land use, and to determine the potential for special-status plants and wildlife to occur. All incidental, visual observations of flora and fauna, including sign (i.e., presence of scat) as well as any audible detections, were noted during the site visit and are discussed in the Existing Conditions section, below.

Natural communities and land use were characterized to map their extent and quantify their amounts within the study area using ArcGIS software. Plant taxonomy followed Hickman (1993), as updated in *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012), and plant community descriptions were characterized using *A Manual of California Vegetation* (Sawyer et al. 2009). Plant communities, land uses, and habitats not identified within the manuals were characterized based on species dominance. Representative photographs were taken during the survey and are provided in **Attachment B, Representative Photographs**.

## Regulatory Framework

### Federal and State Endangered Species Acts

The Federal Endangered Species Act (FESA) provides guidance for conserving federally listed species and the ecosystems upon which they depend. Section 9 of the FESA and its implementing regulations prohibit the “take” of any federally-listed endangered or threatened plant or animal species, unless otherwise authorized by federal regulations. “Take” includes the destruction of a listed species’ habitat. Section 9 also prohibits several specified activities with respect to endangered and threatened plants.

The California Endangered Species Act (CESA) mandates that state agencies do not approve a project that would jeopardize the continued existence of species if reasonable and prudent alternatives are available that would avoid a jeopardy finding. CESA also prohibits the take of any fish, wildlife, or plant species listed as endangered or threatened, or designated as candidates for listing, under CESA. Similar to the FESA, CESA contains a procedure

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for the CDFW to issue an incidental take permit authorizing the take of listed and candidate species incidental to an otherwise lawful activity, subject to specified conditions.

## Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take of native birds “by any means or manner to pursue, hunt, take, capture (or) kill” any migratory birds except as permitted by regulations issued by the USFWS. The term “take” is defined by USFWS regulation to mean to “pursue, hunt, shoot, wound, kill, trap, capture or collect” any migratory bird or any part, nest, or egg of any migratory bird covered by the conventions, or to attempt those activities.

## Clean Water Act

In accordance with Section 404 of the Clean Water Act (CWA), the United States Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into waters of the U.S. Waters of the U.S. and their lateral limits are defined in 33 CFR 328.3(a) and includes navigable waters of the U.S., interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Any activity resulting in the placement of “fill” material within waters of the U.S. requires a permit from USACE; “fill” is defined as any material that replaces any portion of a water of the U.S. with dry land or that changes the bottom elevation of any portion of a water of the U.S. In accordance with Section 401 of the CWA, projects that apply for a Section 404 permit for discharge of dredged or fill material must obtain water quality certification from the Regional Water Quality Control Board (RWQCB).

## Porter-Cologne Water Quality Control Act

In the absence of waters of the U.S., waters may be regulated under the Porter-Cologne Water Quality Control Act if project activities, discharges, or proposed activities or discharges could affect California's surface, coastal, or ground waters. The permit submitted by the applicant and issued by RWQCB is a Waste Discharge Requirement (WDR) in the absence of waters of the U.S.

## Native Plant Protection Act

The Native Plant Protection Act (NPPA) includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the NPPA includes those listed as rare and endangered under the CESA. The NPPA provides limitations on take as follows: “No person will import into this state, or take, possess, or sell within this state” any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFW at least 10 days in advance of changing land use to allow the CDFW to salvage any rare or endangered native plant material.

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## Section 15380 of the California Environmental Quality Act Guidelines

Although threatened and endangered species are protected by specific federal and state statutes, State CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code (i.e., CESA) dealing with rare or endangered plants or animals. This section was included in CEQA primarily to deal with situations in which a public agency must review a project that may have a significant effect on, for example, a species that has not been formally listed by either USFWS or CDFW; CEQA provides such an agency with the ability to protect the non-listed species from the potential impacts of a project. CEQA also calls for the protection of other significant resources, such as certain natural communities, for example. Although these resources are not currently protected, CEQA calls for an assessment of whether they would be affected and requires findings of significance regarding potential losses.

## Sections 3503 and 3513 of the California Fish and Game Code

Section 3503 of the Fish and Game Code (FGC) prohibits the killing of birds or the destruction of bird nests. Birds of prey are protected under Section 3503.5 of the FGC, which provides that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Section 3513 of the FGC prohibits any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA. Migratory birds include all native birds in the United States, except those non-migratory game species, such as quail and turkey, which are managed by individual states.

## Section 1602 of the California Fish and Game Code

Section 1602 of the FGC requires submittal of a Notification of Lake or Streambed Alteration for any activity that may alter the bed and/or bank of a lake, stream, river, or channel. Typical activities that require a Streambed Alteration Agreement may include, but are not limited to, excavation or “fill” placed within a channel, vegetation clearing, installation of culverts and bridge supports, and bank reinforcement.

## City of Highland Municipal Codes

Chapter 8.36 of the City of Highland Municipal Code prevents the removal, relocation, or destruction of any heritage tree within City of Highland’s city limits without a proper tree removal permit and associated

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environmental review (Chapter 8.36, Heritage Trees). Section 8.36.020 of the City of Highland Municipal Code defines heritage trees as any tree that meets the following criteria:

- A. All woody plants in excess of 15 feet in height and having a single trunk circumference of 24 inches or more, as measured four and one-half feet above ground level; or
- B. Multi-trunk tree(s) having a total circumference of 30 inches or more, measured four and one-half feet from ground level; or
- C. A stand of trees, the nature of which makes each dependent upon the others for survival; or
- D. Any other tree as may be deemed historically or culturally significant by the community development director or designees because of size, condition, location, or aesthetic qualities.

The definition of historic landmark includes any tree designated as an historic landmark by city council action. Trees which bear fruit or nuts (with the exemption of trees planted in a grove) and trees planted, grown, and/or held for sale by licensed nurseries and/or tree farms are exempt from the provisions of the City's code.

Tree removal is defined by the City's code as a an act which will cause a heritage tree to die, as determined by a tree expert, including, acts that inflict damage upon root systems, bark or other parts of tree by fire, application of toxic substances or operation of equipment or machinery, improper watering, changing the natural grade of the drip line area around the trunk, or attachment of signs or artificial material piercing the bark of the tree by means of nails, spikes, or other piercing objects. A Tree Removal Permit is required for the removal of all heritage trees within the city limits. A Landmark Alteration Permit is required, in addition to a Tree Removal Permit, for the removal of all trees designated as historic landmarks. The permit requirement may be waived in the case that the tree is determined to be a public health, safety, and welfare concern. Chapter 16.64.040 (Heritage Tree Preservation Requirements) further outlines the requirements of this provision, including the protection of existing trees. No trees are proposed to be removed or impacted during project activities.

Chapter 16.64.050 (Riparian Plant Conservation) establishes regulations to promote healthy and abundant riparian habitats within the City of Highland and works alongside existing regulations enforced by CDFW. This ordinance generally prohibits the removal of any riparian vegetation within 25 feet of the dripline of riparian vegetation adjacent to a "blueline stream" as indicated by the USGS Quadrangle (topographic map) or identified as a protected riparian area in a community or specific plan. The removal of any vegetation within 25 feet of the drip line of riparian vegetation along a blueline stream requires a tree removal permit and shall be subject to environmental review. The provisions of this section apply to both private and public lands within the City limits, with exceptions for emergency flood control operations and authorized water conservation measures established and authorized by an appropriate independent special district with such responsibility. No riparian vegetation is proposed to be removed during project activities.



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## Existing Conditions

### Topography and Soils

Topography within the study area generally slopes in an east-west orientation, ranging between an elevation of 1,570 feet above mean sea level (amsl) and 1,500 feet amsl. A total of two soil types were mapped within the study area (see **Figure 3, Soils**), including Hanford coarse sandy loam, 2-9% slopes, and Soboba stony loamy sand, 2-9% slopes (NRCS 2023). A brief description of each soil type is provided below:

#### Hanford coarse sandy loam, 2-9% slopes

This soil type was mapped in the northern corner of the study area. It consists of well drained soils consisting of alluvium derived from granite. The depth to duripan is more than 80 inches, and the typical soil profile consists of sandy loam 0–12 inches and fine sandy loam 12–60 inches.

#### Soboba stony loamy sand, 2-9% slopes

This soil type was mapped in the majority of the study area. It consists of excessively drained soils consisting of alluvium derived from granite. The depth to duripan is more than 80 inches, and the typical soil profile consists of stony loamy sand 0–10 inches, very stony loamy sand 10–24 inches, and very stony sand 24–60 inches.

### Natural Communities and Land Cover Types

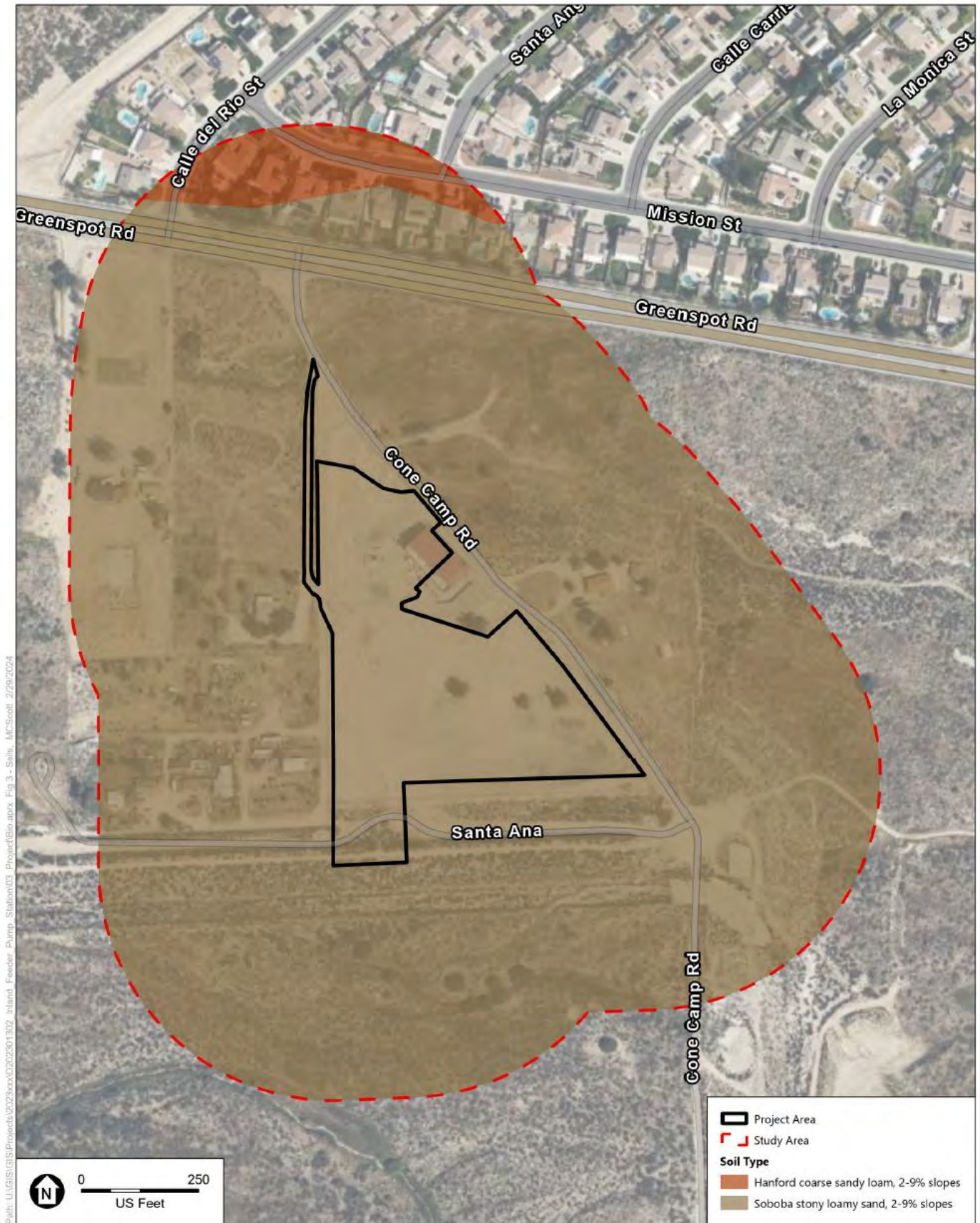
The natural communities and land cover types characterized and mapped within the study area are depicted in **Figure 4, Natural Communities and Land Cover Types**, and their respective acreages are provided in **Table 1, Natural Communities and Land Cover Types**. A complete list of plant species observed within the study area is provided in **Attachment C, Floral and Faunal Compendia**. Each natural community and land cover type is described in detail below.

#### Annual Grasses and Forbs

Annual grasses and forbs occur in two sections of the study area: the northeastern and western portions of the 500-ft buffer outside of the project area. This community is characterized by substantial disturbance including over excavation and grading and exists in a successional state due to regular mowing activities that stopped in 2014. It supports a dense herbaceous layer primarily comprised of non-native grasses and forbs such as wild oats (*Avena sp.*), ripgut brome (*Bromus diandrus*), and short-podded mustard (*Hirschfeldia incana*), interspersed with native shrub and forb species such as dove weed (*Croton setiger*) and slender buckwheat (*Eriogonum gracile* var. *gracile*).

#### Brittle Bush Scrub

Brittle bush scrub (*Encelia farinosa* shrubland alliance) was mapped within the eastern portion of the study area. This natural community is characterized by dense brittle bush (*Encelia farinosa*) with an understory of various grasses and forbs such as deerweed (*Acmispon glaber*), wild oats, brome (*Bromus spp.*), and short-podded mustard.

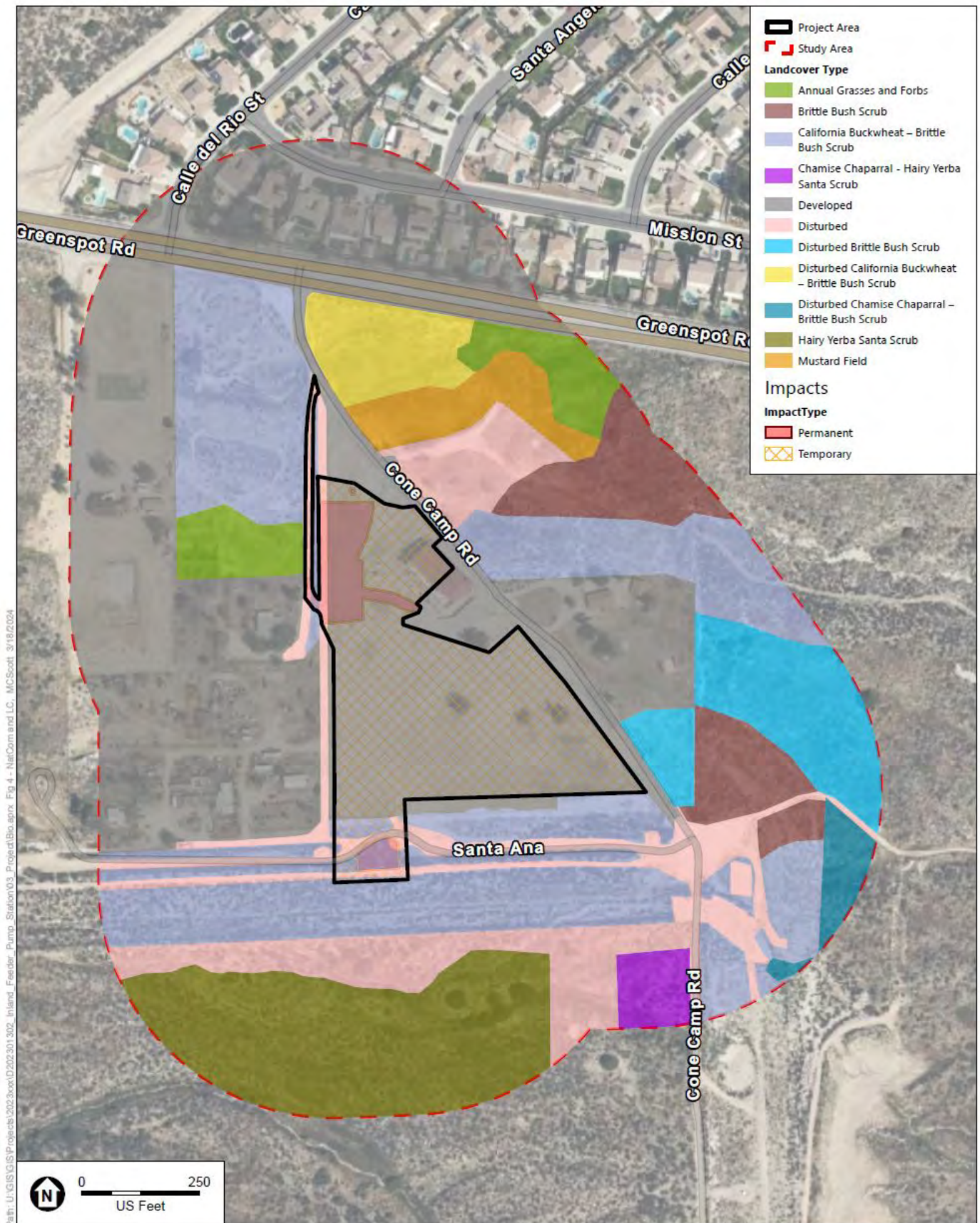


SOURCE: ESA, 2024; USGS Web Soil Survey, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 3**  
Soils





SOURCE: ESA, 2024

Inland Feeder - Foothill Pump Station Intertie Project

**Figure 4**  
Natural Communities and  
Land Cover Types

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**TABLE 1**  
**NATURAL COMMUNITIES AND LAND COVER TYPES**

Natural Community/Land Cover Type	Project Area (acres)	500-foot Buffer (acres)	Total Study Area (acres)
<b>Terrestrial Natural Communities</b>			
Annual Grasses and Forbs	--	1.66	1.66
Brittle Bush Scrub	--	2.79	2.79
Disturbed Brittle Bush Scrub	--	2.70	2.70
California Buckwheat – Brittle Bush Scrub	0.37	12.18	12.55
Disturbed California Buckwheat – Brittle Bush Scrub	--	1.40	1.40
Chamise Chaparral – Hairy Yerba Santa Scrub	--	0.57	0.57
Disturbed Chamise Chaparral – Brittle Bush Scrub	--	0.55	0.55
Hairy Yerba Santa Scrub	--	5.37	5.37
Mustard Fields	--	1.19	1.19
<b>Developed/Disturbed Land Cover Types</b>			
Developed	5.84	18.67	24.51
Disturbed	0.40	6.27	6.67
<b>TOTAL</b>	<b>6.61</b>	<b>53.35</b>	<b>59.96</b>

SOURCE: ESA 2024

## Disturbed Brittle Bush Scrub

Disturbed brittle bush scrub was mapped within the eastern portion of the study area. This natural community is also characterized by brittle bush; however, it appeared as though a disturbance, such as a fire, has decreased the density of brittle bush individuals and increased the dominance of non-native grasses and forbs including wild oats and bromes.

## California Buckwheat – Brittle Bush Scrub

California buckwheat – brittle bush scrub was mapped throughout much of the study area, including the southern portion of the project area and surrounding areas in the 500-ft buffer outside the facility. This natural community was co-dominated by California buckwheat (*Eriogonum fasciculatum*) and brittle bush shrubs. There is a sparse herbaceous layer with wild oat, bromes and filarees such as broad leaf filaree (*Erodium botrys*).

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## **Disturbed California Buckwheat – Brittle Bush Scrub**

Disturbed California buckwheat – brittle bush scrub was mapped in the northern portion of the study area. This natural community is also co-dominated by California buckwheat and brittle bush shrubs but appears disturbed (likely from historic grading due to its proximity to the road and active construction sites). This disturbance has increased the non-native herbaceous layer of wild oats and bromes relative to the shrub layer.

## **Chamise Chaparral – Hairy Yerba Santa Scrub**

Chamise chaparral – hairy yerba santa scrub was mapped in the southern portion of the 500-ft buffer outside of the project area. This natural community has a shrub layer co-dominated by chamise (*Adenostoma fasciculatum*) and hairy yerba santa (*Eriodictyon trichocalyx*). These dense shrubs were accompanied by brittle bush, California buckwheat, and deerweed with a sparse grass layer of bromes and oats.

## **Disturbed Chamise Chaparral – Brittle Bush Scrub**

Disturbed chamise chaparral – brittle bush scrub was mapped in the eastern corner of the 500-ft buffer outside of the project area. This natural community is co-dominated by chamise and brittle bush, but has a higher relative abundance of non-native herbaceous species such as bromes, oats, and filarees due to historic disturbance. This community appears to have been previously graded allowing non-natives to proliferate amongst existing shrubs.

## **Hairy Yerba Santa Scrub**

Hairy yerba santa scrub was mapped in the southern portion of the 500-ft buffer outside of the project area. This natural community is dominated by hairy yerba santa with sparse brittle bush, California buckwheat, California cholla (*Cylindropuntia californica*), and sugar bush (*Rhus ovata*) throughout. There is a sparse herbaceous layer of bromes and wild oats.

## **Mustard Fields**

Mustard fields were mapped in the northern section of the 500-ft buffer outside of the project area. This natural community is dominated by black mustard (*Brassica nigra*) with accompanying dove weed, filarees (*Erodium* sp.), and short-podded mustard. This community appeared to have historic disturbance, likely grading as it was present next to existing dirt roads and ornamentally planted vegetation.

## **Developed**

Developed land cover types represent the heavily trafficked areas including the majority of the project area, paved portion of Cone Camp Road, and residential development to the north, east, and west of the project area. These areas are either entirely or largely devoid of vegetation except for weedy non-native growth (oats and bromes) and ornamentally planted trees such as tree of heaven (*Ailanthus altissima*), citrus trees (*Citrus* sp.), eucalyptus (*Eucalyptus* sp.), and Peruvian pepper tree (*Schinus molle*).



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## Disturbed

Disturbed land cover types represent dirt access roads that traverse the study area as well as areas that were recently graded due to active construction. These areas are largely devoid of vegetation except minimal shrubs (e.g. California buckwheat and brittle bush), ornamental trees (e.g. black poui [*Jacaranda mimosifolia*], Italian cypress [*Cupressus sempervirens*], and olive [*Olea europaea*]), and non-native herbaceous species (e.g. oats, bromes, filarees).

## Sensitive Natural Communities

“Sensitive” natural communities and habitats are defined by CDFW as those natural communities that have a reduced range and/or are imperiled because of various forms of development and other anthropogenic stressors, including residential and commercial expansion, various forms of agriculture, energy production, mining, etc. These communities are evaluated using NatureServe’s Heritage Methodology (NatureServe 2022), which is based on the knowledge of range and distribution of a specific vegetation type and the proportion of occurrences that are of good ecological integrity. Evaluation is done at both a global (natural range within and outside of California [G]) and subnational (State level for California [S]) level, each ranked from 1 (“critically imperiled” or very rare and threatened) to 5 (demonstrably secure). A community or habitat with a State rank of S1 through S3 are considered “sensitive” natural communities and may require review when evaluating environmental impacts (CDFW 2023a,b).

The study area is mapped by CNDDB as occurring within Riversidean alluvial fan sage scrub habitat with a State rank of S1.1. However, the Riversidean alluvial fan sage scrub habitat indicator species, scale broom (*Lepidospartum squamatum*), was not observed as a dominant species within any of the observed natural communities. Only one scale broom individual was observed within the study area. Therefore, no natural communities present within the study area meet the criteria for Riversidean alluvial fan sage scrub. In addition, based on review of CDFW’s California Sensitive Natural Communities List, there are no sensitive natural communities within the study area (CDFW 2023b).

## Special-Status Plants

Special-status plants are defined as those that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as imperiled in some way. Some of these species receive specific protection that is defined by federal or state endangered species legislation and others have been designated as special-status based on adopted policies (e.g., counties and cities) and/or the expertise of state resource agencies or non-profit organizations (e.g., CNPS). For purposes of this report, special-status plants are defined as follows:

- Plants that are listed or proposed for listing as threatened or endangered or are candidates for possible future listing as threatened or endangered, under the FESA or the CESA.

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- Plants that meet the definitions of rare or endangered under State CEQA Guidelines Section 15380.
- Plants considered by the CNPS to be rare, threatened, or endangered (Rank 1A, 1B, 2A and 2B plants) in California.
- Plants considered by the CNPS to be plants about which more information is needed and plants of limited distribution (Rank 3 and 4 plants) that may be significant locally and are recommended for consideration under CEQA.
- Plants listed as rare under the California Native Plant Protection Act (Fish and Game Code 1900 et seq.).

A review of the CNDDDB (CDFW 2023a) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2023) revealed that many special-status plant species have been recorded within the USGS quadrangle search area (see **Attachment D, CNDDDB and CNPS Results**). The potential for special-status plant species to occur is based on existing vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences and geographic ranges. It was determined that many of the plant species generated in the database do not have the potential to occur within the study area due to the lack of suitable habitat. Such species are therefore omitted from further discussion in this report. Based on the criteria defined below, it is determined that suitable habitat for nine species occurs within or immediately adjacent to the project area (see **Table 2, Special-Status Species with Potential to Occur**).

**Low Potential:** Limited habitat exists for a particular species. For example, the appropriate vegetation assemblage may be present while the substrate preferred by the species may be absent, or the preferred habitat may be present, but has undergone substantial disturbance, such that the species is not expected to occur.

**Moderate Potential:** Marginal habitat for a particular species is present. For example, the available habitat may be somewhat disturbed, however, still supports important components, such as a particular soil or community type.

**High Potential:** The study area provides suitable habitat conditions for a particular species and/or known populations occur in the immediate vicinity.

**Present:** The species was observed during the biological resources assessment.

A total of five species, including Plummer's mariposa lily (*Calochortus plummerae*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), slender-horned spineflower (*Dodecahema leptoceras*), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), and Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) have a moderate to high potential to occur within the study area. Santa Ana River woollystar and slender-horned spineflower are federally and state endangered species with a high potential to occur within the study area. The remaining four species were determined to have a low potential to occur based on the lack of suitable habitat.

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**TABLE 2**  
**SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR**

Common Name Scientific Name	Sensitivity Status <sup>1</sup>	Flowering Period	Preferred Habitat/Known Elevation and Distribution <sup>2</sup>	Presence/Potential to Occur
<b>Berberidaceae (Barberry Family)</b>				
Nevin's barberry <i>Berberis nevinii</i>	Federal: FE State: SE Other: 1B.1	Mar.-Jun.	Sandy soils in low-gradient washes, alluvial terraces, and canyon bottoms, along gravelly wash margins, or on coarse soils on steep, generally north-facing slopes in alluvial scrub, cismontane (e.g., chamise) chaparral, coastal sage scrub, oak woodland, and/or riparian scrub or woodland. Elevation range extends from 70-825 meters. Found in Los Angeles, Riverside, San Bernardino, San Diego counties.	<b>Low Potential.</b> Suitable chaparral and coastal scrub habitat are present throughout the study area; however, the study area lacks the steep topography the species is commonly found in. The closest known occurrence is located over 5 miles away from the project area.
<b>Brassicaceae (Cabbage Family)</b>				
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	Federal: None State: None Other: 4.3	Jan.-Jul.	Chaparral and coastal scrub. Elevation range extends from 1-885 meters. Found in Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura counties.	<b>Moderate Potential.</b> Suitable California buckwheat – brittle bush scrub habitat and sandy soils are present within the project area. However, it is more commonly observed in dry, exposed areas rather than under shrub canopy. Additionally, known occurrences of the species are present approximately one mile east of the project area.
<b>Nyctaginaceae (Four O'clock Family)</b>				
chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	Federal: None State: None Other: 1B.1	Jan.-Sep.	Chaparral, coastal scrub, and desert dunes/sandy areas. Elevation range extends from 0-1,600 meters. Found in Los Angeles, Riverside, San Diego, San Bernardino, possibly Orange counties.	<b>Low Potential.</b> Marginal suitable coastal scrub habitat is present adjacent to the project area within the study area and the study area lacks dune habitat. Additionally, known occurrences of the species are present within Riverside County approximately 15 miles south of the project area.

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Common Name Scientific Name	Sensitivity Status <sup>1</sup>	Flowering Period	Preferred Habitat/Known Elevation and Distribution <sup>2</sup>	Presence/Potential to Occur
<b>Polemoniaceae (Phlox Family)</b>				
Santa Ana River woollystar <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Federal: FE State: SE Other: 1B.1	Apr.–Sep.	Chaparral, coastal scrub (alluvial fan)/sandy or gravelly. Elevation range extends from 91-610 meters. Found in Riverside, San Bernardino, possibly Orange counties.	<b>High Potential.</b> Suitable California buckwheat – brittle bush scrub habitat and sandy soils are present within the project area. Additionally, known occurrences of the species are present throughout the alluvial fan scrub associated with the Santa Ana River approximately 0.4 mile west and south of the project area.
<b>Polygonaceae (Buckwheat Family)</b>				
Parry's spineflower <i>Chorizanthe parryi</i> var. <i>parryi</i>	Federal: None State: None Other: 1B.1	Apr.–Jun.	Openings/clearings in coastal or desert sage scrub, chaparral or interface; dry slopes or flat ground; sandy soils. Elevation range extends from 275–1,220 meters. Found in Los Angeles, Riverside, San Bernardino counties.	<b>High Potential.</b> Suitable California buckwheat – brittle bush scrub habitat and sandy soils are present within the project area. Additionally, one known occurrence of the species is present within the southern portion of the study area.
white-bracted spineflower <i>Chorizanthe xanti</i> var. <i>leucotheca</i>	Federal: None State: None Other: 1B.2	Apr.–Jun.	Sandy or gravelly soils in coastal scrub (alluvial fans); Mojavean desert scrub; Pinyon and juniper woodland. Elevation range extends from 300-1,200 meters. Found in Los Angeles, Riverside, San Bernardino, San Diego counties.	<b>Low Potential.</b> Marginal suitable coastal scrub habitat is present immediately adjacent to the project area within the study area. Additionally, one known occurrence of the species is present along Mill Creek approximately 4.6 miles southeast of the study area.
slender-horned spineflower <i>Dodecahema leptoceras</i>	Federal: FE State: SE Other: 1B.1	Apr.–Jun.	Scrub and chaparral in sandy soils and alluvial fans. Elevation range extends from 200-760 meters. Found in Los Angeles, Riverside, San Bernardino counties.	<b>High Potential.</b> Suitable California buckwheat – brittle bush scrub habitat and sandy soils are present within the project area. Additionally, known occurrences of the species are present throughout the alluvial fan scrub associated with the Santa Ana River approximately 0.7 mile south of the project area.
<b>Liliaceae (Lily Family)</b>				
Plummer's mariposa lily <i>Calochortus plummerae</i>	Federal: None State: None Other: 4.2	May-Jul.	Chaparral (openings), cismontane woodland, coastal scrub, valley and foothill grassland, granitic/rocky. Elevation range extends from 100-1,700 meters. Found in Los Angeles, Orange, Riverside, San Bernardino, Ventura counties.	<b>High Potential.</b> Suitable California buckwheat – brittle bush scrub habitat and granitic/rocky soils are present within the project area. Additionally, known occurrences of the species are present within the southern portion of the study area.

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Common Name Scientific Name	Sensitivity Status <sup>1</sup>	Flowering Period	Preferred Habitat/Known Elevation and Distribution <sup>2</sup>	Presence/Potential to Occur
Poaceae (True Grass Family)				
California satintail <i>Imperata brevifolia</i>	Federal: None State: None Other: 2B.1	Sep.–May	Chaparral, coastal sage scrub, Mojavean desert scrub, meadows and seeps (often alkali), riparian scrub/mesic. Elevation range extends from 0–1,215 meters. Found in Kern, Los Angeles, Riverside, San Bernardino, Ventura, Orange counties.	<b>Low Potential.</b> Marginal suitable coastal scrub habitat is present immediately adjacent to the project area within the study area. Additionally, one known occurrence of this species is present within the City of Redlands approximately 1.6 miles south of the study area.
NOTES:				
1. Sensitivity Status				
Federal/State/Local Status: FE = Federally Endangered; SE = State Endangered; ST = State Threatened; California Rare Plant Rank (CRPR) 1B = rare, threatened, or endangered in California and elsewhere; CRPR 2B = rare, threatened, or endangered in California but common elsewhere; CRPR 4 = plants of limited distribution. Rank 3 and 4 plants listed by the CNPS and CDFW as plants in which more information is needed to determine their status and plants of limited distribution that are not significant locally are excluded from this analysis.				
2. Sources for Preferred Habitat: Calflora 2024; CDFW 2023a.				
SOURCE: ESA 2024				

## Special-Status Wildlife

Special-status wildlife are defined as those that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as imperiled in some way. Some of these species receive specific protection that is defined by federal or state endangered species legislation and others have been designated as special-status based on adopted policies (e.g., counties and cities) and/or the expertise of state resource agencies or non-profit organizations (e.g., Western Bat Working Group). Special-status wildlife are defined as follows:

- Wildlife listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the FESA or the CESA.
- Wildlife that meet the definitions of rare or endangered under California Environmental Quality Act (CEQA) Guidelines Section 15380.
- Wildlife designated by CDFW as species of special concern, CDFW Watch List species, or have a state rank of S1-S3 on CDFW's Special Animals List (CNDDDB 2024).
- Wildlife “fully protected” in California (FGC Sections 3511, 4700, and 5050).
- Bird species protected by the MBTA.
- Bat species considered priority by the Western Bat Working Group (WBWG).



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The potential for special-status wildlife species to occur within the study area was assessed according to on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences and geographic ranges. A review of the CNDDDB (CDFW 2023a) revealed that many special-status wildlife species have been recorded within the USGS quadrangle search area (see Attachment D) containing the study area; however, based on habitat preference, geographic distributions, and/or range restrictions, it was determined that a number of the species do not have the potential to occur due to the lack of suitable habitat, and are therefore omitted from further discussion in this report. Based on the criteria defined below, it is determined that 30 species have a low to high potential to occur within the study area or were observed during the biological assessment or previous studies (see **Table 3, Special-Status Wildlife Species with Potential to Occur**).

**Low Potential:** The study area supports limited habitat for a particular species. For example, the appropriate vegetation assemblage may be present while the substrate preferred by the species may be absent.

**Moderate Potential:** Marginal habitat for a particular species may exist. For example, the habitat may be heavily disturbed and/or may not support all stages of a species' life cycle; or may not fit all preferred habitat characteristics.

**High Potential:** The study area provides suitable habitat conditions for a particular species and/or known populations occur in the immediate vicinity.

**Present:** The species was observed within the study area during the site assessment.

Two listed species were present during the site assessment or previous studies conducted within the study area: coastal California gnatcatcher (*Polioptila californica californica*; federally threatened and state species of special concern) and SBKR (federally endangered, state endangered, and state species of special concern). Two non-listed special-status wildlife species were present during the site assessment or previous studies conducted within the study area: coastal western whiptail (*Aspidoscelis tigris* ssp. *stejnegeri*) and northwestern San Diego pocket mouse (*Chaetodipus fallax* ssp. *fallax*). The two listed species identified within the study area are depicted in **Figure 5, Sensitive Biological Resources**.

Based on the condition of the vegetation and habitats that were characterized during the site visit, it was determined that 14 non-listed special-status wildlife species, of the 30 species identified by CNDDDB, were determined to have a moderate to high potential to occur, including southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), Bell's sparrow (*Artemisiospiza belli belli*), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), burrowing owl (*Athene cunicularia*), red-diamond rattlesnake (*Crotalus ruber*), California horned lark (*Eremophila alpestris* ssp. *actia*), loggerhead shrike (*Lanius ludovicianus*), San Diego black-tailed jackrabbit (*Lepus californicus* ssp. *bennettii*), San Diego desert woodrat (*Neotoma lepida* ssp. *intermedia*), southern grasshopper mouse (*Onychomys torridus ramona*), Los Angeles pocket mouse (*Perognathus longimembris* ssp. *brevinasus*), and coast horned lizard (*Phrynosoma blainvillii*). Additional species determined to have a moderate potential to occur include: Crotch bumble bee (*Bombus crotchii*; state candidate endangered) and western spadefoot (*Spea hammondi*; federal candidate as threatened). Wildlife species determined to have a low potential to occur in the study area are not further evaluated in this report beyond Table 3.

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**TABLE 3**  
**SPECIAL-STATUS WILDLIFE SPECIES WITH POTENTIAL TO OCCUR**

Common Name Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Preferred Habitat <sup>2</sup>	Presence/Potential to Occur within the Study Area
<b>Amphibians</b>			
western spadefoot <i>Spea hammondi</i>	Federal: FCT State: SSC Other: S3S4	Mixed woodland, grasslands, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Prefers washes and other sandy areas with patches of brush and rocks. Rain pools or shallow temporary pools, which do not contain bullfrogs, fish, or crayfish are necessary for breeding. Perennial plants necessary for its major food-termites.	<b>Moderate Potential.</b> Suitable upland habitat, such as grasslands and chaparral, is present throughout the study area. The study area contains constructed basins with seasonal ponding. Additionally, multiple constructed basins are present adjacent to the east of the study area. This species has been previously observed within one mile to the east of the project area.
<b>Birds</b>			
Cooper's hawk <i>Accipiter cooperii</i>	Federal: None State: WL Other: S4	Inhabits cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest, or other forest habitats near water. Nests and forages near open water or in riparian vegetation.	<b>Low Potential (Foraging).</b> The study area contains limited woodland areas to support nesting and roosting, but this species may use the area for foraging. This species has been previously observed within San Timoteo Wash approximately 6.8 miles south of the project area.
southern California rufous-crowned sparrow <i>Aimophila ruficeps</i> <i>canescens</i>	Federal: None State: WL Other: S4	Known to frequent relatively steep, often rocky hillsides with grass and forb species. Resident in southern California coastal sage scrub and mixed chaparral habitats.	<b>Moderate Potential.</b> Suitable habitat is present throughout the annual grasses and forbs and coastal sage scrub habitats; however, no sloped, rocky habitat is present within the study area. The nearest known occurrence is located in the San Bernardino Mountains and Yucaipa approximately 5.5 miles north and south of the project area, respectively.
golden eagle <i>Aquila chrysaetos</i>	Federal: BGEPA State: FP, WL Other: S3	Known to live in open and semi-open country featuring native vegetation across most of the Northern Hemisphere. They avoid developed areas and uninterrupted stretches of forest. They are found primarily in mountains up to 12,000 feet, Canyonlands, rimrock terrain, and riverside cliffs and bluffs. Nest on cliffs and steep escarpments in grassland, chaparral, shrubland, forest, and other vegetated areas. Forages for mammalian prey in grasslands, coastal sage scrub, chaparral, oak savannahs, open coniferous forest, and over open areas	<b>Low Potential (Foraging).</b> Suitable foraging habitat is present in the coastal sage scrub and open areas within the study area. However, the study area lacks steep cliffs suitable for nesting. This species has been previously observed within San Timoteo Canyon approximately 9.2 miles southeast of the project area.



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Common Name Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Preferred Habitat <sup>2</sup>	Presence/Potential to Occur within the Study Area
Bell's sparrow <i>Artemisiospiza belli belli</i>	Federal: None State: WL Other: S3	Inhabits large, unfragmented blocks of coastal sage scrub, southern mixed chaparral habitats.	<b>Moderate Potential.</b> Suitable large, unfragmented blocks of coastal scrub and chaparral vegetation are present within the study area; however, this species was previously observed 10.3 miles southwest of the project area within Moreno Valley.
burrowing owl <i>Athene cunicularia</i>	Federal: BCC State: SSC Other: S2	Various open habitat types including grasslands and low scrub communities and is known to utilize heavily disturbed areas for roosting and nesting purposes.	<b>Moderate Potential.</b> Suitable foraging and nesting habitat is present throughout the annual grasses and forbs and scrub habitats within the study area. Limited suitable burrows were observed within the study area outside of the project site. This species has been previously observed within San Bernardino International Airport approximately 4.1 miles west of the project area.
white-tailed kite <i>Elanus leucurus</i>	Federal: None State: FP Other: S3S4	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	<b>Low Potential (Foraging).</b> There is suitable foraging habitat throughout the coastal scrub habitat within the study area. However, this species is unlikely to nest within the study area due to lack of marsh and woodland habitats.
California horned lark <i>Eremophila alpestris actia</i>	Federal: None State: WL Other: S4	Found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above the treeline. During the winter, this species typically flocks in desert lowlands.	<b>Moderate Potential.</b> Marginal suitable grassland habitat is present within the study area. This species has been previously observed within an industrial part of the city of Redlands approximately 5.8 miles southwest of the project area.
merlin <i>Falco columbarius</i>	Federal: None State: WL Other: S3S4	Occupies seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms, and ranches. Clumps of trees or windbreaks are required for roosting in open country.	<b>Low Potential (Foraging).</b> Suitable open grasslands surrounding residential areas may support foraging within the study area. However, the site lacks clumps of trees that are suitable for roosting.
loggerhead shrike <i>Lanius ludovicianus</i>	Federal: None State: SSC Other: S4	Found in broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	<b>High Potential.</b> Suitable open scrub habitat for foraging with dense shrubs and bushes required for nesting is present within the study area. This species has been previously observed within San Timoteo Canyon approximately 9.2 miles southeast of the project area.

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Common Name Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Preferred Habitat <sup>2</sup>	Presence/Potential to Occur within the Study Area
coastal California gnatcatcher <i>Polioptila californica californica</i>	Federal: FT State: SSC Other: S2	Species is an obligate, permanent resident of coastal sage scrub habitats dominated by California sagebrush and flat-topped buckwheat, mainly on cismontane slopes below 1,500 feet in elevation. Low coastal sage scrub in arid washes, on mesas and slopes.	<b>Present.</b> Suitable coastal sage scrub habitat with California buckwheat is present within and surrounding the project area. An individual was visually and audibly identified within the study area during the biological field reconnaissance, approximately 0.2 miles south of the project area.
<b>Mammals</b>			
pallid bat Antrozous pallidus	Federal: None State: SSC Other: S3	Occurs in a wide variety of habitats including chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran Desert scrub, upper montane coniferous forest, valley and foothill grasslands. Most common in open, dry habitats with rocky areas for roosting. For roosting, prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging. Roosts must protect species from high temperatures. Very sensitive to disturbance of roosting sites.	<b>Low Potential (Foraging).</b> Marginal foraging habitat is present within the coastal sage scrub communities present within the study area; however, rocky areas and/or various infrastructure necessary for roosting is not available.
northwestern San Diego pocket mouse <i>Chaetodipus fallax fallax</i>	Federal: None State: None Other: S3S4	Moderate canopy coverage of coastal scrub, sagebrush, chaparral, grasslands, pinyon-juniper, and desert wash and scrub. Found in sandy, herbaceous areas with nearby shrubs for cover. Burrows are typically dug within gravelly or sandy soil.	<b>Present.</b> Suitable habitat is present throughout the scrub habitat with herbaceous areas and accompanying shrubs. This species was present during small-mammal trapping in 2022 (ECORP 2022).
San Bernadino kangaroo rat <i>Dipodomys merriami parvus</i>	Federal: FE State: SSC, SE Other: S1	Inhabits coastal sage scrub vegetation in alluvial fans and floodplains.	<b>Present.</b> Suitable habitat is present throughout the coastal scrub with burrow surveys and nighttime activity surveys suggesting presence of species (ESA 2023). Additionally, this species was present during small-mammal trapping in 2022 (ECORP 2022).
Stephen's kangaroo rat <i>Dipodomys stephensi</i>	Federal: FT State: ST Other: S3	Inhabits annual and perennial grassland habitats, but may occur in coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas. Known to occur in sparse perennial vegetation with firm soil, "neither hard nor sandy."	<b>Low Potential.</b> Suitable habitat is present throughout the annual grasses and forbs and coastal scrub habitats within the study area; however, appropriate soils are not present. Additionally, the species is considered extirpated in Redlands quad.
western mastiff bat <i>Eumops perotis californicus</i>	Federal: None State: SSC Other: S3S4	Known to occur in habitat consisting of extensive open areas within dry desert washes, flood plains, chaparral, cismontane oak woodland, coastal scrub, open ponderosa pine forest, and grasslands. Roosts primarily in crevices in rock outcrops and buildings.	<b>Low Potential (Foraging).</b> This species may forage throughout the study area; however, rock outcrops are not available for roosting and limited infrastructure is available within and surrounding the project area.

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Common Name Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Preferred Habitat <sup>2</sup>	Presence/Potential to Occur within the Study Area
western yellow bat <i>Lasiurus xanthinus</i>	Federal: None State: SSC Other: S3	Known only in Los Angeles and San Bernardino Counties south to the Mexican border. This species has been recorded below 600 m (2000 ft) in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts primarily in trees, including under palm trees, and forages for insects over water and among trees.	<b>Low Potential (Foraging).</b> This species may forage throughout the study area; however, limited trees are available for roosting within and surrounding the project area.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	Federal: None State: None Other: S3S4	Inhabits open grasslands, agricultural fields, and sparse coastal scrub where they occur primarily in arid regions with short grass.	<b>High Potential.</b> This species has a high likelihood of occurring within the study area due to suitable coastal scrub habitat with short grasses present.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	Federal: None State: SSC Other: S3S4	Found in a variety of coastal scrub, desert scrub, chaparral, cactus, and rocky habitats. Nests primarily against rock outcroppings, boulders, cacti, or areas of dense undergrowth.	<b>High Potential.</b> Suitable coastal scrub and chaparral habitat is available within the study area; rock outcrops from berm construction are present for nest building. This species has been observed approximately 1.16 miles east of the project area.
pocketed free-tailed bat <i>Nyctinomops femorosaccus</i>	Federal: None State: SSC Other: S3	Inhabits pinyon-juniper woodlands, riparian scrub, Sonoran desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree woodland, and palm oasis. Typically roosts in caves and rocky outcrops; prefers cliffs in order to obtain flight speed. Feeds on insects flying over bodies of water or arid desert habitats to capture prey.	<b>Low Potential (Foraging).</b> This species may forage throughout the Santa Ana River floodplain, but the study area lacks suitable caves and rocky outcrops for roosting.
southern grasshopper mouse <i>Onychomys torridus ramona</i>	Federal: None State: SSC Other: S3	Alkali desert scrub and desert scrub habitats are preferred, with somewhat lower densities expected in other desert habitats, including succulent shrub, wash, and riparian areas. Also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats. Uncommon in valley foothill and montane riparian, and in a variety of other habitats.	<b>High Potential.</b> Suitable coastal scrub and chaparral habitat is present throughout much of the study area. This species has been observed within Loma Linda approximately 8.8 miles southwest of the project area.
Los Angeles pocket mouse <i>Perognathus longimembris brevinasus</i>	Federal: None State: SSC Other: S1S2	Found in lower elevation grasslands and coastal sage scrub communities.	<b>High Potential.</b> Suitable habitat is present throughout the annual grasses and forbs and coastal scrub habitats within the study area. Additionally, suitable burrows were observed within the western portion of the project area. This species has been observed within the Santa Ana River floodplain approximately 3.9 miles west of the project area.

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Common Name Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Preferred Habitat <sup>2</sup>	Presence/Potential to Occur within the Study Area
American badger <i>Taxidea taxus</i>	Federal: None State: SSC Other: S3	Found in a variety of habitats, including alkali marsh, desert wash, Great Basin scrub, marsh and swamp, meadow and seep, Mojavean desert scrub, riparian scrub, riparian woodland, valley and foothill grassland. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground to dig burrows. Preys on burrowing rodents.	<b>Low Potential.</b> Suitable habitat and evidence of an available prey base (i.e., gophers, ground squirrels, kangaroo rats, and deer mice) are present throughout the annual grasses and forbs; however, no suitable burrows (i.e., appropriately-sized) were observed.
<b>Reptiles</b>			
southern California legless lizard <i>Anniella stebbinsi</i>	Federal: None State: SSC Other: S3	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach/coastal dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat. Often can be found under surface objects such as rocks, boards, driftwood, and logs. Can also be found by gently raking leaf litter under bushes and trees. Sometimes found in suburban gardens in Southern California.	<b>High Potential.</b> Suitable habitat for this species is present throughout the sparsely vegetated chaparral habitat present within the study area. The species was observed along adjacent to the south of Greenspot Road approximately 0.7 mile east and 1.7 miles west of the project area.
California glossy snake <i>Arizona elegans occidentalis</i>	Federal: None State: SSC Other: S2	Inhabits arid scrub, rocky washes, and grasslands, and chaparral habitats. Appears to prefer microhabitats of open areas with friable soils for burrowing.	<b>High Potential.</b> Appropriate vegetation is present throughout the annual grasses and forbs, scrub, and chaparral habitats. Multiple known occurrences of this species are present within one mile east and west of the project area.
Belding's orange-throated whiptail <i>Aspidoscelis hyperythra beldingi</i>	Federal: None State: WL Other: S2S3	Species requires intact habitat within chaparral, cismontane woodland, and coastal scrub plant communities. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food-termites.	<b>Moderate Potential.</b> Appropriate vegetation is available throughout the chaparral and coastal scrub habitats that contain sandy areas with brush and rocks. This species has been observed within the city of Mentone approximately 3.6 miles southeast of the project area.
coastal western whiptail <i>Aspidoscelis tigris ssp. stejnegeri</i>	Federal: None State: SSC Other: S3	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	<b>Present.</b> Suitable habitat is present within the open area throughout the study area. Additionally, this species was observed during nighttime small mammal activity surveys (ESA 2023).

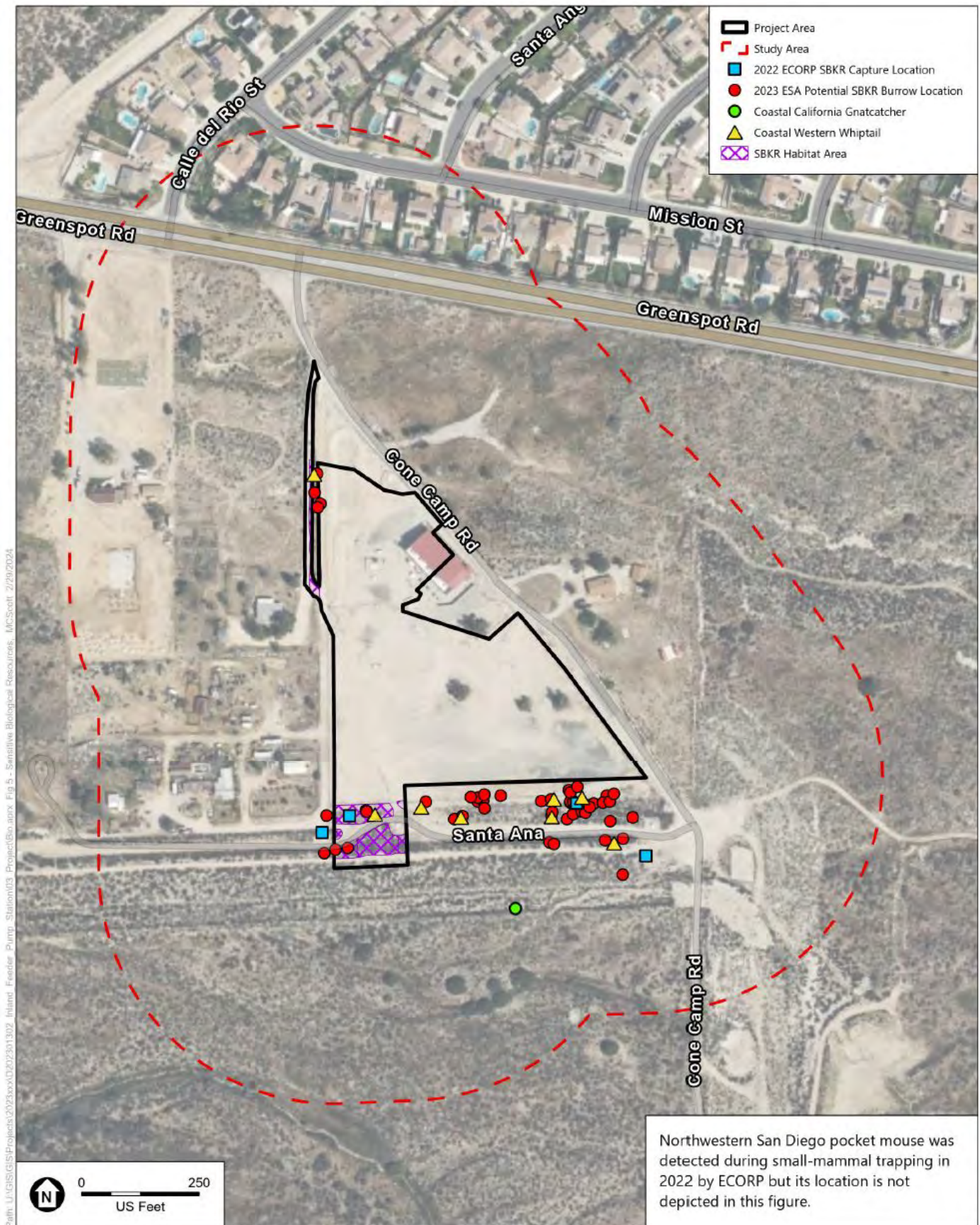
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Common Name Scientific Name	Status <sup>1</sup> (Federal/State/ Other)	Preferred Habitat <sup>2</sup>	Presence/Potential to Occur within the Study Area
red-diamond rattlesnake <i>Crotalus ruber</i>	Federal: None State: SSC Other: S3	Known to occur in chaparral, Mojavean desert scrub, and Sonoran Desert scrub communities. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks, or surface cover objects.	<b>High Potential.</b> Appropriate vegetation is present within the chaparral habitat. There are ample rocky areas with dense vegetation and presence of prey species. This species has been observed 0.3-mile northwest of the project area along Greenspot Road.
coast horned lizard <i>Phrynosoma blainvillii</i>	Federal: None State: SSC Other: S4	Prefers sandy riparian and sage scrub habitats but also occurs in valley-foothill hardwood, conifer, pine-cypress, juniper and annual grassland habitats below 6,000 feet, open country, especially sandy areas, washes, flood plains, and windblown deposits. Requires open areas for sunning, bushes and loose soil for cover and abundant supply of harvester ants.	<b>High Potential.</b> Suitable scrub and annual grass/forb habitat with sandy deposits is present within the project area. This species has been observed 1.3 miles east of the project area.
<b>Invertebrates</b>			
Crotch bumble bee <i>Bombus crotchii</i>	Federal: None State: SCE Other: S2	Open grassland and scrub habitats that support potential nectar sources such as plants within the Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae families.	<b>Moderate Potential.</b> The annual grasses and forbs and coastal scrub habitats support potential nectar sources for the species, especially plants within the Asteraceae and Boraginaceae families. This species has been observed within Loma Linda approximately 6.9 miles southwest of the project area.
<p>NOTES:</p> <p>1. Sensitivity Status</p> <p>Federal/State/Local Status: FE = Federally Endangered; FT = Federally Threatened; FCT = Federal Candidate as Threatened; BCC = Federal Bird of Conservation Concern; SCE = State Candidate as Endangered; SE = State Endangered; ST = State Threatened; SSC = State Species of Special Concern; FP = Fully Protected; WL = State Watch List</p> <p>The California Natural Diversity Database (CNDDB) uses the same ranking methodology originally developed by The Nature Conservancy and now maintained and recently revised by NatureServe. The state rank (S-rank) refers to the imperilment status only within California's state boundaries. It is a reflection of the overall status of an element through its state range. The state rank represents a letter + number score that reflects a combination of Rarity, Threat, and Trend factors, with weighting being heavier on Rarity than the other two.</p> <p>S1 = Critically Imperiled – At very high risk of extirpation in the state due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.</p> <p>S2 = Imperiled – At high risk of extirpation in the state due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.</p> <p>S3 = Vulnerable – At moderate risk of extirpation in the state due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.</p> <p>S4 = Apparently Secure – At a fairly low risk of extirpation in the state due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.</p> <p>2. Sources for Preferred Habitat: CDFW 2023a; Cornell Lab of Ornithology 2024.</p> <p>SOURCE: ESA 2024</p>			





SOURCE: ESA, 2023b; ECORP, 2022

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**Figure 5**  
Sensitive Biological Resources



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## Critical Habitat

Under the FESA, to the extent feasible, the USFWS and National Marine Fisheries Service (NMFS) are required to designate critical habitat for endangered and threatened species. Critical habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated critical habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter that are essential to the survival and recovery of the species, whether the habitat is currently occupied by the species or not. Designated critical habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types.

The entire project area and the majority of the study area aside from the residential development to the north is located within designated Critical Habitat Unit 1 (Santa Ana River Wash) for San Bernardino kangaroo rat (USFWS 2023a, 2008). Critical habitat designations are identified based on habitat areas that provide essential life cycle needs of the species (i.e., areas on which the primary constituent elements or PCEs are found) that include, but are not limited to: (1) space for individual and population growth and behavior; (2) essential resources such as food, water, air, light, minerals, or other nutrition or physiological requirements; (3) cover or shelter; (4) breeding and rearing sites; (5) representative habitats that are protected and represent the historical, geographical, and ecological range of the subspecies.

Specific PCEs required for SBKR include: alluvial fans, washes, and floodplains with suitable soils (i.e., sand, loamy sand, sandy loam, and loam) and burrows for cover and shelter; upland areas adjacent to alluvial fans, washes, and associated floodplain areas that support alluvial sage scrub and/or associated vegetation (i.e., coastal sage scrub and chamise chaparral) with up to approximately 50% canopy cover for protection from predators; and upland areas adjacent to alluvial fans, washes, and associated floodplain areas that include marginal habitat (e.g., alluvial sage scrub with greater than 50% canopy cover) with patches of suitable soils. The brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and disturbed chamise chaparral – hairy yerba santa scrub habitats within the project area and remainder of the study area provide suitable habitat for SBKR.

## Wildlife Movement

Migration corridors are navigable pockets or strips of land that connect larger tracts of open space together, allowing them to function as a greater habitat complex. These “passages” can exist on a small scale, allowing wildlife to pass through or under an otherwise uninhabitable area including a roadway, housing development, or city through drainage culverts, green belts and waterways; or on a larger scale, providing an opportunity for wildlife to skirt large topographical features (e.g., mountains, lakes, streams) by utilizing adjacent canyons, valleys and upland swaths when migrating.

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Chain-link fencing is present along the perimeter of the majority of the developed portion of the project area which blocks access to the project area. Rural residential development also surrounds the project area to the north, east, and west, likely deterring wildlife movement. The land surrounding the project area to the south is undeveloped land that wildlife likely utilizes to forage and breed, and to some extent, travel locally and regionally. Numerous species of birds, reptiles, invertebrates, and small mammals would be expected in the study area, as well as larger mammals such as the coyote (*Canis latrans*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*) and grey fox (*Urocyon cinereoargenteus*), who likely utilize the area for hunting and movement. While the project area provides some refuge for wildlife, it does not provide linkages to other habitats and is not expected to function as an important migration corridor. The project area and study area do not overlap with designated or recognized wildlife corridors.

## Aquatic Resources

A formal aquatic resources delineation was not conducted as part of the biological field reconnaissance. However, five aquatic resource features (Features 1-5) were identified within the study area (**Figure 6, Aquatic Resources**). One constructed basin with associated drainage is located in the project area, while three ephemeral drainages and one constructed drainage are located outside the project area, within the surrounding study area.

### Feature 1: Constructed Basin

Feature 1 is a constructed basin located within the northwestern extent of the project area. This feature is unvegetated and created within an upland area. An existing access road crosses Metropolitan's fee parcel from a gate on the southern fence line to a gate along the western fence line. This road, which crosses the parcel from south to north, appears to capture surface water runoff flowing from the existing access road and likely functions as an unintended stormwater pathway due to its regular use. As a result, concentrated stormwater flows along the road ultimately drain northward into the constructed basin located on the northwestern extent of the project area.

### Feature 2: Ephemeral Drainage

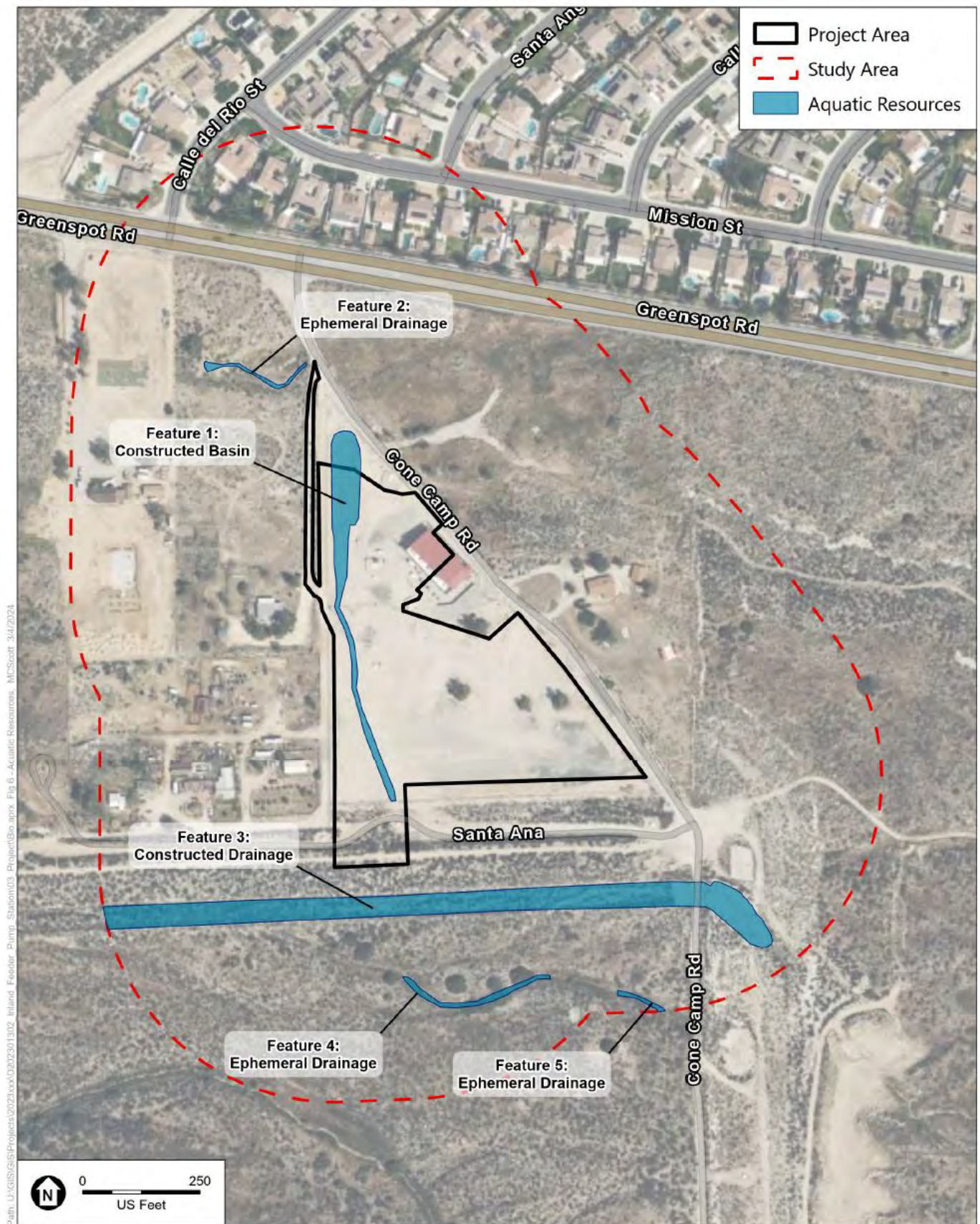
Feature 2 is an ephemeral drainage located within the northern portion of the study area just west of the northernmost corner of the project area, and is dominated by upland vegetation (California buckwheat – brittle bush scrub). This drainage receives and captures surface water runoff from the surrounding landscape, including

Cone Camp Road, and flows to the west for approximately 245 feet before dissipating into the ground. The existing topography, specifically the higher elevation of the adjoining property, acts as a natural barrier preventing the flow from continuing or connecting with any other aquatic features downstream.

### Feature 3: Constructed Drainage

Feature 3 is a constructed drainage within the southern portion of the study area, outside of the project area, north of Features 4 and 5. It is dominated by upland vegetation, including California buckwheat – brittle bush scrub, in addition to one individual sandbar willow (*Salix exigua*) and sparse mulefat (*Baccharis salicifolia*) within the





SOURCE: ESA, 2024

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**Figure 6**  
Aquatic Resources

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eastern portion of the drainage. This drainage appears to have been constructed in an upland area and receives flows through a culvert located at the easternmost end of the feature. During high flows, water travels east to west through the constructed drainage, and converging with Plunge Creek, which ultimately connects to the Santa Ana River further west and outside of the study area.

## Feature 4: Ephemeral Drainage

Feature 4 is an ephemeral drainage located within the southern portion of the study area and outside of the project area. This ephemeral drainage is comprised of upland vegetation, specifically chamise chaparral-hairy yerba santa scrub. Feature 4 dissipates into the ground at its western extent and does not appear to connect with any other aquatic features at its downstream extent.

## Feature 5: Ephemeral Drainage

Feature 5 is an ephemeral drainage located within the southern portion of the study area and outside of the project area. It contains upland vegetation, specifically hairy yerba santa scrub. Based on aerial review, Features 4 and 5 appear to have once formed a single, ephemeral aquatic feature. However, recent disturbances in the area have caused a separation, severing the connection between them. Consequently, due to the surrounding higher elevation, drainage from this feature dissipates into the ground at its western extent.

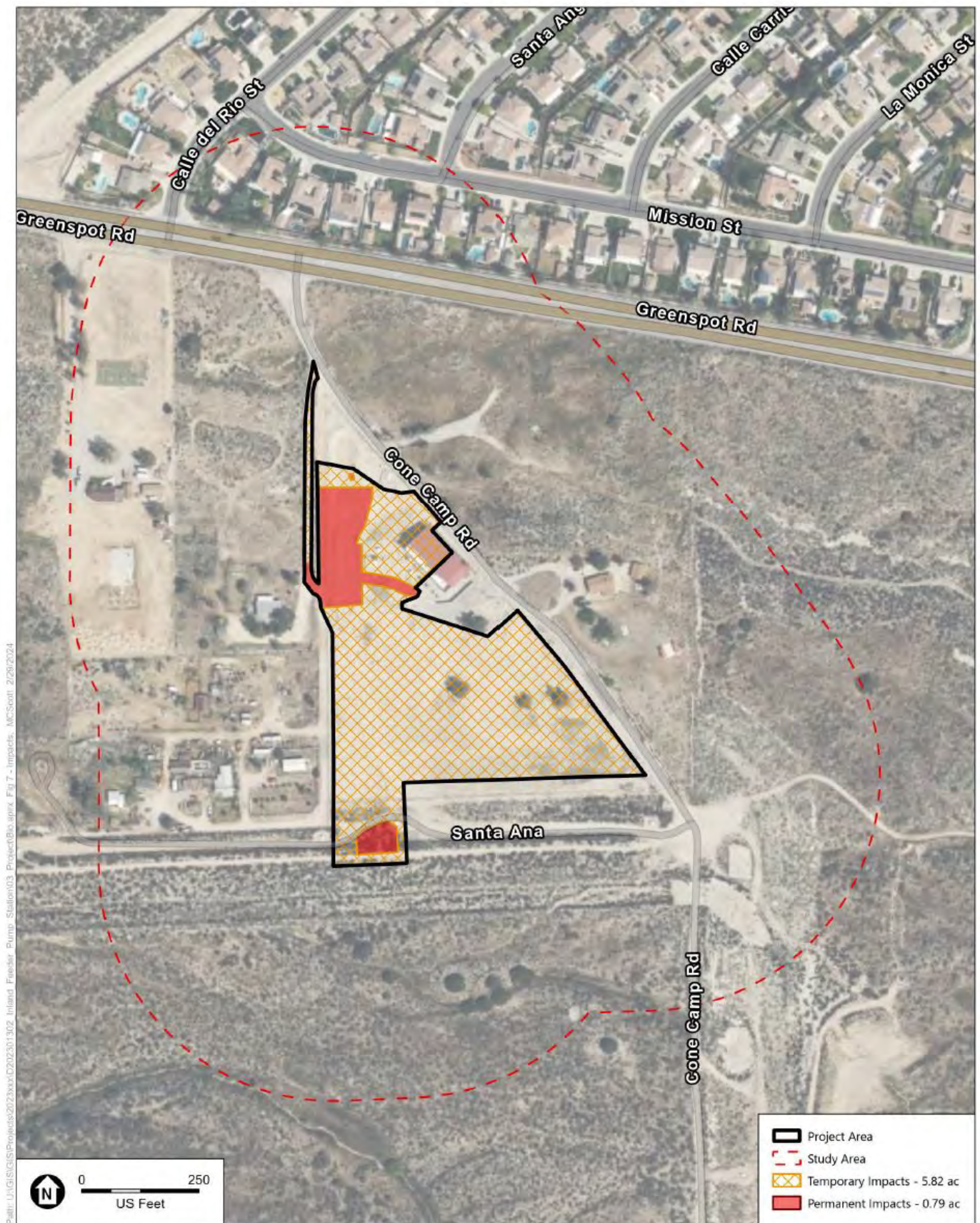
## Conclusions and Potential Impacts

The project is proposing to install two new underground pipelines (supply connection and discharge connection), two underground vaults, four aboveground HSTs, and associated appurtenant structures which would be updated in two stages. Stage 1 includes construction of the supply and discharge pipelines, an underground vault, four HSTs on concrete pads, and appurtenant structures within the existing graded triangular fenced area and the area immediately west of the fenced area. Stage 2 includes construction of a vault, portion of the discharge connection pipeline, associated appurtenant structures, and final connections to the existing Inland Feeder pipeline within the southern portion outside of the existing fenced area. The proposed project would result in 0.79 acres of permanent impacts and 5.82 acres of temporary impacts to developed and disturbed land cover and California buckwheat – brittle bush scrub natural community (**Figure 7, Project Impact Areas**).

## Sensitive Natural Communities

Direct permanent and temporary impacts to natural communities and land covers within the proposed project development footprint are summarized in **Table 4, Project Impacts to Natural Communities and Land Cover Types**, and shown in Figure 7. Direct impacts to natural communities and land covers are proposed as a result of vegetation removal and construction activities and were quantified by overlaying the project boundaries with the vegetation communities mapped in the study area. The majority of the direct impacts would occur primarily within developed (5.84 acres) and disturbed (0.40 acres) areas. The only natural community within the project area is California buckwheat – brittle bush scrub natural community, which is not considered a sensitive natural





SOURCE: ESA, 2024

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**Figure 7**  
Project Impact Areas

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**TABLE 4**  
**PROJECT IMPACTS TO NATURAL COMMUNITIES AND LAND COVER TYPES**

Natural Community/Land Cover Type	Permanent Project Impact (acres)	Temporary Project Impact (acres)	Total Project Impact (acres)	Remaining Acreage in the Study Area (acres)
<b>Terrestrial Natural Communities</b>				
Annual Grasses and Forbs	--	--	--	1.66
Brittle Bush Scrub	--	--	--	2.79
Disturbed Brittle Bush Scrub	--	--	--	2.70
California Buckwheat – Brittle Bush Scrub	0.12	0.25	0.37	12.18
Disturbed California Buckwheat – Brittle Bush Scrub	--	--	--	1.40
Chamise Chaparral – Hairy Yerba Santa Scrub	--	--	--	0.57
Disturbed Chamise Chaparral – Brittle Bush Scrub	--	--	--	0.55
Hairy Yerba Santa Scrub	--	--	--	5.37
Mustard Fields	--	--	--	1.19
<b>Developed/Disturbed Land Cover Types</b>				
Developed	0.54	5.30	5.84	18.67
Disturbed	0.13	0.27	0.40	6.27
<b>TOTAL</b>	<b>0.79</b>	<b>5.82</b>	<b>6.61</b>	<b>53.35</b>

SOURCE: ESA 2024

community. Only 0.37 acre of California buckwheat – brittle bush scrub natural community is proposed to be permanently (0.12 acre) or temporarily (0.25 acre) impacted by the proposed project activities. No sensitive natural communities occur within the study area (CDFW 2023b).

## Federally and State Listed Species

Appropriate authorization from USFWS under FESA or CDFW under CESA may include an Incidental Take Permit (ITP) or a Consistency Determination in certain circumstances, among other options (FGC, §§ 2080.1, 2081, subds. [b] and [c]) for impacts to federally and state listed species. Early consultation is encouraged, as significant modification to the project and mitigation measures may be required to obtain an ITP.

## Special-Status Plants

Five special-status plant species have a moderate to high potential to occur within the California buckwheat – brittle bush scrub habitat within the project area, as well as within the natural communities within the surrounding study area: Parry’s spineflower, Plummer’s mariposa lily, Robinson’s pepper-grass, Santa Ana River woollystar, and slender-horned spineflower. While these five special-status plants have the potential to occur within the



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coastal sage scrub and chaparral habitats mapped in the study area (i.e., brittle bush scrub, disturbed brittle bush scrub, California buckwheat – brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, disturbed chamise chaparral – brittle bush scrub, and hairy yerba santa scrub), Plummer’s mariposa lily also has the potential to occur within the annual grasses and forbs habitat mapped in the study area.

The project would result in the permanent removal of 0.12 acre and temporary removal of 0.25 acre of California buckwheat – brittle bush scrub habitat present within the project area. Focused rare plant surveys are recommended to confirm presence or absence of these species within 50 feet of the project area wherever suitable habitat occurs. Direct impacts to these species may occur in the form of habitat loss and mortality if the individual plants are present and crushed or removed during ground disturbing activities. Indirect impacts may occur in the form of excessive dust and introduction of nonnative plant species. Although these species may be present in the project area, the project would not be expected to result in the loss of individuals or adversely affect local or regional populations of these species with the implementation of **Standard Metropolitan Practices (SMP)-1, SMP-2, and SMP-3**, as well as **Avoidance and Minimization Measures (AMM)-1 and AMM-2**, and **Mitigation Measure BIO-1** listed below.

## Special-Status Wildlife

### ***Coastal California Gnatcatcher, Crotch Bumble Bee, Western Spadefoot, San Bernardino Kangaroo Rat***

Coastal California gnatcatcher may forage and nest within the California buckwheat – brittle bush scrub habitat present within the project area and remainder of the study area. Additionally, the species may use the brittle bush scrub, disturbed brittle bush scrub, disturbed California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and disturbed chamise chaparral – brittle bush scrub, and hairy yerba santa scrub habitat for nesting and foraging within the remainder of the study area. The project would result in the permanent removal of 0.12 acre and temporary removal of 0.25 acre of California buckwheat – brittle bush scrub habitat present within the project area. Ground disturbance and vegetation clearing activities during nesting season may result in “take” of this species through the disruption of breeding/nesting behavior, such as copulation, nest building or incubation. Although this species is known to occur in the project vicinity, the project would not be expected to result in the loss of individuals or adversely affect local or regional populations of coastal California gnatcatcher with implementation of **SMP-1, AMM-1, AMM-3, and Mitigation Measure BIO-1**.

Crotch bumble bee may forage and/or nest within the California buckwheat – brittle bush scrub habitat in the project area and remainder of the study area. The project would result in the permanent removal of 0.12 acre and temporary removal of 0.25 acre of California buckwheat – brittle bush scrub habitat present within the project area. Additionally, this species may use all of the natural communities, aside from the disturbed and developed land cover types, for nesting and foraging within the remainder of the study area. Ground disturbance and vegetation clearing activities may result in direct and indirect impacts to this species through the removal of the species’ preferred plants for nectaring and removal of nest burrows. Although this species has a potential to occur

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in the project vicinity, the project would not be expected to result in the loss of individuals or adversely affect local or regional populations of Crotch bumble bee with the implementation of Metropolitan's Standard Practices as outlined in **SMP-1** and **SMP-2**. In addition, **AMM-1** and **AMM-4** would reduce the potential for direct and indirect impacts; therefore, the project is not likely to adversely affect Crotch bumble bee.

Western spadefoot may use small mammal burrows within the California buckwheat – brittle bush scrub present within the project area and remainder of the study area. The project would result in the permanent removal of 0.12 acre and temporary removal of 0.25 acre of California buckwheat – brittle bush scrub habitat present within the project area. Additionally, this species may use all of the natural communities, aside from the disturbed and developed land cover types, for estivating and foraging within the remainder of the study area. The species is not expected to use the project area for breeding since it is disturbed and there are limited suitable breeding pools present. Although this species has a potential to occur in the project vicinity, the project would not be expected to result in the loss of individuals or adversely affect local or regional populations of western spadefoot with the implementation of Metropolitan's Standard Practices as outlined in **SMP-1**, **SMP-2**, and **SMP-3**, as well as avoidance and minimization measures **AMM-1** and **AMM-5**.

San Bernardino kangaroo rats may burrow, forage, and breed within the California buckwheat – brittle bush scrub habitat within the project area and remainder of the study area. This species was present during small-mammal trapping surveys conducted in 2022 (ECORP 2022). The project would result in the permanent removal of 0.12 acre and temporary removal of 0.25 acre of California buckwheat – brittle bush scrub habitat present within the project area. The proposed project may result in a direct impact to this species through the killing of an individual(s) or the removal of a nest or burrows or may indirectly prevent normal breeding and/or foraging through noise generation from project activities. Indirect impacts may result from human presence, ground vibration and noise generated by heavy equipment, artificial lighting and increased predation. Implementation of Metropolitan's Standard Practices outlined in **SMP-1**, **SMP-2**, and **SMP-4**. In addition, **AMM-1**, **AMM-6**, **AMM-7**, **AMM-8**, and **Mitigation Measure BIO-1** would reduce the potential for direct and indirect impacts; therefore, the project is not likely to adversely affect local or regional populations of SBKR.

## Other Special-Status Wildlife

The Bell's sparrow, burrowing owl, California horned lark, loggerhead shrike, and southern California rufous-crowned sparrow may forage and/or breed within the annual grasses and forbs, brittle bush scrub, California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and hairy yerba santa scrub habitats, as well as the disturbed land cover type, of the project area and remainder of the study area. However, the project area is heavily compacted and provides very limited suitable foraging habitat along its southern boundary. Additionally, there is ample, suitable foraging habitat present in the surrounding area. Thus, the permanent loss of up to 0.12 acre and temporary loss of up to 0.25 acre of potentially suitable foraging habitat due to the proposed project activities is not considered a likely adverse impact to Bell's sparrow, California horned lark, loggerhead shrike, and southern California rufous-crowned sparrow if present during construction. Implementation of



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standard measures such as limiting the area of disturbance would further contribute toward avoiding any potential impacts to foraging species and their habitat.

The study area provides suitable nesting habitat for a variety of native resident and migratory bird and raptor species (including Bell's sparrow, burrowing owl, California horned lark, loggerhead shrike, and southern California rufous-crowned sparrow) protected under the MBTA and CFGC Sections 3503.5, 3505, and 3511. The project may result in the direct and/or indirect impacts to these migratory bird and raptor species through the removal of active nests or disruption of breeding/nesting behavior such as copulation, nest building, or incubation if present during construction activities. Metropolitan would implement their Standard Metropolitan Practices as outlined in **SMP-1**. In addition, implementation of **AMM-1**, **AMM-3**, and **AMM-10** would reduce the potential for direct and indirect impacts; therefore, the project is not likely to adversely affect protected nesting birds or raptors.

The Belding's orange-throated whiptail, burrowing owl, California glossy snake, coast horned lizard, coastal western whiptail, Los Angeles pocket mouse, northwestern San Diego pocket mouse, red-diamond rattlesnake, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern California legless lizard, and southern grasshopper mouse may occupy annual grasses and forbs, brittle bush scrub, California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and/or hairy yerba santa scrub habitats, as well as the disturbed land cover type, of the project area and remainder of the study area. The proposed project may result in a direct impact to these species through the killing of an individual or the removal of a nest or burrow. Indirect impacts may result from human presence, ground vibration and noise generated by heavy equipment, and increased predation. Implementation of Metropolitan's Standard Practices outlined in **SMP-1**, **SMP-2**, and **SMP-4**, as well as avoidance and minimization measures **AMM-1**, **AMM-9**, and **AMM-10** would reduce the potential for direct and indirect impacts; therefore, the project is not likely to adversely affect these special-status ground dwelling species.

## Critical Habitat

Critical habitat for SBKR is located within the study area, and the project would result in the permanent removal of 0.12 acre of designated critical habitat associated with California buckwheat – brittle bush scrub and 0.25 acre of temporary impacts to critical habitat from construction activities. The project would not be expected to result in the adverse modification of critical habitat for SBKR with the implementation of Metropolitan's Standard Practices outlined in **SMP-1** and **SMP-2**, and the implementation of measures **AMM-1**, **AMM-6**, **AMM-7**, **AMM-8**, and **Recommended Measure BIO-1**.

## Wildlife Movement

While wildlife likely uses the study area to forage, breed, and to some extent, for local and regional movement, the project area does not link large areas of contiguous, intact habitat together, and is not expected to function as an important migration corridor. The proposed project may result in both direct and indirect impacts to nesting

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migratory and special-status birds and small mammals that may utilize the study area for foraging and/or nesting. Ground disturbance and vegetation clearing activities may disrupt foraging and breeding/nesting behavior, such as copulation, nest building or incubation, or result in the removal of an active nest or burrow. The project would not be expected to adversely impact the movement of wildlife with the implementation of Metropolitan's Standard Practices outlined in **SMP-1** through **SMP-4**, and measures **AMM-1**, **AMM-3** through **AMM-10**, and **Recommended Measure BIO-1**.

## Aquatic Resources

Feature 1 consists of a constructed basin and an associated drainage feature/road which captures stormwater runoff along an existing access road. Feature 1 is the only aquatic resource identified within the project area. The basin was constructed in an upland area within the northwestern portion of the project area to capture surface water runoff allowing it to infiltrate into the ground within the basin. Feature 1 is less than one acre in size and is used and maintained for the detention, retention, and infiltration of stormwater runoff. This feature does not meet the definition of a water of the state and does not contain or support wetland or riparian habitat, and therefore, would likely not be considered jurisdictional by the CDFW and RWQCB.

Although Feature 3 (the constructed drainage located south of the project area) has a continuous surface connection to the Santa Ana River, a non-wetland water of the U.S., it is an ephemeral feature that does not meet the relatively permanent standard; thus, is likely not considered a water of the U.S. The remaining ephemeral drainage features within the surrounding study area (Features 2, 4, and 5) have no continuous surface connection to waters of the U.S.; therefore, do not meet the definition of a non-wetland water of the U.S. While Features 2 through 5 are located outside the project area and do not support riparian habitat, they may still be regulated by the CDFW and RWQCB. However, the proposed project has no planned impacts to these features as they are situated outside of the project area.

## Standard Metropolitan Practices and Recommended Avoidance, Minimization, and Recommended Measures

The following lists standard Metropolitan practices and recommended avoidance, minimization, and mitigation measures to avoid, minimize, and/or mitigate the project's effects on biological resources.

### Standard Metropolitan Practices

#### Standard Metropolitan Practice (SMP)-1: General Avoidance and Minimization Measures

- **Permits.** The Contractor shall obtain necessary local, state, and federal environmental permits and shall comply with the requirements of all such permits and laws, regulations, acts, codes, and ordinances.

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- **Construction Boundaries.** The Contractor shall perform all construction activities only within the construction boundaries shown on the drawings. The construction boundaries shall be fenced, unless otherwise directed by the Engineer. Any request to use any area outside the construction boundaries for any activity will require review and approval by the Engineer.
- **Worker Environmental Awareness Protections Training.** Metropolitan routinely conducts pre-construction Worker Environmental Awareness Protections Training (WEAP) for both capital projects and operations and maintenance activities. WEAP trainings are project-specific and cover potential environmental concerns or considerations including, but not limited to, awareness of biological resources, special status species near project sites, jurisdictional waters, cultural resources, paleontological resources, environmentally sensitive areas, and/or avoidance areas.
- **Environmental Assessment.** As an internal practice, Metropolitan conducts Environmental Assessments or similar studies prior to project commencement to determine if any sensitive resources have the potential to be present at a project site. Resources assessed typically include biological, cultural, paleontological resources, noise sensitivity, and sensitive receptors in the vicinity of the project area.

## **SMP-2: Hazardous Materials**

- The Contractor shall clean up all spills in accordance with all applicable environmental laws and regulations and notify the Engineer immediately in the event of a spill.
- Stationary equipment such as motors, pumps, and generators, shall be equipped with drip pans.
- The Contractor shall handle, store, apply, and dispose of chemicals and/or herbicides consistent with all applicable federal, state and local regulations.
- The Contractor shall dispose of all contaminated materials in a manner consistent with all applicable local, state and federal environmental laws and regulations.
- Hazardous materials shall be stored in covered, leak-proof containers when not in use, away from storm drains and heavy traffic areas, and shall be protected from rainfall infiltration. Hazardous materials shall be stored separately from non-hazardous materials on a surface that prevents spills from permeating the ground surface, and in an area secure from unauthorized entry at all times. Incompatible materials shall be stored separately from each other.

## **SMP-3: Hydrology and Water Quality**

- The Contractor shall not allow any equipment or vehicle storage within any drainage course or channels.
- Any material placed in areas where it could be washed into a drainage course or channel shall be removed prior to the rainy season.

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- The Contractor shall not create a nuisance or pollution as defined in the California Water Code. The Contractor shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Quality Control Board or the SWRCB, as required by the Clean Water Act (CWA).
- Dewatering activities shall not affect any vegetation outside of the construction limits. The Contractor shall submit proposed dewatering plans to the Engineer for approval prior to any dewatering activities.

#### **SMP-4: Lighting**

- The Contractor shall exercise special care to direct floodlights to shine downward. These floodlights shall also be shielded to avoid a nuisance to the surrounding areas. No lighting shall include a residence or native area in its direct beam. The Contractor shall correct lighting nuisance whenever it occurs.

### **Recommended Avoidance and Minimization Measures**

#### **Avoidance and Minimization Measure (AMM)-1: Best Management Practices**

- **Prevention of Inadvertent Entrapment.** To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep will be covered with tarp, plywood or similar materials at the close of each working day and will be inspected visually to confirm animals would be excluded, to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife is observed, escape ramps or structures will be installed immediately to allow escape.
- **Construction Contractor Specifications.** AMM-1 through AMM-9 will be incorporated into the construction contractor specifications.
- **Trash/Debris Removal.** During project construction activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all spoils, trash, or any debris will be removed off-site to an approved disposal facility or stored appropriately.
- **Speed Limits.** Vehicles will be restricted to existing access roads and approved work areas and will maintain speed limits of no greater than 15 miles per hour on unpaved roads.

#### **AMM-2: Special-Status Plants**

Prior to construction that could potentially remove special-status plants, a qualified botanist shall conduct a pre-construction floristic inventory and focused rare plant survey to determine and map the location and extent of special-status plant species populations within disturbance areas within suitable habitat. This survey shall occur during the typical blooming periods of special-status plants with the potential to occur: Parry's spineflower (*Chorizanthe parryi* var. *parryi*; CRPR 1B.1; blooming period April – June), Plummer's mariposa lily (*Calochortus plummerae*; CRPR 4.2; blooming period May – July), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*; CRPR 4.3; blooming period January – July), Santa Ana River woollystar (*Eriastrum*

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*densifolium* ssp. *sanctorum*; FE, SE, CRPR 1B.1; blooming period April – September), and slender-horned spineflower (*Dodecahema leptoceras*; FE, SE, CRPR 1B.1; blooming period April – June). The plant survey shall follow the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018).

If special-status plants are not identified within the project impact area, then ground-disturbing activities may commence. If special-status plants are detected and project-related impacts are unavoidable, then the preparation and implementation of a special-status species salvage, seed collection, and replanting plan would be required, and consultation with the regulatory agencies would be required to address potential take of listed plant species. The salvage, seed collection, and replanting plan shall include measures to salvage, collect seed, replant, and monitor the disturbance area until native vegetation is re-established.

Pre-construction special-status plant surveys are scheduled to be conducted in 2024. If construction does not begin by 2027, a qualified botanist shall conduct an additional pre-construction floristic inventory and focused rare plant survey in accordance with the guidance above during the appropriate blooming period the year prior to the commencement of project activities.

### **AMM-3: Nesting Birds/Raptors and Special-Status Birds**

Project activities could negatively impact nesting birds that are protected in accordance with the MBTA and FGC, as well as other special-status avian species, such as the Bell’s sparrow, burrowing owl, California horned lark, coastal California gnatcatcher, loggerhead shrike, and southern California rufous-crowned sparrow. No physical disturbance of vegetation, operational structures, buildings, or other potential habitat (e.g., open ground, gravel, construction equipment or vehicles, etc.) that may support nesting birds protected by the MBTA and FGC shall occur in the breeding season, except as necessary to respond to public health and safety concerns, or otherwise authorized by the Engineer. The breeding season extends from February 15 through August 31 for passerines and general nesting and from January 1 through August 31 for raptors.

- If nesting habitat (including annual grasses and forbs, brittle bush scrub, California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and hairy yerba santa scrub habitats, as well as the disturbed land cover types within the study area) must be cleared or project activities must occur within 500 feet of nesting habitat within the breeding season as defined above, a qualified biologist shall perform a nesting bird survey no more than three days prior to clearing or removal of nesting habitat or start of project activities. Surveys will be performed in all Metropolitan accessible areas (fee property and easements) and inaccessible areas will be visually surveyed to their full extent without trespassing.
- If active nests for sensitive species, raptors and/or migratory birds are observed, an adequate buffer zone or other avoidance and minimization measures, as appropriate, shall be established, as identified by a qualified biologist and approved by the Engineer. Construction avoidance buffers are generally 300 feet for non-listed passerines and 500 feet for listed avian species (i.e., coastal California gnatcatcher) and raptors; however, avoidance buffers may be modified at the discretion of the biologist, depending on the species, location of the nest and species tolerance to human presence and construction-related noises and vibrations. The buffer shall

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be clearly marked in the field by the Contractor, as directed by the Engineer, and construction or clearing shall not be conducted within this zone until the young have fledged and are no longer reliant on the nest.

- Additional measures may include (but are not limited to): construction avoidance, until the nest is no longer active, noise attenuation measures to reduce construction noise levels to below 60 dBA Leq (an hourly measurement of A-weighted decibels) or ambient (if existing ambient levels are above 60 dBA), and biological monitoring during construction activities to ensure the species is not harmed during Project implementation.
- A qualified biologist shall monitor active nests or nesting bird habitat within or immediately adjacent to project construction areas, and the Engineer shall provide necessary recommendations to the Contractor to minimize or avoid impacts to protected nesting birds.

#### **AMM-4: Crotch Bumble Bee**

Project activities could negatively impact suitable Crotch bumble bee foraging and/or nesting habitat within the California buckwheat – brittle bush scrub planned for removal in the project area. Therefore, the following measures are recommended to avoid impacts to this species.

- A qualified entomologist familiar with the species' behavior and life history shall conduct surveys to determine presence/absence of the Crotch bumble bee within the year prior to vegetation removal and/or grading in areas that provide suitable habitat for this species. A minimum of three surveys, ideally 2-4 weeks apart, should also be conducted during peak flying season when the species is most likely to be detected above ground, between March 1 to September 1 and during peak bloom of nectaring resources (Thorp et al. 1983; CDFW 2023c). At minimum, a survey report should provide the following:
  - A description and map of the survey area, focusing on areas that could provide suitable habitat for Crotch bumble bee.
  - Field survey conditions that should include name(s) of qualified entomologist(s) and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched.
  - Map(s) showing the location of nests/colonies.
  - A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover, and abundance) within impacted habitat (e.g., species list separated by vegetation class; density, cover, and abundance of each species).
- If Crotch bumble bee is detected, the qualified entomologist should identify the location of all nests within and adjacent to the project site. A 15-meter (50-foot) no disturbance buffer zone should be established around any identified nest(s) to reduce the risk of disturbance or accidental take. A qualified entomologist should expand the buffer zone as necessary to prevent disturbance or take.

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- If Crotch bumble bee is detected and impacts to Crotch bumble bee cannot be feasibly avoided, Metropolitan should consult with CDFW and obtain appropriate take authorization from CDFW (pursuant to FGC, § 2080 et seq).
- Any floral resource associated with Crotch bumble bee that will be removed or damaged by the project should be replaced at no less than 1:1, as determined in consultation with CDFW.

### **AMM-5: Western Spadefoot**

Although limited suitable breeding habitat is present within the constructed basin and associated drainage located in the project area, project activities could negatively impact suitable western spadefoot upland habitat, including all of the natural communities and excluding the disturbed and developed land cover, within the small mammal burrows located in the project area. Therefore, the following measures are recommended to avoid impacts to this species.

- A qualified biologist shall survey areas of suitable habitat for western spadefoot in the project area, including ruts, small pools, and the constructed basin and associated drainage. The survey shall be conducted during the active season of western spadefoot (which corresponds with the rainy season).
- If surveys result in the observation of western spadefoot within project impact areas, observed individuals and/or eggs shall be removed from project impact areas and be relocated to pre-determined suitable habitat in an appropriate area that will not be impacted.
- For work during the western spadefoot toad migration and breeding season (November 1 to May 31), a qualified biologist will survey the active work areas (including access roads) in the mornings following measurable precipitation events. Construction may commence upon confirmation from the biologist that no western spadefoot toads are in the work area.
- When feasible, a 50-foot avoidance buffer will be maintained around burrows that provide suitable upland habitat for western spadefoot toad, as identified by a qualified biologist. The biologist will delineate and mark the no-disturbance buffer.
- If western spadefoot toad is found within the construction footprint, it will be allowed to move out of harm's way on its own accord or a qualified biologist will relocate it to the nearest suitable burrow outside of the construction impact area.
- Prior to beginning work, a qualified biologist will inspect underneath equipment and stored pipes greater than 1.2 inches (3 cm) in diameter for western spadefoot toad. If found, they will be allowed to move out of the construction area on their own accord.



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## **AMM-6: San Bernardino Kangaroo Rat Pre-Construction Presence/Absence Trapping Surveys**

Prior to ground disturbing activities within areas with potential habitat for SBKR or other sensitive small mammals, a qualified SBKR biologist with a required Section 10(a) permit will conduct pre-construction presence/absence trapping surveys. These surveys will follow protocols and trapping methods approved by the regulatory agencies to determine the presence/absence of SBKR and other sensitive small mammals on site.

- If pre-construction presence/absence trapping surveys within the Stage 1 area are negative, then exclusionary fencing (AMM-6) will be installed.
- If SBKR are determined to be present within the Stage 1 project area resulting from the trapping surveys an ITP will need to be obtained. Construction within occupied habitat areas will not proceed until appropriate authorization (i.e., FESA and/or CESA ITP) is obtained.
- Stage 2 construction will not commence until appropriate authorization (i.e., FESA and/or CESA ITP) is obtained. Implementation of protection measures and compensatory mitigation for SBKR, in addition to those identified in this document, will be required as conditions of federal and state take permits.

## **AMM-7: San Bernardino Kangaroo Rat Exclusionary Fencing**

Exclusionary fencing will be erected in construction areas with potential to be occupied by SBKR or containing kangaroo rat sign (e.g., burrows, scat, tail drag, or dust baths) as determined by a preconstruction survey conducted by a qualified biologist.

- A qualified biologist or approved biological monitor will be present on site when the fence is installed to minimize disturbance of SBKR burrows from fence installation.
- The integrity of the fencing will be checked by a qualified biologist at the end of each workday. Any gaps will be repaired immediately.
- Construction access openings will be closed and secured at the end of each workday using the at-grade fencing method.
- The fence will remain in place for the duration of construction activities and removed at the completion of the relevant project activity.
- Stage 1 exclusionary fencing will be installed at grade to minimize the risk of unauthorized take.



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## AMM-8: San Bernardino Kangaroo Rat and General Construction Monitoring

- **SBKR Biologist.** A qualified biologist or approved biological monitor will visually inspect trenches and steep-walled holes before the onset of daily construction for presence of SBKR. If SBKR are discovered, the biologist will supervise the movement or relocation of the equipment until the animal has left the area on its own.
  - To the extent feasible, soil stockpiles in SBKR habitat will be located within the construction area inside the exclusionary fence or within the existing facility in areas devoid of vegetation.
  - Nighttime work shall be avoided as much as possible. If nighttime work is necessary, all lighting shall be directed exclusively at the work area to avoid areas that support local wildlife movement, such as ephemeral drainages, to the greatest extent practical. Any nighttime lighting shall be shielded downward as to avoid light spillage into the surrounding areas.
- **Limits of Disturbance.** Prior to construction in or adjacent to habitats for special-status species, and under the direction of a qualified biologist, Metropolitan will clearly delineate the construction right-of-way (stake, flag, fence, etc.) that restricts the limits of construction to the minimum necessary to implement the project.
- **Biological Monitoring.** Prior to the start of construction, Metropolitan will retain a qualified biological monitor(s) to be onsite during the initial ground disturbance and during construction activities to monitor habitat conditions and impacts. The biological monitor will ensure compliance with the AMMs and will have the authority to halt or suspend all activities until appropriate corrective measures have been taken. The biological monitor will be a qualified biologist with species expertise appropriate for this project.
- **On Site Overnight Storage.** All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for birds and other wildlife before the pipe is subsequently buried, capped, or otherwise used or moved.

## AMM-9: Special-Status Ground-Dwelling Wildlife

Project activities could negatively impact special-status ground-dwelling wildlife that are protected in accordance with the CESA and FGC, such as Belding's orange-throated whiptail, California glossy snake, coast horned lizard, coastal western whiptail, Los Angeles pocket mouse, northwestern San Diego pocket mouse, red-diamond rattlesnake, San Diego black-tailed jackrabbit, San Diego desert woodrat, southern California legless lizard, and southern grasshopper mouse. Therefore, the following measure is recommended to avoid impacts to these species.

- A qualified biologist shall conduct a preconstruction clearance survey throughout the project area. If any of these species are observed during the survey, a qualified biologist should relocate the individual to suitable habitat adjacent to the project area.

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## AMM-10: Burrowing Owl

Prior to the initiation of any ground disturbing activities within 500 feet of suitable burrowing owl habitat, including all of the natural communities and land cover types within the study area, focused protocol surveys for burrowing owl will be conducted by a qualified biologist throughout the study area following the protocol outlined in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). If the qualified biologist finds evidence of burrowing owls during the burrowing owl breeding season (February 1 through August 31), all project-related activities shall avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance includes establishment of a minimum 300-foot buffer zone around nests. Construction and other project-related activities may occur outside of the 300-foot buffer zone. Construction and other project-related activities may be allowed inside of the 300-foot avoidance buffer during the breeding season if the nest is not disturbed, and the project activities are monitored by a qualified biologist.

## Recommended Mitigation Measures

### Mitigation Measure BIO-1: Compensation for Impacts to Federally and State-Listed Species Habitat.

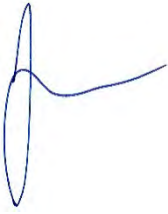
Direct temporary and permanent impacts to suitable habitat for federally or state-listed species shall be mitigated through purchase of credits from an approved mitigation bank, payment to an in-lieu fee program, or in another form of mitigation approved by the regulatory agencies.

- **Temporary Impacts.** Mitigation for direct temporary impacts to suitable habitat for federally or state-listed species shall be provided through on-site restoration. Areas temporarily impacted shall be returned to similar conditions to those that existed prior to grading and/or ground-disturbing activities.
- **Permanent Impacts.** Metropolitan shall purchase credits from an approved mitigation bank, payment to an in-lieu fee program, or in another form of mitigation approved by the regulatory agencies to compensate for all permanent loss of suitable habitat for federally or state-listed species (including critical habitat), if available, at a 1:1 ratio. Direct impacts to federally listed species' occupied habitat shall be addressed through either the Section 7 or Section 10(a)(1)(B) process under the federal Endangered Species Act (ESA) of 1973, as amended. Additionally, direct impacts to federally designated critical habitat that cannot be avoided shall be addressed through either the ESA Section 7 or Section 10(a)(1)(B) process. Direct impacts to state-listed species shall be addressed through the California Fish and Game Code Section 2081(b) incidental take permit process. The two permits and authorization by the agencies with jurisdiction over these resources may require additional measures (e.g., avoidance, conservation, etc.) beyond what is being proposed under this CEQA analysis.

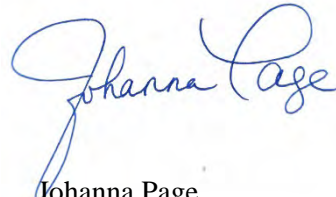
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If you have any questions regarding this letter report, please do not hesitate to contact Amanda French (afrench@esassoc.com) at (530) 966-4294 or Johanna Page (jpage@esassoc.com) at (626) 677-7680.

Sincerely,



Amanda French  
Biologist



Johanna Page  
Principal Biologist

**List of Attachments**

Attachment A: Results of the 2023 Nighttime Small Mammal Activity Surveys  
Attachment B: Representative Photographs  
Attachment C: Floral and Faunal Compendia  
Attachment D: CNDDB and CNPS Results  
Attachment E: Exclusionary Fence Design

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## References

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors, 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley, CA.
- Calflora. 2024. Information on Wild California Plants. Available online at: <https://www.calflora.org/>. Accessed on January 3, 2024.
- CDFW (California Department of Fish and Wildlife). 2012. Staff Report on Burrowing Owl Mitigation.
- CDFW (California Department of Fish and Wildlife). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. March 20, 2018.
- CDFW (California Department of Fish and Wildlife). 2023a. California Natural Diversity Data Base (CNDDB). Database. Accessed December 21, 2023.
- CDFW (California Department of Fish and Wildlife). 2023b. California Sensitive Natural Communities List. Sacramento, CA: CDFW, Natural Heritage Division, June 1, 2023. Accessed December 21, 2023. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline>.
- CDFW (California Department of Fish and Wildlife). 2023b. Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. June 6, 2023.
- CNDDB (California Natural Diversity Database). 2024. Special Animals List. California Department of Fish and Wildlife. Sacramento, CA. January 2024.
- CNPS (California Native Plant Society). 2023. Inventory of Rare and Endangered Vascular Plants of California. Database. Accessed December 21, 2023.
- Cornell Lab of Ornithology. 2024. All About Birds. Cornell Lab of Ornithology, Ithaca, New York. <https://www.allaboutbirds.org> Accessed on January 3, 2024.
- ECORP. 2022. Results of a Focused San Bernardino Kangaroo Rat Trapping Survey Conducted for the Metropolitan Water District of Southern California's Foothill Pump Station Project, Highland, San Bernardino, California. November 18, 2022.
- ESA (Environmental Science Associates). 2023a. Results of a San Bernardino Kangaroo Rat Burrow Survey for Metropolitan's Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California. April 13, 2023.
- ESA (Environmental Science Associates). 2023b. Results of Nighttime Small Mammal Activity Surveys for Metropolitan's Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California. November 16, 2023.

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Hickman, James C. ed. 1993. The Jepson Manual. University of California Press, Berkeley and Los Angeles, California.

NatureServe. 2022. NatureServe Core Methodology. <https://www.natureserve.org/conservation-tools/standards-methods/natureserve-core-methodology>.

NRCS (Natural Resource Conservation Service). 2023. Web Soil Survey. Accessed December 21, 2023. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>.

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation. 2nd Edition. California Native Plant Society.

Thorpe, R., D. Horning, and L. Dunning. 1983. Bumble bees and cuckoo bumble bees of California (Hymenoptera, Apidae). Bulletin of the California Insect Survey, Volume 23.

USFWS (U.S. Fish and Wildlife Service). 2019. Coastal California Gnatcatcher (*Poliophtila californica californica*) Presence/Absence Survey Protocol. Carlsbad Fish and Wildlife Office. Revised June 26, 2019

USFWS (U.S. Fish and Wildlife Service). 2023a. Critical Habitat Portal. Accessed December 21, 2023. [https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265\\_ad4fe09893cf75b8dbfb77](https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265_ad4fe09893cf75b8dbfb77).

USFWS (U.S. Fish and Wildlife Service). 2023b. National Wetland Inventory. Accessed December 21, 2023. <https://www.fws.gov/wetlands/data/Mapper.html>.

# Attachment A

## **Results of the 2023 Nighttime Small Mammal Activity Survey**





# memorandum

date November 16, 2023

to Alfredo Aguirre, Environmental Specialist – Metropolitan Water District of Southern California (Metropolitan)

from Johanna Page, Principal Biologist – Environmental Science Associates (ESA)

subject Results of Nighttime Small Mammal Activity Surveys for Metropolitan’s Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California

Environmental Science Associates (ESA) conducted nighttime small mammal activity surveys for the Metropolitan Water District of Southern California’s (Metropolitan) Inland Feeder Foothill Pump Station Intertie Phase 1 Project (project). The project requires work in areas that are adjacent to occupied San Bernardino kangaroo rat (SBKR; *Dipodomys merriami parvus*) habitat and suitable SBKR burrows were identified within the project site. SBKR is federally listed as endangered, state candidate for listing as endangered and a species of special concern. Based on the findings of previous focused SBKR surveys and SBKR burrow surveys conducted in the survey area in 2022 and 2023, motion-detecting cameras were recommended to determine kangaroo rat presence within the project site. The surveys were conducted in March and July 2023 using nighttime-vision equipment to determine nighttime small mammal activity in the project area, with particular emphasis focused on whether the small mammals are accessing the site from neighboring areas or using burrows within the proposed exclusion fencing areas planned for the project. The March 2023 nighttime small mammal activity survey area corresponds with the future exclusion fencing areas proposed for the project, while the July 2023 nighttime small mammal activity survey corresponds with a larger area and includes burrows where previous SBKR were captured to serve as a control.

## Project Site

The project site is generally located north of the Santa Ana River, south of Greenspot Road, east of State Route 210, and west of State Route 38 in San Bernardino County, California. More specifically, the project site is located southwest of the terminus of Cone Camp Road, north of Weaver Street, within the U.S. Geological Survey (USGS) Redlands 7.5-minute quadrangle (**Figure 1, Regional Vicinity and Project Location**). The project site includes an existing fenced and graded triangular area that encompasses Metropolitan and San Bernardino Valley Municipal Water District (SBVMWD) facilities, as well as the area immediately south and northwest of the existing facility where existing graded maintained roads with California buckwheat – brittle bush scrub (*Eriogonum fasciculatum* – *Encelia farinosa* shrubland) habitat is present interspersed between the existing roads.



## Background

In October 2022, ECORP conducted a protocol-level SBKR trapping survey, which included five nights of consecutive trapping with a total of 135 baited collapsible Sherman live-traps placed in areas of suitable SBKR habitat in the southern portion of the project site (ECORP 2022). Five rodent species were captured during the protocol-level trapping survey: SBKR, San Diego pocket mouse (*Chaetodipus fallax*), Bryant's woodrat (*Neotoma bryanti*), northern Baja deer mouse (*Peromyscus fraterculus*), and deer mouse (*Peromyscus maniculatus*) (ECORP 2022). The 2022 trapping effort yielded a total of three SBKR adult male individuals, captured in four different locations during seven captures, as well as a total of 76 captures of San Diego pocket mouse, 45 captures of northern Baja deer mouse, 18 captures of deer mouse, and 16 Bryant's woodrat captures in the southern extent of the project site. As a result, the project team, in coordination with USFWS, refined the project footprint to avoid areas where SBKR individuals were trapped in 2022 and performed additional biological surveys.

In March 2023, ESA conducted a SBKR burrow survey to determine if potential SBKR burrows occur within the project site, with a focus on the newly proposed project impact areas that were redesigned to avoid take of SBKR (ESA 2023). Based on the findings of the SBKR burrow survey conducted within the southern portion of the project site, subsequent motion-detecting cameras were recommended to identify kangaroo rat presence within the updated temporary and permanent impact areas, also referred to as impact areas in this report. Thus, the nighttime activity survey was designed to confirm where exclusionary fencing should be installed within the southern extent of the project site. The potential SBKR burrows were detected within the northwestern extent of the project site following the installation of the camera installation; thus, were not incorporated in the March 2023 nighttime small mammal activity survey. However, this northwestern portion of the project site was encompassed within the subsequent July 2023 nighttime small mammal activity survey.

## Methodology

### March 2023 Nighttime Small Mammal Activity Survey Area

The March 2023 nighttime small mammal activity survey area (March 2023 survey area) focused on areas with potentially suitable SBKR habitat and SBKR burrows concentrated in the southern portion of the project site, north and south of the existing unnamed dirt access road and southern entrance to the site, and north of Weaver Street (a dirt road). The March 2023 survey area generally overlapped with the proposed exclusion fencing area along the southern extent of the project site, and was identified by overlaying the temporary and permanent impact area boundaries, north and south of the existing graded road to the southern entrance to the existing MWD and SBVMWD facility on site, with the results of the protocol-level SBKR surveys conducted by ECORP in 2022 and subsequent SBKR burrow surveys conducted by ESA in 2023 for the project site (ECORP 2022; ESA 2023) (**Figure 2, SBKR Captures, Potential Burrows, and Camera Locations**). The project was designed to avoid impacts to habitat where SBKR individuals were trapped during protocol-level trapping surveys conducted in 2022 for the project (ECORP 2022). Therefore, the nighttime activity survey was focused on determining small mammal activity within the proposed exclusion fencing areas with suitable SBKR burrows to ensure avoidance.

### July 2023 Nighttime Small Mammal Activity Survey Area

Based on the minimal detection of small mammals captured during the March 2023 nighttime small mammal activity survey, ESA conducted an additional nighttime small mammal activity survey to determine the project area in July 2023. The July 2023 nighttime small mammal activity survey area (July 2023 survey area) focused on

a slightly larger area than accounted for during the March 2023 survey area to include surrounding areas where SBKR were previously captured in 2022 to serve as a control (**Figure 2**). As a result, the July 2023 survey area focused on all suitable SBKR habitat within the project site, including suitable SBKR habitat identified outside of the proposed exclusion fencing area and suitable SBKR habitat in the northwestern extent of the project site. The July 2023 survey was focused on determining use of potential kangaroo rat burrows in the project site (not just within the proposed project impact areas) to gain a better understanding of their use to ensure avoidance.

### **Nighttime Small Mammal Activity Camera Survey**

The camera direction and location were selected according to the burrow locations identified during focused surveys and SBKR burrow survey locations mapped in 2022 and 2023, as well as based on the best line of sight to capture movement in the area (e.g., along dirt areas devoid of vegetation, through breaks in the vegetation, where the exclusion fencing was proposed, and where suitable SBKR burrows occur). Vegetation in the survey area was dense in locations so the biologists focused on installing camera locations in shrub patches that contained open areas with suitable SBKR burrows and bare ground (when possible) to maximize species photo captures. To the extent feasible, cameras were locked inside specialized security boxes to prevent vandalism and theft. Wildlife cameras were either bolted to 4-foot-tall steel posts or cabled to a chain-link fence or vegetation and angled toward the line of sight of the burrow location positioned approximately 1 to 4 feet off the ground. The cameras were oriented away from the sun (to the extent practical) to protect the lens from over-exposure and positioned to capture photographs and short video clips of wildlife walking within the camera's line of sight. Bait was not used as to not attract species from outside of the survey area into the survey area, since the survey's intention was to determine what small mammal species are using the area and where they are travelling in the project area and SBKR were captured outside of the survey area.

Once installed, all wildlife cameras were set to capture images throughout a 24-hour period. Each motion trigger was set to capture three consecutive photographs and a 20-second video clip, also considered a unique camera detection in this report, at intervals of at least 30 seconds between each unique camera detection. The wildlife cameras were placed on site for a minimum of five days. During the July 2023 nighttime activity survey, four of the cameras (8A, 12A, 13A, and 14A) that did not appear to function as well were switched with known functioning cameras and were placed on site for an additional three days, for a total of eight days. Upon removal, photographs and videos were reviewed and categorized based on the camera location and species detected. Videos and photographs of human activity, dogs, and/or vehicles were categorized as well to make general assumptions regarding the amount of anthropogenic disturbance in the survey area.

### **March 2023 Camera Survey**

During the March 2023 nighttime small mammal activity survey, a total of six infrared motion detection wildlife cameras (Bushnell Trophy Cam) were installed within the March 2023 survey area to capture areas where potentially suitable SBKR burrows were abundant in the project area or in areas within the exclusion fencing area closest to where SBKR captures occurred in 2022 during protocol-level surveys (ECORP 2022). The wildlife cameras were installed on March 24, 2023, and removed on March 28, 2023. Specific data on the location and duration of monitoring at each remote wildlife camera is provided in **Table 1** and the camera locations are depicted in **Figure 2**. The target species for this study were small mammals, with a focus on rodent species such as mice, woodrats, and kangaroo rat species known to occur in the project site based on previous trapping surveys.

**TABLE 1**  
**MARCH 2023 REMOTE NIGHTTIME ACTIVITY SURVEY CAMERA LOCATIONS**

Camera	Deployment Dates	Camera Duration	Location	Camera Direction
C-01	3/24/2023–3/28/2023	5 days	Lat: 34.106352° Long: -117.140944°	Facing east toward burrow 30 (north of graded road).
C-02	3/24/2023–3/28/2023	5 days	Lat: 34.106385° Long: -117.140441°	Facing southwest toward the general area of burrows 7 and 8 (north of graded road).
C-03	3/24/2023–3/28/2023	5 days	Lat: 34.106304° Long: -117.139997°	Facing north toward burrow 13, with burrows 10 and 12 in the background (north of graded road).
C-04	3/24/2023–3/28/2023	N/A	Lat: 34.106362° Long: -117.139756°	Facing east toward burrows 21, 22, and 26, with burrow 25 in the background (north of graded road).
C-05	3/24/2023–3/28/2023	5 days	Lat: 34.106264° Long: -117.139912°	Facing north toward burrow 14 (north of graded road).
C-06	3/24/2023–3/28/2023	5 days	Lat: 34.106116° Long: -117.139955°	Facing northwest toward burrows 42 and 43 (south of graded road and north of Weaver Street).

#### July 2023 Camera Survey

During the July 2023 nighttime small mammal activity survey, a total of 15 infrared motion detection wildlife cameras (Bushnell Trophy Cam, Browning, and Reconyx) were installed within the July 2023 survey area to capture photos in areas where potentially suitable SBKR burrows were abundant in the project area or in areas within the exclusion fencing area closest to where SBKR captures occurred in 2022 during protocol-level surveys (ECORP 2022). The majority of the wildlife cameras were installed on July 5, 2023, and removed on July 10, 2023. However, some cameras appeared to not function well in the field and were switched out with better cameras on July 10, 2023, and left on site until July 13, 2023 (these cameras are labelled with “A” next to their number value in **Table 2** below). Specific data on the location and duration of monitoring at each remote wildlife camera is provided in **Table 2** and the camera locations are depicted in **Figure 2**. Similarly, the target species for this study were small mammals, with a focus on rodent species such as mice, woodrats, and kangaroo rat species known to occur in the project site based on previous trapping surveys.

**TABLE 2**  
**JULY 2023 REMOTE NIGHTTIME ACTIVITY SURVEY CAMERA LOCATIONS**

Camera	Deployment Dates	Camera Duration	Location	Camera Direction
C-1*	7/5/2023–7/10/2023	5 days	Lat: 34.106352° Long: -117.140944°	Facing northeast toward burrow 30 (north of graded road).
C-2*	7/5/2023–7/10/2023	5 days	Lat: 34.106291° Long: -117.140665°	Facing east toward burrow 6 (immediately W of SCE pole #254468E and north of graded road).
C-3*	7/5/2023–7/10/2023	5 days	Lat: 34.106380° Long: -117.140609°	Facing northeast toward burrows 7 and 8 (north of graded road).
C-4*	7/5/2023–7/10/2023	5 days	Lat: 34.106385° Long: -117.140033°	Facing west toward burrows 10 and 12 (north of graded road).
C-5*	7/5/2023–7/10/2023	5 days	Lat: 34.106289° Long: -117.140028°	Facing southwest toward burrow 11 (north of graded road).

Camera	Deployment Dates	Camera Duration	Location	Camera Direction
C-6*	7/5/2023–7/10/2023	5 days	Lat: 34.106116° Long: -117.139955°	Facing northwest toward burrows 42 and 43 (south of graded road and north of Weaver Street).
C-7	7/5/2023–7/10/2023	5 days	Lat: 34.106402° Long: -117.139813°	Facing southwest toward burrows 15, 16, and 17 (north of graded road and east of exclusion fencing area).
C-8*	7/5/2023–7/10/2023	5 days	Lat: 34.108153° Long: -117.141675°	Facing southeast toward burrows 47 and 48 (northwestern portion of project site).
C-8A*	7/10/2023–7/13/2023	3 days	Lat: 34.108153° Long: -117.141675°	Facing southeast toward burrows 47 and 48 (northwestern portion of project site; new camera).
C-9	7/5/2023–7/10/2023	5 days	Lat: 34.106286° Long: -117.139893°	Facing north toward burrow 14 (north of graded road and east of exclusion fencing area).
C-10	7/5/2023–7/10/2023	5 days	Lat: 34.106134° Long: -117.139592°	Facing east toward burrows 45 and 46 (south of graded road, north of Weaver Street, and east of exclusion fencing area).
C-11	7/5/2023–7/10/2023	5 days	Lat: 34.106294° Long: -117.139600°	Facing north toward burrow 28 (north of graded road and east of exclusion fencing area).
C-12	7/5/2023–7/10/2023	5 days	Lat: 34.106313° Long: -117.141269°	Facing west toward burrows 1, 2, and 3 (north of graded road and west of exclusion area).
C-12A	7/10/2023–7/13/2023	3 days	Lat: 34.106313° Long: -117.141269°	Facing west toward burrows 1, 2, and 3 (north of graded road and west of exclusion area; new camera).
C-13	7/5/2023–7/10/2023	5 days	Lat: 34.106136° Long: -117.141465°	Facing south toward burrows 41 (south of graded road and west of exclusion area).
C-13A	7/10/2023–7/13/2023	3 days	Lat: 34.106136° Long: -117.141465°	Facing south toward burrows 41 (south of graded road and west of exclusion area; new camera).
C-14*	7/5/2023–7/10/2023	5 days	Lat: 34.108311° Long: -117.141672°	Facing east toward burrow 49 (northwestern portion of project site).
C-14A*	7/10/2023–7/13/2023	3 days	Lat: 34.108311° Long: -117.141672°	Facing east toward burrow 49 (northwestern portion of project site; new camera).
C-15	7/5/2023–7/10/2023	5 days	Lat: 34.106395° Long: -117.139750°	Facing northeast toward burrows near 22-26 (north of graded road and east of exclusion fencing area).

\* Camera locations located within the proposed project impact areas.

## Results

### March 2023 Nighttime Small Mammal Activity Survey Results

During the March 2023 nighttime small mammal activity survey, five of the six wildlife cameras captured data during the survey effort spanning over five days. Wildlife camera 4 (C-04) malfunctioned and did not capture any photos during the survey. Species detected at the five functioning wildlife camera locations (C-01, C-02, C-03, C-05, and C-06) included coyote (*Canis latrans*), California ground squirrel (*Otospermophilus douglasii*), desert cottontail (*Sylvilagus audubon*), various bird species (i.e., swallows (*Hirundo* spp.), common ravens (*Corvus corax*), and American crows (*Corvus brachyrhynchos*)), western fence lizard (*Sceloporus occidentalis*), invertebrates (i.e., flies, bees, moths, and butterflies), and domesticated dog. Vehicles also accounted for a

number of the photo captures within March 2023 survey area. A summary of the results of the wildlife camera data from March 24, 2023, to March 28, 2023, can be found in **Table 3**.

**TABLE 3**  
**MARCH 2023 REMOTE NIGHTTIME ACTIVITY SURVEY DATA (UNIQUE CAMERA DETECTIONS)**

Camera Station No.	Coyote	Domesticated Dog	California Ground Squirrel	Desert Cottontail	Swallow, Crow, Raven	Fence Lizard	Fly, Bee, Moth, Butterfly	Car, Truck
	Mammals				Birds	Reptiles	Invertebrates	Vehicle
C-01	4	0	0	0	0	0	0	0
C-02	6	0	0	10	0	0	0	0
C-03	2	0	0	0	8	0	4	8
C-04	Camera Malfunctioned (No Data)							
C-05	0	0	0	14	0	1	14	10
C-06	0	2	46	13	0	0	1	8
<b>Total</b>	<b>12</b>	<b>2</b>	<b>46</b>	<b>37</b>	<b>8</b>	<b>1</b>	<b>19</b>	<b>26</b>

The most common wildlife species detected during the March 2023 nighttime small mammal activity survey was California ground squirrel (46 unique camera detections) and desert cottontail (37 unique camera detections), followed by invertebrates (19 unique camera detections), coyote (12 unique camera detections), birds (8 unique camera detections), domesticated dog (2 unique camera detections), and fence lizard (1 unique camera detections). Many of the photos taken of these species are likely of the same individuals recurring through the photograph frame and captured numerous times. Thus, the total unique camera detections captured are not representative of these species' population size in the area. Additionally, California ground squirrel observations were most prevalent during the daytime, while desert cottontail was captured primarily in the early mornings and evenings. Although coyotes triggered 12 unique camera detections across three camera locations (C-1, C-2, and C-3), based on the time stamp of the detection and the sightings, these detections are from one or two coyote individuals captured across multiple cameras based on the view from camera 1 which shows the coyote going through the line of sight of other cameras located in the survey area. No Rodentia species were detected during the March 2023 nighttime activity survey. Representative photographs of wildlife species detected in March 2023 are included in **Attachment A, Representative Photographs of Wildlife Detected during the Nighttime Activity Survey**.

### July 2023 Nighttime Small Mammal Activity Survey Results

During the subsequent July 2023 nighttime small mammal activity survey, all 15 wildlife cameras captured data during the survey effort spanning a minimum of five days. Four of the wildlife cameras (C-8, C-12, C-13, and C-14) were not working to their fullest extent (e.g., were capturing only video, minimal images were captured, etc.) and were replaced with known functioning cameras and were left on site for an additional three days; thus,

cameras at these camera locations captured images for a total of eight days. Species detected at the 15 wildlife camera locations included coyote, California ground squirrel, desert cottontail, deer mouse (*Peromyscus* sp.), kangaroo rat (*Dipodomys* sp.), pocket mouse (*Chaetodipus* sp.), rodent (unknown) (Rodentia that could not be determined to genus from the photo capture), woodrat (*Neotoma* sp.), various birds (swallow, crow, raven, and towhee (*Pipilo* spp.)), herptiles (i.e., fence lizard, whiptail (*Aspidoscelis* sp.), and toad), invertebrates (i.e., flies, bees, moths, butterflies, unknown), and vehicles. A summary of the results of the wildlife camera data from July 5, 2023, to July 13, 2023, can be found in **Table 4**. Eight of the camera locations (C-1 through C-6, C-8, and C-14) occurred within the proposed project impact area, while the remaining seven camera locations (C-7, C-9 through C-13, and C-15) were installed outside of the proposed project impact area. The eight camera locations installed within the project impact area are highlighted in brown in **Table 4** below.

**TABLE 4**  
**JULY 2023 REMOTE NIGHTTIME ACTIVITY SURVEY DATA (UNIQUE CAMERA DETECTIONS)**

Camera Station No.	Coyote	California Ground Squirrel	Desert Cottontail	Deer Mouse	Kangaroo Rat	Pocket Mouse	Rodent (Unknown)	Woodrat	Swallow, Crow, Raven, Towhee	Fence Lizard	Whiptail	Toad	Fly, Bee, Moth, Butterfly	Car, Truck
	Mammals								Birds	Herptiles			Invertebrates	Vehicle
C-1	0	0	0	4	0	0	0	0	0	4	7	0	17	14
C-2*	1	0	4	2	8	0	2	10	2	3	4	0	2	1
C-3*	0	0	1	0	1	0	0	0	0	0	0	0	4	54
C-4*	0	0	7	0	1	0	0	0	0	0	2	1	0	0
C-5	0	0	0	4	0	0	0	0	0	0	2	3	5	0
C-6	0	0	1	0	0	0	0	0	0	0	0	0	15	5
C-7*	2	1	7	11	2	0	5	0	0	0	4	0	2	0
C-8	0	0	0	0	0	0	0	0	0	0	0	0	18	3
C-8A	0	0	0	0	0	6	0	0	0	0	0	0	0	0
C-9*	0	1	13	0	6	0	0	4	1	0	0	0	2	0
C-10	0	0	1	0	0	0	0	2	0	0	1	0	34	0
C-11	0	0	0	0	0	0	3	0	0	0	0	0	22	0
C-12*	0	0	1	1	4	0	0	0	0	0	0	0	1	0
C-12A*	0	1	0	0	4	0	0	0	0	0	1	0	63	0
C-13	0	0	0	0	0	0	0	0	0	0	0	0	3	0
C-13A	0	0	0	0	0	0	0	0	0	0	0	0	58	0
C-14	0	0	0	0	0	0	0	0	0	0	0	0	1	0
C-14A	0	0	2	3	0	0	0	0	0	0	1	1	1	0
C-15	0	0	1	0	0	0	0	0	0	0	0	0	2	2
<b>Total</b>	<b>3</b>	<b>3</b>	<b>38</b>	<b>25</b>	<b>26</b>	<b>6</b>	<b>10</b>	<b>16</b>	<b>3</b>	<b>7</b>	<b>22</b>	<b>5</b>	<b>250</b>	<b>79</b>

\* Camera locations with kangaroo rat detection(s).

The most common wildlife species detected during the July 2023 nighttime small mammal activity survey were invertebrates (250 unique camera detections), followed by desert cottontail (38 unique camera detections), kangaroo rat (26 unique camera detections), deer mouse (25 unique camera detections), and whiptail (22 unique camera detections). Other species observed less frequently include woodrat (16 unique camera detections), unknown Rodentia (10 unique camera detections), fence lizard (7 unique camera detections), pocket mouse (6 unique camera detections), toad (5 unique camera detections), California ground squirrel (3 unique camera detections), and coyote (3 unique camera detections). During July 2023, Rodentia species accounted for a total of 83 unique camera detections and may have been of the same individuals recurring through the photograph frame and captured numerous times. Thus, the total unique camera detections captured are not representative of their population size in the area. Representative photographs of wildlife species detected in July 2023 are included in **Attachment A**.

## Weather

Weather likely played a role in the lack of Rodentia activity detected during the March 2023 nighttime activity small mammal activity survey effort, which resulted in additional nighttime small mammal activity surveys being warranted in July 2023. During the March 2023 nighttime small mammal activity survey, temperatures ranged from a low of 34.5° Fahrenheit (F) to a high of 71.4° F with most nighttime temperatures occurring between 37° F and 50° F during the time when kangaroo rats would be most active. During the July 2023 nighttime small mammal activity survey, temperatures ranged from a low of 54.3° F to a high of 101.8° F with most nighttime temperatures occurring between 57° F and 75° F during the time when kangaroo rats would be most active. Weather data for the March and July 2023 survey dates are summarized in **Tables 5** and **6**.

**TABLE 5**  
**MARCH AND JULY 2023 REMOTE NIGHTTIME ACTIVITY SURVEY WEATHER DATA**

Average Weather Conditions	March 2023 Dates					July 2023 Dates									
	3/24	3/25	3/26	3/27	3/28	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	
Temperature Low (°F)	41.7	37.4	34.5	38.3	41.7	55.8	54.7	54.3	55.8	55.8	57.4	63.0	66.9	66.7	
Temperature High (°F)	63.3	64.0	63.5	68.5	71.4	94.8	91.8	89.8	91.2	91.2	99.1	101.8	98.8	98.8	
Temperature Average (°F)	51.3	50.0	49.8	52.4	56.1	74.6	72.5	71.2	72.1	73.2	77.9	81.8	82.7	82.3	
Wind Low (MPH)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Wind High (MPH)	9.8	12.5	8.5	8.5	8.1	10.1	7.4	8.1	8.5	7.2	7.2	6.9	7.4	7.4	
Wind Average (MPH)	0.9	1.3	1.2	0.7	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.8	
Wind Direction	WNW	SSE	NNW	SE	WNW	NW	WNW	W	WNW	WNW	WNW	WNW	WNW	WNW	
Precipitation Average (in.)	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Moon Phase	WC	WC	WC	WC	FQ	WG	WG	WG	LQ	LQ	LQ	WC	WC	WC	
Moon Visibility (%)	11.7	19.3	28.0	37.4	50.0	88.6	79.9	69.8	28.8	47.7	37.0	27.1	18.5	11.3	

Legend:

°F = degrees Fahrenheit

MPH = miles per hour

in. = inches

% = percent

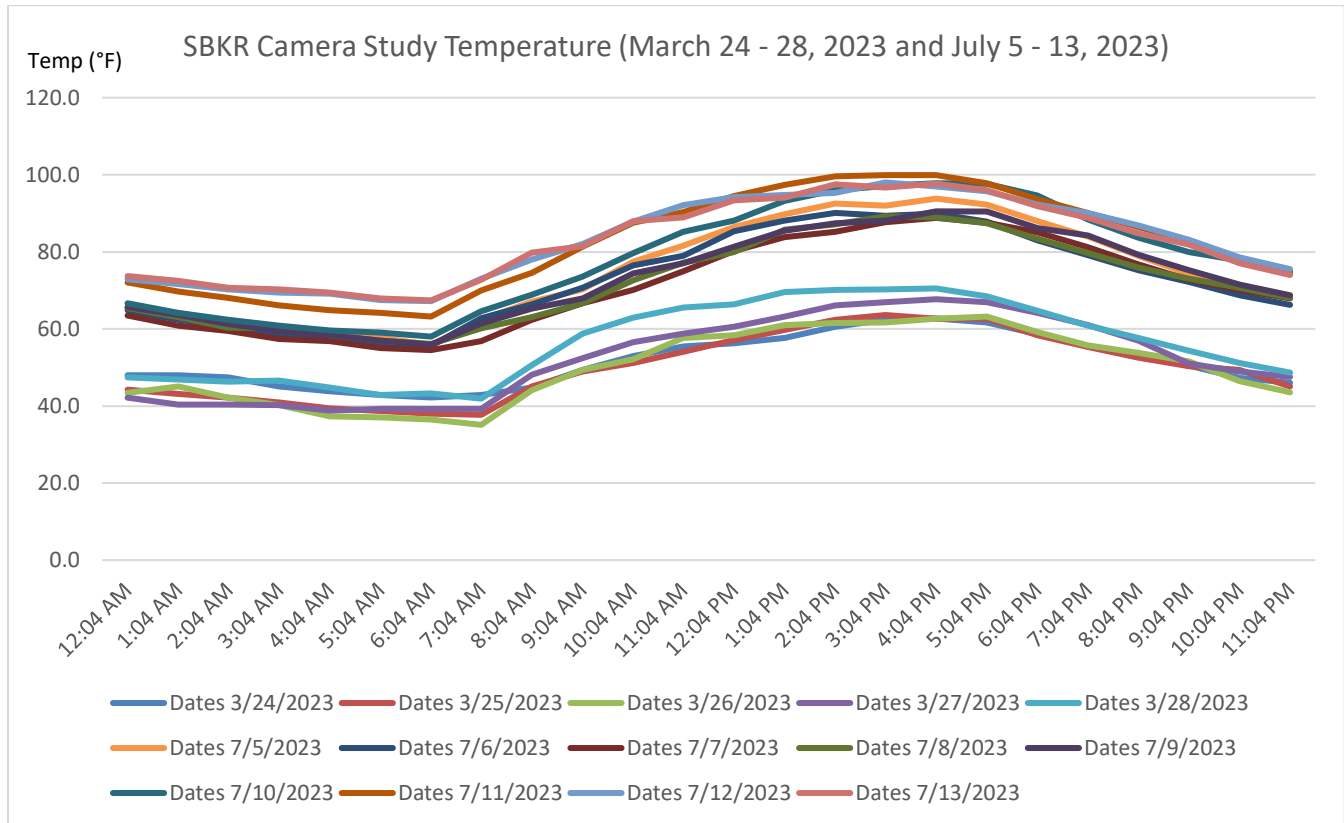
FQ = First Quarter

LQ = Last Quarter

WC = Waxing Crescent

WG = Waning Gibbous

**TABLE 6**  
**MARCH AND JULY 2023 REMOTE NIGHTTIME ACTIVITY SURVEY TEMPERATURE GRAPH**



## Discussion

The March 2023 nighttime small mammal activity survey focused on the small mammal movement in the southern portion of the project site where the exclusion fencing was proposed. Although two small mammals, California ground squirrel and desert cottontail, were frequently detected in the survey area during the March 2023 nighttime small mammal activity survey effort, no rodent species were observed. Based on the results of the previous SBKR trapping efforts conducted in the project site in 2022, five rodent species are known to occur in the general project area: SBKR (3 individuals over 7 captures outside the survey area), San Diego pocket mouse (76 total captures), Bryant's woodrat (45 total captures), northern Baja deer mouse (16 total captures), and deer mouse (18 total captures) (ECORP 2022). Thus, ESA anticipated capturing unique camera detections for rodent species known to occur in the survey area during the nighttime activity survey. Cameras were placed in a manner that should have captured rodent activity if present on site, and cameras detected species of similar size or smaller and less detectable than rodents (i.e., invertebrates and fence lizards). Thus, weather was thought to have played a major role in why other rodent species that were likely to be present in the survey area were not detected during the March 2023 nighttime activity survey.

During the March 2023 survey effort, the weather dropped below 50° Fahrenheit (F) and was documented as low as 34.5°F on March 26, 2023, during the time that these species would have been active in the nighttime if present (see **Tables 5** and **6**). Based on literature review, San Diego pocket mouse is active year-round, but are known to have reduced activity during cold spells (Zeiner 1990). Likewise, although deer mice do not hibernate, they may become dormant (torpid) when weather is especially severe (University of California Agriculture and



Natural Resources 2012). While it was unclear whether the cold weather experienced during the nighttime activity survey may have influenced kangaroo rat or woodrat movement in the area, it is likely that the movement of San Diego pocket mouse, northern Baja deer mouse, and deer mouse known to occur in the area was affected by the cold spell experienced during the nighttime activity survey. As a result of the lack of Rodentia species identified during the March 2023 nighttime activity survey effort, it was recommended that an additional nighttime activity survey be conducted when weather conditions are more suitable for rodent detection, that additional cameras be installed throughout the southern portion of the project site to get a better understanding of all small mammal movement in the southern portion of the project site, and the more recently documented suitable SBKR burrows in the northwestern portion of the project site also be included in the survey to gain a more thorough understanding of rodent activity throughout the project site. Thus, an additional nighttime activity survey was conducted in July 2023.

The July 2023 nighttime small mammal activity survey was conducted in summer when temperatures were more conducive to capturing photos of rodent activity in the project area and included a slightly larger area to cover all areas with suitable SBKR habitat (i.e., within the northwestern portion of the project site and areas outside of project impact areas). The July 2023 nighttime activity survey effort resulted in the detection of four rodent genus including: 25 unique camera detections for deer mouse (*Peromyscus* sp.), 26 unique camera detections for kangaroo rat (*Dipodomys* sp.), 6 unique camera detections for pocket mouse (*Chaetodipus* sp.), and 16 unique camera detections for woodrat (*Neotoma* sp.). Additionally, 10 unique camera detections were confirmed to be rodents but could not be determined to genus based on the photo captures; thus, is represented as unknown rodent in the data. A total of 83 unique camera detections were captured for rodent species during the July 2023 nighttime activity survey. Kangaroo rat individuals were confirmed at six camera locations, including C-2, C-3, and C-4 within the proposed work areas and C-7, C-9, and C-12/12A outside of proposed work areas. Although there is no way to confirm the kangaroo rat to species level during the photo captures, it is assumed that these photo detections may be SBKR based on species known to occur in the area; however, Dulzura kangaroo rat (*Dipodomys simulans*) range also overlaps with the project site and survey areas. Therefore, additional trapping efforts would be required to confirm the species of kangaroo rat present on site.

## Recommendations

We recommend small mammal trapping be conducted in the project area to confirm the presence of kangaroo rat species on the project site. Alternatively, Metropolitan could assume the presence of SBKR on the project site and obtain take permits under the state and federal Endangered Species Acts (ESAs). This would ensure that the project is covered for incidental take if SBKR is found on the site in the future.

## References

- ECORP. 2022. Results of a Focused San Bernardino Kangaroo Rat Trapping Survey Conducted for the Metropolitan Water District of Southern California's Foothill Pump Station Project, Highland, San Bernardino, California. November 18, 2022. 18 pp.
- ESA. 2023. Results of a San Bernardino Kangaroo Rat Burrow Survey for Metropolitan's Inland Feeder Foothill Pump Station Intertie Phase 1 Project, City of Highland, San Bernardino County, California. April 13, 2023. 4 pp.

University of California Agriculture and Natural Resources. 2012. *Deer Mouse*. Integrated Pest Management for Home Gardeners and Landscape Professionals. Statewide Integrated Pest Management Program. Pest Notes Publication 74161. June 2012. 5pp.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1990. *California's Wildlife. Life History Account for San Diego Pocket Mouse*. Volume III: Mammals. California Department of Fish and Game, Sacramento, California. California Statewide Wildlife Habitat Relationship System.  
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=2459>. Accessed April 21, 2023.

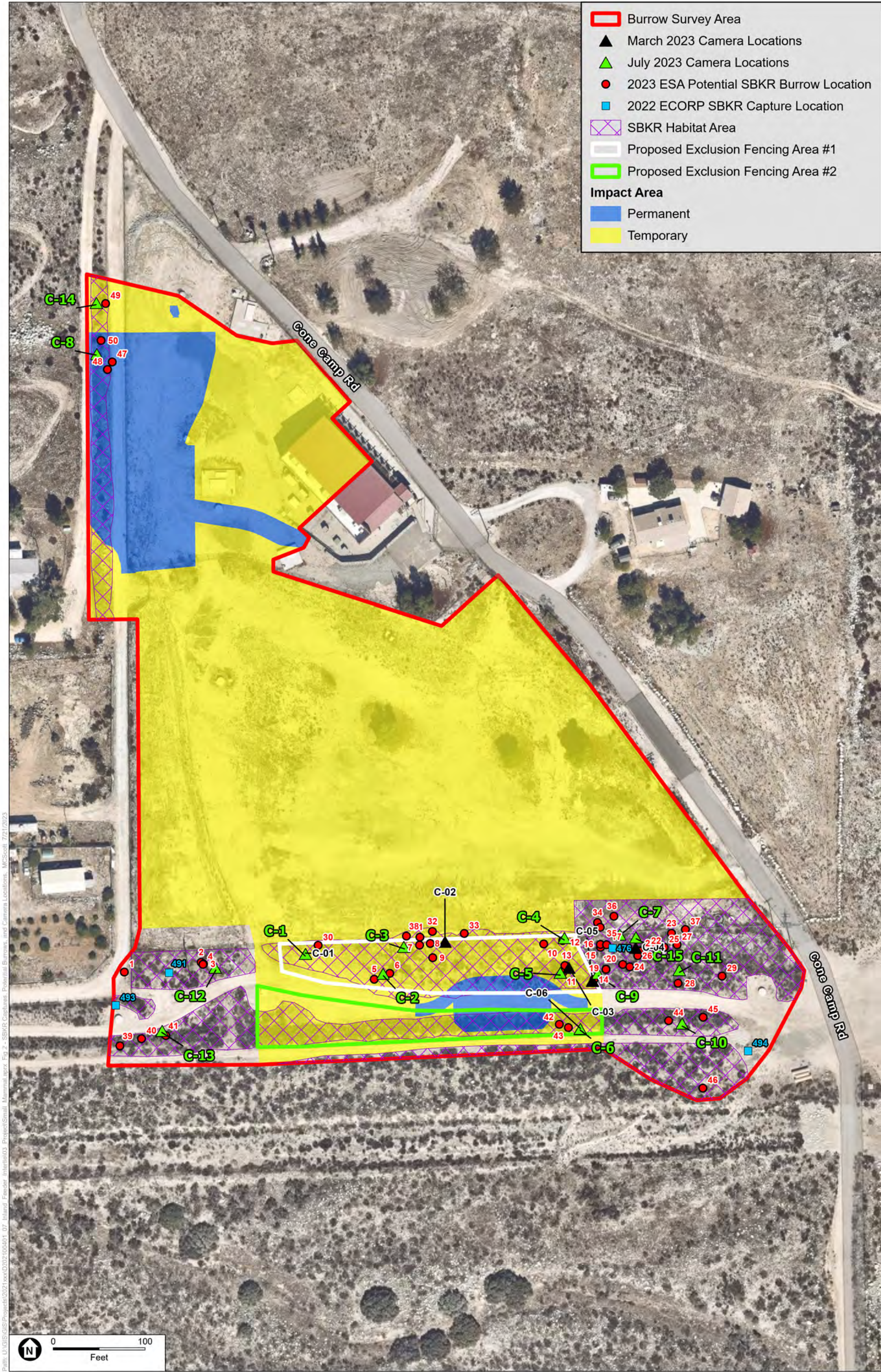


SOURCE: ESA, 2023

Inland Feeder Foothill Pump Station Intertie Phase 1 Project

**Figure 1**  
Regional Vicinity and Project Location





SOURCE: ESA, 2023

Inland Feeder Foothill Pump Station Intertie Phase 1 Project

**Figure 2**  
SBKR Captures, Potential Burrows, and Camera Locations





## **Attachment A Representative Photographs of Wildlife Detected during the Nighttime Activity Surveys**



 <p>Bushnell TROPHY CAM 35°F 1°C 03-27-2023 02:53:03</p>	 <p>Bushnell TROPHY CAM 38°F 3°C 03-27-2023 03:14:48</p>
Coyote detected at Camera 1 in March 2023.	Coyote at Camera 1 in March 2023 (Camera 2 light triggered in background).
 <p>Bushnell TROPHY CAM 33°F 0°C 03-26-2023 06:02:34</p>	 <p>Bushnell TROPHY CAM 38°F 3°C 03-27-2023 03:14:08</p>
Desert cottontail detected at Camera 2 in March 2023.	Coyote detected at Camera 2 in March 2023.



## A. Representative Photographs of Wildlife Detected during the Nighttime Activity Survey



Desert cottontail detected at Camera 5 in March 2023.



California ground squirrel detected at Camera 6 in March 2023.

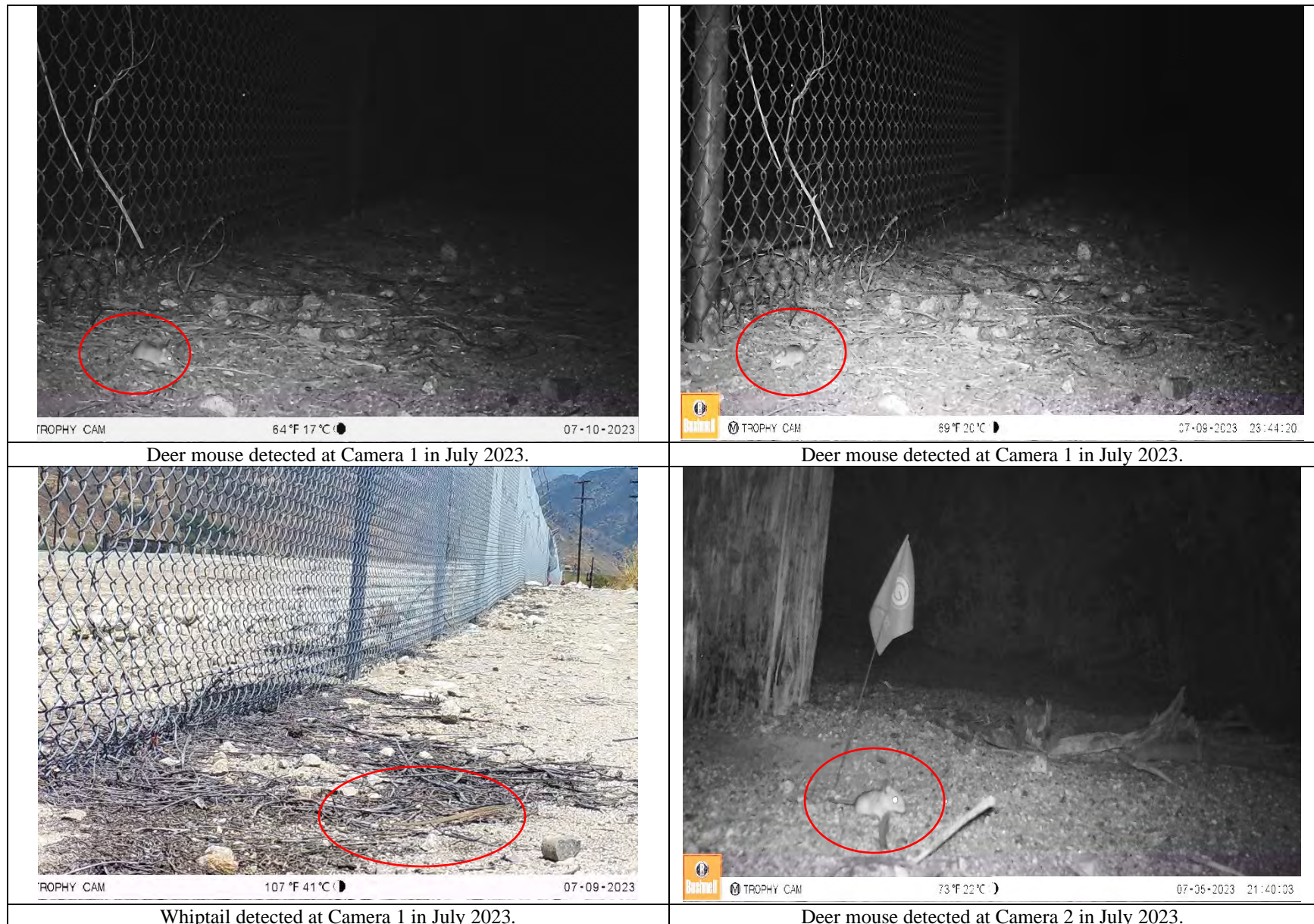


Domesticated dog detected at Camera 6 in March 2023.



Desert cottontail detected at Camera 6 in March 2023.







## A. Representative Photographs of Wildlife Detected during the Nighttime Activity Survey





Whiptail detected at Camera 2 in July 2023.



Desert cottontail detected at Camera 2 in July 2023.



Woodrat detected at Camera 2 in July 2023.



Kangaroo rat detected at Camera 3 in July 2023.



## A. Representative Photographs of Wildlife Detected during the Nighttime Activity Survey

 <p>TROPHY CAM 58°F 14°C 07-07-2023</p>	 <p>Bushnell TROPHY CAM 86°F 30°C 07-10-2023 20:26:55</p>
Desert cottontail detected at Camera 3 in July 2023.	Two desert cottontails detected at Camera 4 in July 2023.
 <p>TROPHY CAM 59°F 15°C 07-11-2023</p>	 <p>Bushnell TROPHY CAM 109°F 42°C 07-11-2023 12:37:26</p>
Kangaroo rat detected at Camera 4 in July 2023.	Whiptail detected at Camera 4 in July 2023.





Desert cottontail detected at Camera 4 in July 2023.



Deer mouse detected at Camera 5 in July 2023.



Toad detected at Camera 5.




Desert cottontail detected at Camera 6 in July 2023.

## A. Representative Photographs of Wildlife Detected during the Nighttime Activity Survey

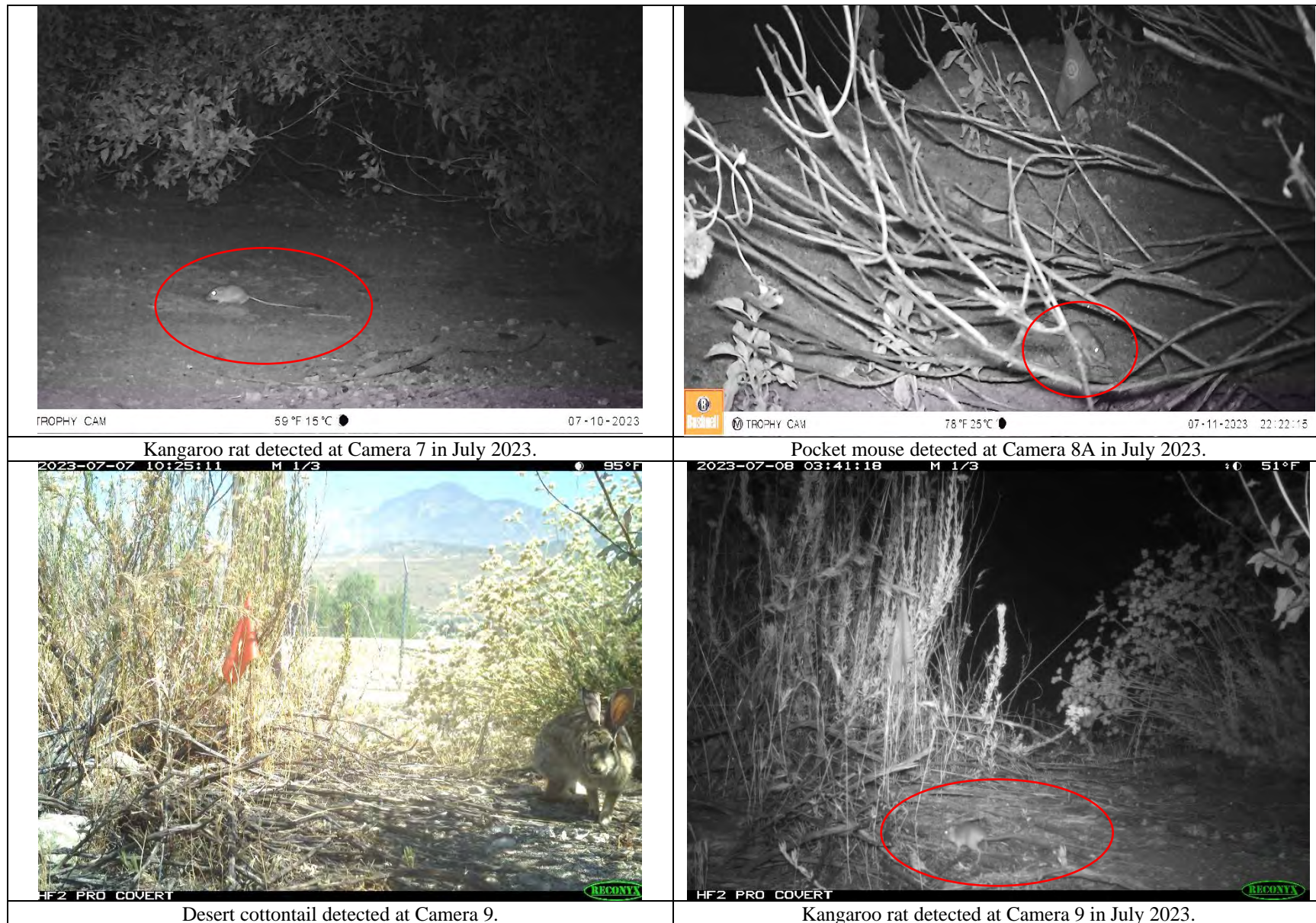
 <p>TROPHY CAM 78°F 25°C 07-05-2023</p>	 <p>Bushnell 70°F 21°C 07-06-2023 22:12:53</p>
Desert cottontail detected at Camera 7 in July 2023.	Deer mouse detected at Camera 7 in July 2023.
 <p>TROPHY CAM 62°F 16°C 07-07-2023</p>	 <p>Bushnell TROPHY CAM 60°F 15°C 07-07-2023 00:42:09</p>
Deer mouse detected at Camera 7 in July 2023.	Coyote detected at Camera 7 in July 2023.



 <p>A daytime photograph of a dirt path with dry brush in the background. A small, dark lizard is on the path, circled in red. The image is from a Trophy Cam.</p> <p>TROPHY CAM 101°F 38°C 07-07-2023</p>	 <p>A nighttime photograph of a dirt path with dark foliage in the background. A small mouse is on the path, circled in red. The image is from a Bushnell Trophy Cam.</p> <p>Bushnell TROPHY CAM 60°F 15°C 07-09-2023 01:14:18</p>
Whiptail detected at Camera 7 in July 2023.	Deer mouse detected at Camera 7 in July 2023.
 <p>A nighttime photograph of a dirt path with dark foliage in the background. A kangaroo rat is on the path, circled in red. The image is from a Trophy Cam.</p> <p>TROPHY CAM 56°F 13°C 07-09-2023</p>	 <p>A daytime photograph of a dirt path with dry brush in the background. A California ground squirrel is on the path. The image is from a Bushnell Trophy Cam.</p> <p>Bushnell TROPHY CAM 90°F 32°C 07-09-2023 10:38:27</p>
Kangaroo rat detected at Camera 7 in July 2023.	California ground squirrel detected at Camera 7 in July 2023.



## A. Representative Photographs of Wildlife Detected during the Nighttime Activity Survey







Woodrat detected at Camera 9 in July 2023.



Whiptail detected at Camera 10 in July 2023.



Desert cottontail detected at Camera 10 in July 2023.



Woodrat detected at Camera 10 in July 2023.



## A. Representative Photographs of Wildlife Detected during the Nighttime Activity Survey



Kangaroo rat detected at Camera 12 in July 2023.



Kangaroo rat detected at Camera 12 in July 2023.







Kangaroo rat detected at Camera 12A in July 2023.



California ground squirrel detected at Camera 12A in July 2023.



 <p>TROPHY CAM 69°F 20°C 07-13-2023</p>	 <p>Bestnet 70°F 21°C 07-13-2023 04:29:57</p>
<p>Kangaroo rat detected at Camera 12A in July 2023.</p>	<p>Kangaroo rat detected at Camera 12A in July 2023.</p>
 <p>TROPHY CAM 69°F 20°C 07-13-2023</p>	 <p>Bestnet TROPHY CAM 71°F 21°C 07-11-2023 01:47:17</p>
<p>Foraging kangaroo rat detected at Camera 12A in July 2023.</p>	<p>Deer mouse detected at Camera 14 in July 2023.</p>



## A. Representative Photographs of Wildlife Detected during the Nighttime Activity Survey



Desert cottontail detected at Camera 14 in July 2023.



Juvenile toad detected at Camera 14 in July 2023.



Deer mouse detected at Camera 14 in July 2023.



Desert cottontail detected at Camera 15 in July 2023.

# **Attachment B**

## **Representative Photographs**







**Photo 1 (N).** Photograph depicts the annual grasses and forbs habitat located northeast of the project area within the study area.



**Photo 2 (N).** Photograph depicts the brittle bush scrub habitat located east of the project area within the study area.





**Photo 3 (E).** Photograph depicts the brittle bush-California buckwheat scrub habitat present within and surrounding the constructed drainage located south of the project area within the study area.



**Photo 4 (W).** Photograph depicts the chamise chaparral-brittle bush scrub habitat within the southeastern portion of the study area outside of the project area.





**Photo 5 (W).** Photograph depicts the southern portion of the project area.



**Photo 6 (N).** Photograph depicts the potentially suitable SBKR habitat present along the west side of the project area.





**Photo 7 (S).** Photograph depicts the hairy yerba santa scrub habitat present within the southern portion of the study area outside of the project area.



**Photo 8 (W).** Photograph depicts Ephemeral Drainage 1 located within the northern portion of the study area outside of the project area.





**Photo 9 (W).** Photograph depicts Ephemeral Drainage 2 located within the southern portion of the study area outside of the project area.



**Photo 10 (W).** Photograph depicts Ephemeral Drainage 3 located within the southern portion of the study area outside of the project area.

# Attachment C

## **Floral and Faunal Compendia**



Scientific Name	Common Name	Comment
<b>Flora</b>		
<b>Angiosperms</b>		
<b>Eudicots</b>		
Anacardiaceae	Cashew Family	
<i>Rhus ovata</i>	sugar bush	
<i>Schinus molle</i> *	Peruvian pepper tree	
Asteraceae	Aster Family	
<i>Ambrosia psilostachya</i>	western ragweed	
<i>Artemisia californica</i>	California sagebrush	
<i>Baccharis salicifolia</i>	mule fat	
<i>Centaurea melitensis</i>	Maltese star thistle	
<i>Encelia farinosa</i>	brittlebush	
<i>Gutierrezia californica</i>	California matchweed	
<i>Helianthus annuus</i>	common sunflower	
<i>Heterotheca grandiflora</i>	telegraphweed	
Bigoniaceae	Bigonia Family	
<i>Jacaranda mimosifolia</i> *	black poui	
Boraginaceae	Forget-me-not Family	
<i>Amsinckia menziesii</i>	small flowered fiddleneck	
Brassicaceae	Mustard Family	
<i>Brassica nigra</i> *	black mustard	
<i>Brassica tournefortii</i> *	Saharan mustard	
<i>Hirschfeldia incana</i> *	short-podded mustard	
Cactaceae	Cactus Family	
<i>Cylindropuntia californica</i>	California cholla	
Convolvulaceae	Bindweed Family	
<i>Cuscuta californica</i>	California dodder	
Cucurbitaceae	Gourd Family	
<i>Marah macrocarpa</i>	chilicothe	
Cupressaceae	Cypress Family	
<i>Cupressus sempervirens</i> *	Italian cypress	
Fabaceae	Pea Family	
<i>Acmispon glaber</i>	deerweed	
Fagaceae	Beech, Chestnut, and Oak Family	
<i>Quercus</i> sp.	scrub oak	
Geraniaceae	Geranium Family	
<i>Erodium botrys</i> *	broad leaf filaree	



Scientific Name	Common Name	Comment
<i>Erodium</i> sp.*	filaree	
Hydrophyllaceae	Waterleaf Family	
<i>Phacelia distans</i>	common phacelia	
Malvaceae	Mallow Family	
<i>Malva parviflora</i> *	cheeseweed mallow	
Myrtaceae	Myrtle Family	
<i>Eucalyptus</i> sp.*	eucalyptus	
Namaceae	Nama Family	
<i>Eriodictylon trichocalyx</i>	hairy yerba santa	
Nyctaginaceae	Four O'Clock Family	
<i>Mirabilis laevis</i>	desert wishbone bush	
Oleaceae	Olive Family	
<i>Olea europaea</i> *	olive	
Polygonaceae	Buckwheat Family	
<i>Eriogonum fasciculatum</i>	California buckwheat	
<i>Eriogonum gracile</i>	slender buckwheat	
Rosaceae	Rose Family	
<i>Adenostoma fasciculatum</i>	chamise	
Rutaceae	Citrus Family	
<i>Citrus x sinensis</i>	orange	
Salicaceae	Willow Family	
<i>Populus fremontii</i>	Fremont cottonwood	
<i>Salix exigua</i>	sandbar willow	
Simaroubaceae	Quassia Family	
<i>Ailanthus altissima</i> *	tree of heaven	
Solanaceae	Nightshade Family	
<i>Datura wrightii</i>	sacred datura	
<i>Nicotiana glauca</i> *	tree tobacco	
<i>Solanum xanti</i> *	purple nightshade	
Tamaricaceae	Tamarisk Family	
<i>Tamarix</i> sp.*	tamarisk	

## Gymnosperms

Pinaceae	Pine Family	
<i>Cedrus deodara</i> *	deodar cedar	

## Monocots

Agavaceae	Agave Family	
<i>Hesperoyucca whipplei</i>	chaparral yucca	

Scientific Name	Common Name	Comment
Arecaceae	Palm Family	
<i>Syagrus romanzoffiana</i> *	queen palm	
Poaceae	Grass Family	
<i>Arundo donax</i> *	giant reed	
<i>Avena</i> sp.*	oat	
<i>Bromus</i> sp.*	brome	
<i>Bromus diandrus</i> *	ripgut brome	
<i>Pennisetum setaceum</i> *	fountaingrass	

## Ferns

Pteridaceae	Brake Family	
<i>Pellaea andromedifolia</i>	coffee fern	

Scientific Name	Common Name	Comment
<b>Fauna</b>		
<b>Birds</b>		
Phasianidae	Pheasants	
<i>Pavo cristatus*</i>	Indian peafowl	
Columbidae	Pigeons and Doves	
<i>Streptopelia decaocto*</i>	Eurasian collared dove	
<i>Zenaida macroura</i>	mourning dove	
Trochillidae	Hummingbirds	
<i>Calypte anna</i>	Anna's hummingbird	
Corvidae	Jays and Crows	
<i>Corvus corax</i>	common raven	
Fringillidae	Finches	
<i>Haemorhous mexicanus</i>	House finch	
<i>Sturnella neglecta</i>	western meadowlark	
Aegithalidae	Bushtits	
<i>Psaltiriparus minimus</i>	bushtit	
Troglodytidae	Wrens	
<i>Thryomanes bewickii</i>	Bewick's wren	
Parulidae	<b>New World Warblers</b>	
<i>Setophaga coronata</i>	yellow-rumped warbler	
Tyrannidae	Tyrant Flycatchers	
<i>Sayornis nigricans</i>	black phoebe	
<i>Sayornis saya</i>	Say's phoebe	
Poliophtilidae	Gnatcatchers and Gnatwrens	
<i>Poliophtila caerulea</i>	blue-gray gnatcatcher	
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	Federally threatened; CDFW species of special concern
Passerellidae	New World Sparrows	
<i>Melozone crissalis</i>	California towhee	
<i>Zonotrichia leucophrys</i>	white-crowned sparrow	

# Attachment D

## **CNDDDB and CNPS Results**



CALIFORNIA DEPARTMENT OF  
FISH and WILDLIFE **RareFind**

**Query Summary:**

Quad IS (Redlands (3411712) OR San Bernardino North (3411723) OR Harrison Mtn. (3411722) OR Keller Peak (3411721) OR Yucaipa (3411711) OR El Casco (3311781)  
OR Sunnymead (3311782) OR Riverside East (3311783) OR San Bernardino South (3411713))

Print

Close

## CNDDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Accipiter cooperii	Cooper's hawk	Birds	ABNKC12040	118	3	None	None	G5	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Cismontane woodland, Riparian forest, Riparian woodland, Upper montane coniferous forest
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	960	9	None	Threatened	G1G2	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	Birds	ABPBX91091	235	18	None	None	G5T3	S4	null	CDFW_WL-Watch List	Chaparral, Coastal scrub
Allium howellii var. clokeyi	Mt. Pinos onion	Monocots	PMLIL02161	25	1	None	None	G4T2	S2	1B.3	SB_SBBG-Santa Barbara Botanic Garden, USFS_S-Sensitive	Great Basin scrub, Meadow & seep, Pinon & juniper woodlands
Allium marvinii	Yucaipa onion	Monocots	PMLIL02330	47	2	None	None	G1	S1	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral
Anniella stebbinsi	Southern California legless lizard	Reptiles	ARACC01060	427	34	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Coastal dunes, Coastal scrub
Antrozous pallidus	pallid bat	Mammals	AMACC10010	420	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland
Aquila chrysaetos	golden eagle	Birds	ABNKC22010	332	1	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, CDFW_WL-Watch List, IUCN_LC-Least Concern	Broadleaved upland forest, Cismontane woodland, Coastal prairie, Great Basin grassland, Great Basin scrub, Lower montane coniferous forest, Pinon & juniper woodlands, Upper montane coniferous forest, Valley &

## 8/20/2024 Board Meeting

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8/20/2024 Board Meeting						7-4		Attachment 2, Page 290 of 430				foothill grassland
Arenaria paludicola	marsh sandwort	Dicots	PDCAR040L0	19	1	Endangered	Endangered	G1	S1	1B.1	SB_SBBG-Santa Barbara Botanic Garden	Freshwater marsh, Marsh & swamp, Wetland
Arizona elegans occidentalis	California glossy snake	Reptiles	ARADB01017	260	11	None	None	G5T2	S2	null	CDFW_SSC-Species of Special Concern	null
Artemisiospiza belli belli	Bell's sparrow	Birds	ABPBX97021	61	2	None	None	G5T2T3	S3	null	CDFW_WL-Watch List	Chaparral, Coastal scrub
Aspidoscelis hyperythra	orange-throated whiptail	Reptiles	ARACJ02060	369	24	None	None	G5	S2S3	null	CDFW_WL-Watch List, IUCN_LC-Least Concern, USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub
Aspidoscelis tigris stejnegeri	coastal whiptail	Reptiles	ARACJ02143	148	15	None	None	G5T5	S3	null	CDFW_SSC-Species of Special Concern	null
Astragalus hornii var. hornii	Horn's milk-vetch	Dicots	PDFAB0F421	28	1	None	None	GUT1	S1	1B.1	BLM_S-Sensitive	Alkali playa, Meadow & seep, Wetland
Athene cunicularia	burrowing owl	Birds	ABNSB10010	2011	13	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland
Atriplex coronata var. notator	San Jacinto Valley crownscale	Dicots	PDCHE040C2	16	5	Endangered	None	G4T1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Alkali playa, Valley & foothill grassland, Vernal pool, Wetland
Atriplex serenana var. davidsonii	Davidson's saltscale	Dicots	PDCHE041T1	26	1	None	None	G5T1	S1	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, Coastal scrub
Batrachoseps gabrieli	San Gabriel slender salamander	Amphibians	AAAAD02110	8	1	None	None	G2G3	S2S3	null	IUCN_DD-Data Deficient, USFS_S-Sensitive	Talus slope
Berberis nevinii	Nevin's barberry	Dicots	PDBER060A0	32	5	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub
Bombus crotchii	Crotch bumble bee	Insects	IIHYM24480	437	16	None	Candidate Endangered	G2	S2	null	IUCN_EN-Endangered	null
Bombus morrisoni	Morrison bumble bee	Insects	IIHYM24460	86	1	None	None	G3	S1S2	null	IUCN_VU-Vulnerable	null
Bombus pensylvanicus	American bumble bee	Insects	IIHYM24260	304	2	None	None	G3G4	S2	null	IUCN_VU-Vulnerable	Coastal prairie, Great Basin grassland, Valley & foothill grassland
Brodiaea filifolia	thread-leaved brodiaea	Monocots	PMLIL0C050	141	2	Threatened	Endangered	G2	S2	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland
Buteo regalis	ferruginous hawk	Birds	ABNKC19120	107	1	None	None	G4	S3S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Great Basin grassland, Great Basin scrub, Pinon & juniper woodlands, Valley & foothill grassland
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2561	2	None	Threatened	G5	S4	null	BLM_S-Sensitive, IUCN_LC-Least Concern	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Calochortus palmeri var. palmeri	Palmer's mariposa-lily	Monocots	PMLIL0D122	111	4	None	None	G3T2	S2	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara	Chaparral, Lower montane coniferous forest, Meadow & seep



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											USFS_S-Sensitive	
Calochortus plummerae	Plummer's mariposa-lily	Monocots	PMLIL0D150	230	24	None	None	G4	S4	4.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley & foothill grassland
Canyon Live Oak Ravine Forest	Canyon Live Oak Ravine Forest	Riparian	CTT61350CA	50	1	None	None	G3	S3.3	null	null	Riparian forest
Carex comosa	bristly sedge	Monocots	PMCYP032Y0	31	1	None	None	G5	S2	2B.1	IUCN_LC-Least Concern	Coastal prairie, Freshwater marsh, Marsh & swamp, Valley & foothill grassland, Wetland
Castilleja cinerea	ash-gray paintbrush	Dicots	PDSCR0D0H0	53	1	Threatened	None	G1G2	S1S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Meadow & seep, Mojavean desert scrub, Pavement plain, Pinon & juniper woodlands, Upper montane coniferous forest
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	Dicots	PDSCR0D410	46	7	None	None	G2?	S2?	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Meadow & seep, Pavement plain, Riparian woodland, Upper montane coniferous forest, Wetland
Catostomus santaanae	Santa Ana sucker	Fish	AFCJC02190	28	3	Threatened	None	G1	S1	null	AFS_TH-Threatened, IUCN_EN-Endangered	Aquatic, South coast flowing waters
Centromadia pungens ssp. laevis	smooth tarplant	Dicots	PDAST4R0R4	137	17	None	None	G3G4T2	S2	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Alkali playa, Chenopod scrub, Meadow & seep, Riparian woodland, Valley & foothill grassland, Wetland
Ceratochrysis longimala	Desert cuckoo wasp	Insects	IIHYM71040	2	1	None	None	G1	S1	null	null	null
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	Mammals	AMAFD05031	101	25	None	None	G5T3T4	S3S4	null	null	Chaparral, Coastal scrub
Charina umbratica	southern rubber boa	Reptiles	ARADA01011	94	22	None	Threatened	G2G3	S2	null	IUCN_VU-Vulnerable, USFS_S-Sensitive	Meadow & seep, Riparian forest, Riparian woodland, Upper montane coniferous forest, Wetland
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	Dicots	PDSCR0J0C2	26	1	Endangered	Endangered	G4?T1	S1	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank, SB_SBBG-Santa Barbara Botanic Garden	Coastal dunes, Marsh & swamp, Salt marsh, Wetland
Chorizanthe parryi var. parryi	Parry's spineflower	Dicots	PDPGN040J2	150	29	None	None	G3T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland
Chorizanthe xanti var. leucotheca	white-bracted spineflower	Dicots	PDPGN040Z1	59	1	None	None	G4T3	S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_USDA-US Dept of Agriculture, USFS_S-Sensitive	Coastal scrub, Mojavean desert scrub, Pinon & juniper woodlands

Coccyzus americanus occidentalis	western yellow-billed cuckoo	Birds	ABNRB02022	165	3	Threatened	Endangered	G5T2T3	S1	null	BLM_S-Sensitive, USFS_S-Sensitive	Riparian forest
Coleonyx variegatus abbotti	San Diego banded gecko	Reptiles	ARACD01031	8	1	None	None	G5T5	S1S2	null	CDFW_SSC-Species of Special Concern	Chaparral, Coastal scrub
Crotalus ruber	red-diamond rattlesnake	Reptiles	ARADE02090	192	9	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Chaparral, Mojavean desert scrub, Sonoran desert scrub
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	Dicots	PDCUS01111	6	1	None	None	G5T4?	SH	2B.2	null	Marsh & swamp, Wetland
Diadophis punctatus modestus	San Bernardino ringneck snake	Reptiles	ARADB10015	14	3	None	None	G5T2T3	S2?	null	USFS_S-Sensitive	null
Diplectrona californica	California diplectron caddisfly	Insects	IITRI23010	2	1	None	None	G1G2	S1	null	null	Aquatic
Dipodomys merriami parvus	San Bernardino kangaroo rat	Mammals	AMAFD03143	81	28	Endangered	Candidate Endangered	G5T1	S1	null	CDFW_SSC-Species of Special Concern	Coastal scrub
Dipodomys stephensi	Stephens' kangaroo rat	Mammals	AMAFD03100	226	35	Threatened	Threatened	G2	S3	null	IUCN_VU-Vulnerable	Coastal scrub, Valley & foothill grassland
Dodecahema leptoceras	slender-horned spineflower	Dicots	PDPGN0V010	42	9	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Cismontane woodland, Coastal scrub
Elanus leucurus	white-tailed kite	Birds	ABNKC06010	184	3	None	None	G5	S3S4	null	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern	Cismontane woodland, Marsh & swamp, Riparian woodland, Valley & foothill grassland, Wetland
Empidonax traillii eximius	southwestern willow flycatcher	Birds	ABPAE33043	70	5	Endangered	Endangered	G5T2	S3	null	null	Riparian woodland
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1559	1	Proposed Threatened	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Eremophila alpestris actia	California horned lark	Birds	ABPAT02011	94	4	None	None	G5T4Q	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Marine intertidal & splash zone communities, Meadow & seep
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Dicots	PDPLM03035	31	25	Endangered	Endangered	G4T1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Coastal scrub
Euchloe hyantis andrewsi	Andrew's marble butterfly	Insects	IILEPA5032	6	4	None	None	G4G5T1	S2	null	null	Lower montane coniferous forest
Eugnosta busckana	Busck's gallmoth	Insects	IILEM2X090	15	3	None	None	G1G3	S2S3	null	null	Coastal dunes, Coastal scrub
Eumops perotis californicus	western mastiff bat	Mammals	AMACD02011	296	6	None	None	G4G5T4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern	Chaparral, Cismontane woodland, Coastal scrub, Valley & foothill grassland
Euphydryas editha quino	quino checkerspot butterfly	Insects	IILEPK405L	186	2	Endangered	None	G4G5T1T2	S1S2	null	null	Chaparral, Coastal scrub

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Falco columbarius	merlin	Birds	ABNKD06030	37	2	None	None	G5	S3S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Estuary, Great Basin grassland, Valley & foothill grassland
Fimbristylis thermalis	hot springs fimbriatylis	Monocots	PMCY0B0N0	19	1	None	None	G4	S1S2	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Meadow & seep, Wetland
Galium californicum ssp. primum	Alvin Meadow bedstraw	Dicots	PDRUB0N0E6	12	1	None	None	G5T2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Lower montane coniferous forest
Gila orcuttii	arroyo chub	Fish	AFCJB13120	49	2	None	None	G2	S2	null	AFS_VU-Vulnerable, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, South coast flowing waters
Glaucomys oregonensis californicus	San Bernardino flying squirrel	Mammals	AMAFB09021	12	5	None	None	G5T1T2	S1S2	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Broadleaved upland forest, Lower montane coniferous forest
Haliaeetus leucocephalus	bald eagle	Birds	ABNKC10010	333	3	Delisted	Endangered	G5	S3	null	BLM_S-Sensitive, CDFW_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth
Helianthus nuttallii ssp. parishii	Los Angeles sunflower	Dicots	PDAST4N102	7	1	None	None	G5TX	SX	1A	null	Freshwater marsh, Marsh & swamp, Salt marsh, Wetland
Heuchera parishii	Parish's alumroot	Dicots	PDSAX0E1F0	70	5	None	None	G3	S3	1B.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Alpine boulder & rock field, Limestone, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest
Horkelia cuneata var. puberula	mesa horkelia	Dicots	PDR0S0W045	103	1	None	None	G4T1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Chaparral, Cismontane woodland, Coastal scrub
Icteria virens	yellow-breasted chat	Birds	ABPBX24010	101	3	None	None	G5	S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Riparian forest, Riparian scrub, Riparian woodland
Imperata brevifolia	California satintail	Monocots	PMPOA3D020	32	4	None	None	G3	S3	2B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden, USFS_S-Sensitive	Chaparral, Coastal scrub, Meadow & seep, Mojavean desert scrub, Riparian scrub, Wetland
Ivesia argyrocoma var. argyrocoma	silver-haired ivesia	Dicots	PDR0S0X021	41	1	None	None	G2T2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Meadow & seep, Pavement plain, Upper montane coniferous forest
Lanius ludovicianus	loggerhead shrike	Birds	ABPBR01030	110	3	None	None	G4	S4	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Broadleaved upland forest, Desert wash, Joshua tree woodland, Mojavean desert scrub, Pinon & juniper woodlands, Riparian woodland, Sonoran desert scrub
Lasiurus xanthinus	western yellow bat	Mammals	AMACC05070	58	8	None	None	G4G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Desert wash

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Lasthenia glabrata ssp. coulteri	Coulter's goldfields	Dicots	PDA5T5L0A1	111	7	None	None	G4T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Alkali playa, Marsh & swamp, Salt marsh, Vernal pool, Wetland
Laterallus jamaicensis coturniculus	California black rail	Birds	ABNME03041	304	2	None	Threatened	G3T1	S2	null	BLM_S-Sensitive, CDFW_FP-Fully Protected, IUCN_EN-Endangered	Brackish marsh, Freshwater marsh, Marsh & swamp, Salt marsh, Wetland
Lepidium virginicum var. robinsonii	Robinson's pepper-grass	Dicots	PDBRA1M114	142	9	None	None	G5T3	S3	4.3	null	Chaparral, Coastal scrub
Leptonycteris yerbabuenae	lesser long-nosed bat	Mammals	AMACB03030	2	1	Delisted	None	G3	S1	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Mojavean desert scrub, Sonoran desert scrub, Upper Sonoran scrub
Lepus californicus bennettii	San Diego black-tailed jackrabbit	Mammals	AMAEB03051	103	12	None	None	G5T3T4	S3S4	null	null	Coastal scrub
Lilium parryi	lemon lily	Monocots	PMLIL1A0J0	160	16	None	None	G3	S3	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank, USFS_S-Sensitive	Lower montane coniferous forest, Meadow & seep, Riparian forest, Upper montane coniferous forest, Wetland
Lycium parishii	Parish's desert-thorn	Dicots	PDSOL0G0D0	21	1	None	None	G4	S1	2B.3	SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Coastal scrub, Sonoran desert scrub
Malacothamnus parishii	Parish's bush-mallow	Dicots	PDMAL0Q0C0	1	1	None	None	GXQ	SX	1A	null	Chaparral, Coastal scrub
Monardella macrantha ssp. hallii	Hall's monardella	Dicots	PDLAM180E1	41	5	None	None	G5T3	S3	1B.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley & foothill grassland
Monardella pringlei	Pringle's monardella	Dicots	PDLAM180J0	2	1	None	None	GX	SX	1A	null	Coastal scrub
Nama stenocarpa	mud nama	Dicots	PDHYD0A0H0	22	1	None	None	G4G5	S1S2	2B.2	null	Marsh & swamp, Wetland
Nasturtium gambelii	Gambel's water cress	Dicots	PDBRA270V0	13	1	Endangered	Threatened	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Brackish marsh, Freshwater marsh, Marsh & swamp, Wetland
Neolarra alba	white cuckoo bee	Insects	IIHYM81010	8	2	None	None	GH	SH	null	null	null
Neotamias speciosus speciosus	lodgepole chipmunk	Mammals	AMAFB02172	24	3	None	None	G4T3T4	S2	null	null	Chaparral, Upper montane coniferous forest
Neotoma lepida intermedia	San Diego desert woodrat	Mammals	AMAFF08041	132	5	None	None	G5T3T4	S3S4	null	CDFW_SSC-Species of Special Concern	Coastal scrub
Nyctinomops femorosaccus	pocketed free-tailed bat	Mammals	AMACD04010	90	2	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Joshua tree woodland, Pinon & juniper woodlands, Riparian scrub, Sonoran desert scrub
Oncorhynchus mykiss irideus pop. 10	steelhead - southern California DPS	Fish	AFCHA0209J	19	1	Endangered	Candidate Endangered	G5T1Q	S1	null	AFS_EN-Endangered	Aquatic, South coast flowing waters
Onychomys torridus ramona	southern grasshopper mouse	Mammals	AMAFF06022	28	3	None	None	G5T3	S3	null	CDFW_SSC-Species of Special Concern	Chenopod scrub
Packera bernardina	San Bernardino ragwort	Dicots	PDA5T8H0E0	35	1	None	None	G2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Meadow & seep, Pavement plain, Upper montane coniferous forest, Wetland

Pelazoneuron puberulum var. sonorensis	Sonoran maiden fern	Ferns	PPTHE05192	27	1	None	None	G5T3	S2	2B.2	USFS_S-Sensitive	Meadow & seep, Wetland
Perideridia parishii ssp. parishii	Parish's yampah	Dicots	PDAP11N0C2	37	8	None	None	G4T3T4	S2	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Lower montane coniferous forest, Meadow & seep, Upper montane coniferous forest
Perognathus alticola alticola	white-eared pocket mouse	Mammals	AMAFD01081	3	3	None	None	G2TH	SH	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Lower montane coniferous forest, Mojavean desert scrub, Pinon & juniper woodlands
Perognathus longimembris brevinasus	Los Angeles pocket mouse	Mammals	AMAFD01041	70	18	None	None	G5T2	S1S2	null	CDFW_SSC-Species of Special Concern	Coastal scrub
Phrynosoma blainvillii	coast horned lizard	Reptiles	ARACF12100	824	23	None	None	G4	S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub, Desert wash, Pinon & juniper woodlands, Riparian scrub, Riparian woodland, Valley & foothill grassland
Plegadis chihi	white-faced ibis	Birds	ABNGE02020	20	1	None	None	G5	S3S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Marsh & swamp, Wetland
Polioptila californica californica	coastal California gnatcatcher	Birds	ABPB08081	1087	14	Threatened	None	G4G5T3Q	S2	null	CDFW_SSC-Species of Special Concern	Coastal bluff scrub, Coastal scrub
Rana draytonii	California red-legged frog	Amphibians	AAABH01022	1764	1	Threatened	None	G2G3	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable	Aquatic, Artificial flowing waters, Artificial standing waters, Freshwater marsh, Marsh & swamp, Riparian forest, Riparian scrub, Riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Rana muscosa	southern mountain yellow-legged frog	Amphibians	AAABH01330	186	5	Endangered	Endangered	G1	S2	null	CDFW_WL-Watch List, IUCN_EN-Endangered, USFS_S-Sensitive	Aquatic
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Insects	IIDIP05021	36	20	Endangered	None	G1T1	S1	null	null	Interior dunes
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	Fish	AFCJB3705K	13	3	None	None	G5T1	S1	null	AFS_TH-Threatened, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, South coast flowing waters
Ribes divaricatum var. parishii	Parish's gooseberry	Dicots	PDGRO020F3	5	1	None	None	G5TX	SX	1A	null	Riparian woodland
Riversidian Alluvial Fan Sage Scrub	Riversidian Alluvial Fan Sage Scrub	Scrub	CTT32720CA	30	4	None	None	G1	S1.1	null	null	Coastal scrub
Salvadora hexalepis virgulata	coast patch-nosed snake	Reptiles	ARADB30033	34	2	None	None	G5T4	S3	null	CDFW_SSC-Species of Special Concern	Coastal scrub
Schoenus nigricans	black bog-rush	Monocots	PMCYP0P010	13	1	None	None	G4	S2	2B.2	IUCN_LC-Least Concern, USFS_S-Sensitive	Marsh & swamp, Wetland

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Senecio aphanactis	chaparral ragwort	Dicots	PDAST8H060	98	2	None	None	G3	S2	2B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank	Chaparral, Cismontane woodland, Coastal scrub
Setophaga petechia	yellow warbler	Birds	ABPBX03010	78	3	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Riparian forest, Riparian scrub, Riparian woodland
Sidalcea hickmanii ssp. parishii	Parish's checkerbloom	Dicots	PDMAL110A3	24	1	None	Rare	G3T1	S1	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden, USFS_S-Sensitive	Chaparral, Cismontane woodland, Lower montane coniferous forest
Sidalcea malviflora ssp. dolosa	Bear Valley checkerbloom	Dicots	PDMAL110FH	18	1	None	None	G5T2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive	Lower montane coniferous forest, Meadow & seep, Riparian woodland, Upper montane coniferous forest, Wetland
Sidalcea neomexicana	salt spring checkerbloom	Dicots	PDMAL110J0	30	4	None	None	G4	S2	2B.2	USFS_S-Sensitive	Alkali playa, Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Wetland
Sidalcea pedata	bird-foot checkerbloom	Dicots	PDMAL110L0	24	1	Endangered	Endangered	G1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Meadow & seep, Pavement plain, Wetland
Southern Coast Live Oak Riparian Forest	Southern Coast Live Oak Riparian Forest	Riparian	CTT61310CA	246	2	None	None	G4	S4	null	null	Riparian forest
Southern Cottonwood Willow Riparian Forest	Southern Cottonwood Willow Riparian Forest	Riparian	CTT61330CA	111	3	None	None	G3	S3.2	null	null	Riparian forest
Southern Mixed Riparian Forest	Southern Mixed Riparian Forest	Riparian	CTT61340CA	14	1	None	None	G2	S2.1	null	null	Riparian forest
Southern Riparian Forest	Southern Riparian Forest	Riparian	CTT61300CA	20	1	None	None	G4	S4	null	null	Riparian forest
Southern Riparian Scrub	Southern Riparian Scrub	Riparian	CTT63300CA	56	2	None	None	G3	S3.2	null	null	Riparian scrub
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	Riparian	CTT62400CA	230	16	None	None	G4	S4	null	null	Riparian woodland
Southern Willow Scrub	Southern Willow Scrub	Riparian	CTT63320CA	45	1	None	None	G3	S2.1	null	null	Riparian scrub
Spea hammondi	western spadefoot	Amphibians	AAABF02020	1444	38	Proposed Threatened	None	G2G3	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland
Sphenopholis obtusata	prairie wedge grass	Monocots	PMPOA5T030	19	2	None	None	G5	S2	2B.2	null	Cismontane woodland, Meadow & seep, Wetland
Spinus lawrencei	Lawrence's goldfinch	Birds	ABPBY06100	4	1	None	None	G3G4	S4	null	IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Broadleaved upland forest, Chaparral, Pinon & juniper woodlands, Riparian woodland

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Streptanthus bernardinus	Laguna Mountains jewelflower	Dicots	PDBRA2G060	22	7	None	None	G3G4	S3S4	4.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest
Streptanthus campestris	southern jewelflower	Dicots	PDBRA2G0B0	73	4	None	None	G3	S3	1B.3	BLM_S-Sensitive, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank, USFS_S-Sensitive	Chaparral, Lower montane coniferous forest, Pinon & juniper woodlands
Streptocephalus woottoni	Riverside fairy shrimp	Crustaceans	ICBRA07010	83	2	Endangered	None	G1G2	S2	null	IUCN_EN-Endangered	Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland
Symphyotrichum defoliatum	San Bernardino aster	Dicots	PDASTE80C0	102	3	None	None	G2	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_CRES-San Diego Zoo CRES Native Gene Seed Bank, USFS_S-Sensitive	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Valley & foothill grassland
Taxidea taxus	American badger	Mammals	AMAJF04010	645	3	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Alkali marsh, Alkali playa, Alpine, Alpine dwarf scrub, Bog & fen, Brackish marsh, Broadleaved upland forest, Chaparral, Chenopod scrub, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub, Desert dunes, Desert wash, Freshwater marsh, Great Basin grassland, Great Basin scrub, Interior dunes, lone formation, Joshua tree woodland, Limestone, Lower montane coniferous forest, Marsh & swamp, Meadow & seep, Mojavean desert scrub, Montane dwarf scrub, North coast coniferous forest, Oldgrowth, Pavement plain, Redwood, Riparian forest, Riparian scrub, Riparian woodland, Salt marsh, Sonoran desert scrub, Sonoran thorn woodland, Ultramafic, Upper montane coniferous forest, Upper Sonoran scrub, Valley & foothill grassland
Thamnophis hammondi	two-striped gartersnake	Reptiles	ARADB36160	184	10	None	None	G4	S3S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-	Marsh & swamp, Riparian scrub, Riparian



												Least Concern, USFS_S-Sensitive	Woodland, Wetland
Trichocoronis wrightii var. wrightii	Wright's trichocoronis	Dicots	PDAST9F031	12	1	None	None	G4T3	S1	2B.1	null		Marsh & swamp, Meadow & seep, Riparian forest, Vernal pool, Wetland
Vireo bellii pusillus	least Bell's vireo	Birds	ABPBW01114	505	29	Endangered	Endangered	G5T2	S3	null	null		Riparian forest, Riparian scrub, Riparian woodland





CALIFORNIA  
NATIVE PLANT SOCIETY

## CNPS Rare Plant Inventory

### Search Results

87 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3411712:3411723:3411722:3411721:3411711:3311781:3311782:3311783:3411713]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	PLANT RANK	CA RARE	CA ENDEMIC	DATE ADDED	PHOTO
<a href="#"><i>Abronia villosa</i></a> <a href="#"><i>var. aurita</i></a>	chaparral sand-verbena	Nyctaginaceae	annual herb	(Jan)Mar-Sep	None	None	G5T2?	S2	1B.1			2001-01-01	 © 2011 Aaron E. Sims
<a href="#"><i>Acanthoscyphus parishii</i></a> <a href="#"><i>var. parishii</i></a>	Parish's oxlytheca	Polygonaceae	annual herb	Jun-Sep	None	None	G4? T3T4	S3S4	4.2	Yes		2007-04-05	 © 2014 Keir Morse
<a href="#"><i>Allium howellii</i></a> <a href="#"><i>var. clokeyi</i></a>	Mt. Pinos onion	Alliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4T2	S2	1B.3	Yes		1974-01-01	 © 2016 Keir Morse
<a href="#"><i>Allium marvinii</i></a>	Yucaipa onion	Alliaceae	perennial bulbiferous herb	Apr-May	None	None	G1	S1	1B.2	Yes		2001-01-01	 © 2013 Keir Morse
<a href="#"><i>Androsace elongata</i></a> <a href="#"><i>ssp. acuta</i></a>	California androsace	Primulaceae	annual herb	Mar-Jun	None	None	G5? T3T4	S3S4	4.2			1994-01-01	 © 2008 Aaron Schusteff
<a href="#"><i>Arenaria paludicola</i></a>	marsh sandwort	Caryophyllaceae	perennial stoloniferous herb	May-Aug	FE	CE	G1	S1	1B.1			1984-01-01	No Photo Available
<a href="#"><i>Artemisia palmeri</i></a>	San Diego sagewort	Asteraceae	perennial deciduous shrub	(Feb)May-Sep	None	None	G3?	S3?	4.2			1974-01-01	No Photo Available
<a href="#"><i>Asplenium vespertinum</i></a>	western spleenwort	Aspleniaceae	perennial rhizomatous herb	Feb-Jun	None	None	G3?	S4	4.2			1974-01-01	No Photo Available



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CNPS Rare Plant Inventory | Search Results

<a href="#"><i>Monardella macrantha</i> ssp. <i>hallii</i></a>	Hall's monardella	Lamiaceae	perennial rhizomatous herb	Jun-Oct	None	None	G5T3	S3	1B.3	Yes	1974-01-01	No Photo Available
<a href="#"><i>Monardella pringlei</i></a>	Pringle's monardella	Lamiaceae	annual herb	May-Jun	None	None	GX	SX	1A	Yes	1974-01-01	No Photo Available
<a href="#"><i>Muhlenbergia californica</i></a>	California muhly	Poaceae	perennial rhizomatous herb	Jun-Sep	None	None	G4	S4	4.3	Yes	1994-01-01	No Photo Available
<a href="#"><i>Muilla coronata</i></a>	crowned muilla	Themidaceae	perennial bulbiferous herb	Mar-Apr(May)	None	None	G3	S3	4.2		1988-01-01	No Photo Available
<a href="#"><i>Nama stenocarpa</i></a>	mud nama	Namaceae	annual/perennial herb	Jan-Jul	None	None	G4G5	S1S2	2B.2		1994-01-01	No Photo Available
<a href="#"><i>Nasturtium gambelii</i></a>	Gambel's water cress	Brassicaceae	perennial rhizomatous herb	Apr-Oct	FE	CT	G1	S1	1B.1		1980-01-01	No Photo Available
<a href="#"><i>Packera bernardina</i></a>	San Bernardino ragwort	Asteraceae	perennial herb	May-Jul	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
<a href="#"><i>Pelazoneuron puberulum</i> var. <i>sonorense</i></a>	Sonoran maiden fern	Thelypteridaceae	perennial rhizomatous herb	Jan-Sep	None	None	G5T3	S2	2B.2		1994-01-01	No Photo Available
<a href="#"><i>Perideridia parishii</i> ssp. <i>parishii</i></a>	Parish's yampah	Apiaceae	perennial herb	Jun-Aug	None	None	G4T3T4S2		2B.2		1974-01-01	No Photo Available
<a href="#"><i>Phacelia mohavensis</i></a>	Mojave phacelia	Hydrophyllaceae	annual herb	Apr-Aug	None	None	G4Q	S4	4.3	Yes	1994-01-01	No Photo Available
<a href="#"><i>Phacelia stellaris</i></a>	Brand's star phacelia	Hydrophyllaceae	annual herb	Mar-Jun	None	None	G1	S1	1B.1		1994-01-01	No Photo Available
<a href="#"><i>Piperia leptopetala</i></a>	narrow-petaled rein orchid	Orchidaceae	perennial herb	May-Jul	None	None	G4	S4	4.3	Yes	2001-01-01	No Photo Available
<a href="#"><i>Quercus engelmannii</i></a>	Engelmann oak	Fagaceae	perennial deciduous tree	Mar-Jun	None	None	G3	S3	4.2		1988-01-01	No Photo Available
<a href="#"><i>Ribes divaricatum</i> var. <i>parishii</i></a>	Parish's gooseberry	Grossulariaceae	perennial deciduous shrub	Feb-Apr	None	None	G5TX	SX	1A	Yes	1988-01-01	No Photo Available
<a href="#"><i>Romneya coulteri</i></a>	Coulter's matilija poppy	Papaveraceae	perennial rhizomatous herb	Mar-Jul(Aug)	None	None	G4	S4	4.2		1974-01-01	No Photo Available
<a href="#"><i>Rupertia rigida</i></a>	Parish's rupertia	Fabaceae	perennial herb	Jun-Aug	None	None	G4	S4	4.3		1974-01-01	No Photo Available

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CNPS Rare Plant Inventory | Search Results

<a href="#"><i>Caulanthus simulans</i></a>	Payson's jewelflower	Brassicaceae	annual herb	(Feb)Mar-May(Jun)	None	None	G4	S4	4.2	Yes	1974-01-01	No Photo Available
<a href="#"><i>Centromadia pungens</i> ssp. <i>laevis</i></a>	smooth tarplant	Asteraceae	annual herb	Apr-Sep	None	None	G3G4T2	S2	1B.1	Yes	1994-01-01	No Photo Available
<a href="#"><i>Chloropyron maritimum</i> ssp. <i>maritimum</i></a>	salt marsh bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct(Nov)	FE	CE	G4?T1	S1	1B.2		1974-01-01	No Photo Available
<a href="#"><i>Chorizanthe leptotheca</i></a>	Peninsular spineflower	Polygonaceae	annual herb	May-Aug	None	None	G3	S3	4.2		1994-01-01	No Photo Available
<a href="#"><i>Chorizanthe parryi</i> var. <i>parryi</i></a>	Parry's spineflower	Polygonaceae	annual herb	Apr-Jun	None	None	G3T2	S2	1B.1	Yes	1994-01-01	 © 2012 Keir Morse
<a href="#"><i>Chorizanthe xanti</i> var. <i>leucotheca</i></a>	white-bracted spineflower	Polygonaceae	annual herb	Apr-Jun	None	None	G4T3	S3	1B.2	Yes	1994-01-01	No Photo Available
<a href="#"><i>Convolvulus simulans</i></a>	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2		1994-01-01	No Photo Available
<a href="#"><i>Cuscuta obtusiflora</i> var. <i>glandulosa</i></a>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	G5T4?	SH	2B.2		2011-08-24	No Photo Available
<a href="#"><i>Deinandra paniculata</i></a>	paniculate tarplant	Asteraceae	annual herb	(Mar)Apr-Nov	None	None	G4	S4	4.2		2001-01-01	No Photo Available
<a href="#"><i>Diplacus clevelandii</i></a>	Cleveland's bush monkeyflower	Phrymaceae	perennial rhizomatous herb	Apr-Jul	None	None	G4	S4	4.2		1980-01-01	 © 2020 W. Juergen Schrenk
<a href="#"><i>Dodecahema leptoceras</i></a>	slender-horned spineflower	Polygonaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1980-01-01	No Photo Available
<a href="#"><i>Eriastrum densifolium</i> ssp. <i>sanctorum</i></a>	Santa Ana River woollystar	Polemoniaceae	perennial herb	Apr-Sep	FE	CE	G4T1	S1	1B.1	Yes	1980-01-01	No Photo Available
<a href="#"><i>Eriophyllum lanatum</i> var. <i>obovatum</i></a>	southern Sierra woolly sunflower	Asteraceae	perennial herb	Jun-Jul	None	None	G5T4	S4	4.3	Yes	1974-01-01	No Photo Available
<a href="#"><i>Erythranthe exigua</i></a>	San Bernardino Mountains monkeyflower	Phrymaceae	annual herb	May-Jul	None	None	G2	S2	1B.2		1974-01-01	No Photo Available



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<u><i>Fimbristylis thermalis</i></u>	hot springs fimbristylis	Cyperaceae	perennial rhizomatous herb	Jul-Sep	None	None	G4	S1S2	2B.2		1980-01-01	No Photo Available
<u><i>Frasera neglecta</i></u>	pine green-gentian	Gentianaceae	perennial herb	May-Jul	None	None	G4	S4	4.3	Yes	1980-01-01	No Photo Available
<u><i>Fritillaria pinetorum</i></u>	pine fritillary	Liliaceae	perennial bulbiferous herb	May-Jul(Sep)	None	None	G4	S4	4.3	Yes	2001-01-01	 © 2008 Steve Matson
<u><i>Galium californicum</i></u> <u><i>ssp. primum</i></u>	Alvin Meadow bedstraw	Rubiaceae	perennial herb	May-Jul	None	None	G5T2	S2	1B.2	Yes	1974-01-01	 © 2013 Keir Morse
<u><i>Galium johnstonii</i></u>	Johnston's bedstraw	Rubiaceae	perennial herb	Jun-Jul	None	None	G4	S4	4.3	Yes	1974-01-01	 © 2015 Keir Morse
<u><i>Helianthus nuttallii</i></u> <u><i>ssp. parishii</i></u>	Los Angeles sunflower	Asteraceae	perennial rhizomatous herb	Aug-Oct	None	None	G5TX	SX	1A	Yes	1974-01-01	No Photo Available
<u><i>Heuchera caespitosa</i></u>	urn-flowered alumroot	Saxifragaceae	perennial rhizomatous herb	May-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	 © 2015 Keir Morse
<u><i>Heuchera parishii</i></u>	Parish's alumroot	Saxifragaceae	perennial rhizomatous herb	Jun-Aug	None	None	G3	S3	1B.3	Yes	1974-01-01	 © 2015 Keir Morse
<u><i>Hordeum intercedens</i></u>	vernal barley	Poaceae	annual herb	Mar-Jun	None	None	G3G4	S3S4	3.2		1994-01-01	No Photo Available
<u><i>Horkelia cuneata</i></u> <u><i>var. puberula</i></u>	mesa horkelia	Rosaceae	perennial herb	Feb-Jul(Sep)	None	None	G4T1	S1	1B.1	Yes	2001-01-01	 © 2008 Tony Morosco
<u><i>Hulsea vestita</i></u> <u><i>ssp. parryi</i></u>	Parry's sunflower	Asteraceae	perennial herb	Apr-Aug	None	None	G5T4	S4	4.3	Yes	1994-01-01	 © 2015 Keir Morse

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<u><i>Imperata brevifolia</i></u>	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	None	None	G3	S3	2B.1		2006-12-26	 © 2020 Matt C. Berger
<u><i>Ivesia argyrocoma</i></u> var. <u><i>ivesia argyrocoma</i></u>	silver-haired ivesia	Rosaceae	perennial herb	Jun-Aug	None	None	G2T2	S2	1B.2	Yes	1974-01-01	 © 2015 Keir Morse
<u><i>Juglans californica</i></u>	Southern California black walnut	Juglandaceae	perennial deciduous tree	Mar-Aug	None	None	G4	S4	4.2	Yes	1994-01-01	 © 2020 Zoya Akulova
<u><i>Juncus duranii</i></u>	Duran's rush	Juncaceae	perennial rhizomatous herb	Jul-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	 © 2017 Keir Morse
<u><i>Lasthenia glabrata</i></u> ssp. <u><i>coulteri</i></u>	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994-01-01	 © 2013 Keir Morse
<u><i>Lepidium virginicum</i></u> var. <u><i>robinsonii</i></u>	Robinson's pepper-grass	Brassicaceae	annual herb	Jan-Jul	None	None	G5T3	S3	4.3		1994-01-01	 © 2015 Keir Morse
<u><i>Lilium humboldtii</i></u> ssp. <u><i>ocellatum</i></u>	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	G4T4?	S4?	4.2	Yes	1980-01-01	 © 2008 Thomas Stoughton
<u><i>Lilium parryi</i></u>	lemon lily	Liliaceae	perennial bulbiferous herb	Jul-Aug	None	None	G3	S3	1B.2		1974-01-01	 © 2009 Thomas Stoughton
<u><i>Lycium parishii</i></u>	Parish's desert-thorn	Solanaceae	perennial shrub	Mar-Apr	None	None	G4	S1	2B.3		1980-01-01	No Photo Available
<u><i>Malacothamnus parishii</i></u>	Parish's bush-mallow	Malvaceae	perennial deciduous shrub	Jun-Jul	None	None	GXQ	SX	1A	Yes	1974-01-01	 © 2021 Keir Morse

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<u><i>Monardella</i></u> <u><i>macrantha</i> ssp.</u> <u><i>hallii</i></u>	Hall's monardella	Lamiaceae	perennial rhizomatous herb	Jun-Oct	None	None	G5T3	S3	1B.3	Yes	1974- 01-01	No Photo Available
<u><i>Monardella</i></u> <u><i>pringlei</i></u>	Pringle's monardella	Lamiaceae	annual herb	May-Jun	None	None	GX	SX	1A	Yes	1974- 01-01	No Photo Available
<u><i>Muhlenbergia</i></u> <u><i>californica</i></u>	California muhly	Poaceae	perennial rhizomatous herb	Jun-Sep	None	None	G4	S4	4.3	Yes	1994- 01-01	No Photo Available
<u><i>Muilla coronata</i></u>	crowned muilla	Themidaceae	perennial bulbiferous herb	Mar- Apr(May)	None	None	G3	S3	4.2		1988- 01-01	No Photo Available
<u><i>Nama</i></u> <u><i>stenocarpa</i></u>	mud nama	Namaceae	annual/perennial herb	Jan-Jul	None	None	G4G5	S1S2	2B.2		1994- 01-01	No Photo Available
<u><i>Nasturtium</i></u> <u><i>gambelii</i></u>	Gambel's water cress	Brassicaceae	perennial rhizomatous herb	Apr-Oct	FE	CT	G1	S1	1B.1		1980- 01-01	No Photo Available
<u><i>Packera</i></u> <u><i>bernardina</i></u>	San Bernardino ragwort	Asteraceae	perennial herb	May-Jul	None	None	G2	S2	1B.2	Yes	1974- 01-01	No Photo Available
<u><i>Pelazoneuron</i></u> <u><i>puberulum</i> var.</u> <u><i>sonorense</i></u>	Sonoran maiden fern	Thelypteridaceae	perennial rhizomatous herb	Jan-Sep	None	None	G5T3	S2	2B.2		1994- 01-01	No Photo Available
<u><i>Perideridia</i></u> <u><i>parishii</i> ssp.</u> <u><i>parishii</i></u>	Parish's yampah	Apiaceae	perennial herb	Jun-Aug	None	None	G4T3T4S2		2B.2		1974- 01-01	No Photo Available
<u><i>Phacelia</i></u> <u><i>mohavensis</i></u>	Mojave phacelia	Hydrophyllaceae	annual herb	Apr-Aug	None	None	G4Q	S4	4.3	Yes	1994- 01-01	No Photo Available
<u><i>Phacelia</i></u> <u><i>stellaris</i></u>	Brand's star phacelia	Hydrophyllaceae	annual herb	Mar-Jun	None	None	G1	S1	1B.1		1994- 01-01	No Photo Available
<u><i>Piperia</i></u> <u><i>leptopetala</i></u>	narrow- petaled rein orchid	Orchidaceae	perennial herb	May-Jul	None	None	G4	S4	4.3	Yes	2001- 01-01	No Photo Available
<u><i>Quercus</i></u> <u><i>engelmannii</i></u>	Engelmann oak	Fagaceae	perennial deciduous tree	Mar-Jun	None	None	G3	S3	4.2		1988- 01-01	No Photo Available
<u><i>Ribes</i></u> <u><i>divaricatum</i> var.</u> <u><i>parishii</i></u>	Parish's gooseberry	Grossulariaceae	perennial deciduous shrub	Feb-Apr	None	None	G5TX	SX	1A	Yes	1988- 01-01	No Photo Available
<u><i>Romneya</i></u> <u><i>coulteri</i></u>	Coulter's matilija poppy	Papaveraceae	perennial rhizomatous herb	Mar- Jul(Aug)	None	None	G4	S4	4.2		1974- 01-01	No Photo Available
<u><i>Rupertia rigida</i></u>	Parish's rupertia	Fabaceae	perennial herb	Jun-Aug	None	None	G4	S4	4.3		1974- 01-01	No Photo Available



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<u><i>Schoenus nigricans</i></u>	black bog-rush	Cyperaceae	perennial herb	Aug-Sep	None	None	G4	S2	2B.2		2001-01-01	No Photo Available
<u><i>Senecio aphanactis</i></u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2		1994-01-01	No Photo Available
<u><i>Senecio astephanus</i></u>	San Gabriel ragwort	Asteraceae	perennial herb	May-Jul	None	None	G3	S3	4.3	Yes	2006-12-21	No Photo Available
<u><i>Sidalcea hickmanii</i> ssp. <i>parishii</i></u>	Parish's checkerbloom	Malvaceae	perennial herb	(May)Jun-Aug	None	CR	G3T1	S1	1B.2	Yes	1974-01-01	No Photo Available
<u><i>Sidalcea malviflora</i> ssp. <i>dolosa</i></u>	Bear Valley checkerbloom	Malvaceae	perennial herb	May-Aug	None	None	G5T2	S2	1B.2	Yes	2012-06-13	No Photo Available
<u><i>Sidalcea neomexicana</i></u>	salt spring checkerbloom	Malvaceae	perennial herb	Mar-Jun	None	None	G4	S2	2B.2		1994-01-01	No Photo Available
<u><i>Sidalcea pedata</i></u>	bird-foot checkerbloom	Malvaceae	perennial herb	May-Aug	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Sidotheca caryophylloides</i></u>	chickweed oxytheca	Polygonaceae	annual herb	Jul-Sep(Oct)	None	None	G4	S4	4.3	Yes	1980-01-01	 ©2021 Keir Morse
<u><i>Sphenopholis obtusata</i></u>	prairie wedge grass	Poaceae	perennial herb	Apr-Jul	None	None	G5	S2	2B.2		1974-01-01	No Photo Available
<u><i>Streptanthus bernardinus</i></u>	Laguna Mountains jewelflower	Brassicaceae	perennial herb	May-Aug	None	None	G3G4	S3S4	4.3	Yes	1980-01-01	No Photo Available
<u><i>Streptanthus campestris</i></u>	southern jewelflower	Brassicaceae	perennial herb	(Apr)May-Jul	None	None	G3	S3	1B.3		1994-01-01	No Photo Available
<u><i>Symphyotrichum defoliatum</i></u>	San Bernardino aster	Asteraceae	perennial rhizomatous herb	Jul-Nov	None	None	G2	S2	1B.2	Yes	2004-01-01	No Photo Available
<u><i>Trichocoronis wrightii</i> var. <i>wrightii</i></u>	Wright's trichocoronis	Asteraceae	annual herb	May-Sep	None	None	G4T3	S1	2B.1		1988-01-01	No Photo Available
<u><i>Trichostema micranthum</i></u>	small-flowered bluecurls	Lamiaceae	annual herb	Jun-Sep	None	None	G4	S3	4.3		1974-01-01	No Photo Available

Showing 1 to 87 of 87 entries

## Suggested Citation:

California Native Plant Society, Rare Plant Program. 2024. Rare Plant Inventory (online edition, v9.5). Website: <https://www.rareplants.cnps.org> [accessed 2 January 2024].

# Attachment E

## **Exclusionary Fence Design**



# AMX48

Temporary & Permanent Wildlife Fencing

*Specification & Installation Guides*

LAST UPDATED MAY 2022

## SUITABLE SPECIES

- TURTLES (Large)
- LIZARDS (Large)
- FROGS
- SMALL MAMMALS

## Contents

Basic Material Size & Features pg.1

Step by Step Installation pg.3

Fixing & Fastening pg.6

Free-standing pg.10

Attached pg.14

Specialised pg.24

Tender Document Descriptions pg.30

# Animex<sup>®</sup>

● **AMX 48**  
Basic Material Size & Features

The length of each **AMX 48** section will vary depending on the material choice.

**AMX 48** dimensions based on Animex’s optimal fencing materials.

**SCORED PLASTIC - PERFORATED & NON-PERFORATED**

*Temporary Applications (AMX-T)*

Thickness: 0.04in / 1mm  
Length: 60ft / 18.2m  
Weight: 50lbs / 23kg

*Semi-Permanent Applications (AMX-SP)*

Thickness: 0.08in / 2mm  
Length: 30ft / 9m  
Weight: 48lbs / 23kg

**PREFORMED METAL- PERFORATED & NON-PERFORATED**

*Permanent Applications (AMX-XP)*

Thickness: 0.08in / 2mm  
Length: 8ft / 2.4m  
Weight: 99lbs / 45kg

**AMX 48** INSTALLED ABOVE GROUND HEIGHT: 30in / 750mm

**Notes:**

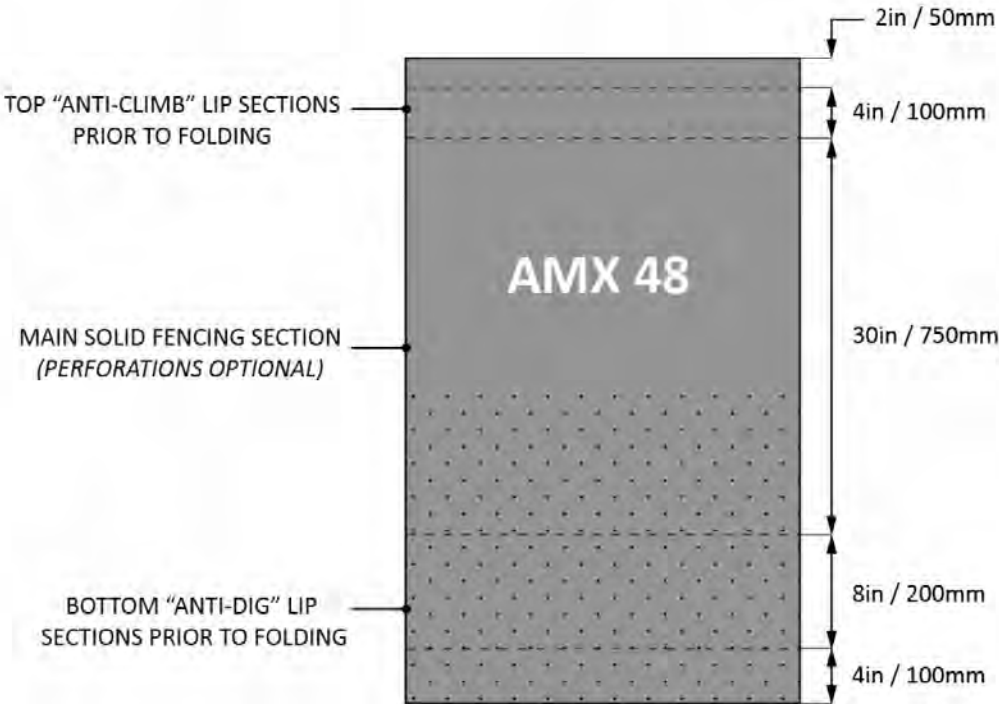
These dimensions are based on maximising the amount of material that can be shipped economically and manoeuvred on site in line with common health and safety guidelines.

Material may be shipped in sheets or rolls depending on their length.

Customised options for alternative **AMX48** barrier options are available from Animex® Fencing suppliers upon request. Other traditional and existing fencing materials including posts and wire etc can be obtained from local contractors.

**NOTES:**  
This specification should be used to aid Installation. Measurements are accurate but may need to be adjusted dependent on location, conditions and local authority recommendations.

**AMX 48**  
Basic Material Size & Features



**AMX 48**  
Basic Material Size & Features



● **AMX 48**

Step-by-Step Installation

- 1) Clear vegetation along the fence line and work area.
- 2) Mark out the Animex fence line.
- 3) **Below Ground:** Excavate trench. Ensure the trench is level and clear of large clumps or rocks.  
**Above Ground:** Clear Ground. Ensure the ground is level and clear of large clumps or rocks.
- 4) **Free-Standing:** Lay out posts and roll out Animex barrier (Fold bottom lip if required).  
**Attached to existing fences:** Roll out Animex barrier along fence (Fold bottom lip if required).
- 5) Install posts at the back of the trench using manual or machine powered post driver (Install horizontal wire if required and secure to end braces).
- 6) Place the Animex fence material into the trench with the lips facing towards the area that animals will encounter the fence.
- 7) Fasten the Animex to posts, straining wire or existing fence starting at the top and work down.
- 8) When attaching rolls overlap them following details on installation drawing Pg7. A minimum of 4 ties should be used on any joins in the fence
- 9) Back fill the trench. Ensure the backfill is compact to eliminate gaps for animals to crawl through. Do the same on the back side of the fence.
- 10) Fasten the top lips and install any additional features such as one-way funnels or pitfall traps (if required).

**MATERIALS**

- Required*
- Animex Fencing
  - Animex Washers
  - UV Resistant Zip-ties or Fencing Wire
  - Fence Posts

- Optional*
- 12 Gauge Straining Wire
  - Fence end braces & wire strainers
  - Gripple Wire Joiners (or similar)
  - Fence Post Safety Caps

**TOOLS & EQUIPMENT**

- Required*
- Weed wacker / Whipper
  - String Line & Marker Pain
  - Box Cutter / Stanley Knife
  - Trencher / Excavator
  - Spade / Trench / Shovel
  - Post Diver / Sledge Hammer
  - Battery Powered Drill
  - Spade Drill Bit 3/4 (20mm)
  - Cutting Pliers

- Optional*
- Shear Attachment For Drill (Trim Fence)
  - Battery Powered reciprocating Saw (Trim Posts)
  - Drill Bit For Drainage Holes 1/8in (3mm)
  - Gripple Tensioning Tool

AMX 48

Step-by-step Installation



●

Fixings & Fastening

Scorded Plastic HDPE

AMX-T & AMX-SP

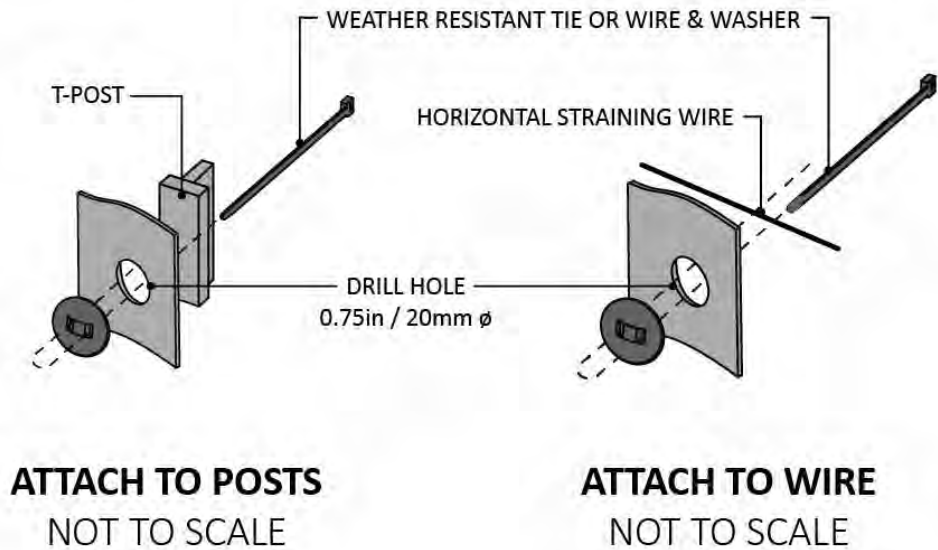
Pre-scored plastic (HDPE) sheets and rolls can expand in when installed in places where there are large fluctuations in temperature. You should therefore avoid hard fixing this material as it can cause buckling and even open up gaps at overlapped or joining sections.

We have prepared some illustrations to demonstrate the best ways to connect and fasten HDPE rolls and sheets.

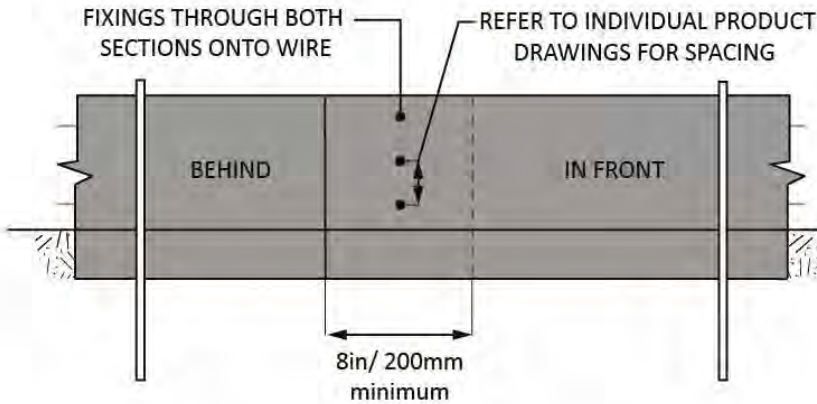
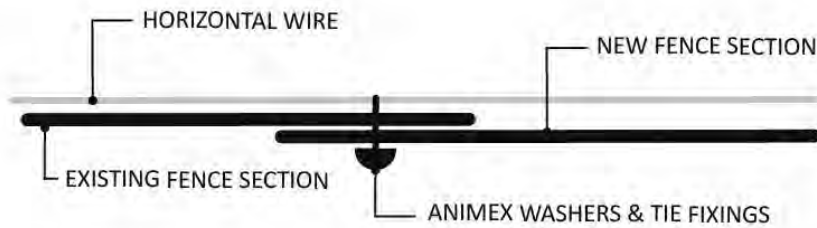
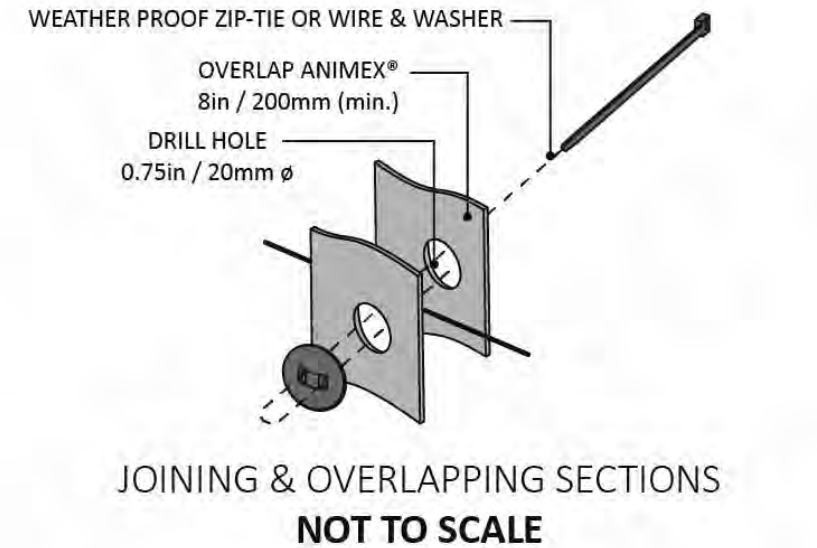
This technique helps to reduce the chances of gaps opening up at the joins and allows the fencing to expand and contract freely.

Ensuring the trench is backfilled correctly and the earth is compacted tightly against both sides of the fence is also essential to ensure there are no gaps at ground level where animals will be encountering the fence.

Joins should be made between posts and onto horizontal wire or horizontal parts of existing fences where possible.



**NOTES:**  
This specification should be used to aid installation. Measurements are accurate but may need to be adjusted dependent on location, conditions and local authority recommendations.





●

Fixings & Fastening

Preformed Metal

AMX-XP

Preformed metal fencing is supplied in sections that are often custom made for your project.

Each section slots inside the other and is then fastened by drilling holes through the overlapping sections and securing with bolt, nuts and washers.

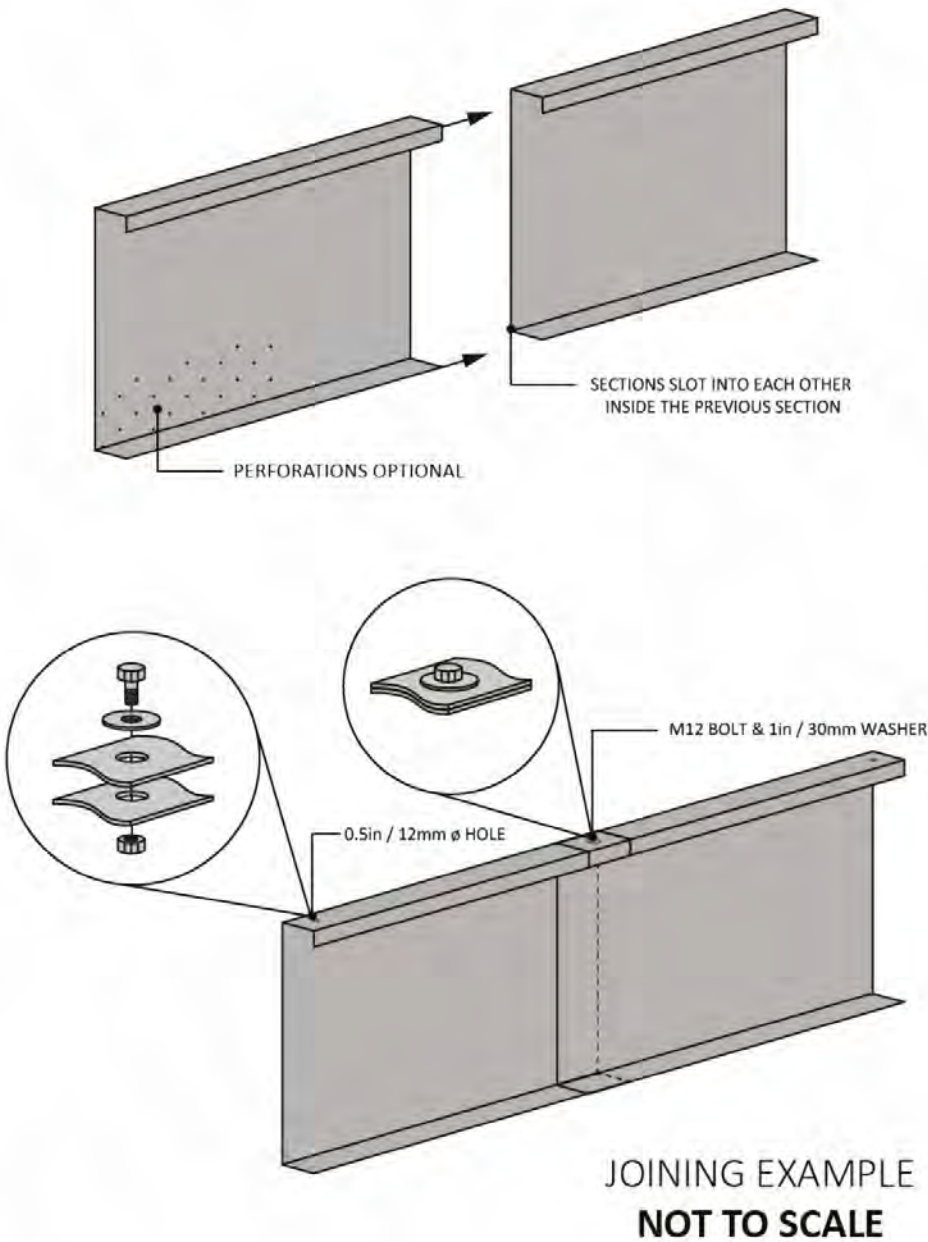
End sections and turn-arounds will also be custom made per project and fitted on site.

Panels can be supplied with a power coating but this will increase costs and may need touch ups after installation.

**NOTES:**  
This specification should be used to aid installation. Measurements are accurate but may need to be adjusted dependent on location, conditions and local authority recommendations.

Fixings & Fastening

Scored Plastic HDPE

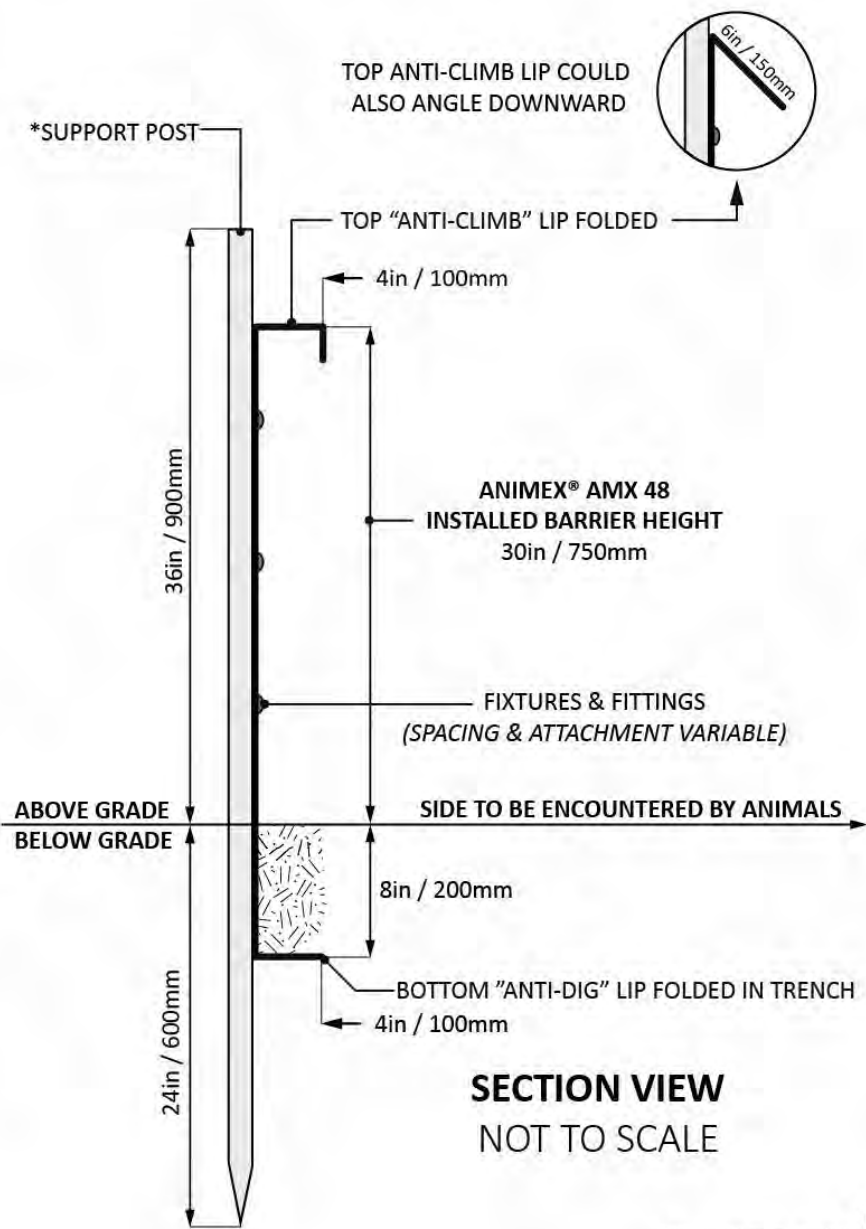


Fixings & Fastening

Scored Plastic HDPE

● **AMX 48**

Free-standing Below Ground



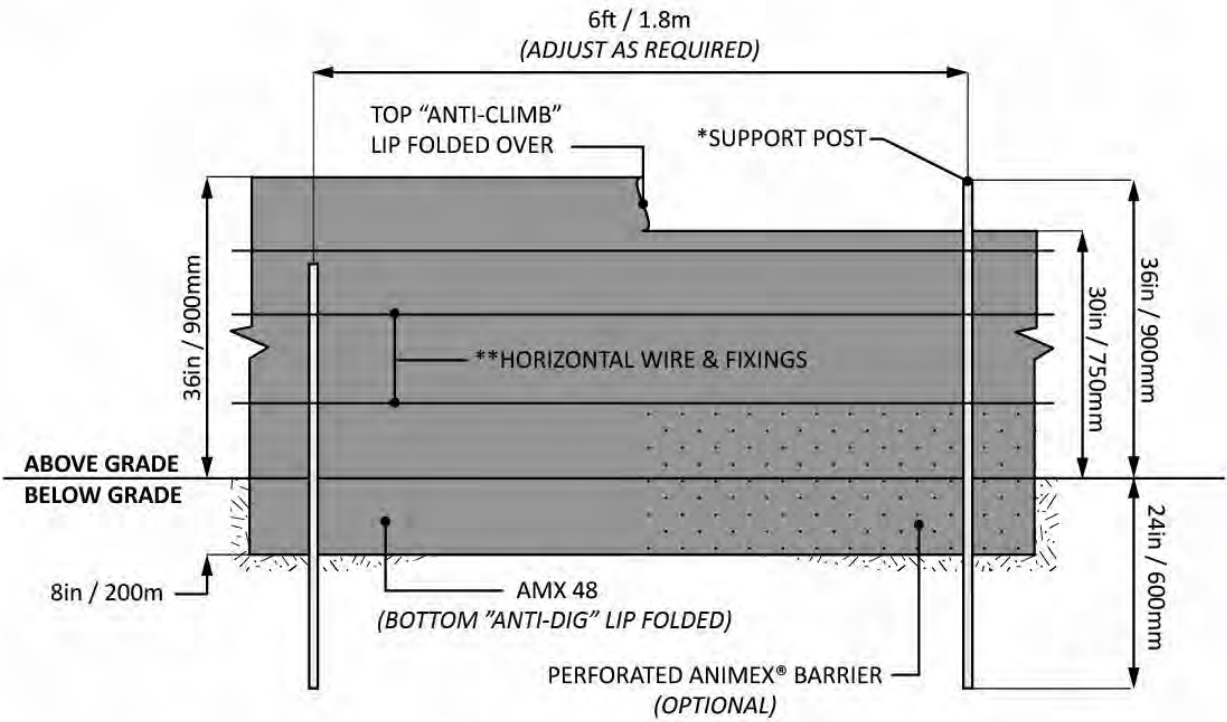
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**AMX 48**

Free-standing Below Ground

\*SUPPORT POSTS & HORIZONTAL WIRE MAY NOT BE NEEDED FOR PREFORMED METAL (AMX-XP) FENCES  
\*\*HORIZONTAL WIRE MAY NOT BE NEEDED FOR TEMPORARY (AMX-T) FENCES



**ELEVATION VIEW**  
NOT TO SCALE

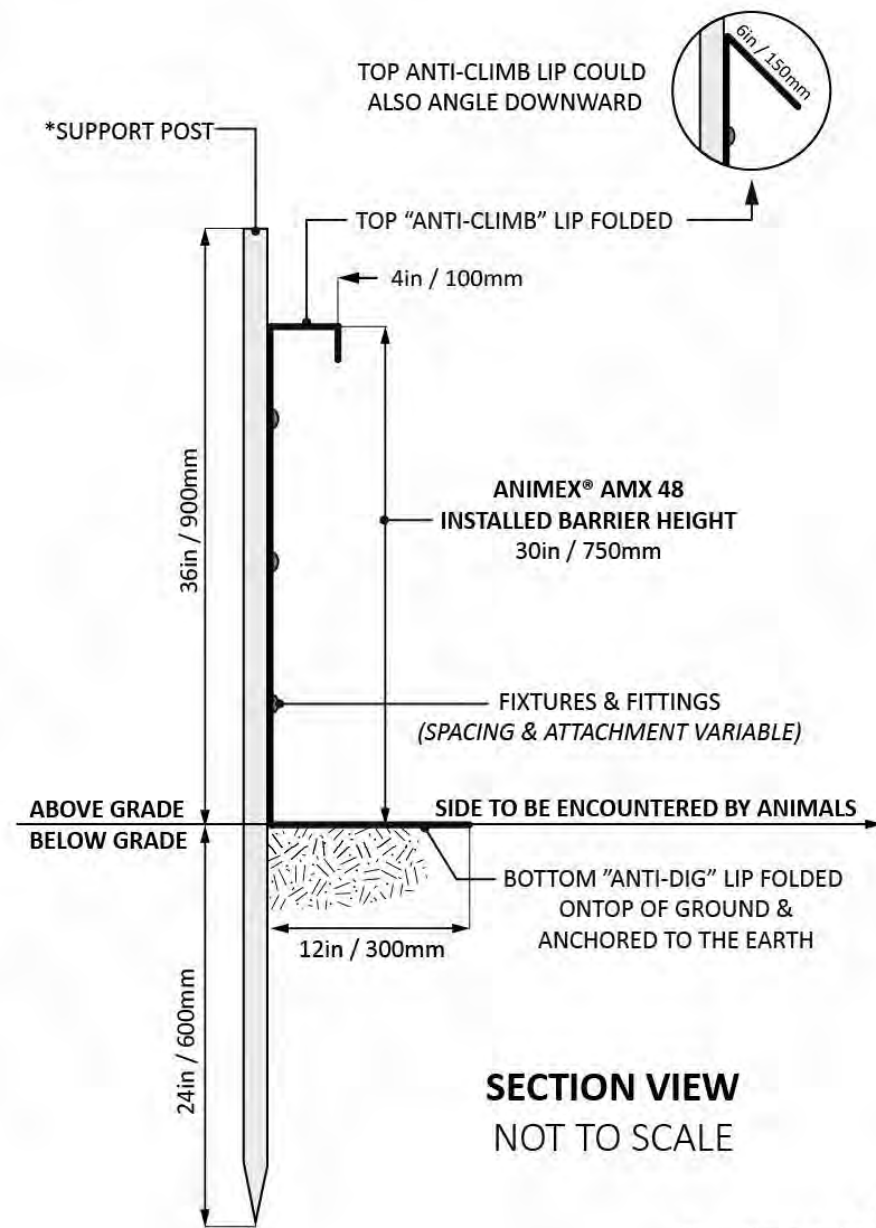
**AMX 48**

Free-standing Below Ground



● **AMX 48**

Free-standing Above Ground



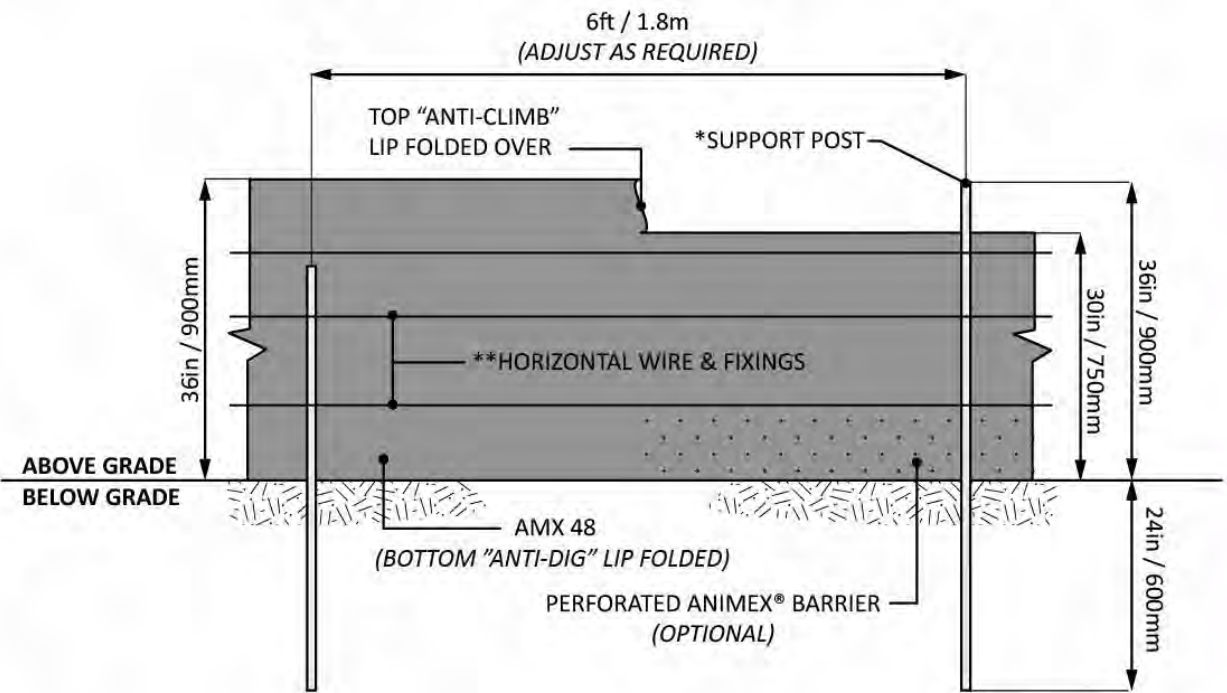
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**AMX 48**  
Free-standing Above Ground

**APPLY THIS ABOVE GROUND METHOD WHEN ATTACHING TO EXISTING FENCE TYPES AS WELL**

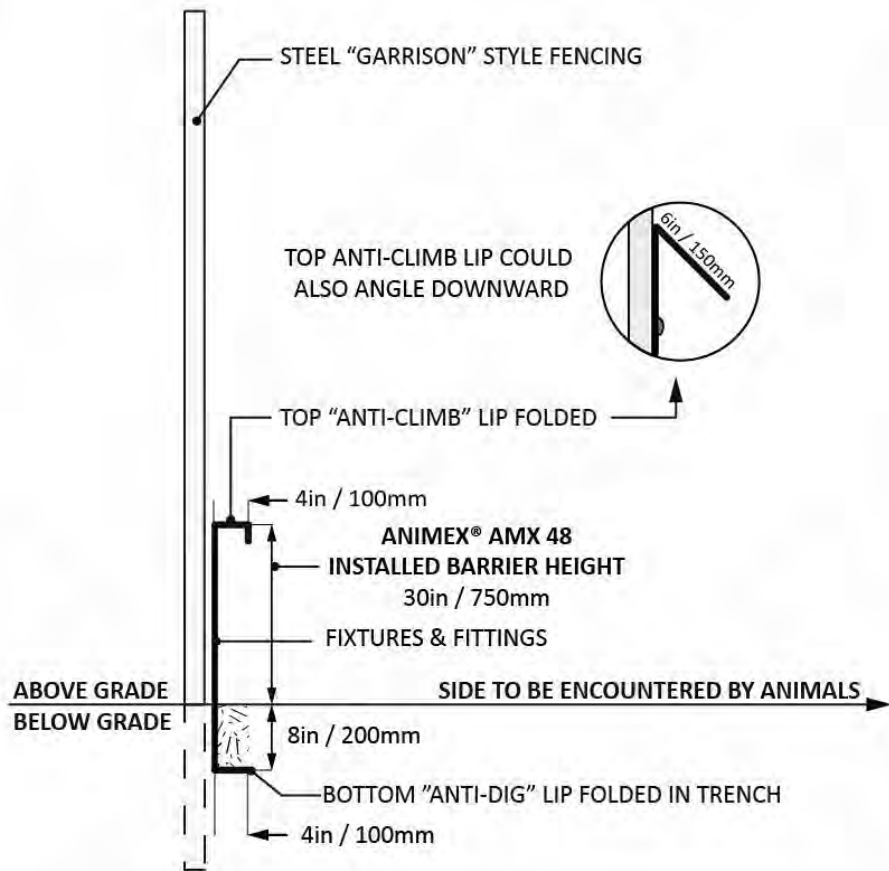
\*SUPPORT POSTS & HORIZONTAL WIRE MAY NOT BE NEEDED FOR PREFORMED METAL (AMX-XP) FENCES  
\*\*HORIZONTAL WIRE MAY NOT BE NEEDED FOR TEMPORARY (AMX-T) FENCES



**AMX 48**  
Free-standing Above Ground

● **AMX 48**

Attached Garrison



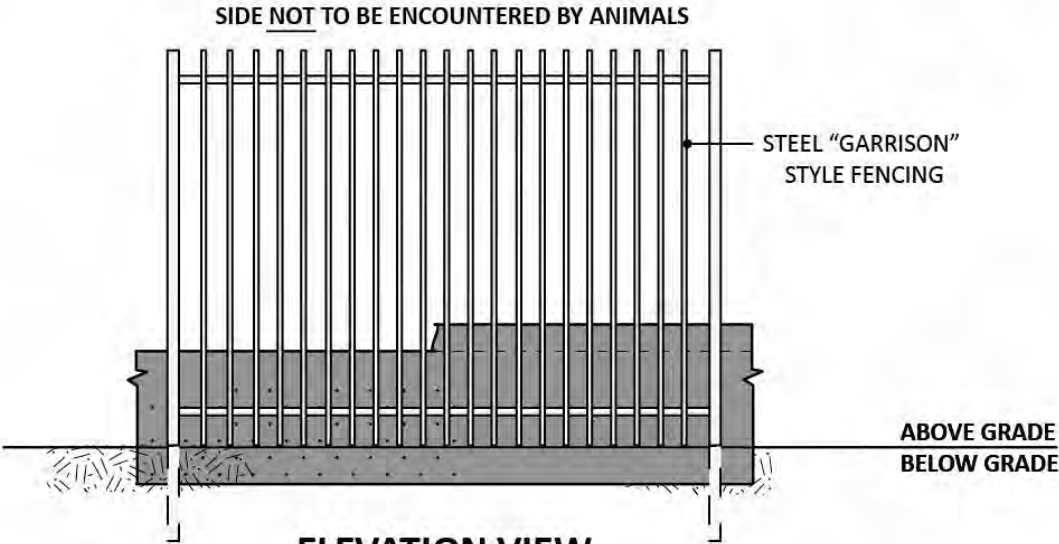
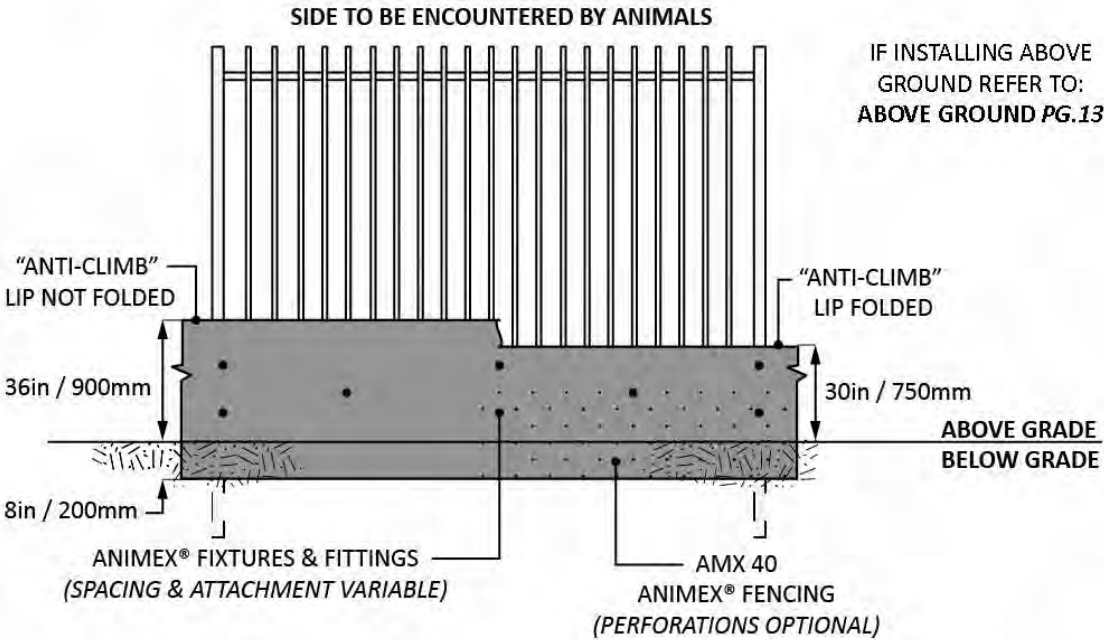
SECTION VIEW  
NOT TO SCALE

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**AMX 48**

Attached Garrison



ELEVATION VIEW  
NOT TO SCALE

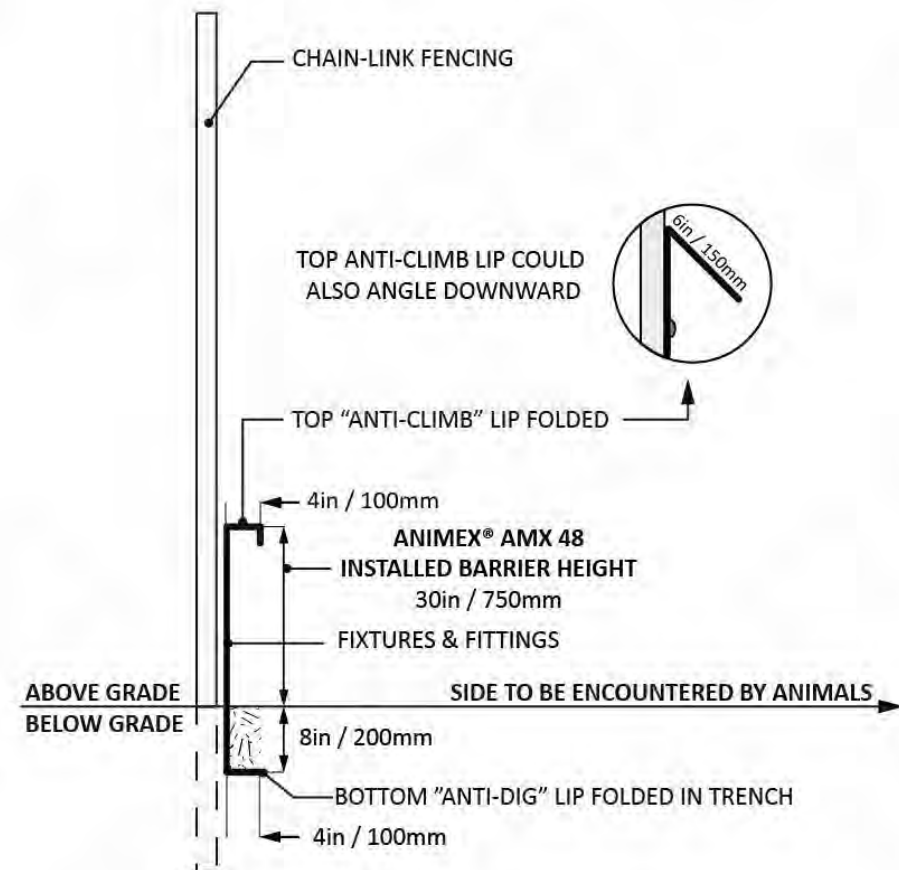
**AMX 48**

Attached Garrison



● **AMX 48**

Attached Chain-link

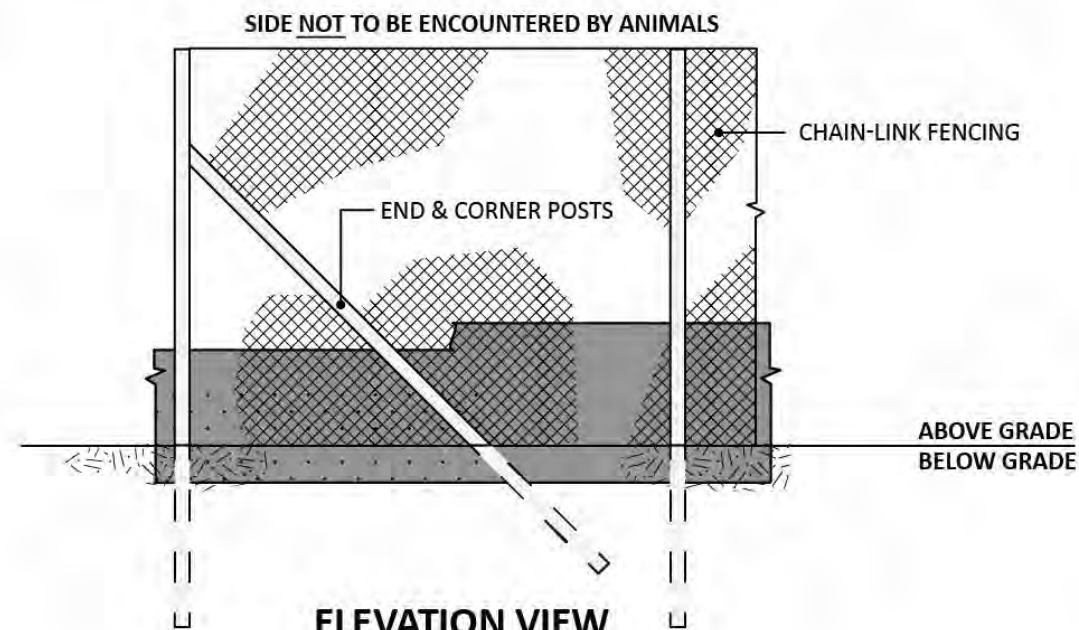
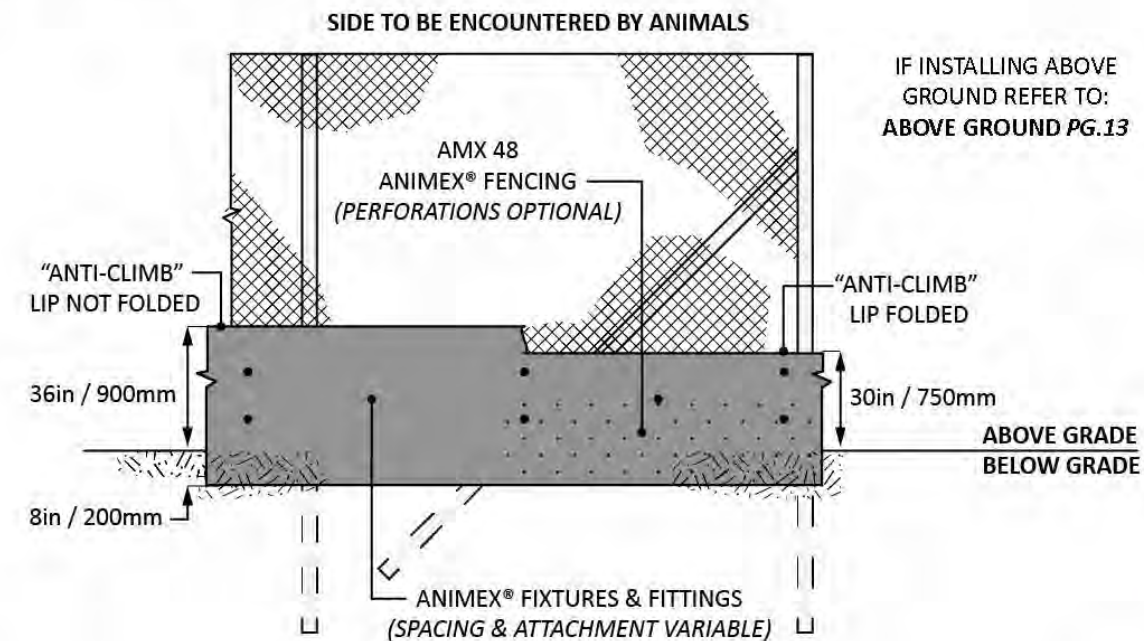


SECTION VIEW  
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**AMX 48**  
Attached Chain-link

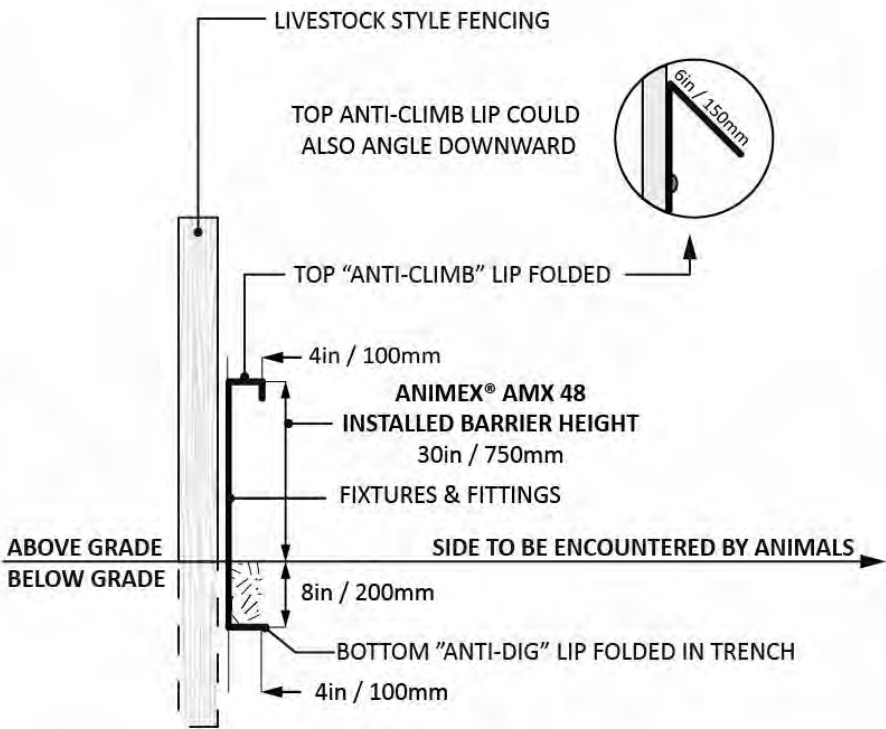


ELEVATION VIEW  
NOT TO SCALE

**AMX 48**  
Attached Chain-link

● **AMX 48**

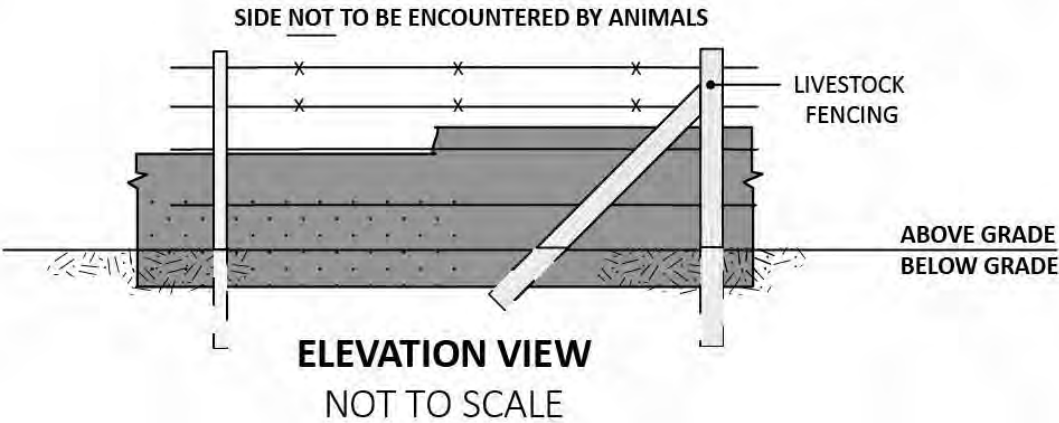
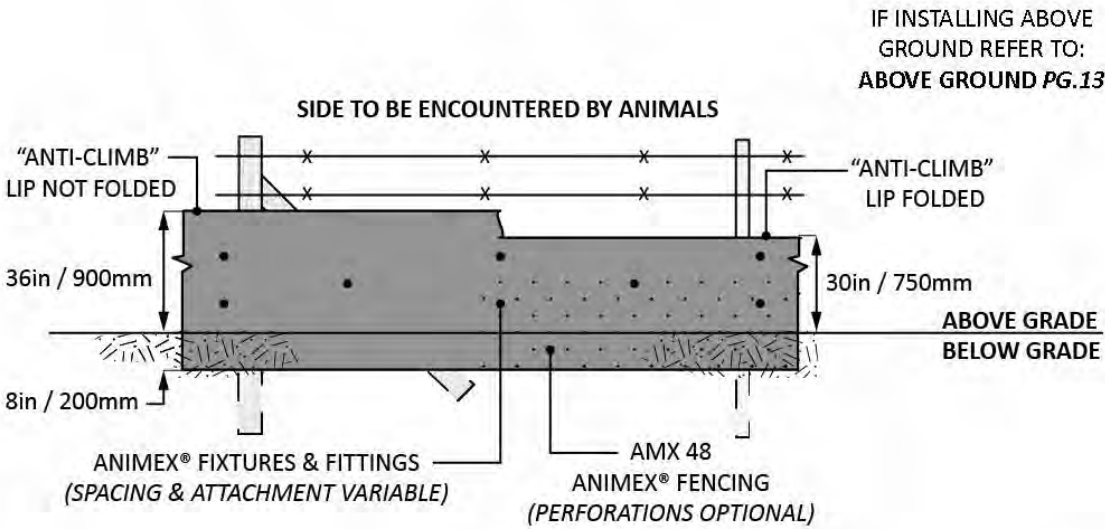
Attached Live Stock



**SECTION VIEW**  
NOT TO SCALE

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**AMX 48**  
Attached Livestock



**ELEVATION VIEW**  
NOT TO SCALE

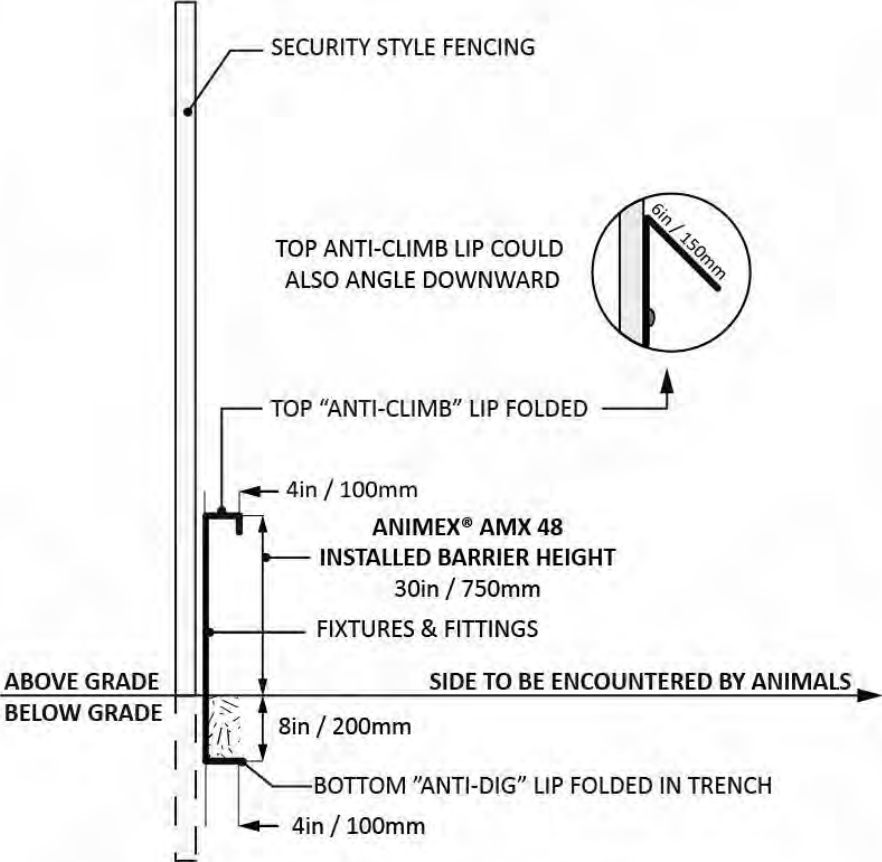
**NOTES:**  
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**AMX 48**  
Attached Livestock



● **AMX 48**

Attached Security

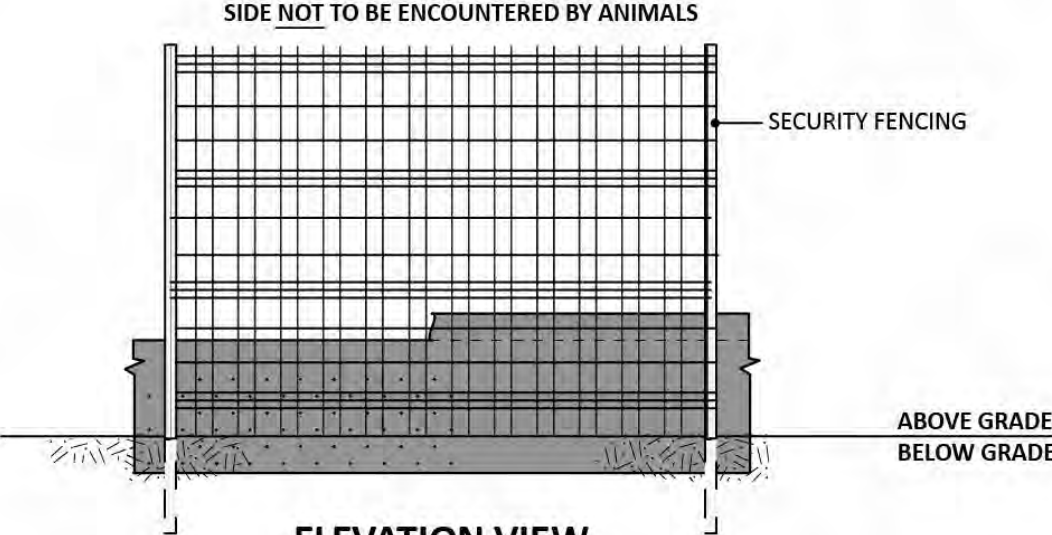
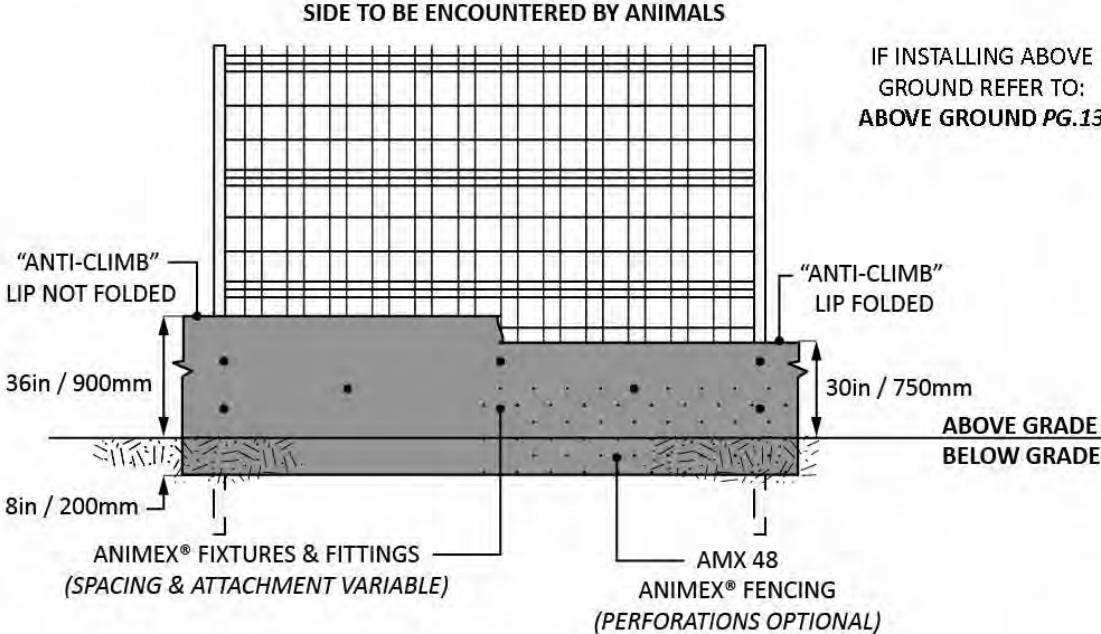


SECTION VIEW  
NOT TO SCALE

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**AMX 48**  
Attached Security



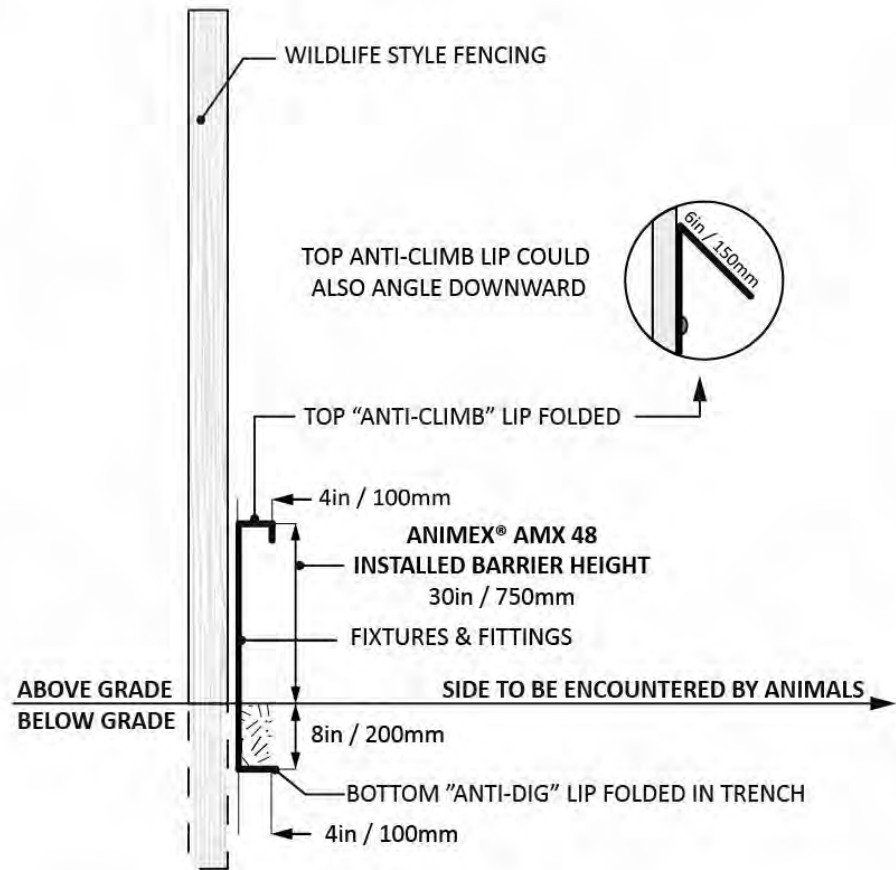
ELEVATION VIEW  
NOT TO SCALE

**AMX 48**  
Attached Security



● **AMX 48**

Attached Large Wildlife

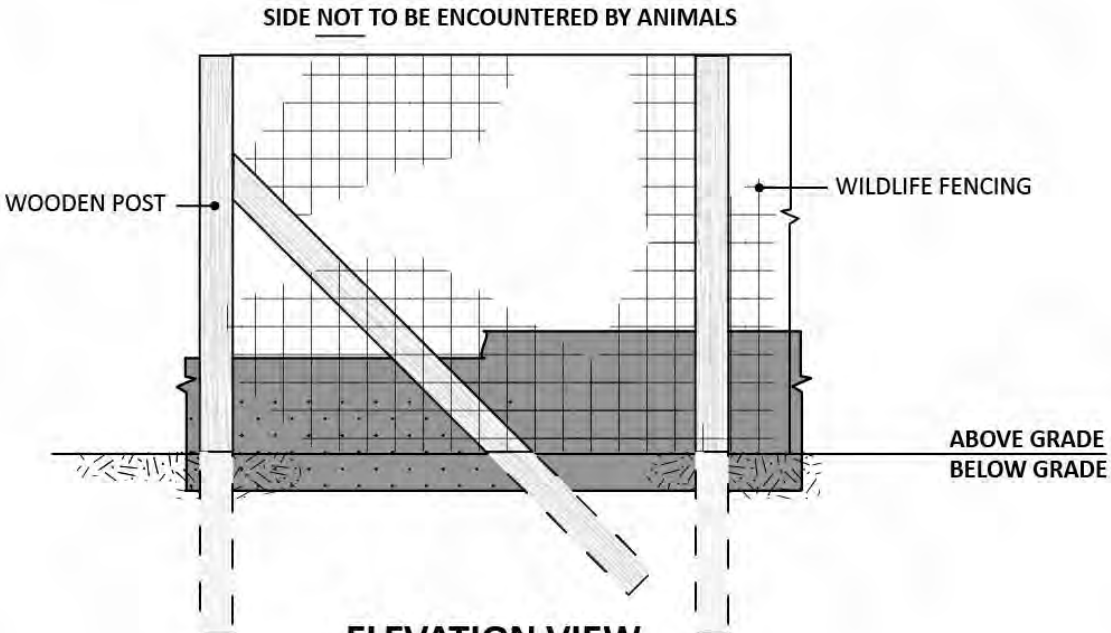
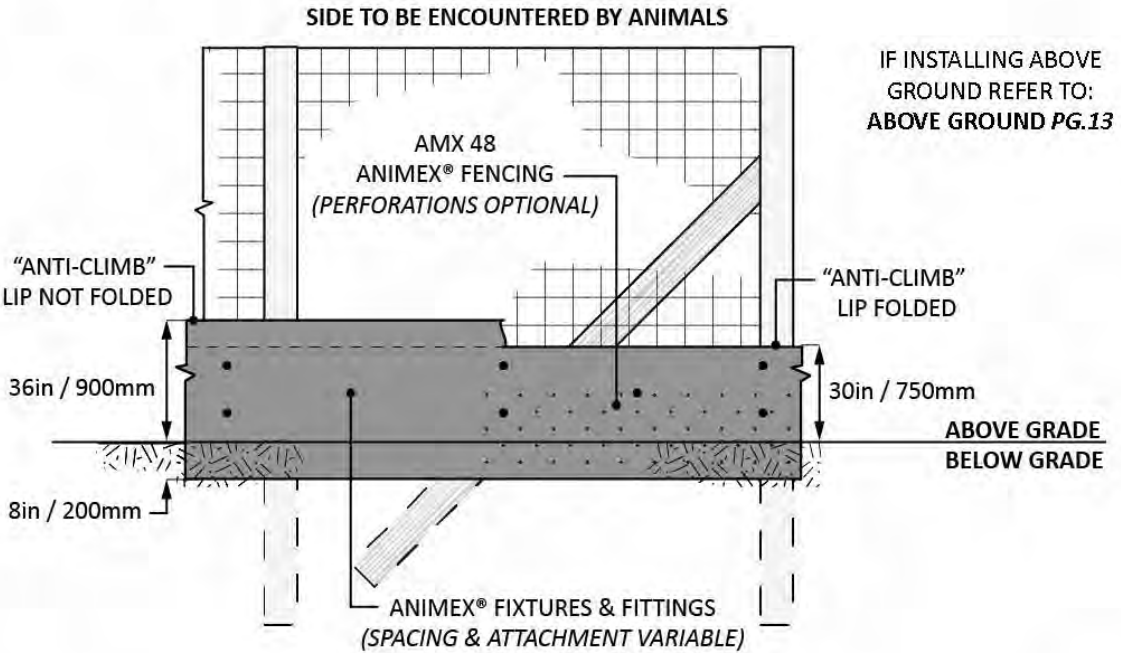


SECTION VIEW  
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**AMX 48**  
Attached Wildlife



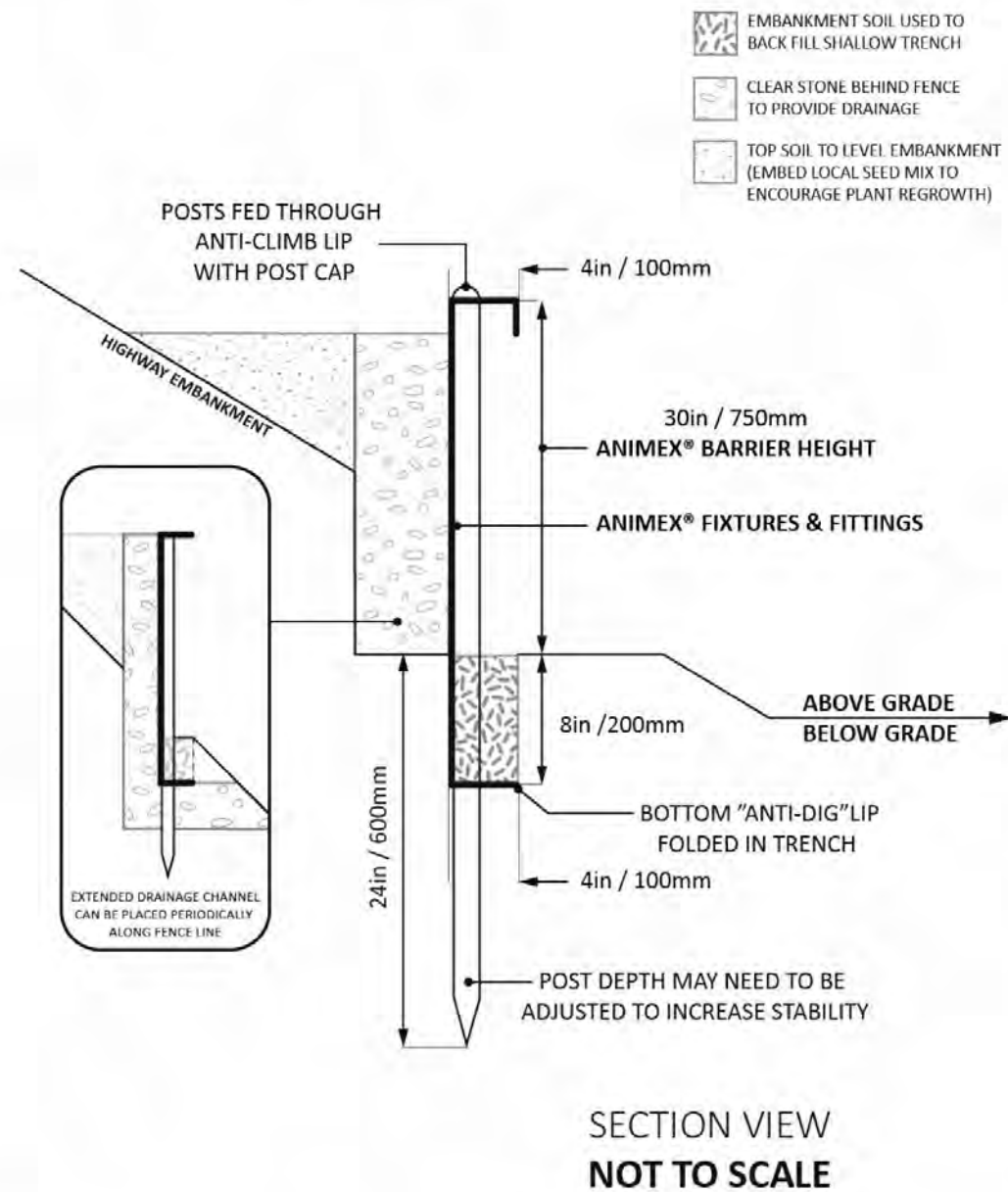
ELEVATION VIEW  
NOT TO SCALE

**AMX 48**  
Attached Wildlife

●

Specialized Fencing Specifications

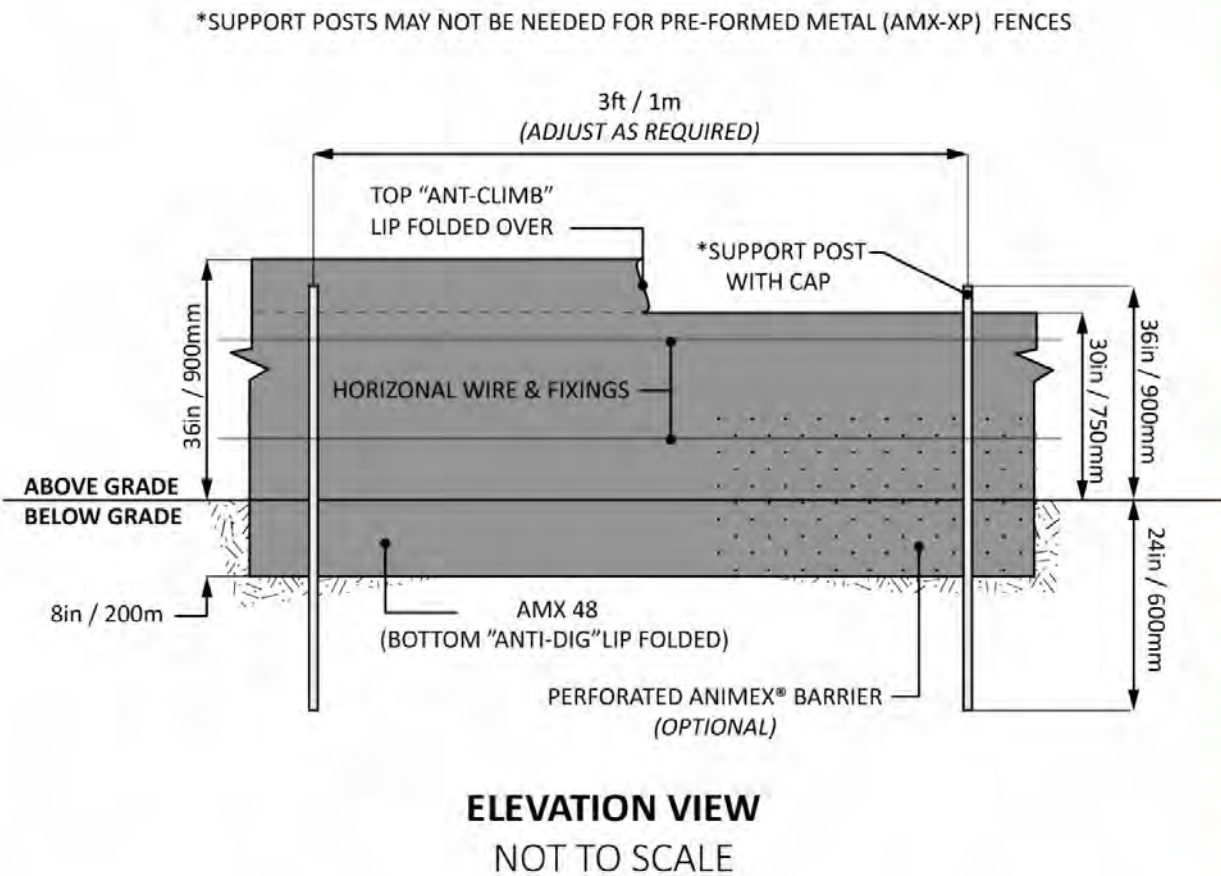
Roadside Embankment



**NOTES:**  
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Specialized Fencing Specifications

Roadside Embankment

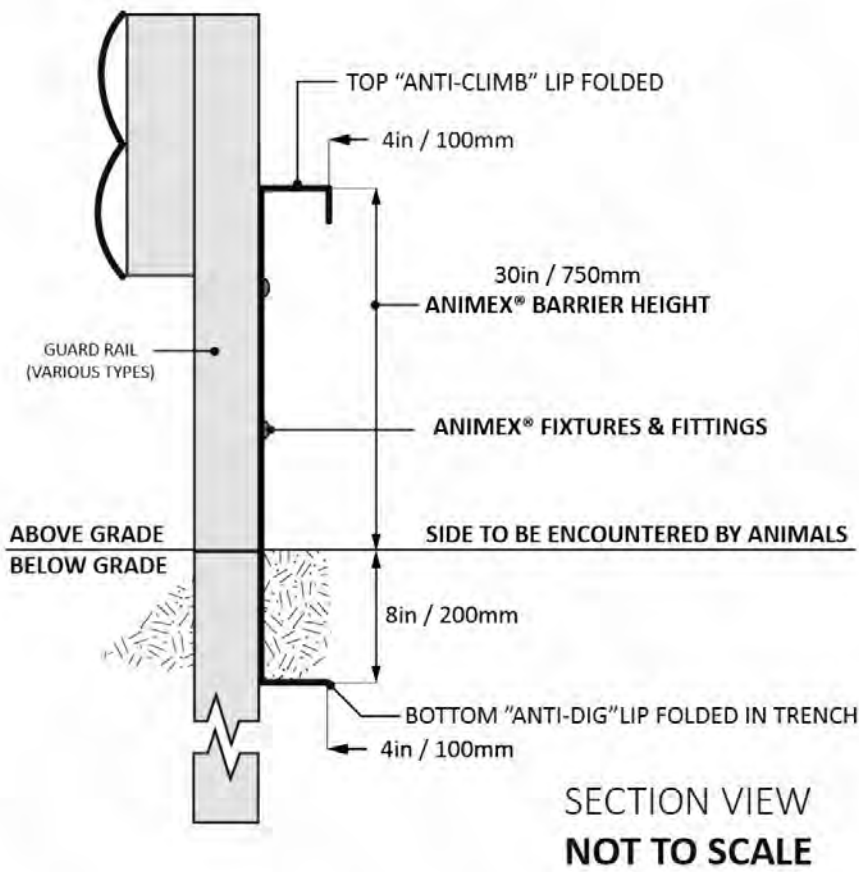




●

Specialized Fencing Specifications

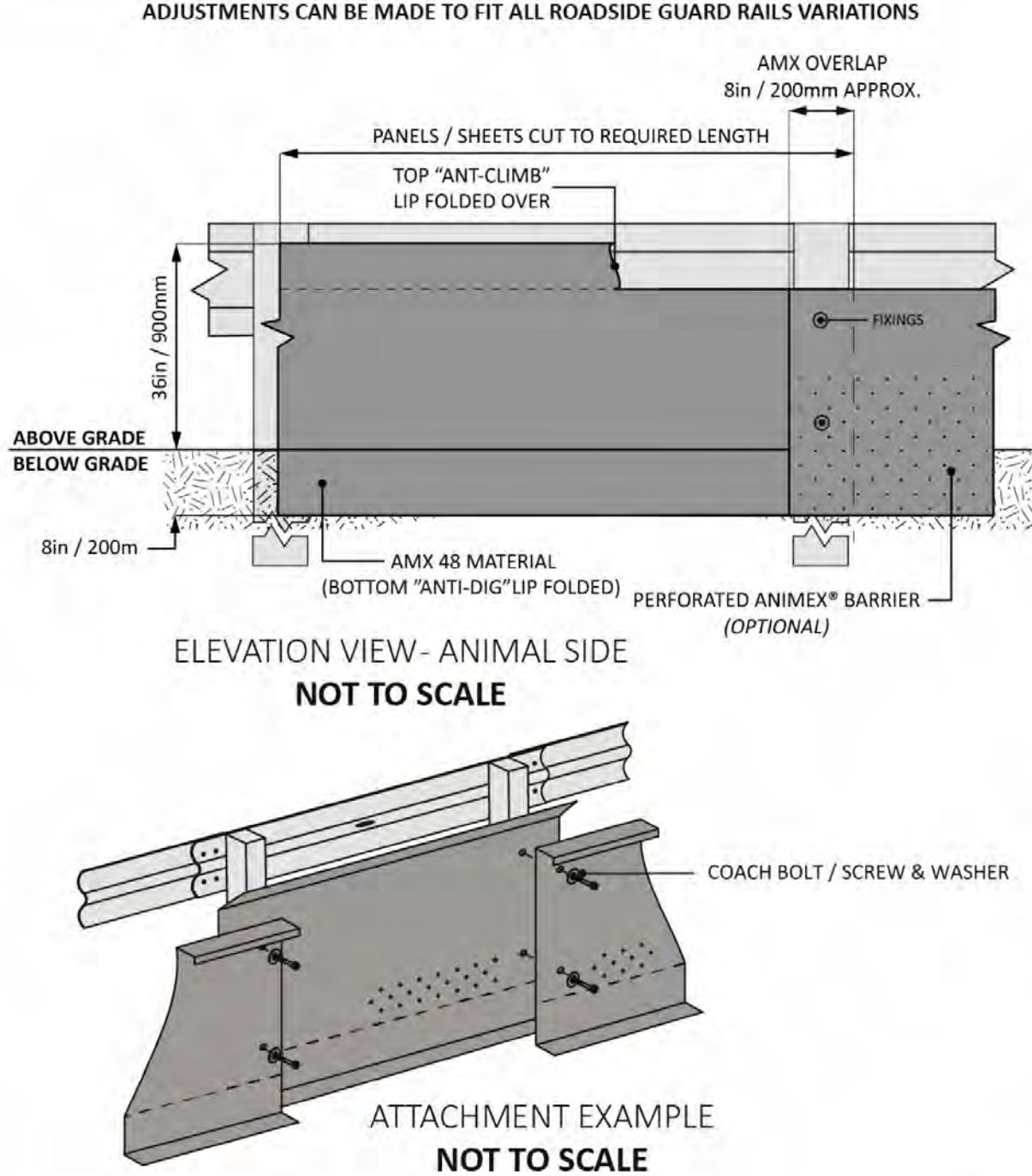
Roadside Guardrail



**NOTES:**  
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Specialized Fencing Specifications

Roadside Guardrail

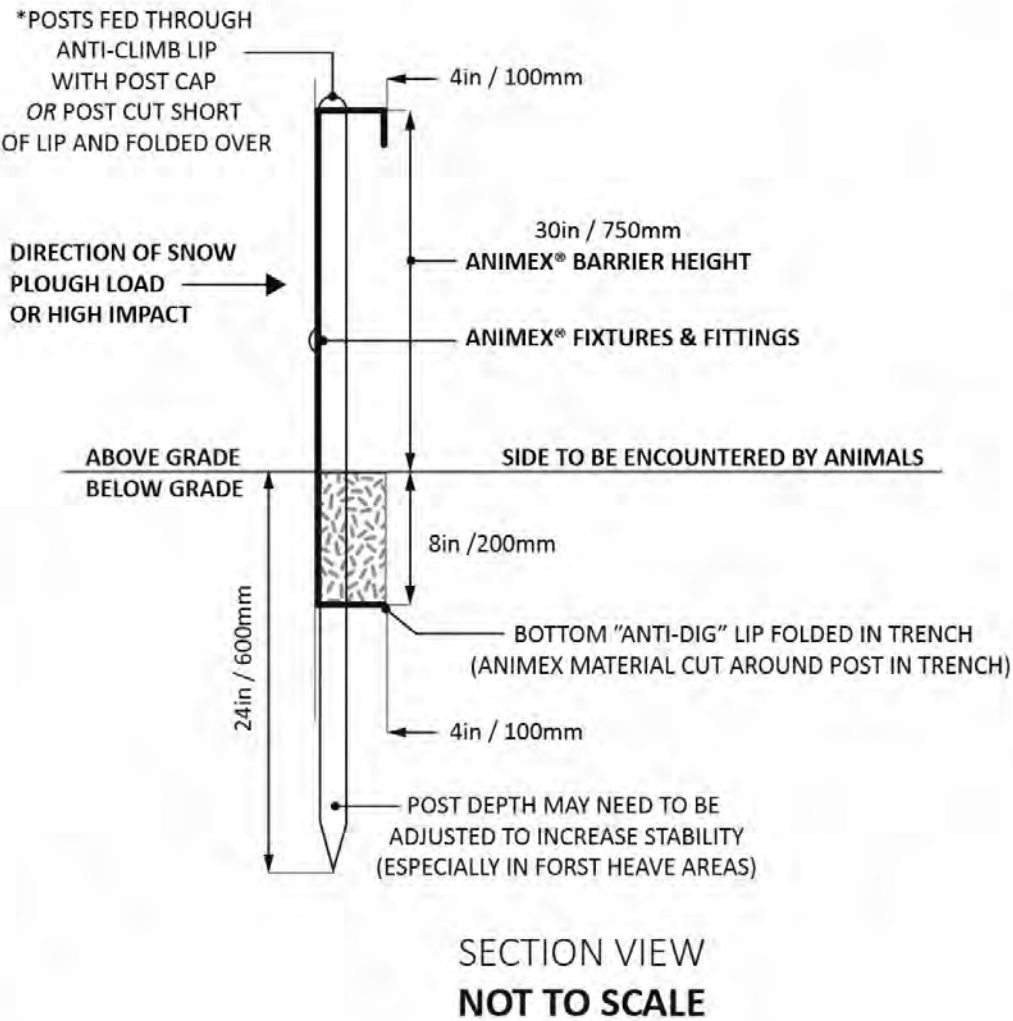


Specialized Fencing Specifications

●

Specialized Fencing Specifications

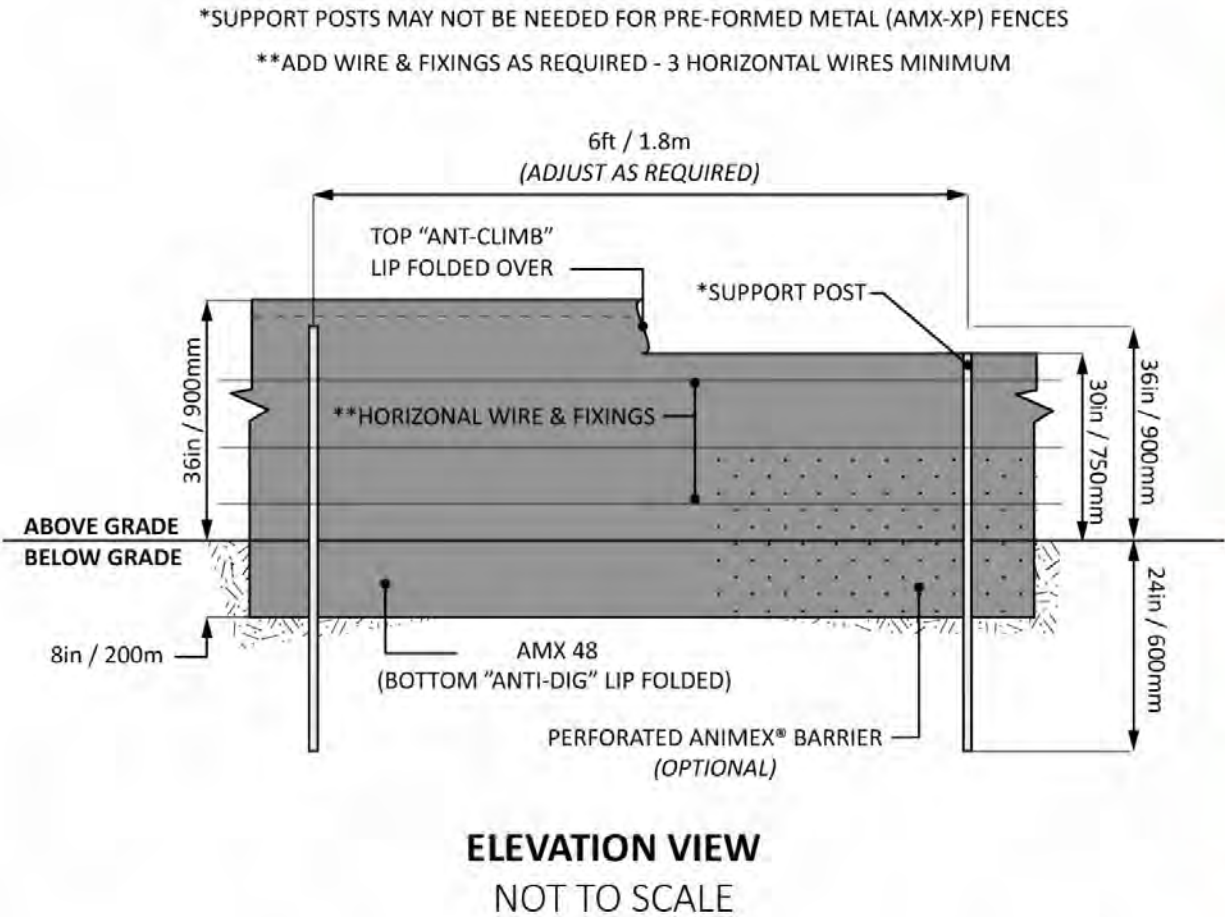
Snow Load / High Impact



**NOTES:**  
This specification should be used to aid installation. Measurements are accurate but may need to be adjusted dependent on location, conditions and local authority recommendations.

Specialized Fencing Specifications

Snow Load / High Impact



Specialized Fencing Specifications



● Tender Document Descriptions

AMX 48  
Tender Document Descriptions

AMX-T / AMX-SP

**General Description:**  
Specifically designed solid Animex wildlife fencing barrier to protect, exclude or guide wildlife.

**Common Applications:**  
Roads  
Construction sites  
Scientific research  
Conservation zones  
Species re-introduction

**Material Height:**  
1015mm (40in)  
1070mm (42in)  
1220mm (48in)  
1550mm (60in)  
Custom options available

**Material Thickness:**  
AMX-T (Temporary): 1mm  
AMX-SP (Semi-Permanent): 2mm

**Material Properties:**  
Solid barrier - no mesh, matrix or geo-textile material  
Made from High Density Polyethylene (HDPE) in North America  
Grooves or scoreline 100mm (4in) from the top and bottom edge to create fold-able lips  
Glossy surface on one side  
Perforations to allow water flow (if required)  
Supplied in sheets or rolls  
Maximum weight per item 25kg (55lbs)

**Installation:**  
See relevant drawings and guides displayed in this document between pages 6 and 29

AMX-XP

**General Description:**  
Specifically designed solid Animex wildlife fencing barrier to protect, exclude or guide wildlife.

**Common Applications:**  
Roads  
Construction sites  
Scientific research  
Conservation zones  
Species re-introduction

**Material Height:**  
1015mm (40in)  
1070mm (42in)  
1220mm (48in)  
1550mm (60in)  
Custom options available

**Material Thickness:**  
AMX-XP - (Permanent): 2mm

**Material Properties:**  
Solid metal barrier - no mesh, matrix or geo-textile material  
Made from weather resistant metals  
Pre-formed with top and bottom lips (as detailed in drawing pg9)  
Perforations to allow water flow (if required)  
Supplied in sheets  
Maximum weight per item 40kg (88lbs)

**Installation:**  
See relevant drawings and guides displayed in this document on pages 8 and 9

AMX 48  
Tender Document Descriptions



This document is continually updated based on new research and information.

To ensure you are referencing the most recent version please contact:

**[info@animexfencing.com](mailto:info@animexfencing.com)**

**FOR MORE INFORMATION OF WILDLIFE FENCING PLEASE VISIT:**

**[WWW.WILDLIFEFENCING.COM](http://WWW.WILDLIFEFENCING.COM)**

***Animex***<sup>®</sup>  
*[www.animexfencing.com](http://www.animexfencing.com)*





## **C2 California Natural Diversity Database Results**





## California Department of Fish and Wildlife

## California Natural Diversity Database



**Query Criteria:** Quad</span> IS </span>(San Bernardino North (3411723)</span> OR </span>Harrison Mtn. (3411722)</span> OR </span>Keller Peak (3411721)</span> OR </span>Yucaipa (3411711)</span> OR </span>El Casco (3311781)</span> OR </span>Sunnymead (3311782)</span> OR </span>Riverside East (3311783)</span> OR </span>San Bernardino South (3411713)</span> OR </span>Redlands (3411712))

Inland Feeder - Foothill Pump Station Intertie Project (March 2024)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Alvin Meadow bedstraw</b> <i>Galium californicum ssp. primum</i>	PDRUB0N0E6	None	None	G5T2	S2	1B.2
<b>American badger</b> <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
<b>American bumble bee</b> <i>Bombus pensylvanicus</i>	IIHYM24260	None	None	G3G4	S2	
<b>Andrew's marble butterfly</b> <i>Euchloe hyantis andrewsi</i>	IILEPA5032	None	None	G3G4T2	S2	
<b>arroyo chub</b> <i>Gila orcuttii</i>	AFCJB13120	None	None	G2	S2	SSC
<b>ash-gray paintbrush</b> <i>Castilleja cinerea</i>	PDSCR0D0H0	Threatened	None	G1G2	S1S2	1B.2
<b>bald eagle</b> <i>Haliaeetus leucocephalus</i>	ABNKC10010	Delisted	Endangered	G5	S3	FP
<b>Bear Valley checkerbloom</b> <i>Sidalcea malviflora ssp. dolosa</i>	PDMAL110FH	None	None	G5T2	S2	1B.2
<b>Bell's sparrow</b> <i>Artemisiospiza belli belli</i>	ABPBX97021	None	None	G5T2T3	S3	WL
<b>bird-foot checkerbloom</b> <i>Sidalcea pedata</i>	PDMAL110L0	Endangered	Endangered	G1	S1	1B.1
<b>black bog-rush</b> <i>Schoenus nigricans</i>	PMCYP0P010	None	None	G4	S2	2B.2
<b>bristly sedge</b> <i>Carex comosa</i>	PMCYP032Y0	None	None	G5	S2	2B.1
<b>burrowing owl</b> <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S2	SSC
<b>Busck's gallmoth</b> <i>Eugnosta busckana</i>	IILEM2X090	None	None	G1G3	S2S3	
<b>California black rail</b> <i>Laterallus jamaicensis coturniculus</i>	ABNME03041	None	Threatened	G3T1	S2	FP
<b>California diplectronan caddisfly</b> <i>Diplectrona californica</i>	IITRI23010	None	None	G1G2	S1	
<b>California glossy snake</b> <i>Arizona elegans occidentalis</i>	ARADB01017	None	None	G5T2	S2	SSC
<b>California horned lark</b> <i>Eremophila alpestris actia</i>	ABPAT02011	None	None	G5T4Q	S4	WL

**California Department of Fish and Wildlife**  
**California Natural Diversity Database**

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>California red-legged frog</b> <i>Rana draytonii</i>	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b>California satintail</b> <i>Imperata brevifolia</i>	PMPOA3D020	None	None	G3	S3	2B.1
<b>Canyon Live Oak Ravine Forest</b> <i>Canyon Live Oak Ravine Forest</i>	CTT61350CA	None	None	G3	S3.3	
<b>chaparral ragwort</b> <i>Senecio aphanactis</i>	PDAST8H060	None	None	G3	S2	2B.2
<b>coast horned lizard</b> <i>Phrynosoma blainvillii</i>	ARACF12100	None	None	G4	S4	SSC
<b>coast patch-nosed snake</b> <i>Salvadora hexalepis virgultea</i>	ARADB30033	None	None	G5T4	S3	SSC
<b>coastal California gnatcatcher</b> <i>Poliophtila californica californica</i>	ABPB08081	Threatened	None	G4G5T3Q	S2	SSC
<b>coastal whiptail</b> <i>Aspidoscelis tigris stejnegeri</i>	ARACJ02143	None	None	G5T5	S3	SSC
<b>Cooper's hawk</b> <i>Accipiter cooperii</i>	ABNKC12040	None	None	G5	S4	WL
<b>Coulter's goldfields</b> <i>Lasthenia glabrata ssp. coulteri</i>	PDAST5L0A1	None	None	G4T2	S2	1B.1
<b>Crotch's bumble bee</b> <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G2	S2	
<b>Davidson's saltscale</b> <i>Atriplex serenana var. davidsonii</i>	PDCHE041T1	None	None	G5T1	S1	1B.2
<b>Delhi Sands flower-loving fly</b> <i>Rhaphiomidas terminatus abdominalis</i>	IIDIP05021	Endangered	None	G1T1	S1	
<b>Desert cuckoo wasp</b> <i>Ceratochrysis longimala</i>	IIHYM71040	None	None	G1	S1	
<b>ferruginous hawk</b> <i>Buteo regalis</i>	ABNKC19120	None	None	G4	S3S4	WL
<b>Gambel's water cress</b> <i>Nasturtium gambelii</i>	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
<b>golden eagle</b> <i>Aquila chrysaetos</i>	ABNKC22010	None	None	G5	S3	FP
<b>Hall's monardella</b> <i>Monardella macrantha ssp. hallii</i>	PDLAM180E1	None	None	G5T3	S3	1B.3
<b>Horn's milk-vetch</b> <i>Astragalus hornii var. hornii</i>	PDFAB0F421	None	None	GUT1	S1	1B.1
<b>hot springs fimbriatylis</b> <i>Fimbristylis thermalis</i>	PMCYP0B0N0	None	None	G4	S1S2	2B.2
<b>Laguna Mountains jewelflower</b> <i>Streptanthus bernardinus</i>	PDBRA2G060	None	None	G3G4	S3S4	4.3

California Department of Fish and Wildlife  
California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Lawrence's goldfinch</b> <i>Spinus lawrencei</i>	ABPBY06100	None	None	G3G4	S4	
<b>least Bell's vireo</b> <i>Vireo bellii pusillus</i>	ABPBW01114	Endangered	Endangered	G5T2	S3	
<b>lemon lily</b> <i>Lilium parryi</i>	PMLIL1A0J0	None	None	G3	S3	1B.2
<b>lesser long-nosed bat</b> <i>Leptonycteris yerbabuenae</i>	AMACB03030	Delisted	None	G3	S1	SSC
<b>lodgepole chipmunk</b> <i>Neotamias speciosus speciosus</i>	AMAFB02172	None	None	G4T3T4	S2	
<b>loggerhead shrike</b> <i>Lanius ludovicianus</i>	ABPBR01030	None	None	G4	S4	SSC
<b>Los Angeles pocket mouse</b> <i>Perognathus longimembris brevinasus</i>	AMAFD01041	None	None	G5T2	S1S2	SSC
<b>Los Angeles sunflower</b> <i>Helianthus nuttallii ssp. parishii</i>	PDAST4N102	None	None	G5TX	SX	1A
<b>marsh sandwort</b> <i>Arenaria paludicola</i>	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
<b>merlin</b> <i>Falco columbarius</i>	ABNKD06030	None	None	G5	S3S4	WL
<b>mesa horkelia</b> <i>Horkelia cuneata var. puberula</i>	PDROS0W045	None	None	G4T1	S1	1B.1
<b>Morrison bumble bee</b> <i>Bombus morrisoni</i>	IIHYM24460	None	None	G3	S1S2	
<b>Mt. Pinos onion</b> <i>Allium howellii var. clokeyi</i>	PMLIL02161	None	None	G4T2	S2	1B.3
<b>mud nama</b> <i>Nama stenocarpa</i>	PDHYD0A0H0	None	None	G4G5	S1S2	2B.2
<b>Nevin's barberry</b> <i>Berberis nevinii</i>	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
<b>northwestern San Diego pocket mouse</b> <i>Chaetodipus fallax fallax</i>	AMAFD05031	None	None	G5T3T4	S3S4	
<b>orange-throated whiptail</b> <i>Aspidoscelis hyperythra</i>	ARACJ02060	None	None	G5	S2S3	WL
<b>pallid bat</b> <i>Antrozous pallidus</i>	AMACC10010	None	None	G4	S3	SSC
<b>Palmer's mariposa-lily</b> <i>Calochortus palmeri var. palmeri</i>	PMLIL0D122	None	None	G3T2	S2	1B.2
<b>Parish's alumroot</b> <i>Heuchera parishii</i>	PDSAX0E1F0	None	None	G3	S3	1B.3
<b>Parish's bush-mallow</b> <i>Malacothamnus parishii</i>	PDMAL0Q0C0	None	None	GXQ	SX	1A





## California Department of Fish and Wildlife

## California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Parish's checkerbloom</b> <i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	PDMAL110A3	None	Rare	G3T1	S1	1B.2
<b>Parish's desert-thorn</b> <i>Lycium parishii</i>	PDSOL0G0D0	None	None	G4	S1	2B.3
<b>Parish's gooseberry</b> <i>Ribes divaricatum</i> var. <i>parishii</i>	PDGRO020F3	None	None	G5TX	SX	1A
<b>Parish's yampah</b> <i>Perideridia parishii</i> ssp. <i>parishii</i>	PDAP11N0C2	None	None	G4T3T4	S2	2B.2
<b>Parry's spineflower</b> <i>Chorizanthe parryi</i> var. <i>parryi</i>	PDPGN040J2	None	None	G3T2	S2	1B.1
<b>Peruvian dodder</b> <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	PDCUS01111	None	None	G5T4?	SH	2B.2
<b>Plummer's mariposa-lily</b> <i>Calochortus plummerae</i>	PMLIL0D150	None	None	G4	S4	4.2
<b>pocketed free-tailed bat</b> <i>Nyctinomops femorosaccus</i>	AMACD04010	None	None	G5	S3	SSC
<b>prairie wedge grass</b> <i>Sphenopholis obtusata</i>	PMPOA5T030	None	None	G5	S2	2B.2
<b>Pringle's monardella</b> <i>Monardella pringlei</i>	PDLAM180J0	None	None	GX	SX	1A
<b>quino checkerspot butterfly</b> <i>Euphydryas editha quino</i>	IILEPK405L	Endangered	None	G4G5T1T2	S1S2	
<b>red-diamond rattlesnake</b> <i>Crotalus ruber</i>	ARADE02090	None	None	G4	S3	SSC
<b>Riverside fairy shrimp</b> <i>Streptocephalus woottoni</i>	ICBRA07010	Endangered	None	G1G2	S2	
<b>Riversidian Alluvial Fan Sage Scrub</b> <i>Riversidian Alluvial Fan Sage Scrub</i>	CTT32720CA	None	None	G1	S1.1	
<b>Robinson's pepper-grass</b> <i>Lepidium virginicum</i> var. <i>robinsonii</i>	PDBRA1M114	None	None	G5T3	S3	4.3
<b>salt marsh bird's-beak</b> <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
<b>salt spring checkerbloom</b> <i>Sidalcea neomexicana</i>	PDMAL110J0	None	None	G4	S2	2B.2
<b>San Bernardino aster</b> <i>Symphyotrichum defoliatum</i>	PDASTE80C0	None	None	G2	S2	1B.2
<b>San Bernardino flying squirrel</b> <i>Glaucomys oregonensis californicus</i>	AMAFB09021	None	None	G5T1T2	S1S2	SSC
<b>San Bernardino kangaroo rat</b> <i>Dipodomys merriami parvus</i>	AMAFD03143	Endangered	Endangered	G5T1	S1	SSC
<b>San Bernardino Mountains owl's-clover</b> <i>Castilleja lasiorhyncha</i>	PDSCR0D410	None	None	G2?	S2?	1B.2



## California Department of Fish and Wildlife

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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>San Bernardino ragwort</b> <i>Packera bernardina</i>	PDAST8H0E0	None	None	G2	S2	1B.2
<b>San Bernardino ringneck snake</b> <i>Diadophis punctatus modestus</i>	ARADB10015	None	None	G5T2T3	S2?	
<b>San Diego banded gecko</b> <i>Coleonyx variegatus abbotti</i>	ARACD01031	None	None	G5T5	S1S2	SSC
<b>San Diego black-tailed jackrabbit</b> <i>Lepus californicus bennettii</i>	AMAEB03051	None	None	G5T3T4	S3S4	
<b>San Diego desert woodrat</b> <i>Neotoma lepida intermedia</i>	AMAFF08041	None	None	G5T3T4	S3S4	SSC
<b>San Gabriel slender salamander</b> <i>Batrachoseps gabrieli</i>	AAAAD02110	None	None	G2G3	S2S3	
<b>San Jacinto Valley crownscale</b> <i>Atriplex coronata</i> var. <i>notatior</i>	PDCHE040C2	Endangered	None	G4T1	S1	1B.1
<b>Santa Ana River woollystar</b> <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1
<b>Santa Ana speckled dace</b> <i>Rhinichthys osculus</i> ssp. <i>8</i>	AFCJB3705K	None	None	G5T1	S1	SSC
<b>Santa Ana sucker</b> <i>Catostomus santaanae</i>	AFCJC02190	Threatened	None	G1	S1	
<b>silver-haired ivesia</b> <i>Ivesia argyrocoma</i> var. <i>argyrocoma</i>	PDROS0X021	None	None	G2T2	S2	1B.2
<b>slender-horned spineflower</b> <i>Dodecahema leptoceras</i>	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
<b>smooth tarplant</b> <i>Centromadia pungens</i> ssp. <i>laevis</i>	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
<b>Sonoran maiden fern</b> <i>Pelazoneuron puberulum</i> var. <i>sonorense</i>	PPTHE05192	None	None	G5T3	S2	2B.2
<b>Southern California legless lizard</b> <i>Anniella stebbinsi</i>	ARACC01060	None	None	G3	S3	SSC
<b>southern California rufous-crowned sparrow</b> <i>Aimophila ruficeps canescens</i>	ABPBX91091	None	None	G5T3	S4	WL
<b>Southern Coast Live Oak Riparian Forest</b> <i>Southern Coast Live Oak Riparian Forest</i>	CTT61310CA	None	None	G4	S4	
<b>Southern Cottonwood Willow Riparian Forest</b> <i>Southern Cottonwood Willow Riparian Forest</i>	CTT61330CA	None	None	G3	S3.2	
<b>southern grasshopper mouse</b> <i>Onychomys torridus ramona</i>	AMAFF06022	None	None	G5T3	S3	SSC
<b>southern jewelflower</b> <i>Streptanthus campestris</i>	PDBRA2G0B0	None	None	G3	S3	1B.3
<b>Southern Mixed Riparian Forest</b> <i>Southern Mixed Riparian Forest</i>	CTT61340CA	None	None	G2	S2.1	

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Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>southern mountain yellow-legged frog</b> <i>Rana muscosa</i>	AAABH01330	Endangered	Endangered	G1	S2	WL
<b>Southern Riparian Forest</b> <i>Southern Riparian Forest</i>	CTT61300CA	None	None	G4	S4	
<b>Southern Riparian Scrub</b> <i>Southern Riparian Scrub</i>	CTT63300CA	None	None	G3	S3.2	
<b>southern rubber boa</b> <i>Charina umbratica</i>	ARADA01011	None	Threatened	G2G3	S2	
<b>Southern Sycamore Alder Riparian Woodland</b> <i>Southern Sycamore Alder Riparian Woodland</i>	CTT62400CA	None	None	G4	S4	
<b>Southern Willow Scrub</b> <i>Southern Willow Scrub</i>	CTT63320CA	None	None	G3	S2.1	
<b>southwestern willow flycatcher</b> <i>Empidonax traillii extimus</i>	ABPAE33043	Endangered	Endangered	G5T2	S3	
<b>steelhead - southern California DPS</b> <i>Oncorhynchus mykiss irideus pop. 10</i>	AFCHA0209J	Endangered	Candidate Endangered	G5T1Q	S1	
<b>Stephens' kangaroo rat</b> <i>Dipodomys stephensi</i>	AMAFD03100	Threatened	Threatened	G2	S3	
<b>Swainson's hawk</b> <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S4	
<b>thread-leaved brodiaea</b> <i>Brodiaea filifolia</i>	PMLIL0C050	Threatened	Endangered	G2	S2	1B.1
<b>tricolored blackbird</b> <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S2	SSC
<b>two-striped gartersnake</b> <i>Thamnophis hammondi</i>	ARADB36160	None	None	G4	S3S4	SSC
<b>western mastiff bat</b> <i>Eumops perotis californicus</i>	AMACD02011	None	None	G4G5T4	S3S4	SSC
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	Proposed Threatened	None	G3G4	S3	SSC
<b>western spadefoot</b> <i>Spea hammondi</i>	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
<b>western yellow bat</b> <i>Lasiurus xanthinus</i>	AMACC05070	None	None	G4G5	S3	SSC
<b>western yellow-billed cuckoo</b> <i>Coccyzus americanus occidentalis</i>	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<b>white cuckoo bee</b> <i>Neolarra alba</i>	IIHYM81010	None	None	GH	SH	
<b>white-bracted spineflower</b> <i>Chorizanthe xanti var. leucotheca</i>	PDPGN040Z1	None	None	G4T3	S3	1B.2
<b>white-eared pocket mouse</b> <i>Perognathus alticola alticola</i>	AMAFD01081	None	None	G2TH	SH	SSC



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<b>white-faced ibis</b> <i>Plegadis chihi</i>	ABNGE02020	None	None	G5	S3S4	WL
<b>white-tailed kite</b> <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP
<b>Wright's trichocoronis</b> <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	PDAST9F031	None	None	G4T3	S1	2B.1
<b>yellow warbler</b> <i>Setophaga petechia</i>	ABPBX03010	None	None	G5	S3	SSC
<b>yellow-breasted chat</b> <i>Icteria virens</i>	ABPBX24010	None	None	G5	S4	SSC
<b>Yucaipa onion</b> <i>Allium marvinii</i>	PMLIL02330	None	None	G1	S1	1B.2

Record Count: 129



## **C3 CNPS Rare Plant Inventory**















[CNPS Rare Plant Inventory](#)



## Search Results

88 matches found. Click on scientific name for details







Search Criteria: Quad is one of [3411712:3411723:3411722:3411721:3411711:3311781:3311782:3311783:3411713]









▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
<a href="#">Abronia villosa</a> <a href="#">var. aurita</a>	chaparral sand-verbena	Nyctaginaceae	annual herb	(Jan)Mar-Sep	None	None	G5T2?	S2	1B.1		2001-01-01	 © 2011 Aaron E. Sims
<a href="#">Acanthoscyphus parishii</a> var. <a href="#">parishii</a>	Parish's oxytheca	Polygonaceae	annual herb	Jun-Sep	None	None	G4? T3T4	S3S4	4.2	Yes	2007-04-05	 © 2014 Keir Morse
<a href="#">Allium howellii</a> <a href="#">var. clokeyi</a>	Mt. Pinos onion	Alliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G4T2	S2	1B.3	Yes	1974-01-01	 © 2016 Keir Morse
<a href="#">Allium marvinii</a>	Yucaipa onion	Alliaceae	perennial bulbiferous herb	Apr-May	None	None	G1	S1	1B.2	Yes	2001-01-01	 © 2013 Keir Morse
<a href="#">Androsace elongata</a> ssp. <a href="#">acuta</a>	California androsace	Primulaceae	annual herb	Mar-Jun	None	None	G5? T3T4	S3S4	4.2		1994-01-01	 © 2008 Aaron Schusteff
<a href="#">Arenaria paludicola</a>	marsh sandwort	Caryophyllaceae	perennial stoloniferous herb	May-Aug	FE	CE	G1	S1	1B.1		1984-01-01	No Photo Available
<a href="#">Artemisia palmeri</a>	San Diego sagewort	Asteraceae	perennial deciduous shrub	(Feb)May-Sep	None	None	G3?	S3?	4.2		1974-01-01	No Photo Available
<a href="#">Asplenium vespertinum</a>	western spleenwort	Aspleniaceae	perennial rhizomatous herb	Feb-Jun	None	None	G3?	S4	4.2		1974-01-01	No Photo Available

<u><i>Astragalus hornii</i></u> <u>var. <i>hornii</i></u>	Horn's milk-vetch	Fabaceae	annual herb	May-Oct	None	None	GUT1	S1	1B.1		2006-12-01	No Photo Available
<u><i>Astragalus pachypus</i></u> var. <u><i>jaegeri</i></u>	Jaeger's milk-vetch	Fabaceae	perennial shrub	Dec-Jun	None	None	G4T1	S1	1B.1	Yes	1994-01-01	No Photo Available
<u><i>Atriplex coronata</i></u> var. <u><i>notatior</i></u>	San Jacinto Valley crownscale	Chenopodiaceae	annual herb	Apr-Aug	FE	None	G4T1	S1	1B.1	Yes	1988-01-01	 © 2008 Larry Sward
<u><i>Atriplex serenana</i></u> var. <u><i>davidsonii</i></u>	Davidson's saltscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G5T1	S1	1B.2		1994-01-01	No Photo Available
<u><i>Berberis nevadensis</i></u>	Nevin's barberry	Berberidaceae	perennial evergreen shrub	(Feb)Mar-Jun	FE	CE	G1	S1	1B.1	Yes	1980-01-01	No Photo Available
<u><i>Brodiaea filifolia</i></u>	thread-leaved brodiaea	Themidaceae	perennial bulbiferous herb	Mar-Jun	FT	CE	G2	S2	1B.1	Yes	1974-01-01	 © 2016 Keir Morse
<u><i>Calochortus catalinae</i></u>	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	(Feb)Mar-Jun	None	None	G3G4	S3S4	4.2	Yes	1974-01-01	No Photo Available
<u><i>Calochortus palmeri</i></u> var. <u><i>palmeri</i></u>	Palmer's mariposa-lily	Liliaceae	perennial bulbiferous herb	Apr-Jul	None	None	G3T2	S2	1B.2	Yes	1994-01-01	No Photo Available
<u><i>Calochortus plummerae</i></u>	Plummer's mariposa-lily	Liliaceae	perennial bulbiferous herb	May-Jul	None	None	G4	S4	4.2	Yes	1994-01-01	No Photo Available
<u><i>Calochortus simulans</i></u>	La Panza mariposa-lily	Liliaceae	perennial bulbiferous herb	Apr-Jun	None	None	G2	S2	1B.3	Yes	1980-01-01	 © 2011 Aaron E. Sims
<u><i>Carex comosa</i></u>	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	None	None	G5	S2	2B.1		1994-01-01	 Dean Wm. Taylor 1997
<u><i>Castilleja cinerea</i></u>	ash-gray paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun-Aug	FT	None	G1G2	S1S2	1B.2	Yes	1974-01-01	No Photo Available
<u><i>Castilleja lasiorhyncha</i></u>	San Bernardino Mountains owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	May-Aug	None	None	G2?	S2?	1B.2	Yes	1980-01-01	No Photo Available
<u><i>Castilleja montigena</i></u>	Heckard's paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	May-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available

<i>Caulanthus</i> <i>si lans</i>	Payson's jewelflower	Brassicaceae	annual herb	(Feb)Mar- May(Jun)	None	None	G4	S4	4.2	Yes	1974- 01-01	No Photo Available
<i>Centro dia</i> <i>pungens</i> ssp. <i>laevis</i>	smooth tarplant	Asteraceae	annual herb	Apr-Sep	None	None	G3G4T2	S2	1B.1	Yes	1994- 01-01	No Photo Available
<i>Chloropyron</i> <i>ma mu riti m</i> ssp. <i>riti mu</i>	salt marsh bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May- Oct(Nov)	FE	CE	G4?T1	S1	1B.2		1974- 01-01	No Photo Available
<i>Chorizanthe</i> <i>leptotheca</i>	Peninsular spineflower	Polygonaceae	annual herb	May-Aug	None	None	G3	S3	4.2		1994- 01-01	No Photo Available
<i>Chorizanthe</i> <i>parryi</i> var. <i>parryi</i>	Parry's spineflower	Polygonaceae	annual herb	Apr-Jun	None	None	G3T2	S2	1B.1	Yes	1994- 01-01	 © 2012 Keir Morse
<i>Chorizanthe</i> <i>xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	Polygonaceae	annual herb	Apr-Jun	None	None	G4T3	S3	1B.2	Yes	1994- 01-01	No Photo Available
<i>Convolvulus</i> <i>si lans</i>	small- flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2		1994- 01-01	No Photo Available
<i>Cuscuta</i> <i>obtusiflora</i> var. <i>glandulosa</i>	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	None	None	G5T4?	SH	2B.2		2011- 08-24	No Photo Available
<i>Deinandra</i> <i>paniculata</i>	paniculate tarplant	Asteraceae	annual herb	(Mar)Apr- Nov	None	None	G4	S4	4.2		2001- 01-01	No Photo Available
<i>Diplacus</i> <i>clevelandii</i>	Cleveland's bush monkeyflower	Phrymaceae	perennial rhizomatous herb	Apr-Jul	None	None	G4	S4	4.2		1980- 01-01	 © 2020 W. Juergen Schrenk
<i>Dodecahe</i> a <i>leptoceras</i>	slender- horned spineflower	Polygonaceae	annual herb	Apr-Jun	FE	CE	G1	S1	1B.1	Yes	1980- 01-01	No Photo Available
<i>Eriastrum</i> <i>densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar	Polemoniaceae	perennial herb	Apr-Sep	FE	CE	G4T1	S1	1B.1	Yes	1980- 01-01	No Photo Available
<i>Eriophyllum</i> <i>lanatum</i> var. <i>obovatum</i>	southern Sierra woolly sunflower	Asteraceae	perennial herb	Jun-Jul	None	None	G5T4	S4	4.3	Yes	1974- 01-01	No Photo Available
<i>Erythranthe</i> <i>exigua</i>	San Bernardino Mountains monkeyflower	Phrymaceae	annual herb	May-Jul	None	None	G2	S2	1B.2		1974- 01-01	No Photo Available




<u><i>Fimbristylis thermalis</i></u>	hot springs fimbristylis	Cyperaceae	perennial rhizomatous herb	Jul-Sep	None	None	G4	S1S2	2B.2		1980- 01-01	No Photo Available
<u><i>Fraseria neglecta</i></u>	pine green- gentian	Gentianaceae	perennial herb	May-Jul	None	None	G4	S4	4.3	Yes	1980- 01-01	No Photo Available
<u><i>Fritillaria pinetorum</i></u>	pine fritillary	Liliaceae	perennial bulbiferous herb	May- Jul(Sep)	None	None	G4	S4	4.3	Yes	2001- 01-01	 © 2008 Steve Matson
<u><i>Galium californicum</i> ssp. <i>primum</i></u>	Alvin Meadow bedstraw	Rubiaceae	perennial herb	May-Jul	None	None	G5T2	S2	1B.2	Yes	1974- 01-01	 © 2013 Keir Morse
<u><i>Galium johnstonii</i></u>	Johnston's bedstraw	Rubiaceae	perennial herb	Jun-Jul	None	None	G4	S4	4.3	Yes	1974- 01-01	 © 2015 Keir Morse
<u><i>Helianthus nuttallii</i> ssp. <i>parishii</i></u>	Los Angeles sunflower	Asteraceae	perennial rhizomatous herb	Aug-Oct	None	None	G5TX	SX	1A	Yes	1974- 01-01	No Photo Available
<u><i>Heuchera caespitosa</i></u>	urn-flowered alumroot	Saxifragaceae	perennial rhizomatous herb	May-Aug	None	None	G3	S3	4.3	Yes	1974- 01-01	 © 2015 Keir Morse
<u><i>Heuchera parishii</i></u>	Parish's alumroot	Saxifragaceae	perennial rhizomatous herb	Jun-Aug	None	None	G3	S3	1B.3	Yes	1974- 01-01	 © 2015 Keir Morse
<u><i>Hordeum intercedens</i></u>	vernal barley	Poaceae	annual herb	Mar-Jun	None	None	G3G4	S3S4	3.2		1994- 01-01	No Photo Available
<u><i>Horkelia cuneata</i> var. <i>puberula</i></u>	mesa horkelia	Rosaceae	perennial herb	Feb- Jul(Sep)	None	None	G4T1	S1	1B.1	Yes	2001- 01-01	 © 2008 Tony Morosco
<u><i>Hulsea vestita</i> ssp. <i>parryi</i></u>	Parry's sunflower	Asteraceae	perennial herb	Apr-Aug	None	None	G5T4	S4	4.3	Yes	1994- 01-01	 © 2015 Keir Morse

<i>Imperata brevifolia</i>	California satintail	Poaceae	perennial rhizomatous herb	Sep-May	None	None	G3	S3	2B.1		2006- 12-26	 © 2020 Matt C. Berger
<i>Ivesia argyrocom a var. argyrocom a</i>	silver-haired ivesia	Rosaceae	perennial herb	Jun-Aug	None	None	G2T2	S2	1B.2	Yes	1974- 01-01	 © 2015 Keir Morse
<i>Juglans californica</i>	Southern California black walnut	Juglandaceae	perennial deciduous tree	Mar-Aug	None	None	G4	S4	4.2	Yes	1994- 01-01	 © 2020 Zoya Akulova
<i>Juncus duranii</i>	Duran's rush	Juncaceae	perennial rhizomatous herb	Jul-Aug	None	None	G3	S3	4.3	Yes	1974- 01-01	 © 2017 Keir Morse
<i>Lasthenia glabrata ssp. coulteri</i>	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994- 01-01	 © 2013 Keir Morse
<i>Lepidium virginicum var. robinsonii</i>	Robinson's pepper-grass	Brassicaceae	annual herb	Jan-Jul	None	None	G5T3	S3	4.3		1994- 01-01	 © 2015 Keir Morse
<i>Lilium hum boldtii ssp. ocellatum</i>	ocellated Humboldt lily	Liliaceae	perennial bulbiferous herb	Mar- Jul(Aug)	None	None	G4T4?	S4?	4.2	Yes	1980- 01-01	 © 2008 Thomas Stoughton
<i>Lilium parryi</i>	lemon lily	Liliaceae	perennial bulbiferous herb	Jul-Aug	None	None	G3	S3	1B.2		1974- 01-01	 © 2009 Thomas Stoughton
<i>Lycium parishii</i>	Parish's desert-thorn	Solanaceae	perennial shrub	Mar-Apr	None	None	G4	S1	2B.3		1980- 01-01	No Photo Available
<i>Malacothamnus parishii</i>	Parish's bush- mallow	Malvaceae	perennial deciduous shrub	Jun-Jul	None	None	GXQ	SX	1A	Yes	1974- 01-01	 © 2021 Keir Morse



<u>Monardella</u> <u>cantha</u> ssp. <u>hallii</u>	Hall's monardella	Lamiaceae	perennial rhizomatous herb	Jun-Oct	None	None	G5T3	S3	1B.3	Yes	1974- 01-01	No Photo Available
<u>Monardella</u> <u>pringlei</u>	Pringle's monardella	Lamiaceae	annual herb	May-Jun	None	None	GX	SX	1A	Yes	1974- 01-01	No Photo Available
<u>Muhlenbergia</u> <u>californica</u>	California muhly	Poaceae	perennial rhizomatous herb	Jun-Sep	None	None	G4	S4	4.3	Yes	1994- 01-01	No Photo Available
<u>Muilla coronata</u>	crowned muilla	Themidaceae	perennial bulbiferous herb	Mar- Apr(May)	None	None	G3	S3	4.2		1988- 01-01	No Photo Available
m a <u>Na</u> <u>stenocarpa</u>	mud nama	Namaceae	annual/perennial herb	Jan-Jul	None	None	G4G5	S1S2	2B.2		1994- 01-01	No Photo Available
<u>Nasturtium</u> m b <u>ga</u> <u>elii</u>	Gambel's water cress	Brassicaceae	perennial rhizomatous herb	Apr-Oct	FE	CT	G1	S1	1B.1		1980- 01-01	No Photo Available
<u>Packera</u> <u>bernardina</u>	San Bernardino ragwort	Asteraceae	perennial herb	May-Jul	None	None	G2	S2	1B.2	Yes	1974- 01-01	No Photo Available
<u>Pelazoneuron</u> <u>puberulum</u> var. <u>sonorense</u>	Sonoran maiden fern	Thelypteridaceae	perennial rhizomatous herb	Jan-Sep	None	None	G5T3	S2	2B.2		1994- 01-01	No Photo Available
<u>Perideridia</u> <u>parishii</u> ssp. <u>parishii</u>	Parish's yampah	Apiaceae	perennial herb	Jun-Aug	None	None	G4T3T4	S2	2B.2		1974- 01-01	No Photo Available
<u>Phacelia</u> <u>havensis</u>	Mojave phacelia	Hydrophyllaceae	annual herb	Apr-Aug	None	None	G4Q	S4	4.3	Yes	1994- 01-01	No Photo Available
<u>Phacelia</u> <u>stellaris</u>	Brand's star phacelia	Hydrophyllaceae	annual herb	Mar-Jun	None	None	G1	S1	1B.1		1994- 01-01	No Photo Available
<u>Piperia</u> <u>leptopetala</u>	narrow- petaled rein orchid	Orchidaceae	perennial herb	May-Jul	None	None	G4	S4	4.3	Yes	2001- 01-01	No Photo Available
<u>Quercus</u> mangel <u>nnii</u>	Engelmann oak	Fagaceae	perennial deciduous tree	Mar-Jun	None	None	G3	S3	4.2		1988- 01-01	No Photo Available
<u>Ribes</u> <u>divaricatum</u> var. <u>parishii</u>	Parish's gooseberry	Grossulariaceae	perennial deciduous shrub	Feb-Apr	None	None	G5TX	SX	1A	Yes	1988- 01-01	No Photo Available
m n <u>Ro</u> <u>eya</u> <u>coulteri</u>	Coulter's matilija poppy	Papaveraceae	perennial rhizomatous herb	Mar- Jul(Aug)	None	None	G4	S4	4.2		1974- 01-01	No Photo Available
<u>Rupertia rigida</u>	Parish's rupertia	Fabaceae	perennial herb	Jun-Aug	None	None	G4	S4	4.3		1974- 01-01	No Photo Available

<u><i>Schoenus nigricans</i></u>	black bog-rush	Cyperaceae	perennial herb	Aug-Sep	None	None	G4	S2	2B.2		2001-01-01	No Photo Available
<u><i>Senecio aphanactis</i></u>	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2		1994-01-01	No Photo Available
<u><i>Senecio astephanus</i></u>	San Gabriel ragwort	Asteraceae	perennial herb	May-Jul	None	None	G3	S3	4.3	Yes	2006-12-21	No Photo Available
<u><i>Sidalcea hickmanii</i> ssp. <i>parishii</i></u>	Parish's checkerbloom	Malvaceae	perennial herb	(May)Jun-Aug	None	CR	G3T1	S1	1B.2	Yes	1974-01-01	No Photo Available
<u><i>Sidalcea malviflora</i> ssp. <i>dolosa</i></u>	Bear Valley checkerbloom	Malvaceae	perennial herb	May-Aug	None	None	G5T2	S2	1B.2	Yes	2012-06-13	No Photo Available
<u><i>Sidalcea neomexicana</i></u>	salt spring checkerbloom	Malvaceae	perennial herb	Mar-Jun	None	None	G4	S2	2B.2		1994-01-01	No Photo Available
<u><i>Sidalcea pedata</i></u>	bird-foot checkerbloom	Malvaceae	perennial herb	May-Aug	FE	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Sidothea caryophylloides</i></u>	chickweed oxytheca	Polygonaceae	annual herb	Jul-Sep(Oct)	None	None	G4	S4	4.3	Yes	1980-01-01	 ©2021 Keir Morse
<u><i>Sphenopholis obtusata</i></u>	prairie wedge grass	Poaceae	perennial herb	Apr-Jul	None	None	G5	S2	2B.2		1974-01-01	No Photo Available
<u><i>Streptanthus bernardinus</i></u>	Laguna Mountains jewelflower	Brassicaceae	perennial herb	May-Aug	None	None	G3G4	S3S4	4.3	Yes	1980-01-01	No Photo Available
<u><i>Streptanthus campestris</i></u>	southern jewelflower	Brassicaceae	perennial herb	(Apr)May-Jul	None	None	G3	S3	1B.3		1994-01-01	No Photo Available
<u><i>Symphyotrichum defoliatum</i></u>	San Bernardino aster	Asteraceae	perennial rhizomatous herb	Jul-Nov	None	None	G2	S2	1B.2	Yes	2004-01-01	No Photo Available
<u><i>Trichocoronis wrightii</i> var. <i>wrightii</i></u>	Wright's trichocoronis	Asteraceae	annual herb	May-Sep	None	None	G4T3	S1	2B.1		1988-01-01	No Photo Available
<u><i>Trichostema m cranthum</i></u>	small-flowered bluecurls	Lamiaceae	annual herb	Jun-Sep	None	None	G4	S3	4.3		1974-01-01	No Photo Available
<u><i>Yucca brevifolia</i></u>						CC			CBR		2011-12-13	No Photo Available

Showing 1 to 88 of 88 entries



# Appendix D

## **Cultural Resources Assessment (Public Version)**





# INLAND FEEDER-FOOTHILL PUMP STATION INTERTIE PROJECT

## Cultural Resources Assessment

Prepared for

The Metropolitan Water District of Southern  
California  
700 North Alameda Street,  
Los Angeles, California 90012

March 2024







# INLAND FEEDER-FOOTHILL PUMP STATION INTERTIE PROJECT

## Cultural Resources Assessment

**Prepared for**

The Metropolitan Water District of Southern California  
700 North Alameda Street,  
Los Angeles, California 90012

March 2024

**Prepared by**

ESA  
626 Wilshire Boulevard, Suite 1100  
Los Angeles, CA 90017

**Principal Investigator:**

James Clark, M.A.

**Author:**

Claudia Camacho-Trejo, B.A.

**Project Location:**

Redlands (CA) USGS 7.5-minute Topographic Quad  
Township 1 South, Range 3 West, Section 1

**Acreage:** Approx. 10.4 acres

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## ACRONYMS AND OTHER ABBREVIATIONS

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Acronym or Abbreviation	Definition
APE	Area of Potential Effects
B.P.	Before Present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
ESA	Environmental Science Associates
Metropolitan	Metropolitan Water District of Southern California
MLD	Most Likely Descendant
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PRC	California Public Resources Code
SBVMWD	San Bernardino Valley Municipal Water District
SBVWCD	San Bernardino Valley Water Conservation District
SCCIC	South Central Coastal Information Center
USC	United States Code
USGS	U.S. Geological Survey



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# INLAND FEEDER-FOOTHILL PUMP STATION INTERTIE PROJECT

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## Cultural Resources Assessment

### Introduction

Environmental Science Associates (ESA) has been retained by The Metropolitan Water District of Southern California (Metropolitan) to conduct a cultural resources assessment for the Inland Feeder-Foothill Pump Station Intertie Project (proposed project). The Inland Feeder is owned and operated by Metropolitan and conveys approximately 1.7 billion gallons of water daily throughout its distribution system. Located in western San Bernardino and Riverside counties, the Inland Feeder is a 44-mile-long, 12-foot-diameter conveyance pipeline supporting reliable water delivery to Southern California. The primary purpose of the Inland Feeder is to connect State Water Project supplies to Metropolitan's Eastern Distribution System.

### Project Personnel

ESA personnel involved in the preparation of this report are as follows: Principal Investigator James Clark, M.A., RPA; report author and archaeologist Claudia Camacho-Trejo, B.A.; archaeologist Ellen McIlvain, B.A.; and GIS specialist Chance Scott. Resumes of key personnel are included in **Appendix A**.

### Project Location

The proposed project is located on an approximately 10-acre, triangular-shaped parcel immediately south of the intersection of Cone Camp Road and Greenspot Road in Highland, California (assessor's parcel numbers 1210381240000 and 1210381250000; referred to in this report as the project area). The site is generally accessible from State Route 210 (Foothill Freeway), located roughly 3.5 miles to the west. Local access to the project area is provided by Cone Camp Road, with an entrance gate immediately north and south of the Foothill Pump Station. The majority of the site is secured with chain-link perimeter fencing. The project area is bounded by Greenspot Road and residential development to the north, the Santa Ana River and open space to the south, and large-lot, single-family residences and open space to the east and west.

Metropolitan owns 5.47 acres of the project area and has easement rights to approximately 1 acre of the project area. The San Bernardino Valley Municipal Water District (SBVMWD) and the San Bernardino Valley Water Conservation District (SBVWCD) own the remainder of the project area. SBVWCD also owns the parcel directly south of Metropolitan's triangular-shaped fee property. Metropolitan will obtain an additional easement for the SBVWCD property located between the

Metropolitan Inland Feeder alignment and its fee property. The project location is shown in **Figure 1, Regional Location Map**. The proposed project facilities are shown in **Figure 2, Project Location Map**, and are situated within Section 1 of Township 1 South, Range 3 West of the Redlands (CA) U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle.

## Project Description

To enhance Metropolitan's water delivery flexibility in response to drought conditions and limited State Water Project (SWP) allocations, Metropolitan is proposing two new pipeline connections between the Inland Feeder and the SBVMWD-Inland Feeder Interconnection Line 1 and SBVMWD's Foothill Pump Station (FPS).

Two new underground pipelines (supply connection and discharge connection), two underground vaults, four aboveground hydropneumatic surge tanks (HST), and associated appurtenant structures would be constructed in two stages as outlined below.

Stage 1 would include construction of the components mainly located within the existing fenced facility. This would include construction of an approximately 400-foot-long, 54-inch supply connection pipeline, an approximately 750-foot-long, 54-inch discharge connection pipeline, a 50-by-40-foot underground vault, four aboveground HSTs on concrete pads, and appurtenant structures. Additionally, the proposed project would include installation of a new fence-line along the western boundary of the project area to accommodate the supply and discharge connection components.

Stage 2 construction activities would occur along the southern portion of the project area, located mainly outside of the fenced facility, and would include a 45-by-40-foot underground vault, a portion of the 54-inch discharge connection pipeline, all associated appurtenant structures, and final connections to the existing Inland Feeder pipeline.

Most of the construction activities would occur during daylight hours, occasional nighttime construction activities may be required to shutdown the Inland Feeder and install the tie-in connection. Operation and maintenance activities at the FPS and Inland Feeder would be similar to existing conditions.

## Area of Potential Effects

An Area of Potential Effects (APE) was established for the undertaking in accordance with Section 106 of the National Historic Preservation Act (NHPA). An APE is defined as:

*... the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 Code of Federal Regulations [CFR] 800.16[d]).*

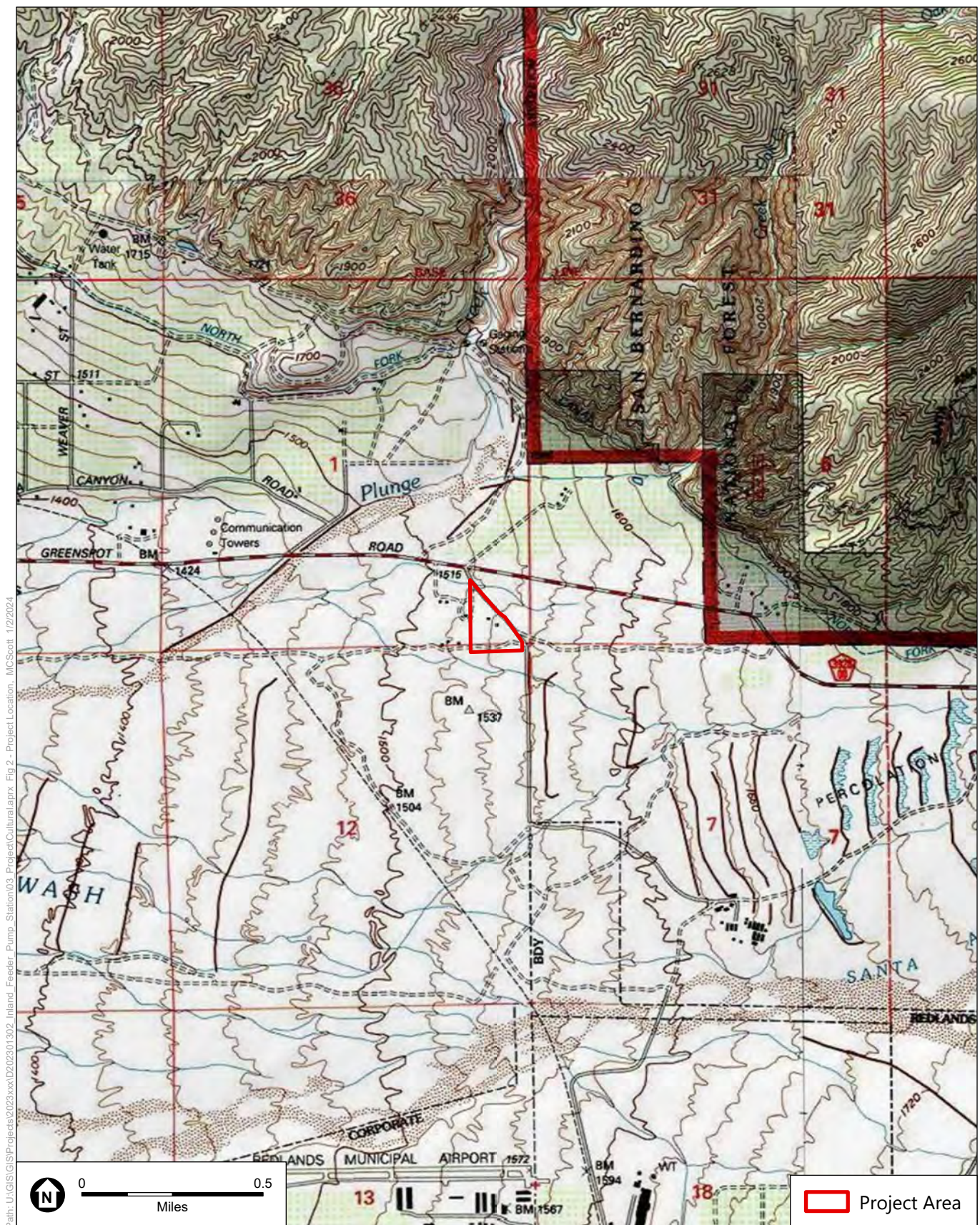


SOURCE: ESA, 2024

Inland Feeder Pump Station

**Figure 1**  
Regional Location Map





SOURCE: ESA, 2024, USGS, 2023

Topo Quad: Redlands, 1980

Inland Feeder Pump Station

**Figure 2**  
Project Location Map



The APE includes the area where project-related activities may directly or indirectly affect cultural resources. The total acreage for the horizontal APE is approximately 10 acres. The horizontal APE retains the level of anticipated disturbance. The vertical APE consists of the maximum depth of ground disturbance, which varies from 10 to 35 feet (**Figure 3, Area of Potential Effects [APE]**), given the nature of the undertaking, which would replace and enhance existing facilities or add underground pipelines, an indirect effects APE was not established.

## Setting

### Environmental Setting

The project site is located on the Peninsular and the south side of the Transverse Ranges border in the north and eastern part of the San Bernardino Valley. This section of San Bernardino Valley, known as Highland, comprises a slim belt of foothill slopes raised from the lowlands, skirting the southern base of the San Bernardino Mountains, and extending west over 10 miles from the gorge of the Santa Ana River. It comprises Quaternary-age young alluvial fan, channel, and wash deposits. Many different environments are recorded in the valley fill, including rivers, lakes, and broad alluvial fans. Alluvium, lake, playa, and terrace deposits at the surface range from the early Pleistocene to the Holocene (Morton and Miller 2006). Several fault systems are located within proximity of the project site.

### Prehistoric Setting

The chronology of Southern California is typically divided into three general time periods: the Early Holocene (11,000 to 8,000 Before Present [B.P.]), the Middle Holocene (8,000 to 4,000 B.P.), and the Late Holocene (4,000 B.P. to A.D. 1769). This chronology is manifested in the archaeological record by particular artifacts and burial practices that indicate specific technologies, economic systems, trade networks, and other aspects of culture.

#### Early Holocene (11,000 to 8,000 B.P.)

While it is not certain when humans first came to California, their presence in Southern California by about 11,000 B.P. has been well documented. At Daisy Cave, on San Miguel Island, cultural remains have been radiocarbon dated to between 11,100 and 10,950 years B.P. (Byrd and Raab 2007). On the mainland, radiocarbon evidence confirms occupation of the Orange county and San Diego county coast by about 9,000 B.P., primarily in lagoon and river valley locations (Gallegos 2002). In western Riverside county, few Early Holocene sites are known to exist. One exception is site CA-RIV-2798, which contains deposits dating to as early as 8,580. B.P. (Grenda 1997). During the Early Holocene, the climate of Southern California became warmer and more arid and the human population, residing mainly in coastal or inland desert areas, began exploiting a wider range of plant and animal resources (Byrd and Raab 2007).

The primary Early Holocene cultural complex in coastal Southern California was the San Dieguito Complex, occurring between approximately 10,000 and 8,000 B.P. The people of the San Dieguito Complex inhabited the chaparral zones of southwestern California, exploiting the plant and animal resources of these ecological zones (Warren 1967). Leaf-shaped and large-stemmed projectile points, scraping tools, and crescentics are typical of San Dieguito Complex material culture.





SOURCE: ESA, 2024

Inland Feeder Pump Station

**Figure 3**  
Area of Potential Effects

## **Middle Holocene (8,000 to 4,000 B.P.)**

During the Middle Holocene, there is evidence for the processing of acorns for food and a shift toward a more generalized economy in coastal and inland Southern California. During this period, the processing of plant foods—particularly acorns—increased, a wider variety of animals were hunted, and trade with neighboring regions intensified (Byrd and Raab 2007).

The Middle Holocene La Jolla (8,000–4,000 B.P.) Complex is essentially a continuation of the San Dieguito Complex. La Jolla groups lived in chaparral zones or along the coast, often migrating between the two. Coastal settlement focused on the bays and estuaries of coastal Orange and San Diego counties. La Jolla peoples produced large, coarse stone tools, but also produced well-made projectile points and milling slabs. The La Jolla Complex represents a period of population growth and increasing social complexity, and it was also during this period that the first evidence of the exploitation of marine resources and the grinding of seeds for flour appears, as indicated by the abundance of millings in the archaeological record (Byrd and Raab 2007).

Contemporary with the La Jolla Complex, the Pauma Complex has been defined at coastal and adjacent inland sites in San Diego and Orange counties, as well as in inland Riverside county (True 1958). The Pauma Complex is similar in technology to the La Jolla Complex; however, evidence of coastal subsistence is absent from Pauma Complex sites (Moratto 1984). The Pauma and La Jolla Complexes may either be indicative of separate inland and coastal groups with similar subsistence and technological adaptations, or, alternatively, may represent inland and coastal phases of one group's seasonal rounds. The latter hypothesis is supported by the lack of hidden and deeply buried artifacts at Pauma sites, indicating that these sites may have been temporary camps for resource gathering and processing.

## **Late Holocene (4,000 B.P. to A.D. 1769)**

During the Late Holocene, native populations of Southern California were becoming less mobile, and populations began to gather in small sedentary villages with satellite resource-gathering camps (Byrd and Raab 2007). Evidence indicates that the overexploitation of larger, high-ranked food resources may have led to a shift in subsistence towards a focus on acquiring greater amounts of smaller resources, such as shellfish and small-seeded plants (Byrd and Raab 2007).

Around 1,000 B.P., there was an episode of sustained drought, known as the Medieval Climatic Anomaly. While the effects of this environmental change on prehistoric populations are still debated, it likely led to changes in subsistence strategies to deal with the substantial stress on resources (Jones and Schwitalla 2008). In coastal Southern California, beginning before the Medieval Climatic Anomaly but possibly accelerated by it, conditions became drier, and many lagoons had been transformed into saltwater marshes. Because of this, populations abandoned coastal mesa and ridge tops to settle nearer to permanent freshwater resources (Gallegos 2002).

Trade intensity reached its zenith in the Late Holocene, with asphaltum (tar), seashells and steatite being traded from Southern California to the Great Basin. Major technological changes appeared as well, particularly with the advent of the bow and arrow, which largely replaced the use of the dart and atlatl (Byrd and Raab 2007). Small projectile points, ceramics, including Tizon

brownware pottery, and obsidian from Obsidian Butte (Imperial county), are all representative artifacts of the Late Holocene.

It has been postulated that as early as 3,500 B.P., a Takic-speaking people arrived in coastal Los Angeles and Orange counties, having migrated west from inland desert regions (Kroeber 1925; Warren 1968; Sutton 2009). By around 1,500 to 1,000 B.P., Takic language and cultures had spread to the south and inland to the east. These new arrivals, linguistically and culturally different from earlier coastal populations, may have brought new settlement and subsistence systems with them, along with other new cultural elements. This migration has been postulated as being a factor in several of the significant changes in material culture seen in the Late Holocene (such as the use of smaller projectile points and pottery), as well as the introduction of cremation as a burial practice.

The San Luis Rey (divided into San Luis Rey I [AD 1400 to 1750] and San Luis Rey II [AD 1750 to 1850]) cultures represented the Late Period in southwestern Riverside county, northern San Diego county, southern Los Angeles county, and the interior mountains of Orange county (Meighan 1954; Moratto 1984). San Luis Rey I village sites contain manos (hand stones), metates (grinding slabs), bedrock mortars, shell artifacts, and triangular arrow points. In addition to these features, San Luis Rey II sites are characterized by the presence of pottery, pictographs, and the cremation of the dead (Moratto 1984).

San Luis Rey settlement patterns in the upper San Luis Rey River drainage are typified by seasonally occupied lowland villages located in proximity to water sources, and highland villages occupied in the late summer and fall for acorn collection (True and Waugh 1982). However, settlement patterns within southwestern Riverside county are less well known. The available information, stemming primarily from survey data, indicates that four primary site types existed within the region during the Late Period: field camps, resource procurement locations, residential bases, and villages (Mason 1999). Resource procurement locations and field camps, the most common site types, contain a limited assemblage of artifacts and subsistence remains, primarily lithic debitage, some tools, fire affected rock, and small amounts of animal bones and charred seeds and nuts. This indicates that these types of sites were used primarily for focused activities and short-term occupancy.

Villages and residential bases, on the other hand, show evidence for long-term occupation by large groups of people. Villages were occupied year-round, while residential bases were occupied seasonally. Artifacts and features found at both village and residential bases, including large amounts of faunal and botanical remains, numerous high-quality tools, fire-affected rock, and anthrosols, indicate a wide range of activities (Mason 1999). Bedrock mortars point to the processing of seeds and acorns, and ceremonial activities are evidenced by the presence of pictographs, petroglyphs, and cupules within village sites.



## Ethnographic setting

### Maara'yam

At the time of contact, San Bernardino county was occupied by two groups, the Maara'yam (referred to as the Serrano in ethnographic literature) and the Cahuilla, though the area of the undertaking was largely occupied by the Maara'yam. The Maara'yam speak a dialect of the Takic family of the Uto-Aztecan language group. The extent of Maara'yam ancestral territory, which includes the mountain regions occupied by the Mountain Maara'yam and desert region occupied by the Desert Maara'yam, sometimes referred to as "Vanyume". Maara'yam ancestral territory includes the Antelope Valley to the west, the southwest Mojave Desert to the north, portions of the San Gabriel and San Bernardino Mountains at its center, the Inland Empire north of the city of Riverside to the south, and the city of Twentynine Palms to the east (San Manuel Band of Mission Indians 2022).

The Maara'yam lived in seasonal rounds and utilized resources in specific locations at different times of year, such as acorns, piñon nuts, yucca, mesquite, cacti, chia, deer, bighorn sheep, antelope, rabbits, small rodents, and birds (primarily quail) (Bean and Smith 1978). The Maara'yam used shell, bone, feathers, wood, stone, and plant fibers in the manufacture of their material culture, including basketry, blankets, and clothing. The Maara'yam, and many neighboring language groups, were organized into independent but interconnected village communities. These villages consisted of extended families residing in circular, dome-shaped structures made of willow frames covered with tule thatching, also known as a *kiic* (Bean and Smith 1978). Each of these villages consisted of one or more patrilineal clans that belonged to one of two exogamous moieties, either coyote or wildcat. The clan-based villages and the larger moiety groups maintained complex ceremonial, familial, and political relationships with one another (Gifford 1918; Strong 1929). Frequently, a number of communities would combine to celebrate important festivals, harvest cycles, and other ceremonial events, occasionally inviting distant, linguistically unrelated groups. The APE covers a broad area and was potentially known and visited by separate groups. However, the northern slopes of the San Bernardino Mountains appear to have fallen within the territory of the Apihavatum, a Maara'yam clan whose primary village was located at the present-day Arrowhead Hot Springs. The village, as well as the entire region, was known as *Apihanava t* or *Apuiva 't* (Strong 1929).

## Historic Setting

### Spanish Period (1769–1821)

The first European to cross into San Bernardino County was Pedro Fages, who entered the area in 1772. Fages was in pursuit of deserting Spanish soldiers. In 1774 and 1776, Juan Batista de Anza crossed into San Bernardino Valley. With the establishment of the Mission System in California, catastrophe was wrought on Native American communities, their social fabric, and lifeways. Much of the Maara'yam were removed from the Antelope Valley, the Mojave River region, and the Inland Empire to the San Gabriel Mission, established in 1771 (San Manuel Band of Mission Indians 2022). The first attempt by Spanish missionaries to settle the valley was short-lived and unsuccessful. In 1810, Father Dumetz set out from the San Gabriel Mission to establish a mission station adjacent to an Indian village on the Santa Ana River. The station, called Politana, was

largely destroyed by an earthquake in 1812. Shortly thereafter, the mission station was raided by non-local Indians and the settlement was abandoned (Scott 1976).

In 1819, Spanish Missionaries attempted to establish another mission outpost in the San Bernardino Valley. The outpost, called Estancia San Bernardino, was located in the area around what is presently the city of Redlands. The estancia's overseers compelled local Maara'yam and other indigenous communities to work as laborers building infrastructure to support the outpost (San Manuel Band of Mission Indians 2022). One such piece of infrastructure established via the labor of the Maara'yam was the Mill Creek Zanja, an irrigation system that allowed for the watering of the estancia's agricultural fields and served the local population for 60 years (Hertzberg 1976; San Manuel Band of Mission Indians 2022).

### **Mexican Period (1821–1846)**

Mexico received its independence from Spain in 1821 and secularized the Spanish Missions in 1834. In 1842, Mexican settlers began to populate the eastern portion of the San Bernardino Valley. The same year, the Mexican Governor of California granted the majority of east San Bernardino Valley, including the Estancia San Bernardino, to Don Antonio Lugo's sons—Jose del Carmen, Jose Maria, and Vincente—along with their cousin, Diego Sepulveda. The land was used primarily for cattle ranching and was known as San Bernardino Rancho. The Lugos subsequently sold off parcels of the rancho to incoming Mormon settlers in the early 1850s, including the sale of the estancia in 1852 (Hertzberg 1976; Scott 1976).

### **American Period (1846–Present)**

Mexico ceded California to the United States as part of the Treaty of Guadalupe Hidalgo, which ended the Mexican American War (1846–1848). The treaty also recognized rights of Mexican citizens to retain ownership of land granted to them by Spanish or Mexican authorities. However, the claimant was required to prove their right to the land before a patent was given. The process was lengthy and costly, and generally resulted in the claimant losing at least a portion of their land to attorney's fees and other costs associated with proving ownership (Starr 2007).

The Gold Rush (1849–1855) saw the first big influx of American settlers to California. In San Bernardino county, Mormon settlers entered the San Bernardino Valley in 1851 and purchased 37,000 acres from the Lugos for \$75,000. The Mormon pioneers established the town of San Bernardino, along with other settlements along the Santa Ana River, and created new irrigation systems such as the Tenny Ditch. In 1857, the Mormon colony was recalled to Salt Lake City and many of the settlers were forced to sell off their lands at a loss. New residents of the valley continued to divert water from the Santa Ana River and Mill Creek to expand local agricultural production (Hertzberg 1976). Over the next 20 years, as the population and agriculture increased, so did the scale of the region's irrigation systems.

With the influx of settlers came increased private land ownership within the ancestral lands of the Maara'yam as ranches, farms, mines, and logging camps were established in the region. As a result, the Maara'yam who still inhabited their ancestral lands were subject to violence by the new settlers and forced into marginal areas of the San Bernardino Valley (San Manuel Band of

Mission Indians 2022). In 1866, San Bernardino militia units began terrorizing Maara'yam in the Big Bear region, killing many, causing the local Maara'yam tribal head, Santos Manuel, to lead his *Yuhaaviatam* (People of the Pines) clan of 20–30 persons away from their mountain territory (San Manuel Band of Mission Indians 2022).

Following removal from their mountain homeland, the *Yuhaaviatam* inhabited the San Bernardino Valley along Warm Creek, and over a period of a decade settled in various areas such as what is presently the National Orange Show Event Center in San Bernardino, Meadowbrook Park, and Harlem Springs (San Manuel Band of Mission Indians 2022). In 1891, the *Yuhaaviatam* were removed to the San Manuel Reservation.

## Regulatory Framework

There are various laws and regulations that require federal, state, and local agencies to consider the impact of a project on cultural resources. These laws and regulations specify a compliance process, outline the responsibilities of the different agencies involved in proposing the action, and establish the relationship between other relevant agencies.

### Federal

#### Section 106 of the NHPA

Archaeological resources are protected through the NHPA of 1966, as amended (16 United States Code [USC] 470f), and its implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an “undertaking” (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (National Register). As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the National Register. Under the NHPA, a resource is considered significant if it meets the National Register listing criteria at 36 CFR 60.4.

#### National Register of Historic Places

The National Register was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2). The National Register recognizes a broad range of cultural resources that are significant at the national, state, and local levels and can include districts, buildings, structures, objects, prehistoric archaeological sites, historic-period archaeological sites, traditional cultural properties, and cultural landscapes. As noted above, a resource that is listed in or eligible for listing in the National Register is considered “historic property” under Section 106 of the NHPA.



To be eligible for listing in the National Register, a property must be significant in American history, architecture, archaeology, engineering, or culture. Properties of potential significance must meet one or more of the following four established criteria:

- A. Are associated with events that have made a significant contribution to the broad patterns of our history;
- B. Are associated with the lives of persons significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance.” The National Register recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.

Ordinarily religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years are not considered eligible for the National Register unless they meet one of the Criteria Considerations (a–g) below, in addition to meeting at least one of the four significance criteria A–D above, and retaining integrity (36 CFR 60.4):

- a. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- b. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- c. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life.
- d. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- e. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or
- f. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- g. A property achieving significance within the past 50 years if it is of exceptional importance.

## State

### California Environmental Quality Act

The California Environmental Quality Act (CEQA) is the principal statute governing environmental review of projects occurring in the state and is codified at California Public Resources Code (PRC) Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources. Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

The CEQA Guidelines (Title 14 California Code of Regulations [CCR] Section 15064.5) recognize that historical resources include (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the CEQA Guidelines apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site may be treated in accordance with the provisions of Section 21083, which is as a unique archaeological resource. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site is to be treated in accordance with the provisions of Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be

made to permit any or all of these resources to be preserved in place (Section 21083.1[a]). If preservation in place is not feasible, mitigation measures shall be required. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064.5[c][4]).

A significant effect under CEQA would occur if a project results in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5(a). Substantial adverse change is defined as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired” (CEQA Guidelines Section 15064.5[b][1]). According to CEQA Guidelines Section 15064.5(b)(2), the significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that:

- A. Convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
- B. Account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- C. Convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a Lead Agency for purposes of CEQA.

In general, a project that complies with the *Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (Grimmer 2017) is considered to have mitigated its impacts to historical resources to a less-than-significant level (CEQA Guidelines Section 15064.5[b][3]).

## California Register of Historical Resources

The CRHR is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1[a]). The criteria for eligibility for the CRHR are based upon National Register of Historic Places (NRHP) criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the NRHP.

To be eligible for the CRHR, a prehistoric or historic-period property must be significant at the local, state, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
2. Is associated with the lives of persons important in our past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the CRHR must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR.

Additionally, the CRHR consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally determined eligible for the NRHP.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the CRHR.

Other resources that may be nominated to the CRHR include the following:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the NRHP, the CRHR, and/or a local jurisdiction register).
- Individual historical resources.
- Historical resources contributing to historic districts.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

## **California Health and Safety Code Section 7050.5**

California Health and Safety Code Section 7050.5 requires that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the California NAHC within 24 hours to relinquish jurisdiction.

## **California Public Resources Code Section 5097.98**

PRC Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner

and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the landowner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

## Archival Research

### South Central Coastal Information Center Records Search

On December 15, 2023, ESA staff conducted a records search for the proposed project through the California Historical Resources Information System South Central Coastal Information Center (SCCIC), housed at California State University, Fullerton. The records search included a review of all recorded archaeological resources and previous studies within the APE and general vicinity.

### Previous Cultural Resources Investigations

According to the search results, 13 cultural resources studies have been conducted within a 0.5-mile radius of the APE (as shown in **Table 1**). Approximately 50 percent of the searched radius was covered in these previous studies. Out of these 13 studies, two of them (SB-05816, and 07459) overlap nearly 90 percent of the APE, including adjacent roads.

**TABLE 1**  
**PREVIOUS CULTURAL RESOURCES INVESTIGATIONS**

SCICC (SB-)	Author	Title	Year
01566	Brock, James, John F. Elliott, Benjamin Resnick, And William A. Sawyer	Santa Ana River Upstream Alternatives, Cultural Resources Survey	1986
01754	Hatheway, Roger G.	Historical And Architectural Evaluation, Seven Oaks Dam Bridges	1987
01783	Hornbeck, David And Howard Botts	Seven Oaks Dam Project: Water Systems	1988
02652	Mckenna, Jeanette A.	Results Of An Archaeological Monitoring Program For The Greenspot Road Pipeline Along Greenspot Road, East Highlands, San Bernardino County, California	1992
02685	Mckenna, Jeanette A. And Leta J. Franklin	Archaeological Testing And Mitigation Of Adverse Impacts At Ca-Sbr-7166h, An Historic Habitation Site, East Highlands, San Bernardino County, California	1992
02853	Foster, John M., James J. Schmidt, Carmen A. Weber, Gwendolyn R. Romani, And Roberta S. Greenwood	Cultural Resource Investigation: Inland Feeder Project, MWD Of Southern Ca	1991
04067	Tang, Bai Tom	APN: 297-021-04, -05 & The Southern Portion Of 097-021-12, Due Diligence/Feasibility Investigation, City Of Highland, San Bernardino County, Ca. 3PP	2004
04831	Brunzell, David and Curt Duke	Cultural Resource Assessment: Upper Santa Ana River Wash Land Management and Habitat Conservation Plan, San Bernardino County, California.	2005

SCICC (SB-)	Author	Title	Year
05816	Schmidt, Tiffany A. And Janis K. Offerman	East Branch Extension Phase II Archaeological Survey Report, San Bernardino County, California.	2007
06035	Goodwin, Riordan	Archaeological Survey Report for The Greenspot S-Curve Realignment, City Of Highland, San Bernardino County, California.	2008
07459	Tang, Bai "Tom", Terri Jacquemain, Harry Quinn, Daniel Ballester, And Nina Gallardo	Identification and Evaluation of Historic Properties: Enhanced Recharge Facilities for Santa Ana River Water Diverted by Valley District and Western under Water Rights Permit Project (Phase 1 & 2), Cities of Highland and Redlands, San Bernardino County, California.	2012
07569	Mcdougall, Dennis P. And Jill A. Onken	Inland Feeder Pipeline Project: Final Synthetic Report of Archaeological Findings, San Bernardino County, California.	2003
08040	Tang, Bai "Tom" And Michael Hogan	Historical/Archaeological Resources Survey Report Tentative Tract Map no. 18893, City of Highland, San Bernardino County, California	2015

NOTES: APE = area of potential effects; APN = assessor's parcel number, SCCIC = South Central Coastal Information Center.  
SOURCE: SCCIC 2023.

## Previously Recorded Cultural Resources

The records search results indicate that a total of 18 cultural resources have been recorded within the general vicinity of the APE (Table 2). Of the 18 resources, 8 are historic-period archaeological sites (P-36-005526, 006068, 010184, 033121, 033122, 033123, 033124, and 060194); two are historic isolates (P-36-023403 and 024382); and eight historic built-in structures (P-36-006847, 006848, 007051, 007165, 007215, 023404, and 024384).

**TABLE 2**  
**PREVIOUSLY RECORDED CULTURAL RESOURCES**

P Number (P-36-)	Permanent Trinomial (CASBR-)	Description	Dates Recorded	NRHP/ CRHR Eligibility
005526	005526H	Historic site: building foundation and refuse scatter	1985; 1987	Unknown
006068	006068H	Historic site: pipes, cans, and domestic debris	1987; 2018	Not Evaluated
006847	006847H	Historic site: (Structure, Site) segment of the historic alignment of the Southern California Railroad	1987; 2018	Ineligible
006848	006848H	Historic site: irrigation ditch	1990; 1992; 1993; 2006; 2010; 2017	Ineligible
007051	007051H	Historic Structure: Irrigation system	1990; 1994; 2003	Unknown
007165	007165H	Historic Site: Plunge Creek Bridge	1996; 1987	Ineligible
007215	007215h	Historic Site: road, orchard, irrigation canal and standpipe irrigation system.	1992	Unknown
010184	010184H	Historic Site: trash scatter	1999	Unknown
010681	010681H	Historic Site: building foundations	2002	Ineligible
023403	—	Historic Isolate: wooden and metal objects	2009	Unknown
023404	014789H	Historic Structure: pipe culvert	2009	Ineligible
024382	—	Historic Isolate	2012	Unknown



P Number (P-36-)	Permanent Trinomial (CASBR-)	Description	Dates Recorded	NRHP/ CRHR Eligibility
024384	—	Historic Site: Water Conveyance	2018	Ineligible
033121	033121H	Historic Site: Refuse scatter	2018	Not Evaluated
033122	033122H	Historic Site: Refuse scatter	2018	Not Evaluated
033123	033123H	Historic Site: Refuse scatter	2018	Not Evaluated
033124	033124H	Historic Site: Refuse scatter	2018	Unknown
060194	—	Historic: Porcelain fragments and a license plate	1984	Unknown

## Native American Heritage Commission

The Native American Heritage Commission (NAHC) maintains a confidential Sacred Lands File that contains information about sites that hold a traditional, cultural, or religious value to the Native American community. On December 14, 2023, a request was made to the NAHC for a Sacred Land File search for the APE. On January 5, 2024, the NAHC responded to the request. The NAHC provided a list of tribal contacts and recommended that they be contacted to obtain additional information. The Sacred Lands File search has been included in **(Appendix B-Confidential)**.

## Historic Maps and Aerial Photographs

ESA examined historic maps and aerial photographs to discern historical information about the APE and to contribute to an assessment of the APE's archaeological sensitivity. Available maps include the 1954 and 2012 Redlands USGS 7.5-minute topographic quadrangle (TopoView 2023). Historic aerial photographs were available for the years 1938, 1959, 1980, 2002, 2005, 2010, 2013, and 2020 (Historicaerials.com 2023); 1933, 1952, 1954, and 1966, (FrameFinder 2023); 1995, 2002, 2003, 2005, 2018, and 2023 (Google Earth Pro 2024).

The 1901 topographic map depicts Greenspot Road and Cone Camp Road (unnamed) adjacent to the APE, although these are shown as unknown. A review of the 1954 topographic map shows the area is primarily undeveloped, with only two buildings in the southwest section of the APE. On the next available topographic map from 2012, no buildings near Cone Camp Road are visible.

The 1938 aerial photograph displays a historic-era resource within the APE. The northwest area of the APE was undeveloped. By 1959, more buildings (features) could be observed as part of the historic-era resource within the APE while the rest of the area remained the same. After 1966, housing growth can be observed on the east side of the APE. The 1995 aerial is missing features present in the 1966 aerial, indicating historic-era resources were removed sometime between the two images were taken. In the 2002 aerial image, it is evident that the last poultry farm standing within the southern portion of APE is no longer present. After 2005, the APE was turned into a staging area for the Inland Feeder construction. In the northeast section of the APE, the

SBVMWD Foothill Pump Station building is visible in aerial imagery. From 2006 to 2023, the south area remained a graded empty lot while the north section of the APE presented changes, including a pipeline running north to south, the Foothill Pump Station structure, a chain-link fence surrounding the APE and also acting as a divider between the north and south of the APE, and a short, paved road that leads to a graded parking area.

## Geologic Map Review

The project area is entirely mapped as Holocene-aged Quaternary alluvial (Qa) “consisting of “sand and clay of valley areas, covered with gray clay soil, including “alluvial pebbly sand adjacent to mountain terranes” (Dibblee and Minch, 2004). Surficial sediment consists of alluvial sediments composed of gravel and sand. The vicinity of the project site also includes Young Alluvial Wash Deposits (Qw), Young Axial-Channel Deposits (Qya3 and Qya4), and artificial fill adjacent to or near the improvements (HDR Engineering, 2022; Morton and Matti, 2001).

## Geotechnical Report Review

The geotechnical study was completed by HDR Engineering (2022). They conducted a geophysical survey by their subcontractors (Atlas) on June 24, 2022. In addition to the survey, three test pits were excavated to the maximum depth of 15 feet below ground surface to study the conditions of the project site. The first 5 to 11 feet of the test pit units showed artificial fill, alluvium soils were found beneath the artificial fill and consist of poorly graded sand mixed with gravel, cobbles, and boulders up to 49.6 inches in diameter. (HDR Engineering 2022).

## Cultural Resources Survey

### Methods

On December 20, 2023, ESA archaeologists Claudia Camacho-Trejo, B.A. and Ellen McIlvain, B.A. conducted an intensive pedestrian survey of the APE. The purpose of the survey was to identify archaeological and built environment resources within the APE. The survey methodology varied depending on the landforms encountered within the APE. Areas with flat terrain and visible ground surfaces were subject to systematic pedestrian surveys with transects spaced between 5 and 15 meters apart (approximately 15 to 45 feet). Areas with limited ground visibility, such as densely vegetated areas, underwent opportunistic surveys, where areas with some ground visibilities were targeted. The APE was verified using the ArcGIS Field Maps application on an Android phone. Photo logs, field observations, and results were documented using Survey 123 with a Samsung 10S device. No subsurface investigation was performed during the pedestrian survey.

### Results

No cultural resources were discovered during the survey. The APE is a relatively flat area with SBVMWD Foothill Pump Station’s modern pump structure on the northeast area surrounded by chain-link fences and gates subdividing the area. Soils generally consisted of graded sandy gravel with cobbles, including native vegetation and several trees. However, one modern feature, an F-shaped poured concrete foundation, was documented within the APE. The following paragraphs

describe the results of the survey and the resources encountered during the survey. No artifacts were observed during the survey.

In the northern part of the APE, 5-meter transects were conducted along the chain-link fence with good ground visibility of around 60 to 70 percent. Elsewhere in northern part of the APE, due to a concentration of granite boulders, the Foothill Pump Station building, a depression near a pipeline area, and a graded parking lot area, ground visibility was low (about 10 to 20 percent); an opportunistic survey was conducted in this section of the APE (**Figures 4–6**).

The middle portion of the APE was surveyed using 5-meter transects; ground visibility was excellent (around 80 to 90 percent) due to previous grading and compaction of the area. The soil was composed of imported gravel and silty sand. This section of the APE was highly disturbed and previously used as a parking area, as two track marks are visible all over the area.

**Figure 4. General View along Northwest Chain-Link Fence, View NW**



SOURCE: Photo by Environmental Science Associates



**Figure 5. General View of Depression of the Discharged Pipeline on the Northwest Section of the APE, View NW**



SOURCE: Photo by Environmental Science Associates

**Figure 6. General View of Granite Boulders, Foothill Pump Station Building and a Plastic Pipe Feature, View SE**



SOURCE: Photo by Environmental Science Associates

On the southeast area of APE, an F-shaped concrete foundation was encountered. The foundation measured about 157.2 inches long and 53 inches wide. Based on aerial imagery, the foundation was built between 2012 and 2015 (Historicaerials 2023; Google Earth Pro 2024). This F-shaped concrete foundation was made for a trailer truck previously stationed in this area of the APE. Based on the aerial imagery, it is likely that this section of the APE was previously used as a parking location for trucks and trailers. The F-shaped concrete foundation was in excellent condition, with some spray paint markings and a small wood frame on the edges of the foundation (**Figures 7–8**).

Outside the gated facility, within the southern portion of the project area, visibility was poor (less than 10 percent) in the areas with overgrown vegetation, oversized granite boulders mixed in with modern trash debris; therefore, an opportunistic survey was conducted. Two existing, unpaved two track roads cross west to east in this portion of the APE (**Figures 9–11**).

**Figure 7. General View of F-Shape Poured Cement Foundation, View SW**



SOURCE: Photo by Environmental Science Associates



**Figure 8. Overview F-Shape Poured Cement Foundation, View SW**



SOURCE: Photo by Environmental Science Associates

**Figure 9. General View of the SOUTH portion of the APE, Granite Boulder and Distribution Pole, View SW**



SOURCE: Photo by Environmental Science Associates



**Figure 10. General View of Two Track Road Transecting the South APE, View SE**



SOURCE: Photo by Environmental Science Associates

**Figure 11. Overview of APE, View N**



SOURCE: Photo by Environmental Science Associates

## Archaeological Sensitivity Assessment

### Prehistoric Archaeological Analysis

The potential for prehistoric archaeological deposits is predicated on (1) proximity to permanent or semi-permanent water sources capable of supporting long-term or seasonal occupation of the area; and (2) flat or gently sloped topography conducive to human habitation. Previous research conducted elsewhere in California has indicated that the presence of buried archaeological sites is positively correlated with proximity to water, as well as flat to gently sloped landforms.

Review of the geologic map indicates that the APE is composed of Quaternary-age young alluvial fan, channel, and wash deposits. The review of the geotechnical report also shows a historic disturbance layer of 3 to 5 feet, and an artificial fill composed primarily of sand and gravel to at least 5 to 15 feet below ground surface.

The APE is located on a flat surface, and the closest body of water to the APE (per a review of historical topographic maps) is the Santa Ana River, located approximately 1.12 miles southeast of the APE. The NAHC indicated that the Sacred Lands File search yielded positive results. Based on all these factors, the potential for yielding surficial and not deeply buried prehistoric archaeological resources within the APE is considered to be low to moderate.

### Historic Archaeological Analysis

The records search identified 19 historic-period archaeological sites (consisting of remains of irrigation features, concrete foundations/structures, refuse deposits, and bridges) recorded within the general vicinity. The number of historic-period archaeological sites, and historic use of the area within the APE and vicinity, indicate a low to moderate potential of encountering buried historic archaeological resources. The construction of the Inland Feeder conveyance system by the Metropolitan Water District began in 1997 and was completed in 2007. Before the proposed project of Inland Feeder Foothill Pump Station Intertie, the Foothill Pump Station was built in early 2005. Given previous construction, the APE was previously graded and disturbed by the construction of the Inland Feeder conveyance system and the Foothill Pump Station within the APE.

A total of two historic architectural resources are recorded within the general vicinity the APE; however, none of these resources are located within or immediately adjacent to the APE. Therefore, no impacts to historic architectural resources would occur as a result of the proposed project.

## Conclusions and Recommendations

No cultural resources were identified as a result of the survey. As such, the proposed project would result in **No Historic Properties Affected** under Section 106 of the National Register and California Register under CEQA and the Project would not result in a direct impact to historical resources.

As a result of the archival research and cultural resources survey conducted for the proposed project, no cultural resources have been identified within the APE. However, the likelihood for encountering subsurface archaeological deposits within the APE during project construction is low to moderate based on the amount of disturbance and fill at the site. In the event that subsurface archaeological deposits are encountered during project implementation, they may qualify as historical resources or unique archaeological resources pursuant to CEQA and may be subject to significant impacts. As such, the following recommended measures for the retention of a qualified archaeologist, cultural resources sensitivity training, construction monitoring, and inadvertent discovery protocols are provided below. Since no cultural resources were identified within the APE, and with implementation of the recommended measures below, the Project would result in less than significant impacts related to archaeological resources.

## Recommendations

**Worker Archaeological Awareness Training.** Because of the potential for the proposed project to encounter archaeological resources, a qualified archaeologist shall conduct worker training prior to the initiation for ground-disturbing activities to inform workers of the types of resources that may be encountered and advise them of the proper handling of such resources.

**Inadvertent Discoveries.** If archaeological resources are encountered at the project site, the Contractor shall not disturb the resources and shall immediately cease all work within 50 feet of the discovery, notify the Engineer, and protect the discovery area, as directed by the Engineer. The Engineer, with the qualified archaeologist, shall make a decision of validity of the discovery and designate an area surrounding the discovery as a restricted area. The Contractor shall not enter or work in the restricted area until the Engineer provides written authorization.

Should the resource be determined to be potentially significant, a treatment plan shall be prepared. The plan shall be implemented by the qualified archaeologist in consultation with the Metropolitan to provide for the adequate recovery of the scientifically consequential information contained in the archaeological resource. The treatment plan shall include measures regarding the curation of the recovered resources, which may include curation at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material.

## Human Remains

In the event that human remains are discovered during excavation/construction activity, Health and Safety Code Section 7050.5, CEQA Guidelines Section 15064.5(e), and Public Resources Code (PRC) Section 5097.98 will apply. The Contractor shall notify Metropolitan at once and not enter or work in the restricted area until the Engineer provides written authorization.

## References Cited

- Bean, Lowell J., and Charles R. Smith. 1978. "Gabrielino." In *California*, edited by R.F. Heizer, pp. 538–549. *Handbook of North American Indians*, Vol. 8, W. C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.
- Byrd, Brian F., and L. Mark Raab. 2007. "Prehistory of the Southern Bight: Models for a New Millennium." In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 215–227.
- Dibblee, T.W., and Minch, J.A., 2004. Geologic map of Harrison Mountain/North ½ of Redlands Quadrangle, San Bernardino County, California: Dibblee Geological Foundation, DF-126, scale 1:24,000.
- Gallegos, Dennis. 2002. "Southern California in Transition: Late Holocene Occupation of Southern San Diego County." In *Catalysts to Complexity: Late Holocene Societies on the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 27–40. Perspectives in California Archaeology Vol. 6, Cotsen Institute of Archaeology, University of California, Los Angeles.
- Gifford, Edward W. 1918. Clans and Moieties in Southern California. *American Archaeology and Ethnology*. Vol.12, No.2, University of California Publications.
- Grenda, Donn. 1997. *Continuity and Change: 8,500 Years of Lacustrine Adaptation on the Shores of Lake Elsinore*. Statistical Research Inc. (SRI) Technical Series 59, SRI, Tucson, Arizona.
- Grimmer, E. Anne. 2017. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*. National Park Services: Technical Preservation Services, Washington, D.C.
- Google Earth Pro. 2024 Aerial photographs for the years: 1995, 2002, 2003, 2005, 2018, 2023, and 2024.
- HDR Engineering, Inc. 2022. *Geotechnical Report Inland Feeder-Foothill Pump Station Project*.
- Hertzberg, Robert Myles. 1976. "The Catalyst and the King." Unpublished thesis on file at the University of Redlands, Redlands, California.
- Historicaerials.com. 2023. Aerial photographs for the years: 1938, 1959, 1980, 2002, 2005, 2010, 2013, and 2020. Acquired December 25, 2023.
- Horne, M., and C. Inoway. 2002. Archaeological Site Record Update for P-36-010681. On file at the South-Central Coastal Information Center.
- Kroeber, A. L. 1925. *Handbook of the Indians of California*. Reprint Edition of 1976, Dover Publications, New York.
- Jones, T. L., & Schwitalla, A. 2008. "Archaeological Perspectives on the Effects of Medieval Drought in Prehistoric California." *Quaternary International* 188:41–58.
- Mason, Roger D. 1999. *Results of Archaeological Test Programs at CA-RIV-1022, CA-RIV-3331, and CA-RIV-3332H*. Cottonwood Hills Project Area, City of Lake Elsinore, Riverside County, CA. Prepared by Chambers Group.

- Meighan, Clement W. 1954. "A Late Complex in Southern California Prehistory." *Southwestern Journal of Anthropology* 10(2): 215–227.
- Moratto, M. J. 1984. *California Archaeology*. Smithsonian Press: San Diego, CA.
- Morton, D.M., and Matti, J.C. 2001. Geologic map of the Sunnymead 7.5' Quadrangle, Riverside County, California. U.S.G.S. Open File Report 01-450, scale 1:24,000.
- Morton, Douglas M. and Fred K. Miller. 2006. Geologic Map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California U.S.G.S. Open File Report OF-2006-1217. scale 1:100,000.
- San Manuel Band of Mission Indians. 2022. "History." Electronic resource, <https://sanmanuel-nnsn.gov/culture/history>. Accessed January 25, 2024.
- Scott, M.B. 1976. *Development of Water Facilities in the Santa Ana River Basin, California, 1810–1968: A Compilation of Historical Notes Derived from Many Sources Describing Ditch and Canal Companies, Diversions, and Water Rights*. Open-File Report 77-398. U.S. Geological Survey, Menlo Park, CA.
- Starr, Kevin. 2007. *California: A History*. Modern Library, Random House, Inc. New York.
- Strong, W.D. 1929. *Aboriginal Society in Southern California*. University of California Publications in *American Archaeology and Ethnology* (2)1.
- Sutton, Mark. 2009. "People and Language: Defining the Takic Expansion into Southern California." *Pacific Coast Archaeological Society Quarterly* 41(2/3): 32–92.
- TopoView. 2023. Redlands USGS 7.5-minute topographic quadrangle and 2012 Redlands USGS 7.5-minute topographic quadrangle. Acquired December 25, 2023.
- True, Delbert L. 1958. "An Early Complex in San Diego County, California." *American Antiquity*, 23(3): 225–263.
- True, Delbert L., and Georgie Waugh. 1982. "Proposed Settlements Shifts during San Luis Rey Times: Northern San Diego County, California." *Journal of California and Great Basin Anthropology* 4(1): 34–54.
- FrameFinder. 2023. Historic aerial photographs were available for the years 1933, 1952, 1954, 1966. UCSB (University of California, Santa Barbara) Library. Acquired December 25, 2023.
- Warren, C.N. 1967. "The San Dieguito Complex: A Review and Hypothesis." *American Antiquity* 32(2): 168–18.
- Warren, C.N. 1968. "Cultural Tradition and Ecological Adaptation on the Southern California Coast." In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams, pp. 1–14. Eastern New Mexico University Contributions in Anthropology 1(3).

# Appendix A

## **Personnel Qualifications**







# Claudia Camacho-Trejo

## Cultural Resources Specialist III



### EDUCATION

MA(In Progress),  
Anthropology, California  
State University, Los  
Angeles

BA, Anthropology,  
California State  
University, Los Angeles

AA Behavioral Studies,  
East Los Angeles  
Community College

### 6 YEARS' EXPERIENCE

### PROFESSIONAL AFFILIATIONS

Archaeological Institute of  
American, since 2016.

Society for California  
Archaeology, since 2016.

Golden Key International  
Honour Society, California  
State L.A. inducted 2015

Lambda Alpha  
Anthropological Honor  
Society, California State  
L.A. inducted 2014

Society of American  
Archaeology since 2014

Claudia Camacho-Trejo is an archaeologist with eleven years of experience throughout Eastern Sierra Nevada, the Mojave Desert, the California South Coast, and Mexico. Claudia had focused as a cultural resource specialist the last six years of her career, working as an author and co-author of California Environmental Quality Act (CEQA)-level technical reports, Environmental Impact Report (EIR) sections, Initial Study (IS) sections, archaeological peer reviews, archaeological monitoring reports, and reports under Bureau Land Management requirements. She has performed archaeological excavation and testing, site recordation, laboratory analysis, pedestrian surveys, and construction monitoring. She has experience requesting records searches through several California Historical Resources Information Systems-Information Centers. In addition to her archaeological background, Claudia has coauthored paleo reports.

### Relevant Experience

#### **Ten West Link Transmission Line Project, Riverside County, CA and La Paz County, AZ.**

*Senior Cultural Resources Specialist (November 2022 – Present).* Environmental Science Associates (ESA) was retained by Delaney Colorado River Transmission LLC to provide archaeological monitoring during construction as well as perform archaeological and historic architectural resource documentation and evaluation in compliance with Section 106, NEPA, and CEQA requirements. The project involves the construction of 125 miles of high voltage electrical transmission line from Tonopah, AZ, to Blythe, CA. The corridor spans numerous federal, state, and private jurisdictions with varied cultural resource requirements necessitating sophisticated tracking and implementation of numerous agency jurisdiction-specific mitigations. The project passes through many Abandoned Mine Land areas and ESA's team has identified, documented, and evaluated a wide array of historic mining and mining related features such as prospects, cairns and claim markers, roads and trails, mine openings, can and other refuse scatters, and other mining related infrastructure. The project footprint also encompasses culturally sensitive areas important to multiple tribes including CRIT. ESAs providing ESA's team is working alongside the construction contractor, several tribes including CRIT monitors, and with the BLM in two states. Claudia was a lithic specialist who conducted a macroscopic lithic analysis on stone tools artifacts recovered during monitoring and excavation activities. She also curated part of the lithics collection at the Pasadena Lab and co-authored parts of the report.

#### **The San Manuel Ancestral Land Exchange, San Bernardino County, CA. Cultural**

*Resources Specialist (May 2022 – Present).* Yuhaaviatam of San Manuel Nation, a Federally recognized Indian Tribe, formerly known as the San Manuel Band of Mission Indians and the Forest Service, United States Department Of Agriculture entered into an Agreement to Initiate the San Manuel Ancestral Land Exchange. Environmental Science Associates (ESA) prepared a cultural Resources Assessment in support of the Land Exchange. The study was conducted in compliance with Section 106 of the National Historic Preservation Act



## Claudia Camacho-Trejo (Continued)

### Cultural Resources Specialist

(NHPA) of 1966 and considered a 2,997-acre study area, comprised of the combined six privately owned Non-Federal Parcels and two USFS-administered Federally Parcels. Claudia authored portions of the reports and conducted a heritage record search.

**Caltrans-ROW Project, Olancho, CA. *Archaeologist*.** Claudia performed archaeological screening from dewatering dwell spoils to recover cultural artifacts. This task was conducted directly with the tribal monitors and ESA supervisors to ensure the protection of culturally sensitive areas and artifact density areas identified during Phase I & II testing.

**Material Culture Consulting, Pomona, CA. *Archaeologist/Project Analyst*.** Claudia conducted pedestrian surveys for SCE pole replacement on public and private lands as an archaeologist. She also performed background research for archaeological studies, including processing records searches. Additional duties included conducting archaeological desktop reviews, including background data, project information, archaeological sensitivity, land ownership, and preparing DPR reports. Claudia then performed cultural resources monitoring during ground-disturbing activities. As a project analyst, Claudia provided Administrative and operational support for Operations and Maintenance Projects with extensive use of Excel, EHSync, and Google Earth. With a focus on archaeology, she collaborated with a team of subject matter experts regarding project status, assignment status, pre-construction and post-construction status, and other project issues as appropriate. She compiled and issued Environmental Clearance Documents to clients, project management, and field staff. Claudia prepared project information (e.g., project maps using GIS, Google Earth, or a similar program, and project description) for agency consultation and approvals. She also performed desktop clearances related to deteriorated pole replacements, Master Special Use Permit pole replacements on U.S. Forest Service Land, and private lands for Southern California Edison.

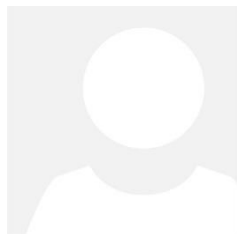
**SWCA, Pasadena, CA. *Archaeologist*.** Claudia conducted archaeological pedestrian surveys, construction monitoring, and other field or office tasks. She also prepared DPRs, technical reports and organized the company's artifacts collections being deaccessioned to an Orange County Museum.

**California State University, Los Angeles Los Angeles, CA. *Graduate Thesis Reviewer*.** Claudia conducted thesis examination meetings for Master degree candidates from all fields of study. She met with graduate students on an individual basis to review theses, provide direction regarding format requirements and academic standards, answer questions, and communicate policy guidelines. Claudia recorded the outcome of student thesis appointments, progress and dates of completion and maintained accurate and complete records of each thesis meeting with students to demonstrate progress. She would also communicate with students, to provide thesis related information, review select thesis pages, deadlines, and/or answer questions. She managed all activities related to the completion, submission and reporting and oversaw the thesis publication process with ProQuest and the distribution of hard copies to the academic units.



# James J. Clark

Senior Archaeologist



## EDUCATION

MA, Museum Studies, New York University

BA, Ancient Near Eastern Civilizations (Egyptology), Minor, Anthropology, University of California Los Angeles

## 24 YEARS' EXPERIENCE

### CERTIFICATIONS/REGISTRATION

Registered Professional Archaeologist, #16586

Meets Secretary of the Interior's PQS for Archaeology

United States Department of Agriculture Organics Act Permit, Principal Investigator

California BLM Permit, Principal Investigator

Meets Caltrans PQS for Principal Investigator

### PROFESSIONAL AFFILIATIONS

Society of California Archaeology

Society of Black Archaeologists

James Clark is a Senior Archaeologist with over two decades of experience working in California, as well as the U.S. Northeast and Southeast. James provides technical oversight, expertise, and quality assurance for cultural resources support services, including survey, testing, data recovery, and monitoring projects. He has conducted numerous cultural resource studies for local, state, and federal agencies, as well as private utility companies and corporate entities pursuant to Sections 106 and 110 of the National Historic Preservation Act (NHPA), the National Environmental Policy Act, and the California Environmental Quality Act. James is experienced in Native American coordination and compliance with California Assembly Bill 52. He is also experienced in archaeological curation and collections rehabilitation (36 CFR 79) and is proficient in several collections management and database applications including Gallery Systems/The Museum System, Microsoft Access, and SQL.

James meets the Secretary of the Interior's Professional Qualification Standards for Archaeology (i.e., 36 Code of Federal Regulations Part 61) and is a Registered Professional Archaeologist. Further, he also meets the California Department of Transportation (Caltrans) Professionally Qualified Staff standards at the level of Principal Investigator and is also named on permits to perform archaeological studies for a number of federal, state, and local agencies as well as Native American tribes.

## Relevant Experience

### **Southern California Edison, Rush Creek Hydroelectric System FERC Relicensing Project #1039, Inyo National Forest, Mono County, CA. *Project Manager.***

James coordinated the implementation of the archival research and fieldwork components of the project's Technical Study Plans for archaeological and built environment resources within the proposed APE for the Undertaking. Archival research entailed record searches at the Eastern Information Center and the Inyo National Forest office and an examination of germane documents from various repositories and on-line databases; fieldwork involved an intensive Class III inventory of the project APE. James also participated in project stakeholder meetings, as well as coordinated the preparation of separate Technical Study Reports (TSRs) which included preliminary NRHP eligibility recommendations for resources identified within the APE.

### **Southern California Edison, Ivanpah-Control Transmission Line Rating Remediation (TLRR) 15 Sites National Register of Historic Places and California Register of Historic Resources Eligibility Evaluations, Inyo County, CA. *Principal Investigator.***

James coordinated the implementation of the project research design for the testing of 15 sites (prehistoric, historical period, and multicomponent) for NRHP and CRHR eligibility. In addition to coordinating testing fieldwork, he also supervised artifact analysis (including obsidian hydration and sourcing) and performed senior review of the technical report and its Department of Parks and Recreation 523 series site form appendix.



## James J. Clark (Continued)

### Senior Archaeologist

**Naval Facilities Engineering Command (NAVFAC) SW Division, Post-Fire Archeological Survey of 2,645 Acres, Naval Weapons Station Seal Beach, Detachment Fallbrook, CA.** *Principal Investigator.* This project entailed NRHP Section 110 Class III Inventory of 2,645 acres at Naval Weapons Station Seal Beach, Detachment Fallbrook. James coordinated, co-authored, and provided senior review the project work plan, research design, safety plan, technical report, and Department of Parks and Recreation 523 series site forms. James also supervised the fieldwork phase of the project.

**National Park Service, Scorpion Pier Replacement Project, Santa Cruz Island, Channel Island National Park, Santa Barbara County, CA.** *Principal Investigator.* As required per a 2017 Programmatic agreement between the NPS and the California State Historic Preservation Office, this project involved archaeological and osteological monitoring during construction-related ground disturbance at Scorpion Pier, Channel Island National Park for NHPA Section 106 compliance. James coordinated monitoring fieldwork and co-authored the technical report.

**Property One, LLC. Redlands Packing House District Phase 2, Distillery, Coffee Shop, and Mixed-Use Retail Cultural Resources Investigations, Redlands, CA.** *Project Manager.* This project entailed preconstruction and construction cultural resources monitoring, mechanical stripping, trenching, and testing at various parcels overlaying historic Chinatown (i.e., CA-SBR-5314H) and Sonora town in Downtown Redlands, California. James coordinated all phases of fieldwork, ethnographic interviews w/community stakeholders, artifact analysis, and technical report writing.

**Naval Facilities Engineering Command (NAVFAC) SW Division, Archaeological Survey of a Portion of the Wilcox Ranch Properties for the Cultural Resources Program, Travis Air Force Base, Solano County, CA.** *Principal Investigator.* The project involved an NHPA Section 106 Class III cultural resources inventory of 271- acres of privately owned land in support of a potential land exchange with Travis AFB. James coordinated, co-authored, and provided senior review of the project work plan, research design, safety plan, and technical report. James also supervised the fieldwork phase of the project.

**United States Fish and Wildlife Service, Cultural Resources Survey for a Potential Land Exchange at Bitter Creek National Wildlife Refuge, Kern County, CA.** *Project Manager.* The project involved an NHPA Section 106 Class III cultural resources inventory of 714- acres at 10 district parcels located within the Bitter Creek NWF, Kern County, California in support of a potential land exchange. James coordinated, co-authored, and provided senior review of the project work plan, research design, safety plan, and technical report. James also supervised the fieldwork phase of the project.

**First Solar, LLC., First Solar Desert Quartzite Solar Farm Survey, Blythe, CA.** *Project Manager.* The project entailed an NHPA Section 106 Class III archaeological inventory of approximately 5,000 acres of Bureau of Land Management land near Blythe, California for a 300-megawatt power-generating solar photovoltaic facility. James coordinated the production of the project work plan, research design, safety plan and technical report. James also supervised the fieldwork phase of the project.

**Naval Facilities Engineering Command (NAVFAC) SW Division, Section 110 Site Recordation, Evaluation, and Data Recovery at Locus 1019, CA-IMP-8396, Naval Air Facility, El Centro, CA.** *Project Manager.* The project involved an NHPA Section 110 survey, testing, and data recovery at CA-IMP-8396 Locus 1019 which consisted of three house pit house structures, several thermal features, and a midden situated along the maximum high stand shoreline of Lake Cahuilla. James coordinated preparation of the project work plan, research design, safety plan, technical report. James also supervised all three fieldwork phases of the project and coordinated all artifact analysis (including special studies conducted by external analysts).



# Sara Dietler

Senior Archaeologist



## EDUCATION

BA, Anthropology, San Diego State University

## 24 YEARS' EXPERIENCE

## CERTIFICATIONS/ REGISTRATION

California BLM Permit,  
Principal Investigator,  
Statewide

Nevada BLM Permit,  
Paleontology, Field Agent,  
Statewide

## PROFESSIONAL AFFILIATIONS

Society for American  
Archaeology (SAA)

Society for California  
Archaeology (SCA)

Sara Dietler is a senior archaeology and paleontology lead with more than 20 years of experience in cultural resources management in Southern California. As a senior project manager, she manages and prepares technical studies to report the findings of archaeological and paleontological surveys to assess a project's potential impacts. She applies her expertise for project-specific as well as on on-call contracts for cities, counties, utilities, transportation, and other agencies throughout the state of California.

Sara is well versed in preparing documentation and providing consultation in compliance with the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and the Society of Vertebrate Paleontology guidelines and requirements. Cross-trained in paleontological monitoring, Sara regularly monitors and supervises fossil salvage for public agencies and private developers. She has extensive experience providing oversight for long-term compliance monitoring projects throughout the Los Angeles Basin for archaeological, Native American, and paleontological monitoring projects and provides streamlined management for these disciplines.

Lending her expertise in Native American consultation, Sara also conducts trainings for and provides expert support to clients managing tribal cultural resource issues under CEQA and NEPA for all types of projects and environmental documents.

## Relevant Experience

**City of Los Angeles, Department of Recreation and Parks, Rancho Cienega Celes King III Swimming Pool. *Project Manager.*** Sara is managing the historic recordation and archaeological, paleontological, and Native American monitoring performed for the proposed new Recreation Center and swimming pool at the Rancho Cienega Sports Complex.

**City of Los Angeles, Department of Recreation and Parks, San Pasqual Park Restroom Replacement Project. *Project Manager.*** Sara managed and oversaw the archaeological and Native American monitoring performed during ground disturbance of the San Pasqual Park Restroom Replacement project. The project required monitoring during construction activities due to known archaeological sensitivity at the park.

**City of Los Angeles Department of Public Works – Bureau of Engineering, San Pedro Plaza Park, San Pedro, Los Angeles, CA. *Senior Cultural Resources Project Manager.*** Sara provided archaeological and paleontological monitoring support for the San Pedro Plaza Park Project. The project area is located in the City of Los Angeles port district of San Pedro, approximately 26 miles south of downtown Los Angeles. Sara provided quality control oversight for the archaeological and paleontological mitigation. During monitoring on the project, archaeological materials were recovered include refuse associated with park use since it opened in 1889, and historic building debris likely





## Sara Dietler (Continued)

### Senior Archaeologist

associated with the Carnegie Library which formerly stood on site. Sara also provided recommendations for commemoration and protection of the find.

**City of Los Angeles Department of Public Works – Bureau of Engineering, Gaffey Street Pool Construction Monitoring, San Pedro, Los Angeles, CA. *Project Manager.*** Sara oversaw the data recovery of a World War I slit trench discovered during project excavation for an ADA compliant sidewalk. Serving as project manager and senior archaeologist on the project Sara provided mitigation recommendations and immediate response to the find.

**City of Los Angeles Department of Public Works – Bureau of Engineering, Warner Grand Theatre, Historic Resources Technical Report and Conditions Assessment, San Pedro, Los Angeles, CA. *Project Manager, Report Co-Author.*** The Bureau of Engineering's Environmental Management Group requested a Cultural Resources Surveys to inform and guide future rehabilitation or redevelopment efforts of the Warner Grand Theatre. The Warner Grand Theatre designed in the Art Deco-Modern style by master architect B. Marcus Priteca in 1931, and is listed on the National Register of Historic Places, and is designated a Los Angeles Historic-Cultural Monument. ESA prepared a historical resources technical report and conditions assessment report, which provided a comprehensive table of character-defining features along with a conditions assessment of each feature located within the interior and exterior of the Warner Grand Theatre. Sara managed both the archaeological and historic efforts providing one point of contact for the City.

**City of Los Angeles Department of Public Works – Bureau of Engineering, Alameda Street Widening Between Harry Bridges Boulevard and Anaheim Street Project, Los Angeles, CA. *Project Manager.*** The project included upgrades to Alameda Street and adjoining streets with improved infrastructure to accept increased traffic from existing and proposed projects located primarily within the Port of Los Angeles and the Wilmington Industrial Park and to adequately deal with storm flows. Sara oversaw a California Historical Resources Information System record search of the project area for archaeological and paleontological resources and technical documents regarding the findings and recommendations for construction activities during the proposed project. In addition, she provided and oversaw staff for the Archaeological/paleontological monitoring for geotechnical testing and made further recommendations based on the results of the testing.

**Alameda Street Widening Archaeological Resource Assessment; Los Angeles, California; LADPW, Bureau of Engineering. *Project Archaeologist.*** During the course of monitoring, archaeologists discovered historic archaeological resources from the late 19th and early 20th century use of the area. Resources discovered included a segment of the original Zanja Madre irrigation system, railroad elements, and the original vitrified brick paving surface of Alameda Street located under the present roadway. Mitigation in compliance with CEQA was developed to address each of the resource types, and included documentation, avoidance, and removal. Brick paving was reused in design of current traffic island as a result of this mitigation. Role included analysis of artifacts, research and development of mitigation during field phase of project and client consultation.

**Main Street Archaeological/Paleontological Monitoring and Assessment; Los Angeles, California; City of Los Angeles BOE. *Archaeologist.*** Archaeological monitoring resulted in the identification of 18 archaeological features. The features mainly consisted of subterranean architecture such as basements that had been backfilled and capped. Directed construction crew in controlled excavation of these features so that they could be exposed and recorded prior to demolition. Completed the analysis of artifacts recovered and produced a technical report. Directed the archaeological and paleontological monitoring of a police parking facility in downtown Los Angeles. Coordinated with the client and construction personnel throughout the project.



## Sara Dietler (Continued)

### Senior Archaeologist

**RSCVE LLC, 670 Mesquit Street and Seventh Street Bridge Evaluation, Los Angeles, CA. *Project Manager and Report Co-author.*** ESA prepared an EIR for the 670 Mesquit Street project in Los Angeles. As part of the EIR, a Cultural Resources Technical Report was prepared to determine if the project site was eligible for listing as a historical resource. The project site, originally occupied by the Los Angeles Ice and Cold Storage Company, was determined to lack integrity and therefore, ineligible for listing. Although the core of the building on the project site retained elements of the historic cold storage building, the facility was seismically upgraded resulting in significant alterations to its exterior. In its current condition, the facility does not convey its historical associations. Located south of the project site is the Seventh Street Bridge, which is listed on the California Register of Historical Resources, and eligible for the National Register of Historic Places. The project was also evaluated to determine if it would result in any potential impacts to nearby historic resources, including the Seventh Street Bridge and adjacent railroad tracks. Sara provided oversight and analysis for the preparation of Cultural Resources Technical Report.

**Clark Construction, Long Beach Courthouse Project, Long Beach, CA. *Senior Project Archaeologist and Project Manager.*** Sara directed the paleontological and archaeological monitoring for the construction of the New Long Beach Courthouse. She supervised monitors inspecting excavations up to 25 feet in depth. Nine archaeological features were recovered. Sara completed an assessment of the artifacts and fossil localities in a technical report at the completion of the project.

**Vadnais Trenchless Services, Venice Dual Force Main Project, Venice, CA. *Cultural Resources Lead.*** The Venice Dual Force Main Project is an \$88 million sewer force main construction project spanning 2 miles within Venice, Marina del Rey, and Playa del Rey. Contracted to Vadnais Trenchless Services and reporting to the City of Los Angeles, Bureau of Engineering, Environmental Management Group, ESA is serving as the project's environmental resource manager. ESA is serving as the project's environmental resource manager responsible for documenting the project's compliance with required environmental measures. The project is situated in a dense residential neighborhood and has garnered significant public interest. Monitoring includes the electronic collection of compliance data in the areas of aesthetics, biology, cultural resources, noise, vibration, stormwater pollution prevention best management practices, parking, haul routes, tree protection, among others. Sara provides quality control oversight for the archaeological and paleontological mitigation.

**Advanced Water Treatment Facility Project Groundwater Reliability Improvement Project, Pico Rivera, CA. *Project Manager.*** ESA is providing environmental compliance monitoring for the Water Replenishment District to ensure compliance with the conditions contained in the Mitigation and Monitoring Reporting Programs associated with three environmental documents, including the Final Environmental Impact Report (EIR), a Mitigated Negative Declaration, and a Supplemental EIR, pertaining to three infrastructure components associated with the project. ESA provides general compliance monitoring at varying rates of frequency depending on the nature of the activities and is sometimes on-site for 4-hour spot checks and other times for full 24-hour rotations. The project is located near a residential neighborhood and adjacent the San Gabriel River. Issues of concern include noise, vibration, night lighting, biological resources, cultural resources, and air quality. Sara provides quality assurance and oversight of the field monitoring, and day-to-day response to issues. She oversees archaeological and Native American monitoring for ground disturbance and coordinates all sub-consultants for the project. She also provides daily, weekly, and quarterly reporting on project compliance to support permitting and agency oversight.

**Southern California Edison On-Call Master Services Agreement for Natural and Cultural Resources Services, Avalon, CA. *Cultural Resources Task Manager.*** Sara provided project management and senior archaeological support for



## Sara Dietler (Continued)

### Senior Archaeologist

an on-call Master Services Agreement with Southern California Edison for cultural and natural resources consulting services. This contract included numerous surveys and monitoring projects for pole replacements and small- to mid-size reconductoring projects, substation maintenance, and construction projects. Sara served as project manager for more than 25 projects under this contract and served as the go-to person for all water, gas, and power projects occurring in the city of Avalon on Santa Catalina Island. Sara was responsible for oversight of archaeological and paleontological monitors and served as report author and report manager.

**Los Angeles Unified School District (LAUSD) Central Los Angeles High School #9; Los Angeles, CA. Senior Project Archaeologist and Project Manager.** Sara conducted on-site monitoring and investigation of archaeological sites exposed as a result of construction activities. During the data recovery phase in connection with a 19th century cemetery located on-site, she participated in locating of features, feature excavation, mapping, and client coordination. She organized background research on the cemetery, including genealogical, local libraries, city and county archives, other local cemetery records, internet, and local fraternal organizations. Sara advised on the lab methodology and setup and served as project manager. She was a contributing author and editor for the published monograph, which was published as part of a technical series, "Not Dead but Gone Before: The Archaeology of Los Angeles City Cemetery."

**City of Los Angeles Department of Water and Power, Scattergood Olympic Transmission Line, Los Angeles, CA. Report Author.** The Los Angeles Department of Water and Power constructed approximately 11.4 miles of new 230 kilovolt (kv) underground transmission line connecting the Scattergood Generation Station and Olympic Receiving Station. The project includes monitoring of construction activities occurring in street rights-of-way. Sara provided final reporting for the long-term monitoring and QA/QC of the field data.

**Veterans Administration Long Beach, Long Beach, CA. Senior Project Manager.** Sara managed a long-term monitoring project of the Veteran's Administration campus, which also includes implementation of a Memorandum of Agreement, a Plan of Action, and Historic Properties Treatment plan for the mitigation of disturbance to a prehistoric site on the campus.

**City of Los Angeles Department of Public Works – Bureau of Engineering, Downtown Cesar Chavez Median Project, City of Los Angeles, CA. Project Manager.** As a part of the Specialty Services On-Call Contract with the Bureau of Engineering, Sara assisted the City with a Local Assistance Project requiring consultations with Caltrans cultural resources. Sara was responsible for Caltrans coordination, serving as contributing author and report manager for the required Archaeological Survey Report, Historic Properties Survey Report, and Historical Resources Evaluation Report prepared for the project. Approximate Cost: \$9,956, Project Work Dates: 09/2015 to 12/2015

**John Laing Homes, Hellman Ranch Project, Orange County, CA. Lab Director.** Sara served as the lab director for the final monitoring phase of the John Laing Homes development project, cataloging and analyzing artifacts recovered from salvage monitoring and test units placed in relation to recovered intact burials. She conducted microscopic analysis of small items such as bone tools and shell and stone beads, directed lab assistants, and oversaw special studies, including the photo-documentation of the entire collection. Sara completed a section reporting on the results of the bead and ornament analysis in the final report, which was published as part of a technical series.

**Hansen Dam Golf Course Water Recycling Project, Los Angeles, CA. Senior Archaeologist and Project Manager.** Sara directed a phase I historical assessment for the Hansen Dam Golf Course Water Recycling Project located in the Los Angeles' San Fernando Valley. The project included the construction of an outdoor pumping station adjacent to the existing Hansen Tank located at the Los Angeles Department of Water and Power's Valley Generating Station. In addition,



## Sara Dietler (Continued)

### Senior Archaeologist

a pipeline or distribution line was planned to be installed from the pumping station to the Hansen Dam Golf Course along the Tujunga Wash. The phase I study of this project included mitigation for the effects of the project on the portion of the golf course falling within the area of potential effects, which was potentially sensitive for buried cultural resources as the result of a complex of World War II housing units placed on the site between the 1940s and the 1960s. Sara conducted consultation with the U.S. Army Corps of Engineers regarding the project.

**Alameda Corridor-East Construction Authority (ACE). San Gabriel Trench Grade Separation Environmental Compliance Services, San Gabriel, CA. Senior Archaeologist and Report Manager.** Sara conducted bead analysis, lab supervision and served as contributing author to data recovery report. She oversaw preparation of a published monograph, which includes the analysis of the feature and artifact recovery from the San Gabriel Mission site, as well as a contextual history of the site and findings. Sara provided artifact analysis and co-authored the artifact chapter in the monograph. The 2.2-mile San Gabriel Trench grade separation project resulted in the lowering of a 1.4-mile section of Union Pacific railroad track in a 30-foot-deep, 65-footwide trench through the city of San Gabriel with bridges constructed at Ramona Street, Mission Road, Del Mar Avenue and San Gabriel Boulevard, allowing vehicles and pedestrians to pass over the tracks. Proximity to the San Gabriel Mission provided sensitivity for cultural resources and a number of known archaeological resources in the project site. The cultural resources support was a multi-year effort consisting of Phase II testing, data recovery, and monitoring resulting in some of the most important finds known to the region.

**Coachella Flats Wind Energy Repower Environmental Surveys, Coachella, CA. Senior Cultural Resources Task Leader.** Sara served as Senior Cultural and Paleontological manager providing management and oversight for the surveys and reporting. She conducted coordination with the client and the U.S. Bureau of Land Management. Sara provided cultural resources, paleontological resources, and biological resources services in support of an Environmental Impact Report for the project.

**Los Angeles County Department of Public Works (LACDPW), Topanga Library Project, Topanga Canyon, CA. Project Manager.** Sara supervised the archaeological monitoring effort and directed data recovery of findings for the library project as part of an LACDPW On-call Contract. Construction included the installation waterlines along the roadway outside of the main project area. Monitoring resulted in the discovery of materials associated with the recorded archaeological site CA-LAN-8. Sara prepared a Data Recovery Plan and Research Design to mitigate the disturbance to the known site during installation of a water main for the library project. The resources were identified and evaluated for eligibility to the National Register of Historic Places. During the project, Sara worked closely with the LACDPW to assist them in mitigating the effects of the project as well as coordinating with Caltrans who had oversight on the project. Approximate Cost: \$145,000.00, Project Work Dates: 01/2009 to 12/2012

**Pacific Gas & Electric (PG&E) North American Electric Reliability Corporation Support; Multiple Counties, CA. Senior Cultural Resources Specialist.** Sara provided recommendations on archaeological, historic, and paleontological sensitivity based on desktop research via Geographic Information Systems, Google Earth, historic maps and aerials, and the National Geological Map database to determine sensitivity of cultural resources within the right-of-way for eight different transmission line projects. She supported PG&E Land and Environmental Management and PG&E Electric Transmission with cultural, and paleontological resource sensitivity assessments and other compliance efforts.

**Pacific Gas & Electric (PG&E) Vallejo Substation B Reconductoring Projects Cultural Resources Support, Vallejo, CA. Senior Project Manager.** Sara provided oversight of archaeological and historic evaluation of the property. The



## Sara Dietler (Continued)

### Senior Archaeologist

project consisted of an evaluation of a PG&E substation for potential historical register listing and conducted a cultural resources sensitivity desktop review.

**Interstate 5 High Occupancy Vehicle Lanes Project, Orange County, CA.** *Cultural Resources Task Manager.* Sara directed the Orange County Transportation Authority (OCTA) Interstate 5 (I-5) High Occupancy Vehicle (HOV) Lanes Project, which involves improvements to I-5 between State Route (SR) 55 and SR-57 and included a phase I study. Orange County Transportation Authority and the California Department of Transportation (Caltrans) served as the overseeing agencies. She coordinated with planners, other resource managers, and Caltrans. Sara completed analysis of existing conditions, conducted an archaeological survey, and produced an Archaeological Survey Report following Caltrans guidelines.

**Holland Partners, Sixth and Bixel Project, Los Angeles, CA.** *Project Manager.* Sara managed a monitoring phase of the project for a Holland Partners mixed-use development in downtown Los Angeles, which included the recovery of fossils such as marine invertebrates, sharks, and a partial whale. She conducted coordination with the Los Angeles Natural History Museum regarding preparation and curation of the whale fossil.

**Los Angeles Department of Water and Power, Elysian/USC Water Recycling Project Initial Study/ Environmental Assessment, Los Angeles, CA.** *Project Manager.* Sara worked on the Initial Study/Mitigated Negative Declaration and an Environmental Assessment/Finding of No Significant Impact to construct recycled water pipelines for irrigation and other industrial uses serving Los Angeles Department of Water and Power customers in downtown Los Angeles, including Elysian Park. The U.S. Environmental Protection Agency is the federal lead agency. Sara prepared two technical reports and a treatment plan for archaeological, historic, and paleontological resources identified during the phase I assessment.

**Recurrent Energy, Kern County Solar Energy Projects, Kern County, CA.** *Project Manager/Senior Archaeologist.* Sara provided cultural resources, paleontological resources, and Native American monitoring services for five separate solar photovoltaic projects for Recurrent Energy. The five projects include a total of 626 acres of previously undeveloped land in the eastern portion of the county. Sara served as project manager for all five projects and Senior Archaeologist providing client coordination and oversight of paleontological monitoring and reporting.

**City of Beverly Hills, Purple Line Extension Project Independent Compliance Manager, Beverly Hills, CA.** *Supervisor.* ESA conducted general compliance monitoring under contract to the City of Beverly Hills to ensure project compliance with the Memorandum of Agreement between the City of Beverly Hills and LAMetro during the advanced utilities relocation and construction of Section 1 of the Metro Purple Line Extension. In this role, ESA was responsible for compliance oversight of provisions in a Memorandum of Agreement between Metro and the City of Beverly Hills. Significant issues included traffic, pedestrian access, haul routes, and noise. Sara provided scheduling and oversight of the field monitoring and day-to-day response to compliance issues.

**Crystal Geyser Roxane, Cabin Bar Ranch Water Bottling Facility Slowdown Lane, Inyo County, CA.** *Project Manager, Senior Archaeologist.* Crystal Geyser Roxane proposed to construct a slowdown lane on the west side of U.S. Highway 395 for the spring water bottling facility, requiring an encroachment permit from Caltrans. ESA conducted testing at two National Register-eligible sites in accordance with Caltrans requirements. ESA evaluated the portions of the sites within the encroachment permit area and found that these areas did not contain sufficient data to address National Register criteria. Sara obtained necessary permitting, strategized and authored treatment plans in coordination with Caltrans





## Sara Dietler (Continued)

### Senior Archaeologist

archaeologist, Caltrans Environmental, Permitting, the Tribe and the client team. She also oversaw compliance with treatment plan during monitoring. Approximate Cost: \$34,000, Project Work Dates: 05/2016 – 02/2017

**El Camino Real Bridge Replacement, Atascadero, CA. *Paleontological Project Manager.*** Sara oversaw the preparation of all California Environmental Quality Act/National Environmental Policy Act documentation, survey, technical studies, and permitting, for the replacement of the El Camino Real Bridge over Santa Margarita Creek in Atascadero. Caltrans was the overseeing agency on the project and all reporting was prepared in accordance with the Caltrans Standard Environmental Reference for paleontology. Approximate Cost: \$8,600, Project Work Dates: 09/2015 to 12/2015

**Orange County Parks Cooper Center Curation Project, Orange County, CA. *Project Manager.*** Sara served as project manager and senior cultural resources report author and reviewer. ESA conducted this study on curation in California at the request of Orange County Parks. The purpose of the study was to conduct market research and collect a data set of curation costs and long-term management models used by curation facilities that house collections throughout California. The facilities in the data set included museums, universities, colleges, archaeological centers, cultural centers, tribal curation facilities, historical societies, city facilities, and county facilities.

**Peters Canyon Channel Reuse Pipeline Project, Irvine, CA. *Paleontological Lead.*** Sara served as paleontological lead for the paleontological monitoring report for the Peters Canyon Channel Reuse Pipeline Project. The project will divert high selenium nuisance surface and groundwater flows from the channel to the Orange County Sanitation District for treatment and reuse. Sara provided reporting and analysis of fossils encountered during construction.

**City of Burbank, Avion Project Environmental Impact Report, Burbank, CA. *Paleontological Lead.*** Sara is preparing the cultural resources section and overseeing the paleontological technical report for the Environmental Impact Report in support of a General Plan Amendment to change the General Plan land use designation from Airport to Golden State Commercial/Industrial for the westernmost 18-acre portion of the 60-acre project site.

**County of Los Angeles, Rancho Los Amigos South Campus Environmental Impact Report (EIR), Los Angeles, CA. *Paleontological Lead.*** Sara provided review and oversight of the paleontological technical report in support of the project EIR. ESA led the CEQA process on behalf of the County, including preparation of all technical studies in support of a full-scope EIR for the Rancho Los Amigos South Campus Project. This includes a historic district evaluation, archaeological surveys, traffic, water supply, arborist services, and all other California Environmental Quality Act-required topics.

**The Onni Group, Los Angeles Times Mirror Square Environmental Impact Report, Los Angeles, CA. *Cultural Resources Task Leader.*** Sara served as cultural lead, providing coordination and senior oversight for reporting on archaeological, tribal, and paleontological resources. The project includes the development of two mixed-use residential towers and the rehabilitation of the historic Los Angeles Times structures on a 3.6-acre city block within the Center City/Historic Core District of Downtown Los Angeles. Approximate Project Cost: \$219,400 (as of 2018)

### Publications and Presentations

2015. Artifacts. In *Abundant Harvests: The Archaeology of Industry and Agriculture at San Gabriel Mission*. Dietler, John, Heather Gibson, and James M Potter, eds. SWCA Anthropological Research Paper Number 11. SWCA Environmental Consultants. Pasadena, California.





## Sara Dietler (Continued)

### Senior Archaeologist

2013. To the West of the Mission: Artifacts and Mortuary Patterns of the 19th Century Los Angeles Plaza Cemetery. Oral Presentation at the Society for California Archaeology Meeting, Honolulu, HI Session: California Mission Archaeology in the Los Angeles Area.
2012. Not Dead but Gone Before: The Archaeology of Los Angeles City Cemetery. AECOM Cultural Heritage Publication No. 4 (Author/Editor).
2008. Digging Deep: Archival Research into the History of Los Angeles' City Cemetery. Oral Presentation at the Society for American Archaeology Meeting, Vancouver, B.C., Canada and Society for California Archaeology Meeting, Ventura, California.
2007. Beads and Ornaments, in Piecing Together the Prehistory of Landing Hill: A Place Remembered. Chapter 15, EDAW Cultural Publications No. 3.
2006. Bones, Beads and Bowls: Variation in Habitation and Ritual Contexts at Landing Hill. Oral Presentation at the Society for California Archaeology Meeting, Ventura, California.

# Appendix B

## Sacred Land File Search

**(Confidential – Not for public distribution)**



# Appendix C

## DPR Forms

**(Confidential – Not for public distribution)**



# Appendix E

## **Paleontological Resources Assessment Report (Public Version)**





**Public Draft**

**INLAND FEEDER-FOOTHILL PUMP STATION  
INTERTIE PROJECT**

Paleontological Resources Assessment Report

Prepared for

The Metropolitan Water District of Southern  
California  
700 North Alameda Street,  
Los Angeles, California 90012

May 2024





**Public Draft****INLAND FEEDER-FOOTHILL PUMP STATION  
INTERTIE PROJECT****Paleontological Resources Assessment Report****Prepared for:**

The Metropolitan Water District of  
Southern California  
700 North Alameda Street,  
Los Angeles, California 90012

May 2024

**Prepared by:**

ESA  
626 Wilshire Blvd. Suite 1100  
Los Angeles, CA 90017

**Principal Investigator:**

J.D. Stewart, PhD.

**Authors:**

J.D. Stewart, PhD.  
Fatima Clark, B.A.

**Project Manager**

Sara Dietler, B.A.

**Project Location:**

Redlands (CA) USGS 7.5-minute Topographic Quad  
Township 1 South, Range 3 West, Section 1

**Acreage:** Approx. 10.4 acres

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# INLAND FEEDER-FOOTHILL PUMP STATION INTERTIE PROJECT

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## Paleontological Resources Assessment Report

### Introduction

Environmental Science Associates (ESA) has been retained by The Metropolitan Water District of Southern California (Metropolitan) to conduct a paleontological resources assessment for the Inland Feeder-Foothill Pump Station Intertie Project (proposed project). The Inland Feeder is owned and operated by Metropolitan and conveys approximately 1.7 billion gallons of water daily throughout its distribution system. Located in western San Bernardino and Riverside counties, the Inland Feeder is a 44-mile-long, 12-foot-diameter conveyance pipeline supporting reliable water delivery to Southern California. The primary purpose of the Inland Feeder is to connect State Water Project supplies to Metropolitan's Eastern Distribution System. Metropolitan is the lead agency under the California Environmental Quality Act (CEQA).

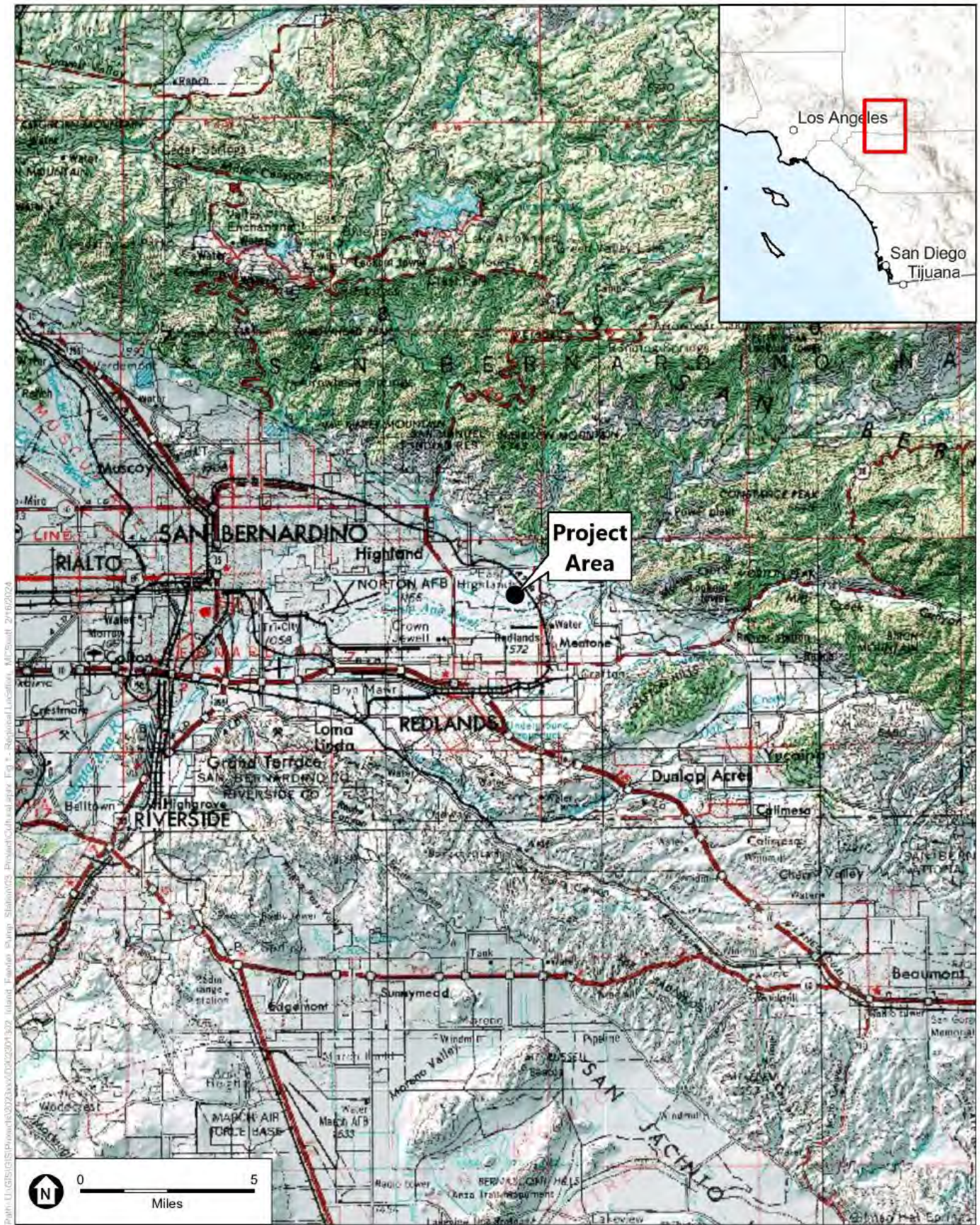
### Project Personnel

ESA personnel involved in the preparation of this report are as follows: J.D. Stewart, Ph.D., Principal Investigator of paleontology and report author; Fatima Clark, B.A., report contributor; Sara Dietler, B.A., project manager; and Chance Scott, GIS specialist. Resumes of key personnel are included in **Appendix A**.

### Project Location

The proposed project is located on an approximately 10-acre, triangular-shaped parcel immediately south of the intersection of Cone Camp Road and Greenspot Road in Highland, California (assessor's parcel numbers 1210381240000 and 1210381250000; referred to in this report as the project area) (**Figure 1**). The site is generally accessible from State Route 210 (Foothill Freeway), located roughly 3.5 miles to the west. Local access to the project area is provided by Cone Camp Road, with an entrance gate immediately north and south of the Foothill Pump Station. The majority of the site is secured with chain-link perimeter fencing. The project area is bounded by Greenspot Road and residential development to the north, the Santa Ana River and open space to the south, and large-lot, single-family residences and open space to the east and west.





SOURCE: ESA, 2024

Inland Feeder Pump Station

**Figure 1**  
Regional Location



Metropolitan owns 5.47 acres of the project area and has easement rights to approximately 1 acre of the project area. The San Bernardino Valley Municipal Water District (SBVMWD) and the San Bernardino Valley Water Conservation District (SBVWCD) own the remainder of the project area. SBVWCD also owns the parcel directly south of Metropolitan's triangular-shaped fee property. Metropolitan will obtain an additional easement for the SBVWCD property located between the Metropolitan Inland Feeder alignment and its fee property.

The proposed project facilities are situated within Section 1 of Township 1 South, Range 3 West of the Redlands (CA) U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (**Figure 2**).

## Project Description

To enhance Metropolitan's water delivery flexibility in response to drought conditions and limited State Water Project (SWP) allocations, Metropolitan is proposing two new pipeline connections between the Inland Feeder and the SBVMWD-Inland Feeder Interconnection Line 1 and SBVMWD's Foothill Pump Station (FPS).

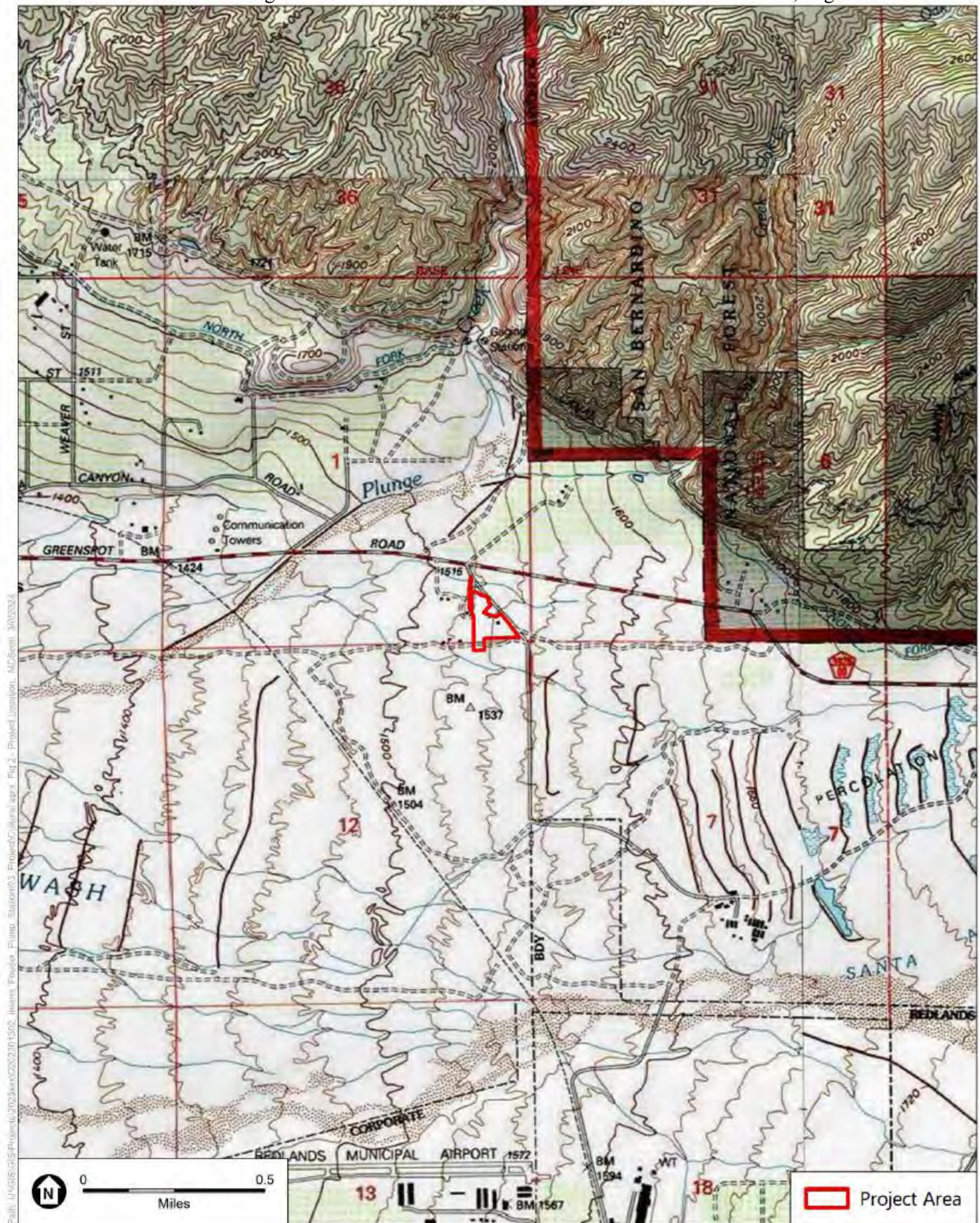
Two new underground pipelines (supply connection and discharge connection), two underground vaults, four aboveground hydropneumatic surge tanks (HST), and associated appurtenant structures would be constructed in two stages as outlined below.

Stage 1 would include construction of the components mainly located within the existing fenced facility. This would include construction of an approximately 400-foot-long, 54-inch-diameter supply connection pipeline, an approximately 750-foot-long, 54-inch-diameter discharge connection pipeline, a 50-foot by 40-foot underground vault, four aboveground HSTs on concrete pads, and appurtenant structures. Additionally, the proposed project would include installation of a new fence-line along the western boundary of the project area to accommodate the supply and discharge connection components.

Stage 2 construction activities would occur along the southern portion of the project area, located mainly outside of the fenced facility, and would include a 45-foot by 40-foot underground vault, a portion of the 54-inch-diameter discharge connection pipeline, all associated appurtenant structures, and final connections to the existing Inland Feeder pipeline.

Most of the construction activities would occur during daylight hours, occasional nighttime construction activities may be required to shut down the Inland Feeder and install the tie-in connection. Operation and maintenance activities at the FPS and Inland Feeder would be similar to existing conditions.





SOURCE: ESA, 2024, USGS, 2023

Topo Quad: Redlands, 1980

Inland Feeder Pump Station

**Figure 2**  
Local Vicinity Map (Topo)



## Regulatory Framework

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value that are afforded protection under state laws and regulations. The following section summarizes the applicable state laws and regulations, as well as professional standards provided by the Society of Vertebrate Paleontology (SVP 2010).

### State Regulations

#### California Environmental Quality Act

In California, unique paleontologic resources, sites, and geologic features, particularly with regard to fossil localities, are afforded protection under a number of state environmental statutes, including the California Environmental Quality Act (CEQA). Under CEQA, a lead agency must determine if the project would result in the direct or indirect destruction of a unique paleontologic resource or site or unique geologic feature, and if such impacts would be significant. The CEQA lead agency is responsible for ensuring that feasible mitigation measures are implemented in order to reduce impacts to a less-than-significant level. CEQA does not include a specific definition of “unique paleontological resource or site,” nor does it establish thresholds for significance.

Further guidance can be found in Scott and Springer (2003). Those authors stated that significant paleontologic resources include “fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals previously not represented in certain portions of the stratigraphy, and fossils that might aid stratigraphic correlations, particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species” (2003:6). Furthermore, they also advised that impacts might be considered less than significant if dense concentrations of plant and/or invertebrate fossil remains were “so locally abundant that the impacts to the resources do not appreciably diminish their overall abundance or diversity” (2003:6).

More recent guidance has been developed by the Society for Vertebrate Paleontology (SVP 2010), which defines significant paleontologic resources as “fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).”

Therefore, any identifiable vertebrate fossil remains would be considered unique under CEQA, and direct or indirect impacts on such remains would be considered significant. Identifiable invertebrate and plant fossils would be considered unique if they meet the criteria presented above. Determinations shall take into account the abundance and densities of fossil specimens or newly and previously recorded fossil localities in exposures of the rock units present at a project site.



## Public Resources Code Section 5097.5

Other state regulations for paleontological resource management are included in PRC Section 5097.5. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

## Society for Vertebrate Paleontology

The SVP has established standard guidelines (SVP 2010) that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most agencies with paleontological resource-specific Laws, Ordinances, Regulations, and Standards (LORS) accept and use the professional standards set forth by the SVP.

As defined by the SVP (2010:11), significant nonrenewable paleontological resources are:

*Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).*

Based on the significance definitions of the SVP (2010), all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

A geologic unit known to contain significant fossils is considered to be “sensitive” to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either directly or indirectly disturb or destroy fossil remains. Paleontological sites indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case (SVP 2010).

## Paleontological Sensitivity

Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its “Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources,” the SVP (2010:1–2) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

- **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e. g., ashes or tephra), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.).
- **Low Potential.** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e. g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.
- **Undetermined Potential.** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
- **No Potential.** Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

For geologic units with high potential, full-time monitoring is generally recommended during any Project-related ground disturbance. For geologic units with low potential, protection or salvage efforts would not generally be necessary. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist should be conducted to specifically determine the paleontologic potential of the rock units present within the study area.

## Methods and Results

The project area was the subject of thorough background research and analysis to assess its paleontological sensitivity. The research included geologic setting, literature, geologic map, and geotechnical report review, a paleontological records search conducted by the Natural History Museum of Los Angeles County (LACM), and a paleontological sensitivity analysis conducted by ESA Principal Paleontologist, J.D. Stewart, Ph.D.

## Geologic Setting

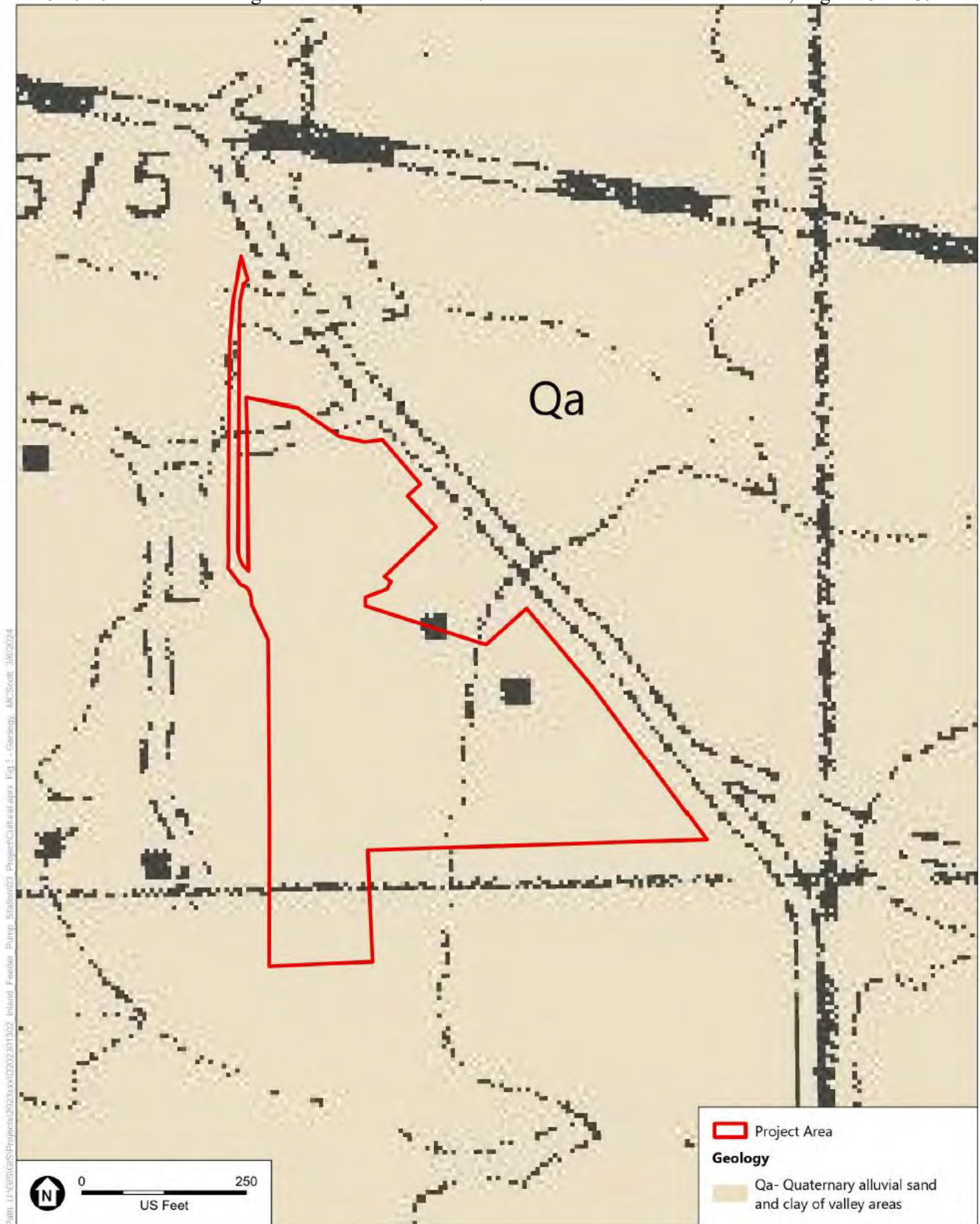
The project area is situated on the limit of the Peninsular and Transverse Range geomorphic provinces. The Peninsular Geomorphic Province follows a northwest to southeast course from Baja California to the Santa Ana Mountains. The Transverse Ranges trend east-west and consist of mountain ranges and valleys from the Mojave and Colorado Desert Provinces to Point Arguello at the Pacific Ocean. The project area is located within the San Bernardino Valley, made up of alluvial deposits created as a result of igneous and metasedimentary rock of the San Bernardino Mountains. The Santa Ana River along with the San Bernardino Mountains are the predominant features in the vicinity. The San Andreas Fault Zone, Crafton Hill Fault, and the San Jacinto Fault are located in the vicinity of the project area (Morton and Miller 2006; HDR Engineering Inc. 2022).

## Literature Review

The Pleistocene deposits of the greater Los Angeles area host many significant vertebrate fossils. However, the Project should not disturb Pleistocene alluvium, only Holocene. The late Holocene is considered too young to host significant fossils (SVP 2010). Neither of the compendia of Pleistocene vertebrate fossil localities in California by Jefferson (1991a, b) list any nearby localities not listed in the Report of Bell (2024).

## Geologic Map

The project area is entirely mapped as Holocene-aged Quaternary alluvial “sand and clay of valley areas, covered with gray clay soil”, including “alluvial pebbly sand adjacent to mountain terranes” (Dibblee and Minch 2004) (**Figure 3**).



SOURCE: ESA, 2024

Inland Feeder Pump Station

**Figure 3**  
Geologic Map

## Geotechnical Report Review

ESA reviewed the geotechnical report prepared by HDR Engineering (2022) for the proposed Project. HDR Engineering (2022) excavated three test pits to a depth of 49.6 feet below ground surface (bgs) to study the conditions of the project area. The first 5 to 11 feet of the test pit units showed artificial fill. Alluvium soils were found beneath the artificial fill and consist of poorly graded sand mixed with gravel, cobbles, and boulders (HDR Engineering 2022).

## Paleontological Record

A paleontological resources database search was conducted by the Natural History Museum of Los Angeles County (LACM) on January 7, 2024 (**Appendix B**). The search entailed an examination of current geologic maps and known fossil localities within the project area and vicinity. The purpose of the records search was to (1) determine whether any previously recorded fossil localities occur in the project area or vicinity; (2) assess the potential for disturbance of these localities during construction; and (3) assist in evaluating the paleontological sensitivity of the project area.

Results of the paleontological resources records search conducted by the LACM indicated that no fossil localities lie directly within the project area; however, four fossil localities (LACM VP 1782, 4540, 4619, and 7811) were identified nearby from sedimentary deposits that may be found in the subsurface in the project area (**Table 1**) (Bell 2022).

**TABLE 1**  
**LACM FOSSIL LOCALITIES**

Locality Number	Formation	Taxa	Depth
LACM VP 1782	Unnamed formation (Pleistocene)	Camel family (Camelidae)	Unknown
LACM VP 4540	Unnamed formation	Horse Family (Equidae)	unknown
LACM VP 4619	Unknown formation (eolian, tan silt;	Mammoth (Mammuthus)	9–11 feet bgs
LACM VP 7811	(Pleistocene, gravel pit)	Whip snake (Masticophis)	100 feet bgs

LACM VP 1782 produced fossil specimens of the camel family (Camelidae) at an unknown depth. LACM VP 4540 yielded specimens of the horse family (Equidae) at an unknown depth. LACM VP 4619 produced a fossil specimen of mammoth (*Mammuthus*) at 9 and 11 feet bgs. LACM VP 7811 produced a fossil specimen of whip snake (*Masticophis*) at 100 feet bgs.

## Paleontological Sensitivity Analysis

The literature and geologic mapping review, as well as the LACM records search results, were used to assign paleontological sensitivity to the geologic units at surface and underlying the project area, following the guidelines of the SVP (2010):

**Qa:** Holocene alluvium is found throughout the broad coastal valley hosting the project area, bounded outside the project area by uplifted regions of older Pleistocene marine and non-marine deposits. While these Pleistocene units likely underly the younger, Holocene alluvium in the project area, the depth is unknown but most likely lies deeper than the planned excavation based on the geotechnical reports. The Qa throughout the project area is likely less than 5,000 years old and is considered to not contain fossils, if the age is correct. Therefore, this unit is assigned a **Low Potential** to contain paleontological resources.

## Conclusions and Recommendations

The Quaternary alluvium underlying the proposed project area is of low paleontological sensitivity, increasing to higher sensitivity with depth. While the exact depth is not known, it likely lies deeper than the planned excavation. However, should aspects of the proposed project excavate below the potential shift from Holocene to Pleistocene alluvium and potentially impact unique paleontological resources. Per Metropolitan's general Standard Practices, a project-specific WEAP training will be prepared and given to all construction personnel. The training will include all potential concerns and considerations related to paleontological resources, including types of paleontological resources that may be encountered and the proper procedures to be enacted in the event of an inadvertent discovery of paleontological resources. In addition, per Metropolitan's paleontological resources Standard Practice, the following standard would be met:

- If archaeological or paleontological resources are encountered at the project site, the Contractor shall not disturb the resources and shall immediately cease all work within 50 feet of the discovery, notify the Engineer, and protect the discovery area, as directed by the Engineer. The Engineer, with the qualified architectural historian, archaeologist and/or paleontologist, shall make a decision of validity of the discovery and designate an area surrounding the discovery as a restricted area. The Contractor shall not enter or work in the restricted area until the Engineer provides written authorization.

Impacts to unique paleontological resources would result in less than significant impacts through adherence to Metropolitan's Standard Practices and local and state regulations.



## References

- Bell, Alyssa. 2024. Paleontological resources for the Inland Feeder Foothill Project (D202301302). Prepared for Environmental Science Associates by the Natural History Museum of Los Angeles County.
- Dibblee, T.W., and Minch, J.A., 2004, Geologic map of the Harrison Mountain/north 1/2 of Redlands quadrangles, Dibblee Geological Foundation, Dibblee Foundation Map DF-126, 1:24,000.
- Eisentraut, P. and J. Cooper. 2002. Development of a model curation program for Orange County's archaeological and paleontological collections. Prepared by California State University, Fullerton and submitted to the County of Orange Public Facilities and Resources Department/Harbors, Parks and Beaches (PFRD/HPB).
- HDR Engineering, Inc. 2022. Geotechnical Report Inland Feeder-Foothill Pump Station Project. Prepared for the Metropolitan Water District of Southern California.
- Jefferson, G.T. 1991a. A catalogue of Late Quaternary Vertebrates from California: Part One, Nonmarine Lower Vertebrate and Avian Taxa. Natural History Museum of Los Angeles County. Technical Reports, Number 5: 1–50.
- Jefferson, G.T. 1991b. A catalogue of Late Quaternary Vertebrates from California: Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports 7: 1–129.
- Morton, D.M., and Miller F. K. 2006. Geologic Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, California: U.S. Geological Survey Open-file Report 2006-1217, Scale 1:100,000.
- Murphey, P.C., and D. Daitch. 2007. Paleontological Overview of Shale and Tar Sands Areas in Colorado, Utah and Wyoming. Technical Report, Bureau of Land Management. Washington, D.C.
- Murphey, P.C., G.E. Knauss, L.H. Fisk, T.A. Deméré, and R.E. Reynolds. 2019. Best Practices in Mitigation Paleontology. Proceedings of the San Diego Society of Natural History 47: 43 pp.
- Scott, E. and K. Springer. 2003. CEQA and Fossil Preservation in California. The Environmental Monitor.
- Scott, E., K. Springer, and J. C. Sagebiel. 2004. Vertebrate paleontology in the Mojave Desert: the continuing importance of “follow-through” in preserving paleontologic resources. In The human journey and ancient life in California's deserts: Proceedings from the 2001 Millennium Conference. Ridgecrest: Maturango Museum Publication 15: 65–70.
- Society of Vertebrate Paleontology (SVP). 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources.

# Appendix A

## **Personnel**





# Sara Dietler

## Cultural Resources Technical Lead



### EDUCATION

BA, Anthropology, San Diego State University

### 25 YEARS' EXPERIENCE

### CERTIFICATIONS/ REGISTRATION

California BLM Permit,  
Principal Investigator,  
Statewide

Nevada BLM Permit,  
Paleontology, Field Agent,  
Statewide

### PROFESSIONAL AFFILIATIONS

Society for American  
Archaeology (SAA)

Society for California  
Archaeology (SCA)

Sara Dietler is a senior archaeology and paleontology lead with more than 25 years of experience in cultural resources management in Southern California. As a senior project manager, she manages and prepares technical studies to report the findings of archaeological and paleontological assessments to determine a project's potential impacts. She applies her expertise for project-specific as well as on-call contracts for cities, counties, utilities, transportation, and other agencies throughout the state of California. Sara is well versed in preparing documentation and providing consultation in compliance with the National Historic Preservation Act (NHPA), National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and the Society of Vertebrate Paleontology guidelines and requirements. She has extensive experience managing multidisciplinary projects throughout the Los Angeles Basin including analysis of archaeological, paleontological, tribal, and built environment resources, and provides streamlined management for these disciplines.

### Relevant Experience

**County of Los Angeles, Department of Public Works, Los Angeles River Bike Path Project, City of Los Angeles and Universal City, California.** *Project Manager, Report Author.* ESA completed a cultural resources assessment for the proposed Los Angeles River Bike Path Project. The proposed project consists of constructing approximately 1.5 miles of paved path varying in width from 12 to 14 feet, along the Los Angeles River Flood Control Channel in the cities of Los Angeles and Universal City. Class I bicycle paths, also called shared-use paths or multi-use paths, are for exclusive use by bicyclists, pedestrians, and other non-motorized modes of travel. This project was initiated through the 2012 County of Los Angeles Bicycle Master Plan and a development agreement with NBC Universal with the purpose of installing a Class I bicycle facility. As part of the assessment direct and indirect impacts to the LAR were found to be not significant. Sara provided senior cultural resource expertise, tribal consultation support, authored the report and MND section of the environmental document.

**The City of Los Angeles Bureau of Engineering, North Atwater East Bank Riverway Project, Los Angeles, CA.** *Project Manager, Report Author.* The North Atwater East Bank Riverway project will convert an existing maintenance road that runs along the LAR Channel into an aesthetically pleasing pathway for use by pedestrians and equestrians. The existing site pathway is an asphalt maintenance road alongside a series of power lines in the Atwater Village area, specifically along the LAR Channel east bank, south of 134 Freeway and north of Los Feliz Boulevard. ESA, working with BOE and the US Army Corps of Engineers, prepared a report compliant with Section 106 of NEPA.

**The City of Los Angeles Bureau of Engineering, North Outfall Sewer Rehabilitation Unit 11 – Humboldt St. to Cardinal St. Project, Los Angeles, CA.** *Project Manager, Report Author.* ESA completed an Archaeological Resources Assessment, Paleontological Resources



## Sara Dietler (Continued)

### Cultural Resources Technical Lead

Assessment, and a Cultural Resources Mitigation Monitoring Plan for the North Outfall Sewer Rehabilitation Unit 11 Project. The Project proposed to rehabilitate 3,942 linear feet of 54-inch Burns-McDonnell Semi Elliptical North Outfall Sewer that was constructed in the 1920s. The line was originally constructed with concrete and a layer of tile above the invert and all the way to the crown. Sara prepared the cultural resources study and found a high sensitivity for buried resources. She then worked with BOE staff to create recommendations and PDFs to support the Project.

**The City of Los Angeles Bureau of Engineering, CBD Sewer Rehabilitation Units 13 and 14 – Griffith to Grand Avenue Project, Los Angeles, CA.** ESA completed an Archaeological Resources Assessment, Paleontological Resources Assessment, and a Cultural Resources Mitigation Monitoring Plan for the CBD Sewer Rehabilitation Units 13 and 14 Project. The Project proposed to rehabilitate 4,828 linear feet of existing circular brick sewer and rehabilitate 13 existing maintenance holes. The Project limits span from the existing maintenance hole 537-03-204 on East Washington Boulevard from Griffith Avenue to Main Street at MH 516-14-149. The CBD Unit 13 proposes to rehabilitate approximately 3,600 linear feet of existing 40 and 45-inch diameter circular brick sewer. ESA prepared the cultural resources study and found a high sensitivity for buried resources as well as a potential to impact the Zanja Conduit System. ESA worked with BOE staff to create recommendations and PDFs to support the Project and design the project around the location of resources

**City of Burbank, Avion Project Environmental Impact Report, Burbank, CA.** *Paleontological Lead.* Sara is preparing the cultural resources section and overseeing the paleontological technical report for the Environmental Impact Report in support of a General Plan Amendment to change the General Plan land use designation from Airport to Golden State Commercial/Industrial for the westernmost 18-acre portion of the 60-acre project site.

**City of Los Angeles Department of Public Works – Bureau of Engineering, Warner Grand Theatre, Historic Resources Technical Report and Conditions Assessment, San Pedro, Los Angeles, CA.** *Project Manager, Co-Author.* Sara managed the Cultural Resources Surveys to inform and guide future rehabilitation or redevelopment efforts of the Warner Grand Theatre. The Warner Grand Theatre designed in the Art Deco-Modern style by master architect B. Marcus Priteca in 1931, and is listed on the National Register of Historic Places, and is designated a Los Angeles Historic-Cultural Monument. ESA prepared a historical resources technical report and conditions assessment report, which provided a comprehensive table of character-defining features along with a conditions assessment of each feature located within the interior and exterior of the Warner Grand Theatre. Sara managed both the archaeological and historic efforts providing one point of contact for the City.

**Los Angeles Department of Water and Power, Elysian/USC Water Recycling Project Initial Study/ Environmental Assessment, Los Angeles, CA.** *Project Manager.* Sara worked on the IS/MND and an EA/Finding of No Significant Impact to construct recycled water pipelines for irrigation and other industrial uses serving Los Angeles Department of Water and Power customers in downtown Los Angeles, including Elysian Park. Sara prepared two technical reports and a treatment plan for archaeological, historic, and paleontological resources identified during the phase I assessment.



# JD Stewart, PhD

Paleontologist



## EDUCATION

PhD, Systematics & Ecology, University of Kansas

MA, Systematics and Ecology, University of Kansas

BA Degree, Biology, University of Kansas

## 40 YEARS' EXPERIENCE

### CERTIFICATIONS/REGISTRATION

Meets Society of Vertebrate Paleontology definition of qualified professional paleontologist

Orange County Certified Paleontologist

### PROFESSIONAL AFFILIATIONS

Society of Vertebrate Paleontology

Research Associate, Natural History Museum of Los Angeles County

Dr. JD Stewart has more than 40 years' experience in the field of paleontology, with 30 years' experience in California. He has authored or co-authored 40 peer-reviewed articles for scientific journals and books. Within these, he has authored or co-authored descriptions of three new genera and three new species.

He is a recognized authority on fossil fishes of Cretaceous rocks of North America and Cenozoic rocks of the western coast of North America. As a result, Dr. Stewart is often called upon to identify paleontological and archaeological specimens. He has served as expert witness for the U.S. Department of Justice.

Dr. Stewart has extensive experience finding and excavating fossils for county, state, and provincial institutions. His field work includes projects in cooperation with the U.S. Bureau of Land Management, National Parks Service, U.S. Army Corps of Engineers, U.S. Navy, U.S. Department of Energy, Federal Aviation Administration, California Energy Commission, Caltrans, and California State Parks. The Bureau of Land Management's national website features one of his excavations from 2004. He has supervised monitoring of construction activity in numerous California counties and municipalities. In addition to fieldwork, he has experience in the supervision of preparators, surveyors, curatorial assistants, and excavators. He also has extensive experience preparing fossils, and has processed, recovered, and identified thousands of microvertebrate fossils.

## Relevant Experience

### Salton Sea Mitigation Implementation Plan, Riverside and Imperial Counties, CA.

*Paleontologist.* ESA prepared an adaptive management and monitoring plan for the Salton Sea basin for the Salton Sea Management Program, which is a partnership between the California Natural Resources Agency, DWR, and CDFW. The monitoring plan will prioritize and guide monitoring for biological resources, including avian species, fish and invertebrates, as well as water quality, hydrology, air quality, and socioeconomics. The monitoring plan will inform status and trends of resources, as well as the implementation of future habitat and dust suppression projects. JD compiled the paleontological resource mitigation and monitoring plan and prepared the team for monitoring.

California Water Service Company, Palos Verdes Peninsula Water Reliability Project, Rolling Hills Estates, CA. Paleontologist. ESA provided a full suite of environmental services for the Palos Verdes Peninsula Water Reliability project. The proposed project involves the construction of approximately seven miles of buried potable water pipelines and a new booster pump station to replace the current water distribution system serving the Palos Verdes Peninsula. The large 7-mile utility/infrastructure project, which crossed multiple jurisdictions, including the cities of Rolling Hills Estates and Rancho Palos Verdes, and the County of Los Angeles. JD oversaw paleontological monitoring for reaches 3 and 4 and the pump station, coordinating finds, identifying fossils, and processing the fossils at the lab.





## JD Stewart, PhD (Continued)

### Paleontologist

**Syphon Reservoir Geotechnical Investigations Project IS/MND, Orange County, CA.** *Principal Paleontologist.* IRWD implemented the Geotechnical Investigations Project to characterize the geologic and geotechnical conditions of the Syphon Reservoir site to support the potential development of a future reservoir expansion. The Project included a combination of exploratory test pits, borings, and geophysical surveys to characterize the subsurface conditions of the soil at the Syphon Reservoir site and verified the characteristics of the Center Valley Fault. ESA provided extensive biological surveys and cultural surveys, assisted IRWD with AB 52 process for Tribal consultation. Dr. Stewart supervised paleontological monitoring during geotechnical explorations (including borings, exploratory test pits, and abutment/seismic trenches) at the Syphon Reservoir, as the project is located within geologic formations (Silverado and Sespe/Vaqueros) that have a high paleontological potential for yielding paleontological resources. Sediment sampling was conducted to identify the presence/absence of microvertebrate fossils.

**Goetz Road Potable Water Storage Tank and Pipeline Project EIR, Riverside, CA.** *Paleontologist.* ESA prepared an EIR and conducted supporting biological, archaeological, and paleontological surveys, as well as prepared visual simulations and a shade and shadow report for the Goetz Road Potable Water Storage Tank and Pipeline project. The project would involve construction and operation of an 8-million-gallon potable water storage tank in the City of Perris. JD led the paleontology survey.

**City of Menifee, On-Call Consulting and Peer Review Services, Menifee, CA.** *Paleontologist.* For 5 years, ESA has provided on-call peer reviews of more than 30 applicant-prepared cultural resources technical reports. ESA has become a trusted advisor to the City. JD has provided peer review of paleontology sections and reports for the City.

**Rosedale-Rio Bravo Water Storage District, Onyx Ranch South Fork Valley Water Project EIR, Kern County, CA.** *Paleontologist.* ESA prepared the EIR and associated technical studies to support the Onyx Ranch South Fork Valley Water Project. RRBWSD proposes to change the point of diversion and place of use for the water rights associated with Onyx Ranch and Smith Ranch on the South Fork of the Kern River. The intent of the project is to allow water to be delivered in the RRBWSD service area on the San Joaquin Valley floor and used for irrigation and groundwater recharge. The proposed project would assist the RRBWSD in meeting its sustainability goals under the Sustainable Groundwater Management Act. JD prepared the paleontology report to support the CEQA section.

**Guild GC, 8777 Washington Boulevard MND, Culver City, CA.** *Paleontologist.* ESA prepared an MND to address the proposed redevelopment of an approximately 1-acre property at 8777 Washington Boulevard north of the intersection at Washington Boulevard and National Boulevard in Culver City. The project is proposing a four-story building up to 56 feet. The project is proposing approximately 128,000 square feet of office space on Levels 2 through 4 and 4,500 square feet of retail/food retail on the ground level. JD provided monitoring oversight, oversaw fossil discovery, and processed fossil samples.

**I-805 Managed Lanes South Project, Caltrans District 11, San Diego County, CA.** *Paleontologist.* Dr. Stewart supervised the pedestrian survey of the project footprint and wrote the Paleontological Resource Assessment.

**I-805 North Corridor Project, Caltrans District 11, San Diego County, CA.** *Paleontologist.* Dr. Stewart supervised the pedestrian survey of the project footprint and wrote the Paleontological Resource Assessment.

**Crestavilla Retirement and Assisted Living Community Project, Laguna Niguel, CA.** *Principal Paleontologist.* Dr. Stewart supervised paleontological monitoring during the construction of a new 224-unit retirement and assisted living facility and an approximately 1,870 square-foot Spiritual Resource Center (Shepherd of the Hills Church) within a four-story structure located over a one-level subterranean parking structure. The monitoring led to the identification of a



## JD Stewart, PhD (Continued)

### Paleontologist

remarkable collection of vertebrate fossils, including the first record of a gulper shark (*Centrophorus*) from any Neogene sediments of coastal California and the first reported specimens of the cookie-cutter shark (*Isistius*) from the Capistrano Formation. Additionally, the project yielded the most complete fossil tuna ever found in California and it probably represents a species new to science.

**Palos Verdes Peninsula Water Reliability Project, Palos Verdes Peninsula, CA.** *Principal Paleontologist.* Dr. Stewart supervised paleontological monitoring during construction of new potable water pipelines and a new booster pump station to replace the current water distribution system serving the Palos Verdes Peninsula. The monitoring led to the identification and salvage of numerous fossils from Altamira Shale deposits of the Monterey Formation, including fossils of leaf imprints, sardine scales, fish parts (vertebrae, dentary, mandible) and the fossil appendage (dactyl) of a type of Mantis shrimp (Stomatopod). The Mantis shrimp specimen is believed to be the only second known occurrence in southern California of *Angelosquilla altamierensis*, and the only one with a known precise locality and provenience.

**Oaks at Monte Nido, Santa Monica Mountains, Unincorporated Los Angeles County, CA.** *Principal Paleontologist.* Dr. Stewart was in charge of the preparation of the Paleontological Resources Assessment Report, which included a pedestrian survey. The pedestrian survey yielded the identification of a sandstone boulder that contains a fossil impression of the skull of a small-toothed cetacean “dolphin” and the identification of fossilized shells of pelecypods (e.g., bivalves such as clams, mussels, oysters, and cockles) and gastropods (e.g., snails and slugs). The project proposes the development of 15 single-family residences on separate individual recorded parcels within the Monte Nido Community, along the scenic route of Piuma Road.

**Heritage Fields/Great Park Paleontological Review, Orange County, CA.** *Principal Paleontologist.* Dr. Stewart conducted Phase I and II paleontological assessments at the Heritage Fields / Great Park in Orange County, California where he and his team discovered significant portions of a Miocene-aged (15 million years ago) whale fossil, and a Pleistocene microvertebrate fauna dating to before 28,000 years ago.

**Calnev Pipeline Project, San Bernardino County, CA, and Clark County, NV.** *Principal Paleontologist.* Dr. Stewart directed paleontological survey of a 234-mile-long project area in San Bernardino County, California and Clark County, Nevada and wrote the paleontological assessment.



# Appendix B

## **LACM Records Search –**

## **Confidential – Not for Public**

## **Distribution**



# Appendix F

## **Noise Calculations and Modeling**





## Project: Inland Feeder

Construction Noise Impact on Sensitive Receptors  
Unmitigated

## Parameters

Leq to L10 factor	3
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Leq to L10 factor				30				40				250				275							
A - Upper South				R1					R2					R3					R4				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shieldin g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding , dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding , dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding , dBA
Pipeline Trenching and Installation-SC					92	89				90	86				75	71				74	70		
Drum Mixer	1	80	50%	30	84	81	84	0	40	82	79	82	0	250	66	63	66	0	275	65	62	65	0
Excavator	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Generator	1	82	50%	30	86	83	86	0	40	84	81	84	0	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	230	67	60	63	0	240	66	59	62	0	450	61	54	57	0	475	60	53	56	0
Vacuum Street Sweeper	1	80	10%	230	67	57	60	0	240	66	56	59	0	450	61	51	54	0	475	60	50	53	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Welder	1	73	40%	230	60	56	59	0	240	59	55	58	0	450	54	50	53	0	475	53	49	52	0
Vault Structure Excavation-SC					91	87				88	84				73	69				72	68		
Excavator	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	72	62	65	0	140	71	61	64	0	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	84	80	83	0	40	82	78	81	0	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Vault Structure Installation-SC					92	87				90	84				75	69				74	68		
Compressor (air)	1	80	40%	30	84	80	83	0	40	82	78	81	0	250	66	62	65	0	275	65	61	64	0
Crane	1	85	16%	30	89	81	84	0	40	87	79	82	0	250	71	63	66	0	275	70	62	65	0
Forklift	1	75	10%	230	62	52	55	0	240	61	51	54	0	450	56	46	49	0	475	55	45	48	0
Generator	1	82	50%	30	86	83	86	0	40	84	81	84	0	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	67	57	60	0	240	66	56	59	0	450	61	51	54	0	475	60	50	53	0
Surge Tank Excavation-SC					91	87				88	84				73	69				72	68		
Excavator	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	72	62	65	0	140	71	61	64	0	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	84	80	83	0	40	82	78	81	0	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Surge Tank Installation-SC					94	89				91	86				76	71				75	70		
Compressor (air)	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Crane	1	85	16%	30	89	81	84	0	40	87	79	82	0	250	71	63	66	0	275	70	62	65	0
Generator	1	82	50%	30	86	83	86	0	40	84	81	84	0	250	68	65	68	0	275	67	64	67	0
Grader	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	67	57	60	0	240	66	56	59	0	450	61	51	54	0	475	60	50	53	0
Welder	1	73	40%	230	60	56	59	0	240	59	55	58	0	450	54	50	53	0	475	53	49	52	0

A - Upper South				R1					R2					R3					R4				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding , dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding , dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding , dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding , dBA
Pipeline Trenching and Installation-DC				92	89				90	86				75	71				74	70			
Drum Mixer	1	80	50%	30	84	81	84	0	40	82	79	82	0	250	66	63	66	0	275	65	62	65	0
Excavator	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Generator	1	82	50%	30	86	83	86	0	40	84	81	84	0	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	230	67	60	63	0	240	66	59	62	0	450	61	54	57	0	475	60	53	56	0
Vacuum Street Sweeper	1	80	10%	230	67	57	60	0	240	66	56	59	0	450	61	51	54	0	475	60	50	53	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Welder	1	73	40%	230	60	56	59	0	240	59	55	58	0	450	54	50	53	0	475	53	49	52	0
Vault Structure Excavation-DC				91	87				88	84				73	69				72	68			
Excavator	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	72	62	65	0	140	71	61	64	0	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	84	80	83	0	40	82	78	81	0	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Vault Structure Installation-DC				92	87				90	86				75	69				74	68			
Compressor (air)	1	80	40%	30	84	80	83	0	40	82	78	81	0	250	66	62	65	0	275	65	61	64	0
Crane	1	85	16%	30	89	81	84	0	40	87	79	82	0	250	71	63	66	0	275	70	62	65	0
Forklift	1	75	10%	230	62	52	55	0	240	61	51	54	0	450	56	46	49	0	475	55	45	48	0
Generator	1	82	50%	30	86	83	86	0	40	84	81	84	0	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	67	57	60	0	240	66	56	59	0	450	61	51	54	0	475	60	50	53	0
Surge Tank Excavation-DC				91	87				88	84				73	69				72	68			
Excavator	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	72	62	65	0	140	71	61	64	0	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	84	80	83	0	40	82	78	81	0	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Surge Tank Installation-DC				94	89				91	86				76	71				75	70			
Compressor (air)	1	80	40%	130	72	68	71	0	140	71	67	70	0	350	63	59	62	0	375	62	59	62	0
Crane	1	85	16%	30	89	81	84	0	40	87	79	82	0	250	71	63	66	0	275	70	62	65	0
Generator	1	82	50%	30	86	83	86	0	40	84	81	84	0	250	68	65	68	0	275	67	64	67	0
Grader	1	85	40%	30	89	85	88	0	40	87	83	86	0	250	71	67	70	0	275	70	66	69	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	72	65	68	0	140	71	64	67	0	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	67	57	60	0	240	66	56	59	0	450	61	51	54	0	475	60	50	53	0
Welder	1	73	40%	230	60	56	59	0	240	59	55	58	0	450	54	50	53	0	475	53	49	52	0

**Project: Inland Feeder****Construction Noise Impact on Sensitive Receptors****Mitigated****Parameters**

Leq to L10 factor	3
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				West 30					East 40					North 250					West 275				
				R1					R2					R3					R4				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding g, dBA
<b>Pipeline Trenching and Installation-SC</b>				30	87	84			40	85	81			250	75	71			275	74	70		
Drum Mixer	1	80	50%	30	79	76	79	5	40	77	74	77	5	250	66	63	66	0	275	65	62	65	0
Excavator	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Generator	1	82	50%	30	81	78	81	5	40	79	76	79	5	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	230	62	55	58	5	240	61	54	57	5	450	61	54	57	0	475	60	53	56	0
Vacuum Street Sweeper	1	80	10%	230	62	52	55	5	240	61	51	54	5	450	61	51	54	0	475	60	50	53	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Welder	1	73	40%	230	55	51	54	5	240	54	50	53	5	450	54	50	53	0	475	53	49	52	0
<b>Vault Structure Excavation-SC</b>				30	86	82			40	83	79			250	73	69			275	72	68		
Excavator	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	67	57	60	5	140	66	56	59	5	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	79	75	78	5	40	77	73	76	5	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
<b>Vault Structure Installation-SC</b>				30	87	82			40	85	79			250	75	69			275	74	68		
Compressor (air)	1	80	40%	30	79	75	78	5	40	77	73	76	5	250	66	62	65	0	275	65	61	64	0
Crane	1	85	16%	30	84	76	79	5	40	82	74	77	5	250	71	63	66	0	275	70	62	65	0
Forklift	1	75	10%	230	57	47	50	5	240	56	46	49	5	450	56	46	49	0	475	55	45	48	0
Generator	1	82	50%	30	81	78	81	5	40	79	76	79	5	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	62	52	55	5	240	61	51	54	5	450	61	51	54	0	475	60	50	53	0
<b>Surge Tank Excavation-SC</b>				30	86	82			40	83	79			250	73	69			275	72	68		
Excavator	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	67	57	60	5	140	66	56	59	5	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	79	75	78	5	40	77	73	76	5	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
<b>Surge Tank Installation-SC</b>				130	89	84			140	86	81			350	76	71			375	75	70		
Compressor (air)	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Crane	1	85	16%	30	84	76	79	5	40	82	74	77	5	250	71	63	66	0	275	70	62	65	0
Generator	1	82	50%	30	81	78	81	5	40	79	76	79	5	250	68	65	68	0	275	67	64	67	0
Grader	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	62	52	55	5	240	61	51	54	5	450	61	51	54	0	475	60	50	53	0
Welder	1	73	40%	230	55	51	54	5	240	54	50	53	5	450	54	50	53	0	475	53	49	52	0

				R1					R2					R3					R4				
Construction Phase	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding, g, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding, dBA	Distance (ft)	Lmax	Leq	L10	Estimate d Noise Shielding, dBA
Pipeline Trenching and Installation-DC					87	84				85	81				75	71				74	70		
Drum Mixer	1	80	50%	30	79	76	79	5	40	77	74	77	5	250	66	63	66	0	275	65	62	65	0
Excavator	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Generator	1	82	50%	30	81	78	81	5	40	79	76	79	5	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	230	62	55	58	5	240	61	54	57	5	450	61	54	57	0	475	60	53	56	0
Vacuum Street Sweeper	1	80	10%	230	62	52	55	5	240	61	51	54	5	450	61	51	54	0	475	60	50	53	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Welder	1	73	40%	230	55	51	54	5	240	54	50	53	5	450	54	50	53	0	475	53	49	52	0
Vault Structure Excavation-DC					86	82				83	79				73	69				72	68		
Excavator	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	67	57	60	5	140	66	56	59	5	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	79	75	78	5	40	77	73	76	5	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Vault Structure Installation-DC					87	82				85	79				75	69				74	68		
Compressor (air)	1	80	40%	30	79	75	78	5	40	77	73	76	5	250	66	62	65	0	275	65	61	64	0
Crane	1	85	16%	30	84	76	79	5	40	82	74	77	5	250	71	63	66	0	275	70	62	65	0
Forklift	1	75	10%	230	57	47	50	5	240	56	46	49	5	450	56	46	49	0	475	55	45	48	0
Generator	1	82	50%	30	81	78	81	5	40	79	76	79	5	250	68	65	68	0	275	67	64	67	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	62	52	55	5	240	61	51	54	5	450	61	51	54	0	475	60	50	53	0
Surge Tank Excavation-DC					86	82				83	79				73	69				72	68		
Excavator	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Vacuum Street Sweeper	1	80	10%	130	67	57	60	5	140	66	56	59	5	350	63	53	56	0	375	62	52	55	0
Tractor/Loader/Backhoe	1	80	40%	30	79	75	78	5	40	77	73	76	5	250	66	62	65	0	275	65	61	64	0
Tractor/Loader/Backhoe	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Surge Tank Installation-DC					89	84				86	81				76	71				75	70		
Compressor (air)	1	80	40%	130	67	63	66	5	140	66	62	65	5	350	63	59	62	0	375	62	59	62	0
Crane	1	85	16%	30	84	76	79	5	40	82	74	77	5	250	71	63	66	0	275	70	62	65	0
Generator	1	82	50%	30	81	78	81	5	40	79	76	79	5	250	68	65	68	0	275	67	64	67	0
Grader	1	85	40%	30	84	80	83	5	40	82	78	81	5	250	71	67	70	0	275	70	66	69	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Compactor (ground)	1	80	20%	130	67	60	63	5	140	66	59	62	5	350	63	56	59	0	375	62	56	59	0
Vacuum Street Sweeper	1	80	10%	230	62	52	55	5	240	61	51	54	5	450	61	51	54	0	475	60	50	53	0
Welder	1	73	40%	230	55	51	54	5	240	54	50	53	5	450	54	50	53	0	475	53	49	52	0

**Inland Feeder****Table I. Off-Site Structural Vibration Impacts**

Receptor	Type of Building	Equipment	Reference Distance	Reference Level <sup>a</sup>	Distance to Receptor (ft) <sup>b</sup>	Impact Level	Threshold	Exceeds Threshold?
				PPV (in/sec)		PPV (in/sec)	PPV (in/sec) <sup>a</sup>	
Residential Buildings	Residential Buildings	Loaded Trucks	25	0.076	25	0.076	0.20	No
		Loaded Trucks	25	0.076	50	0.027	0.20	No
		Loaded Trucks	25	0.076	60	0.020	0.20	No
		Loaded Trucks	25	0.076	75	0.015	0.20	No
		Loaded Trucks	25	0.076	100	0.010	0.20	No

Notes:

a. Caltrans Transportation and Construction Vibration Guidance Manual (2020), Table 15 and Table 18

b. Distances represent the closest measurement from project building footprint to closest building footprint





# INLAND FEEDER – FOOTHILL PUMP STATION INTERTIE PROJECT

## Response to Comments Received

The Metropolitan Water District of Southern California  
700 North Alameda Street  
Los Angeles, CA 90012



Report Number ER 1694

July 2024

## Comment Letters

This document includes comments received during the public review period of the Initial Study/Mitigated Negative Declaration (IS/MND) prepared for the Inland Feeder – Foothill Pump Station Intertie Project (proposed Project). This document includes a copy of the one comment letter submitted during the 32-day public review period for the IS/MND, which was submitted by the San Bernardino Valley Water Conservation District (SBVWCD; District).

Although not required by the California Environmental Quality Act (CEQA) or the CEQA Guidelines, the Metropolitan Water District of Southern California (Metropolitan) is providing written responses to comments received on the IS/MND for the proposed Project as part of the administrative record and for the Metropolitan Board of Directors (Board) to review when considering adoption of the IS/MND. In accordance with the requirements of CEQA Guidelines Section 15073(e), Metropolitan will provide notification in writing to the commenters 10 days in advance of the Board meeting to adopt the MND for the proposed Project.

The comment letter received during the public review period is listed in **Table 1-1**. The letter has been marked with brackets that delineate comments pertaining to environmental issues and the information and analysis contained in the IS/MND. Responses to comments are provided below.

**TABLE 1-1  
COMMENT LETTERS RECEIVED**

<b>Comment Letter No.</b>	<b>Commenter</b>	<b>Date of Comment</b>
1	Betsy Miller - San Bernardino Valley Water Conservation District (SBVWCD; District)	June 17, 2024

June 17, 2024

Ms. Michelle Morrison  
Environmental Planning Section  
The Metropolitan Water District of Southern California  
P.O. Box 54153  
Los Angeles, California 90054

RE: Notice of Intent to Adopt a Mitigated Negative Declaration for the Inland Feeder-Foothill Pump Station Intertie Project

Dear Ms. Morrison,

The San Bernardino Valley Water Conservation District (District) appreciates the opportunity to comment on the Initial Study/Mitigated Negative Declaration (IS/MND) for the Inland Feeder-Foothill Pump Station Intertie Project (Project) proposed by the Metropolitan Water District of Southern California (Metropolitan) and note our support for projects that increase regional water reliability.

In addition to recharging the Bunker hill groundwater basin for over a century, the District is the lead Permittee for the adopted Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan). The Wash Plan is the culmination of two decades of coordination among the District and our Task Force partners to develop an integrated approach to permit and mitigate construction and maintenance activities within the Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement. Members in the Task Force include the District, County of San Bernardino, the Cities of Highland and Redlands, Redlands Municipal Utility District, BLM, Cemex Inc., Robertson's Ready-Mix, East Valley Water District, San Bernardino Valley Municipal Water District, and San Bernardino County Flood Control District. The Wash Plan conserves and protects the following listed species: Santa Ana River woolly-star (Woolly-star), San Bernardino kangaroo rat (SBKR), Coastal California gnatcatcher (CAGN), and Slender-horned spinyflower (SHSF). Additionally, the Wash Plan serves as mitigation for several infrastructure projects within the area.

While the District does not appear to be listed as a CEQA Responsible Agency, we request consideration of the following comments on the IS/MND:

1. As noted in the IS/MND (section 3.4), the southwestern portion of the proposed Project area is situated within the Wash Plan boundary and District Conserved Lands. Overlap of the proposed Project area to District owned properties is also noted in Section 1.5.2. We appreciate recognition of the Wash Plan as an adopted Habitat Conservation Plan which lies adjacent to, and shares overlap with, the proposed Project boundary. We kindly request consideration of mention of the Wash Plan in other applicable sections of the IS/MND.

1-1

1-2

2. The Wash Plan Habitat Conservation Plan was adopted in 2020. We kindly request a correction be made to the adoption date noted in section 3.4 of the IS/MND. 1-3
3. Access through or use of District owned properties absent of an easement agreement will require authorization through an Access Permit with the District. When requesting an Access Permit, we recommend early coordination with the District. Please contact the District contact below to initiate coordination. To the extent that the area of which Metropolitan seeks easements or rights of entry have been transferred to the Bureau of Land Management (BLM) under the legislation noted in the footnote to table 1-3, said rights would be secured from BLM. 1-4
4. We understand from section 3.4 that the proposed project would result in permanent and temporary impacts within the Wash Plan boundary and District Conserved Lands. We appreciate the commitment to restore areas of temporary impact to prior conditions as well as the plans to implement mitigation measures complementary to the proposed timeline of the Wash Plan through the implementation of BIO-3 to fully mitigate for the permanent loss of habitat otherwise to serve as compensatory mitigation for activities covered under the HCP. 1-5
5. We understand from section 3.4 that SBKR, CAGN, SHSF, and Woolly-star are subject to direct and indirect impacts resulting from proposed construction activities. We further understand that ground disturbance and vegetation removal activities may result in “take” of SBKR and CAGN. SBKR, CAGN, SHSF, and Woolly-star are Covered Species under the Wash Plan; however, we note that the planned implementation of standard best practices and mitigation measures are tied to project-specific permits given that the proposed Project and associated activities are not covered under the Wash Plan. 1-6
6. If nighttime construction activities are to occur as noted in section 1.5.1, the District kindly suggests implementation of light and noise measures in order to minimize disturbance to wildlife within the Wash Plan Preserve. 1-7

If it may be of use, the Wash Plan is available online at <https://www.sbvwd.org/our-projects/upper-santa-ana-wash-land-management-and-habitat-conservation-plan-wash-plan/>

Please feel free to contact Milan Mitrovich at 909-793-2503 or [mmitrovich@sbvwd.org](mailto:mmitrovich@sbvwd.org) with any questions or comments. We appreciate the opportunity to comment, and request to be included on future project notifications as well.

Sincerely,



Betsy Miller  
General Manager

# Response to Comment Letter 1

Letter 1: Betsy Miller, General Manager (San Bernardino Valley Water Conservation District)

Date: June 17, 2024

## Response 1-1

The commentor provides an introduction to the comment letter and notes support for projects that increase regional water reliability as the lead Permittee for the Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan). The SBVWCD recognizes that it is not listed as a CEQA Responsible Agency and the request for consideration of the following comments on the IS/MND is noted.

## Response 1-2

The commentor states that the SBVWCD is noted in Section 1.5.2 and the Wash Plan is recognized in Section 3.4 and requests mention of the Wash Plan in other applicable Sections. Metropolitan acknowledges that SBVWCD owned properties and the Wash Plan boundary are within proposed Project Area in Figure 1-4 (Parcel Ownership), Table 1-3 (Discretionary Permits and Easements Potentially Required), and Section 2.3 (Initial Study; Other public agencies whose approval is required).

## Response 1-3

The commentor states that the Wash Plan was adopted in 2020, not 2022, and requests correction. Metropolitan acknowledges the request for correction and shall change the Wash Plan adoption date to 2020 in the IS/MND. In response to the comment, the following revision to page 55 of the IS/MND has been made:

The Wash Plan HCP was prepared by SBVWCD and officially adopted in 2020 ~~2022~~.

## Response 1-4

The commentor states that access through or use of District-owned properties will require an Access Permit and recommends early coordination with the District. Metropolitan acknowledges that access through or use of District owned properties will require authorization through an Access Permit with the District and acknowledges the contact personnel specified by the District. Metropolitan shall coordinate rights of entry or easement with all applicable property owners.



**Response 1-5**

The commentor states that the District appreciates the commitment to implement mitigation measures complementary to the proposed timeline of the Wash Plan. Metropolitan acknowledges this comment and appreciates the District's review of the proposed Project in relation to the Wash Plan. All Project mitigation measures will be implemented in accordance with the adopted Mitigation Monitoring and Reporting Program.

**Response 1-6**

The commentor states that the IS/MND describes potential direct and indirect impacts to special-status plant and wildlife species, and planned implementation of standard best practices and mitigation measures are tied to project-specific permits, given that the proposed Project is not covered under the Wash Plan. Metropolitan acknowledges this comment. In regard to proposed Project impacts to special-status plants, in June 2024, Metropolitan conducted a rare plant survey of the proposed Project Area in accordance with the California Department of Fish and Wildlife's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. No rare or special-status plant species were observed during the June survey. Additionally, all Project mitigation measures will be implemented in accordance with the adopted Mitigation Monitoring and Reporting Program.

**Response 1-7**

The commentor states that the SBVWCD suggests implementation of light and noise measures to minimize disturbance to wildlife within the Wash Plan Preserve if nighttime construction activities are to occur. Metropolitan acknowledges this comment. The implementation of light and noise measures is described in several sections of the IS/MND and Appendix A (Metropolitan Standard Practices). Page 16 of the IS/MND (and Appendix A) describes that floodlights would be directed to shine downward and shielded to avoid a nuisance to the surrounding areas and no lighting would be directed toward a residence or natural areas as part of Metropolitan Standard Practices. Appendix A also describes that the Contractor shall perform all work without undue noise and shall make every effort to alleviate or prevent noise nuisances as part of Metropolitan Standard Practices. Page 90 of the IS/MND, implementation of Mitigation Measure NOI-1, would reduce the Project's on-site construction noise impacts at noise sensitive receptors.

**Response 1-8**

The commentor states that Wash Plan is available online for reference and provides contact information for any questions or comments. Metropolitan acknowledges this comment. The comment does not state a specific concern about the adequacy of the IS/MND or otherwise comment on the contents of the IS/MND analysis. The comment is noted and will be included in the project record, but a response is not required pursuant to CEQA.

# INLAND FEEDER – FOOTHILL PUMP STATION INTERTIE PROJECT

## Mitigation Monitoring and Reporting Program

The Metropolitan Water District of Southern California  
700 North Alameda Street  
Los Angeles, CA 90012



Report Number ER 1694

July 2024

# Mitigation Monitoring and Reporting Program

The Mitigation Monitoring and Reporting Program (MMRP) for the proposed Inland Feeder – Foothill Pump Station Intertie Project (proposed Project) has been prepared in accordance with Public Resources Code Section 21081.6 and State CEQA Guidelines Section 15091(d). Metropolitan will use this MMRP to track compliance with the proposed Project mitigation measures.

Metropolitan's Board of Directors will consider the MMRP during the adoption hearing for the Initial Study/Mitigated Negative Declaration (IS/MND). The MMRP will incorporate all mitigation measures adopted for the proposed Project.

This MMRP summarizes mitigation commitments identified in the IS/MND. Table 1-1 provides the MMRP which includes all mitigation measures, monitoring timing, and responsible persons/agency for implementation. Impacts and mitigation measures are presented in the same order as in the project MND. The columns in the table provide the following information:

- **Mitigation Measures:** This column lists the action(s) that will be taken to reduce the impact to a less-than-significant level.
- **Implementation Party:** This column lists the party responsible for implementation of the mitigation measure.
- **Timing of Implementation:** This column indicates the general schedule for conducting each monitoring task, either prior to construction, during construction, and/or after construction.
- **Responsible Party:** This column lists the agency responsible for ensuring implementation of the mitigation measure.

**MITIGATION MONITORING AND REPORTING PROGRAM**  
**INLAND FEEDER – FOOTHILL PUMP STATION INTERTIE PROJECT**

Mitigation Measure	Implementation Party	Timing of Implementation	Responsible Party
<b>Biological Resources</b>			
<b>BIO-1: Prevention of Inadvertent Entrapment.</b> To prevent inadvertent entrapment of common and special-status wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered with tarp, plywood or similar materials at the close of each working day and shall be inspected visually to confirm animals would be excluded, to prevent animals from being trapped. Ramps may be constructed of earth fill or wooden planks within deep walled trenches to allow animals to escape, if necessary. Before such holes or trenches are backfilled, they should be thoroughly inspected for trapped animals. If trapped wildlife is observed, escape ramps or structures will be installed immediately to allow escape.	Metropolitan Qualified Biologist	During Construction	Metropolitan
<b>BIO-2: Special Status Plants.</b> Prior to construction activities that could potentially remove special-status plants, a qualified botanist shall conduct a pre-construction floristic inventory and focused rare plant survey to determine and map the location and extent of special-status plant species populations within disturbance areas within suitable habitat. This survey shall occur during the typical blooming periods of special-status plants with the potential to occur: Parry's spineflower ( <i>Chorizanthe parryi</i> var. <i>parryi</i> ; CRPR 1B.1; blooming period April – June), Plummer's mariposa lily ( <i>Calochortus plummerae</i> ; CRPR 4.2; blooming period May – July), Robinson's pepper-grass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> ; CRPR 4.3; blooming period January – July), Santa Ana River woollystar ( <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> ; FE, SE, CRPR 1B.1; blooming period April – September), and slender-horned spineflower ( <i>Dodecahema leptoceras</i> ; FE, SE, CRPR 1B.1; blooming period April–June). The plant survey shall follow the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018).  If special-status plants are not identified within the proposed Project Area, then ground-disturbing activities may commence. If special-status plants are detected and Project-related impacts are unavoidable, then the preparation and implementation of a special-status species salvage, seed collection, and replanting plan would be required, and consultation with the regulatory agencies would be required to address potential take of listed plant species. The salvage, seed collection, and replanting plan shall include measures to salvage, collect seed, replant, and monitor the disturbance area until native vegetation is re-established.  Pre-construction special-status plant surveys are scheduled to be conducted in 2024. If construction does not begin by 2027, a qualified botanist shall conduct an additional pre-construction floristic inventory and focused rare plant survey in accordance with the guidance above during the appropriate blooming period the year prior to the commencement of proposed Project activities.	Metropolitan Qualified Biologist	Prior to Construction	Metropolitan
<b>BIO-3: Compensation for Impacts to Federally and State-Listed Plant and Wildlife Species Habitat.</b> Direct temporary and permanent impacts to suitable habitat for federally or state-listed species shall be mitigated through purchase of credits from an approved mitigation bank, payment to an in-lieu fee program, or in another form of mitigation approved by the regulatory agencies.  <b>Temporary Impacts.</b> Mitigation for direct temporary impacts to suitable habitat for federally or state-listed species shall be provided through on-site restoration. Areas temporarily impacted shall be returned to similar conditions to those that existed prior to grading and/or ground-disturbing activities.  <b>Permanent Impacts.</b> Metropolitan shall purchase credits from an approved mitigation bank, payment to an in-lieu fee program, or in another form of mitigation approved by the regulatory agencies to compensate for all permanent loss of suitable habitat for federally or state-listed species (including critical habitat), if available, at a 1:1 ratio.	Metropolitan	Prior to Construction	Metropolitan

Mitigation Measure	Implementation Party	Timing of Implementation	Responsible Party
<p><b>BIO-4: Nesting Birds/Raptors and Special-Status Birds.</b> Proposed Project activities could negatively impact nesting birds that are protected in accordance with the MBTA and FGC, as well as other special-status avian species, such as the Bell's sparrow, burrowing owl, California horned lark, coastal California gnatcatcher, loggerhead shrike, and Southern California rufous-crowned sparrow. No physical disturbance of vegetation, operational structures, buildings, or other potential habitat (e.g., open ground, gravel, construction equipment or vehicles, etc.) that may support nesting birds protected by the MBTA and FGC shall occur in the breeding season, except as necessary to respond to public health and safety concerns, or otherwise authorized by the Engineer. The breeding season extends from February 15 through August 31 for passerines and general nesting and from January 1 through August 31 for raptors.</p> <ul style="list-style-type: none"> <li>If nesting habitat (including annual grasses and forbs, brittle bush scrub, California buckwheat – brittle bush scrub, chamise chaparral – hairy yerba santa scrub, and hairy yerba santa scrub habitats, as well as the disturbed land cover types within the Study Area) must be cleared or proposed Project activities must occur within 500 feet of nesting habitat within the breeding season as defined above, a qualified biologist shall perform a nesting bird survey no more than three days prior to clearing or removal of nesting habitat or start of proposed Project activities. Surveys will be performed in all Metropolitan accessible areas (fee property and easements) and inaccessible areas will be visually surveyed to their full extent without trespassing.</li> <li>If active nests for sensitive species, raptors and/or migratory birds are observed, an adequate buffer zone or other avoidance and minimization measures, as appropriate, shall be established, as identified by a qualified biologist and approved by the Engineer. Construction avoidance buffers are generally 300 feet for non-listed passerines and 500 feet for listed avian species (i.e., coastal California gnatcatcher) and raptors; however, avoidance buffers may be modified at the discretion of the biologist, depending on the species, location of the nest and species tolerance to human presence and construction-related noises and vibrations. The buffer shall be clearly marked in the field by the Contractor, as directed by the Engineer, and construction or clearing shall not be conducted within this zone until the young have fledged and are no longer reliant on the nest.</li> <li>Additional measures may include (but are not limited to): construction avoidance until the nest is no longer active, noise attenuation measures to reduce construction noise levels to below 60 dBA Leq (an hourly measurement of A-weighted decibels) or ambient (if existing ambient levels are above 60 dBA), and biological monitoring during construction activities to ensure the species is not harmed during proposed Project implementation.</li> <li>A qualified biologist shall monitor active nests or nesting bird habitat within or immediately adjacent to the proposed Project construction areas, and the Engineer shall provide necessary recommendations to the Contractor to minimize or avoid impacts to protected nesting birds.</li> </ul>	Metropolitan Qualified Biologist	Prior to Construction During Construction	Metropolitan
<p><b>BIO-5: Crotch Bumble Bee.</b> If removal of suitable Crotch bumble bee foraging and/or nesting habitat within the California buckwheat – brittle bush scrub is required, the following measures shall be implemented:</p> <ul style="list-style-type: none"> <li>A qualified entomologist familiar with the species' behavior and life history shall conduct surveys to determine presence/absence of the Crotch bumble bee within the year prior to vegetation removal and/or grading in areas that provide suitable habitat for this species. A minimum of three surveys, ideally 2-4 weeks apart, should also be conducted during peak flying season when the species is most likely to be detected above ground, between March 1 to September 1 and during peak bloom of nectaring resources (Thorp et al. 1983; CDFW 2023c). At minimum, a survey report should provide the following:</li> </ul>	Metropolitan Qualified Biologist	Prior to Construction During Construction	Metropolitan

Mitigation Measure	Implementation Party	Timing of Implementation	Responsible Party
<ul style="list-style-type: none"> <li>○ A description and map of the survey area, focusing on areas that could provide suitable habitat for Crotch bumble bee.</li> <li>○ Field survey conditions that should include name(s) of qualified entomologist(s) and brief qualifications; date and time of survey; survey duration; general weather conditions; survey goals, and species searched.</li> <li>○ Map(s) showing the location of nests/colonies.</li> <li>○ A description of physical (e.g., soil, moisture, slope) and biological (e.g., plant composition) conditions where each nest/colony is found. A sufficient description of biological conditions, primarily impacted habitat, should include native plant composition (e.g., density, cover, and abundance) within impacted habitat (e.g., species list separated by vegetation class; density, cover, and abundance of each species).</li> <li>• If Crotch bumble bee is detected, the qualified entomologist should identify the location of all nests within and adjacent to the proposed Project Area. A 15-meter (50-foot) no disturbance buffer zone should be established around any identified nest(s) to reduce the risk of disturbance or accidental take. A qualified entomologist should expand the buffer zone as necessary to prevent disturbance or take.</li> <li>• If Crotch bumble bee impacts cannot be feasibly avoided, Metropolitan would obtain appropriate take authorization from CDFW (pursuant to FGC, § 2080 et seq), and replace habitat at a 1:1 ratio, or as determined in consultation with CDFW.</li> </ul>			
<p><b>BIO-6: Western Spadefoot.</b> Although limited suitable breeding habitat is present within the constructed basin and associated drainage located in the proposed Project Area, proposed Project activities could negatively impact suitable western spadefoot upland habitat, including all of the natural communities and excluding the disturbed and developed land cover, within the small mammal burrows located in the proposed Project Area. Therefore, the following measures are required to avoid impacts to this species.</p> <ul style="list-style-type: none"> <li>• A qualified biologist shall survey areas of suitable habitat for western spadefoot in the proposed Project Area, including ruts, small pools, and the constructed basin and associated drainage. The survey shall be conducted during the active season of western spadefoot (which corresponds with the rainy season).</li> <li>• If surveys result in the observation of western spadefoot within proposed Project Area, observed individuals and/or eggs shall be removed from proposed Project Area and be relocated to pre-determined suitable habitat in an appropriate area that will not be impacted.</li> <li>• For work during the western spadefoot toad migration and breeding season (November 1 to May 31), a qualified biologist will survey the active work areas (including access roads) in the mornings following measurable precipitation events. Construction may commence upon confirmation from the biologist that no western spadefoot toads are in the work area.</li> <li>• When feasible, a 50-foot avoidance buffer will be maintained around burrows that provide suitable upland habitat for western spadefoot toad, as identified by a qualified biologist. The biologist will delineate and mark the no-disturbance buffer.</li> <li>• If western spadefoot toad is found within the construction footprint, it will be allowed to move out of harm's way on its own accord or a qualified biologist will relocate it to the nearest suitable burrow outside of the construction impact area.</li> <li>• Prior to beginning work, a qualified biologist will inspect underneath equipment and stored pipes greater than 1.2 inches (3 cm) in diameter for western spadefoot toad. If found, they will be allowed to move out of the construction area on their own accord.</li> </ul>	Metropolitan Qualified Biologist	Prior to Construction During Construction	Metropolitan



Mitigation Measure	Implementation Party	Timing of Implementation	Responsible Party
<p><b>BIO-7: San Bernardino Kangaroo Rat Pre-Construction Presence/Absence Trapping Surveys.</b> Prior to ground disturbing activities within areas with potential habitat for SBKR or other sensitive small mammals, a qualified SBKR biologist with a required Section 10(a) permit will conduct pre-construction presence/absence trapping surveys. These surveys will follow protocols and trapping methods approved by the regulatory agencies to determine the presence/absence of SBKR and other sensitive small mammals on-site.</p> <ul style="list-style-type: none"> <li>If pre-construction presence/absence trapping surveys within the Stage 1 area are negative, then exclusionary fencing (Mitigation Measure BIO-8) will be installed.</li> <li>If results from the trapping surveys demonstrate that SBKR are present within the Stage 1 proposed Project Area, an ITP will need to be obtained. Construction within occupied habitat areas will not proceed until appropriate authorization (i.e., FESA and/or CESA Incidental Take Permit (ITP) is obtained.</li> <li>Stage 2 construction will not commence until appropriate authorization (i.e., FESA and/or CESA ITP) is obtained. Implementation of protection measures and compensatory mitigation for SBKR, in addition to those identified in this document, will be required as conditions of federal and state take permits.</li> </ul>	Metropolitan Qualified Biologist	Prior to Construction	Metropolitan
<p><b>BIO-8: San Bernardino Kangaroo Rat Exclusionary Fencing.</b> Exclusionary fencing will be erected in construction areas with potential to be occupied by SBKR or containing kangaroo rat sign (e.g., burrows, scat, tail drag, or dust baths) as determined by a preconstruction survey conducted by a qualified biologist.</p> <ul style="list-style-type: none"> <li>A qualified biologist or approved biological monitor will be present on-site when the fence is installed to minimize disturbance of SBKR burrows from fence installation.</li> <li>The integrity of the fencing will be checked by a qualified biologist at the end of each workday. Any gaps will be repaired immediately.</li> <li>Construction access openings will be closed and secured at the end of each workday using the at-grade fencing method.</li> <li>The fence will remain in place for the duration of construction activities and removed at the completion of the relevant proposed Project activity.</li> <li>Stage 1 exclusionary fencing will be installed at grade to minimize the risk of unauthorized take.</li> </ul>	Metropolitan Qualified Biologist	Prior to Construction During Construction	Metropolitan
<p><b>BIO-9: San Bernardino Kangaroo Rat and General Construction Monitoring.</b></p> <p><b>SBKR Biologist.</b> A qualified biologist or approved biological monitor shall visually inspect trenches and steep-walled holes before the onset of daily construction for presence of SBKR. If SBKR are discovered, the biologist shall supervise the movement or relocation of the equipment until the animal has left the area on its own.</p> <ul style="list-style-type: none"> <li>To the extent feasible, soil stockpiles in SBKR habitat will be located within the construction area inside the exclusionary fence or within the existing facility in areas devoid of vegetation.</li> <li>Nighttime work shall be avoided as much as possible. If nighttime work is necessary, all lighting shall be directed exclusively at the work area to avoid areas that support local wildlife movement, such as ephemeral drainages, to the greatest extent practical. Any nighttime lighting shall be shielded downward to avoid light spillage into the surrounding areas.</li> </ul> <p><b>Limits of Disturbance.</b> Prior to construction in or adjacent to habitats for special-status species, and under the direction of a qualified biologist, Metropolitan shall clearly delineate the construction right-of-way (stake, flag, fence, etc.) that restricts the limits of construction to the minimum necessary to implement the proposed Project.</p>	Metropolitan Qualified Biologist	Prior to Construction During Construction	Metropolitan

Mitigation Measure	Implementation Party	Timing of Implementation	Responsible Party
<p><b>Biological Monitoring.</b> Prior to the start of construction, Metropolitan shall retain a qualified biological monitor(s) to be on-site during the initial ground disturbance and during construction activities to monitor habitat conditions and impacts. The biological monitor will ensure compliance with mitigation measures and will have the authority to halt or suspend all activities until appropriate corrective measures have been taken. The biological monitor shall be a qualified biologist with species expertise appropriate for the proposed Project.</p> <p><b>On-Site Overnight Storage.</b> All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods should be thoroughly inspected for birds and other wildlife before the pipe is subsequently buried, capped, or otherwise used or moved.</p>			
<p><b>BIO-10: Special-Status Ground-Dwelling Wildlife.</b> A qualified biologist shall conduct a preconstruction clearance survey throughout the proposed Project Area. If any special-status ground-dwelling wildlife, protected in accordance with CESA and FGC, such as the Belding's orange-throated whiptail, California glossy snake, coast horned lizard, coastal western whiptail, Los Angeles pocket mouse, northwestern San Diego pocket mouse, red-diamond rattlesnake, San Diego black-tailed jackrabbit, San Diego desert woodrat, Southern California legless lizard, and southern grasshopper mouse are observed during the survey, a qualified biologist should relocate the individual to suitable habitat adjacent to the proposed Project Area.</p>	Metropolitan Qualified Biologist	Prior to Construction	Metropolitan
<p><b>BIO-11: Burrowing Owl.</b> Prior to the initiation of any ground disturbing activities within 500 feet of suitable burrowing owl habitat, including all of the natural communities and land cover types within the Study Area, focused surveys for burrowing owl shall be conducted by a qualified biologist throughout the Study Area following the most current CDFW required protocol for the species. If the qualified biologist finds evidence of burrowing owls during the burrowing owl breeding season (February 1 through August 31), all Project-related activities shall avoid nest sites during the remainder of the breeding season or while the nest remains occupied by adults or young (nest occupation includes individuals or family groups foraging on or near the site following fledging). Avoidance includes establishment of a minimum 300-foot buffer zone around nests. Construction and other proposed Project-related activities may occur outside of the 300-foot buffer zone. Construction and other proposed Project-related activities may be allowed inside of the 300-foot avoidance buffer during the breeding season if the nest is not disturbed, and the proposed Project activities are monitored by a qualified biologist.</p>	Metropolitan Qualified Biologist	Prior to Construction During Construction	Metropolitan
<b>Noise</b>			
<p><b>NOI-1: Temporary Noise Barriers.</b> Temporary noise barriers shall be used along the western and eastern property boundaries to block the line-of-sight between the construction equipment and the noise sensitive receptors.</p>	Metropolitan	During Construction	Metropolitan



Engineering, Operations, & Technology Committee

# Adopt MND and Accept Grant Funding for Inland Feeder-Foothill Pump Station Intertie Project

Item 7-4

August 19, 2024

## Item 7-4

### Inland Feeder- Foothill Pump Station Intertie IS-MND

#### Subject

Adopt the Mitigated Negative Declaration (MND) for the Foothill Pump Station Intertie Project; adopt resolution to accept \$5 million U.S. Bureau of Reclamation's WaterSMART: Drought Resiliency Projects grant for Fiscal Year 2024 to support project; authorize General Manager to accept grant funds; and designate Group Manager of Engineering Services to be signatory to grant

#### Purpose

Project is one of a series of projects to improve supply reliability for SWP-dependent member agencies. Grant funding and MND adoption will support project progress in timely manner

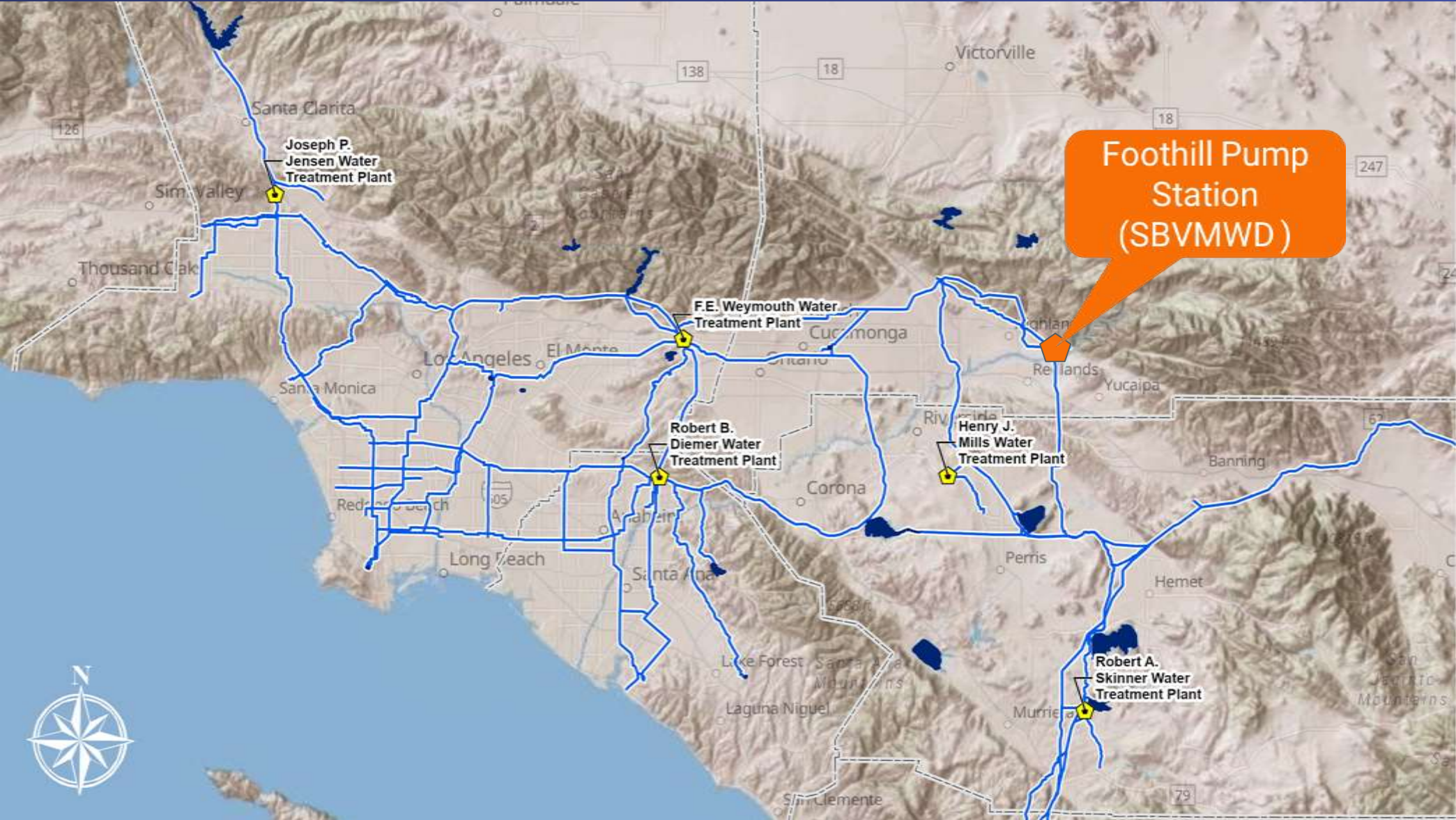
#### Recommendation and Fiscal Impact

Adopt CEQA and accept grant funding  
No Fiscal Impact

#### Budgeted

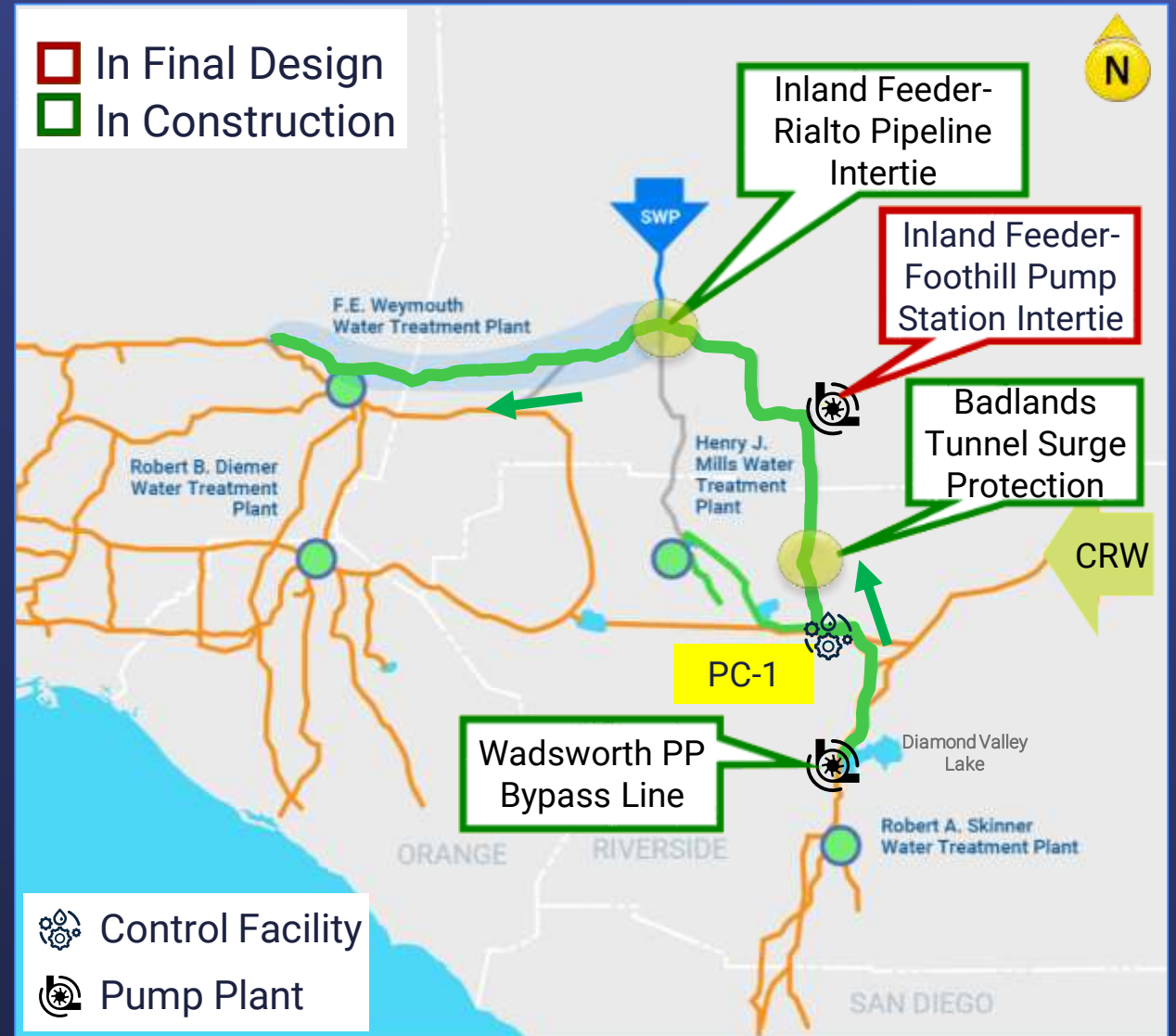


# Location Map



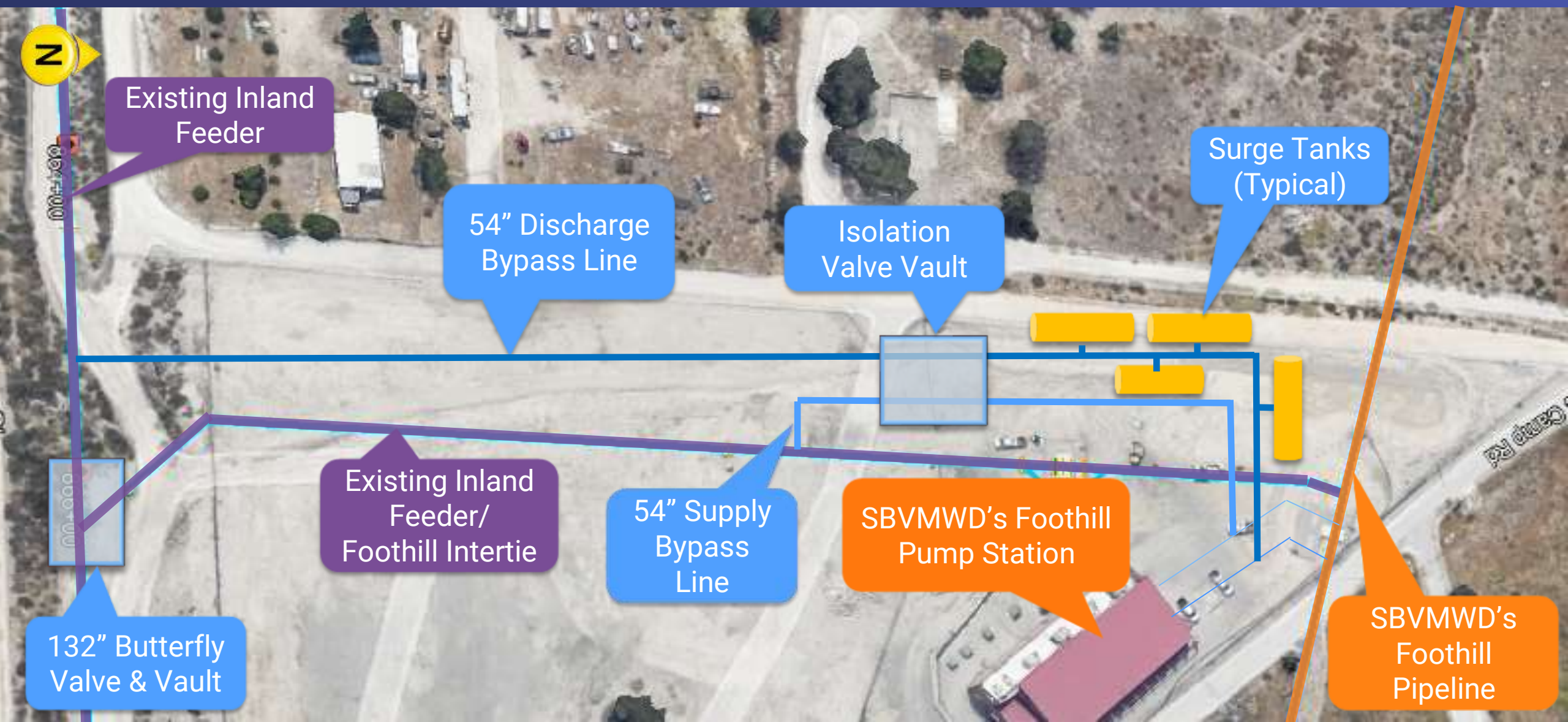
# Background - Rialto Area Water Supply Reliability Improvements

- Rialto Pipeline service area is dependent on SWP
- Rialto Pipeline Water Supply Improvements
  - Wadsworth Bypass
  - Badlands Tunnel Surge Protection
  - Foothill Pump Station Intertie
  - Inland Feeder Rialto Pipeline Intertie





# Foothill Pump Station Intertie



Inland Feeder-  
Foothill Pump  
Station Intertie  
USBR Grant and  
MND



San Bernardino Kangaroo Rat  
Image courtesy of U.S. Fish  
and Wildlife Service

## Adopt Mitigated Negative Declaration

- Two potentially significant impact categories
  - Biological resources – endangered San Bernardino kangaroo rat identified
  - Noise
- 30-day public review completed; received one comment letter supporting project
- All impacts less than significant with mitigation

Inland Feeder-  
Foothill Pump  
Station Intertie  
USBR Grant  
and MND

## WaterSMART Drought Response Program: Drought Resiliency Projects

- Federal grant application for up to \$5 M from the U.S. Bureau of Reclamation (USBR)
  - 50% cost-share: \$5 M match required
- Planned use of grant funds
  - Reimbursement of planned CIP construction contract cost
  - Contract estimate: \$24 M
- Anticipated grant award: October 2024
- Estimated funding period: October 2024 to October 2027

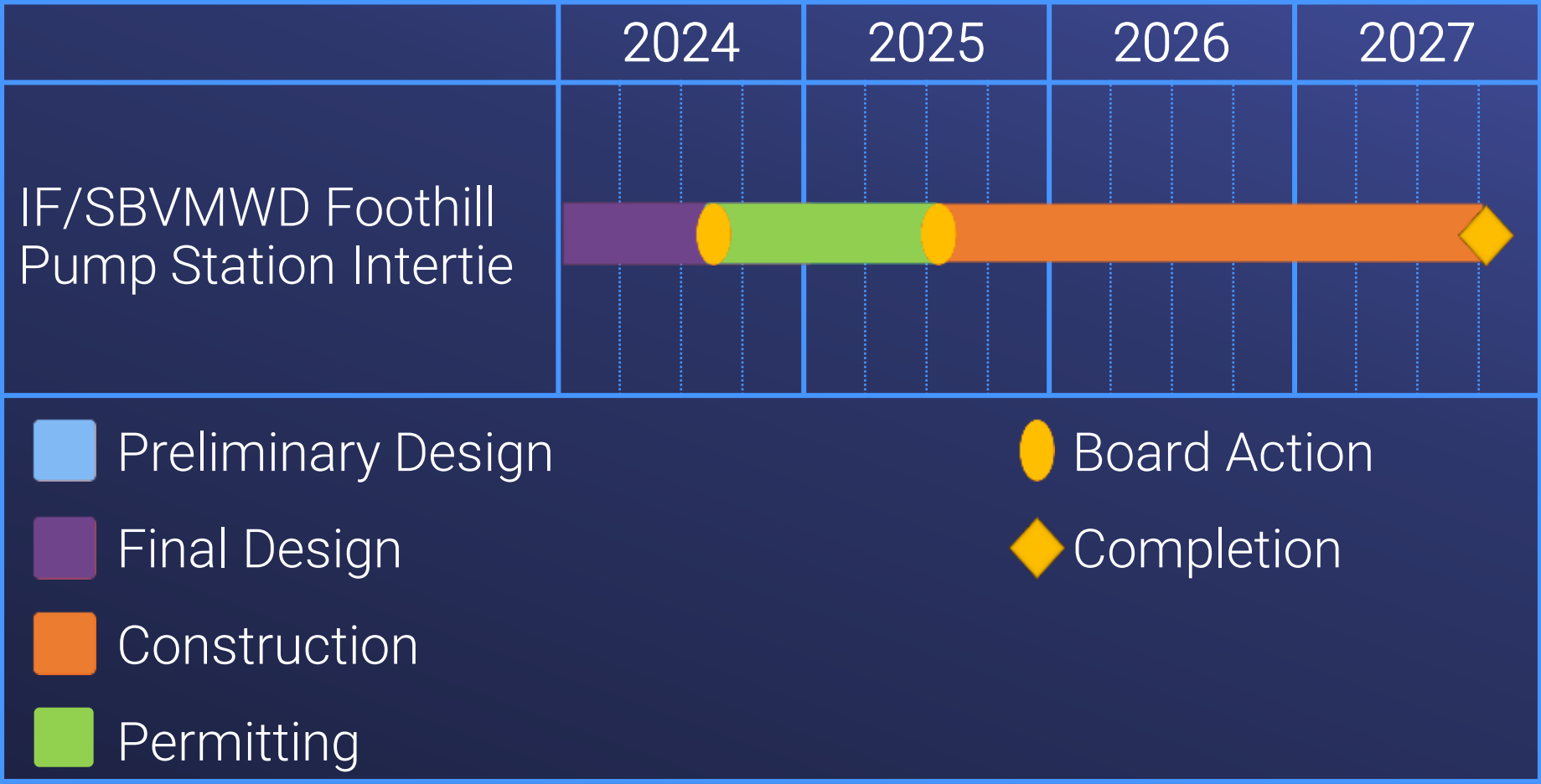
Inland Feeder-  
Foothill Pump  
Station Intertie  
USBR Grant  
and MND

## USBR Grant - Benefits

- Facilitates required environmental permit
  - USBR creates a federal nexus for Section 7 consultation with the U.S. Fish and Wildlife Service
- Receive \$5 M funding to offset project's planned construction cost



# Project Schedule



# Board Options

- Option #1
  - a. Adopt the Mitigated Negative Declaration for the Inland Feeder-Foothill Pump Station Intertie Project and take related CEQA actions.
  - b. Adopt a resolution to accept \$5 million in funding from the U.S. Bureau of Reclamation to support the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie Project.
  - c. Designate the Group Manager of Engineering Services to be the signatory to execute actions related to the funds.
  - d. Appropriate \$5 million in funding from the U.S. Bureau of Reclamation for use on the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie Project.



# Board Options

- Option #2
  - Do not proceed with adoption of the MND and the use of grant funds at this time.

# Staff Recommendation

- Option #1





- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

8/20/2024 Board Meeting

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7-5

## Subject

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Amend an existing agreement with Procure America Inc. for a new annual maximum amount of \$340,000 per year for a new not-to-exceed amount of \$1.7 million over the term of the agreement for the audit of Metropolitan's telecommunications circuits; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

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Metropolitan entered into an agreement with Procure America for \$220,000 under the general manager's authority in September 2022 to audit telecommunications invoicing, taxes, circuit technology, and circuit redundancy. The payment term for this agreement includes Procure America receiving thirty percent of all cost savings identified in the audit over a five-year period. Procure has completed its audit, and implementation of the audit findings has generated an annual cost savings to Metropolitan of \$1,128,000. Procure America's annual fee for the five-year period based on the identified savings is \$338,400. This amount exceeds the estimated fee of \$220,000 annually which was set forth in the original agreement. Hence a board action is required to increase the annual agreement amount with Procure America.

This action authorizes an annual increase in the agreement with Procure America of up to \$340,000 to match their thirty percent share of the annual identified savings to Metropolitan. Metropolitan's annual cost savings, net of the \$340,000 payment to Procure America, is \$788,000. This equates to a net savings to Metropolitan of \$3.94 million over the five-year term due to the audit findings.

## Proposed Action(s)/Recommendation(s) and Options

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### Staff Recommendation: Option #1

#### Option #1

Amend an existing agreement with Procure America Inc. for a new annual maximum amount of \$340,000 per year for a new not-to-exceed amount of \$1.7 million over the term of the agreement for the audit of Metropolitan's telecommunications circuits.

**Fiscal Impact:** Expenditures of \$340,000 in Operations and Maintenance funds from Telecom billing savings

**Business Analysis:** This audit provides accounting for accurate billing and invoicing from Metropolitan's Telecommunications providers.

#### Option #2

Do nothing at this time

**Fiscal Impact:** No Operations and Maintenance expenditures

**Business Analysis:** Metropolitan would have insufficient funds to pay the vendor, and work would stop.

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**Alternatives Considered**

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Not applicable

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**Applicable Policy**

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Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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**Related Board Action/Future Action**

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Not applicable

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**California Environmental Quality Act (CEQA)**

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**CEQA determination for Option #1:**

The proposed action is not defined as a project under CEQA because it will not result in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. (State CEQA Guidelines Section 15378(a).) In addition, the proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities; personnel-related actions; and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5)). Finally, the proposed action is not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment. (State CEQA Guidelines Section 15378(b)(4)).

**CEQA determination for Option #2:**

None required

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**Details and Background**

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**Background**

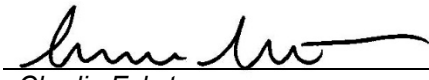
Metropolitan currently has ten telecommunications providers servicing over 2,000 billing circuits, providing voice, data, and wireless services at over fifty field sites. Metropolitan performs a full circuit inventory roughly every ten years to determine the effectiveness of our current system. This audit allows Metropolitan to maintain a streamlined telecommunications budget by reviewing voice, data and mobile communications expenses across all locations. The audit also provides assistance and guidance for upcoming Capital Investment Plans and Operations and Maintenance budgets and will be used as a trusted source of information to ensure ongoing network reliability and improvement. This auditing process typically utilizes external expertise due to time constraints, audit complexity, and limited availability of in-house staff to review the large number of circuits and sites involved.

Metropolitan entered into an agreement under the general manager's authority with Procure America on September 1, 2022, to audit telecommunications invoicing, taxes, circuit technology, and circuit redundancy. The original payment stipulation for this agreement included Procure America receiving thirty percent of all funds saved over a five-year period, paid on a monthly basis. Based on initial estimates of anticipated audit results, the original agreement was established with an annual payment cap of up to \$220,000. The audit is now complete and has generated monthly savings that are in excess of what was originally envisioned. On a monthly basis, implementation of the audit recommendations will generate approximate monthly savings of \$94,000, for a total annual savings to Metropolitan of approximately \$1,128,000. Under the terms of the agreement, Procure America is entitled to a thirty percent share of identified savings. Under this formula, Procure America's annual fee would be \$338,400, which exceeds the originally agreed-upon annual fee of \$220,000. The agreement terms also stipulate that the fee is payable for a five-year period.

This action authorizes an increase in the annual amount payable to Procure America to \$340,000 per year for the next five years, not to exceed \$1.7 million over the five-year term of the agreement.

***Project Milestone***

Invoice Payment                      Sep 2024

  
\_\_\_\_\_  
Charlie Eckstrom                      8/6/2024  
Group Manager, Information Technology                      Date

  
\_\_\_\_\_  
Deven Upadhyay                      8/6/2024  
Interim General Manager                      Date

Ref# it12697564





Engineering, Operations & Technology Committee

# Procure America Telecommunications Audit

Item 7-5

August 19, 2024

## Item 7-5

### Procure America Telecommunications Audit

#### Subject

Amend an existing agreement with Procure America Inc. for a new annual maximum amount of \$ 340,000 per year for a new not-to-exceed amount of \$ 1.7 million over the term of the agreement for the audit of Metropolitan's telecommunications circuits.

#### Purpose

This action authorizes more funds for continued services provided by the audit which is saving Metropolitan over \$1 million dollars annually.

#### Recommendation and Fiscal Impact

Staff recommends authorizing the yearly increase of \$120,000 for the continued performance of the audit.

#### Budgeted

Vendor paid 30% of total savings realized.

# Background



## Audit Details

- MWD currently has 10 Telecommunications providers
- Over 2000 billing circuits providing Voice, Data, and Wireless Service
- MWD performs a circuit inventory audit to determine the effectiveness of the current system
- Audit allows MWD to maintain a streamlined Telecommunications budget by reviewing all expenses across all locations



# MWD Locations Served

Details



# Background



## Audit Background and Scope

- MWD used a Cooperative Agreement from County of Orange
- Engaged with Procure America to conduct a Telecommunications review
- The scope of the review includes MWD's voice, data and mobile communications expenses across all locations
- Procure America was given access to MWD's wireline and wireless billing portals
- All required historical billing information was obtained by Procure America directly from the carriers

# Background



## Overview of Analysis

- Review wireline telecommunications invoices for MWD
- Perform contract compliance review
- Establish inventory of circuits
- Identify taxes or surcharges that MWD is exempt from
- Identify telecom services billing at sites that do not appear to be active MWD sites
- Identify services that may be redundant or no longer in use



# Background



## Overview of Analysis

- Review wireless telecommunications invoices for MWD
- Perform contract compliance review to ensure carriers are following the agreed upon terms and conditions and services are billing correctly
- Establish inventory of all wireless lines of service
- Analyze six months of talk, text and data usage for each line
- Inventory plans and features assigned to each line
- Identify lines showing no usage for more than six months
- Identify lines that do not have the optimum plans or features to match usage trends

## Implemented Recommendations



## Implemented Recommendations

- Disconnecting unused legacy lines from AT&T, Lumen & Frontier
- Removing phone line voice features that are not needed
- Disconnecting legacy ISDN-BRI circuits and dedicated internet Circuits at 700 Alameda
- Improved pricing on Crown Castle circuits
- Eliminating Utility Users Tax
- Reviewed adjusting plans on 278 Verizon lines
- Suspending or deactivating unused lines

# Summary

- The audit has generated a savings of \$ 1,128,000 yearly
- At a thirty percent savings share, Procure America's annual fee would be \$340,000
- This exceeds the agreed upon fee of \$220,000 annually
- This action authorizes an increase of \$120,000 annually to provide payment for on-going savings found in the audit

# Board Options

- Option #1  
Amend an existing agreement with Procure America Inc. for a new annual maximum amount of \$340,000 per year for a new not-to-exceed amount of \$1.7 million over the term of the agreement for the audit of Metropolitan's telecommunications circuits.
- Option #2  
Do nothing at this time.

# Staff Recommendation

- Option #1







- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

8/20/2024 Board Meeting

7-6

## Subject

Authorize a \$875,000 increase to an existing agreement with Computer Aid Incorporated to a new not-to-exceed amount of \$2,625,000 for staff augmentation support services for the operation and maintenance of the Metropolitan Cybersecurity Operations Center for an additional six months; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

This action authorizes an amendment to the agreement for operation and maintenance of Metropolitan's enterprise-wide Cybersecurity Operations Center (CSOC) to extend the termination date of the original agreement from September 30, 2024, to March 1, 2025, and increases the total value of the contract from \$1,750,000 to \$2,625,000. The purpose of this contract amendment is to ensure Metropolitan maintains cybersecurity threat monitoring capability while Metropolitan continues vendor selection and negotiates the award of the long-term Cybersecurity Operations Center-managed services contract from RFP-DH-1367. Metropolitan safeguards its information and operational technology infrastructure through a combination of cybersecurity services, monitoring, anti-malware technologies, next-generation firewalls, enhanced zero trust access control, and employee awareness education. The electronic security system integrates data from access control, intrusion detection, and video monitoring. The CSOC functions 24 hours per day, seven days per week, 365 days per year to detect, identify, contain, and remediate cybersecurity threats to Metropolitan's computers, data, and industrial control systems used to store, treat and deliver water.

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

Authorize a \$875,000 increase to an existing agreement with Computer Aid Incorporated to a new not-to-exceed amount of \$2,625,000 for staff augmentation support services for the operation and maintenance of the Metropolitan Cybersecurity Operations Center for an additional six months.

**Fiscal Impact:** Expenditures of \$875,000 in Operations and Maintenance funds

**Business Analysis:** This option will implement security recommendations made by internal staff and the Department of Homeland Security and address cyber threats affecting business computer systems and Supervisory Control and Data Acquisition (SCADA) systems. This all-inclusive approach comprehensively strengthen Metropolitan's cyber security resilience.

#### Option #2

Do not proceed with this project at this time

**Fiscal Impact:** No additional expenditures of Operations and Maintenance funds

**Business Analysis:** This option would allow the Computer Aid Incorporated (CAI) agreement to expire and place the Cybersecurity Operations Center into a state where it could not be operationally maintained until a consultant is awarded a contract from RFP-DH-1367.

---

## Alternatives Considered

Not applicable

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## Applicable Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

---

## Related Board Action(s)/Future Action(s)

By Minute Item 53354, dated August 15, 2023, the Board authorized the agreement with Computer Aid Incorporated in an amount not to exceed \$1,750,000.

---

## California Environmental Quality Act (CEQA)

### CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it will not result in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. (State CEQA Guidelines Section 15378(a)). In addition, the proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities; personnel-related actions; and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5)).

### CEQA determination for Option #2:

None required

---

## Details and Background

### Background

In August 2023, the Board authorized an agreement with CAI. This action will allow CAI to continue to centrally monitor, detect, analyze, mitigate, and respond to cyber threats on the Metropolitan Enterprise Information Technology and SCADA systems until a new contract is awarded. Metropolitan released a request for proposals (RFP) in October of 2022 for CSOC Co-Managed Services. The main purpose of the CSOC-co-managed support services is to improve real-time situational awareness resulting in Metropolitan's improved capabilities to detect, identify and respond to cyber threats. A secondary function of the CSOC is to provide critical intelligence information to Metropolitan's member agencies to enhance the overall cybersecurity posture for Metropolitan's service area.

After going through the selection process, no contract was awarded. One vendor was selected, but the final scope of work deviated too far from the original scope of work that was detailed in the RFP resulting in a cancellation of the RFP with a re-release of the RFP planned pending a more stringent re-write of the scope requirements. The result of this action is to maintain the current contract for staff augmentation support to provide Metropolitan with the minimum ability to continuously monitor for cyber threats while the RFP process is conducted.

The CSOC project was executed under the Capital Investment Plan (CIP). The CIP covered the procurement and implementation of the required technologies and the actual construction of the CSOC facility. CIP funding is not available for the co-managed services agreement. Funds for this action are available within Metropolitan's IT Group, Operations and Maintenance budget.

**Objective**

CAI would be required to continue to provide staff support for around-the-clock monitoring of CSOC systems to afford Metropolitan employees assigned to the CSOC to be free to conduct the CSOC defensive posture support such as approving cybersecurity exception requests, conduct information systems and operational technology design and upgrade support, and to conduct vulnerability scanning management activities. CAI will assist with CSOC core functions. These core functions include network monitoring and security event analysis, email security monitoring and analysis, cyber incident response and management, vulnerability assessment, security engineering, cyber intelligence support, and intrusion analysis.

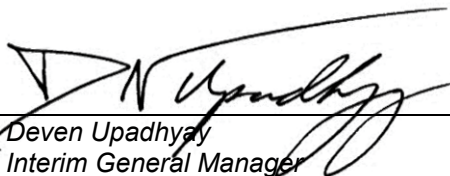
The CSOC provides Information Technology and Operational Technology defensive posture support and is responsible for the overall security of the Metropolitan Enterprise-wide information systems and networks. The CSOC is established in accordance with the guiding principles of security established by the National Institute of Standards and Technology, the Metropolitan Cyber Security Program Framework, and the Metropolitan Cyber Security Policy. The CSOC is chartered to prevent, detect, contain, and eradicate cyber threats through monitoring, intrusion detection, and protective security services to Metropolitan information systems, including the Metropolitan wide area networks, local area networks, security devices, servers, and workstations. The Metropolitan CSOC also conducts vulnerability assessments, analyzes cyber threats, monitors the Metropolitan email gateway, and collects information on, investigates, and reports on all confirmed or suspected cybersecurity incidents.

***Project Milestones***

Onboard of Co-Managed Service Vendor	September 2024
Transition from Staff Augmentation Services to Co-Managed Services	October 2024
Co-Managed services vendor fully integrated with Metropolitan CSOC and conducting cybersecurity operational support services	January 2025

  
\_\_\_\_\_  
Charles Eckstrom  
Group Manager, Information Technology

7/30/2024  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Deven Upadhyay  
Interim General Manager

7/31/2024  
\_\_\_\_\_  
Date



Engineering, Operations, & Technology Committee

# Amendment to Agreement with Computer Aid Incorporated for CSOC Staff Augmentation Services

Item 7-6

August 19, 2024

## Item 7-6

### Amendment to Agreement with Computer Aid Incorporated

## Subject

Amendment to Staff Augmentation Agreement with CAI.

## Purpose

Provides information relevant to the Board for approval of an extension of the current agreement with CAI for CSOC Staff Augmentation.

## Next Steps

Extension to CAI contract to ensure CSOC remains operational while a vendor is selected from the RFP process.

## Current Action

Authorize a \$875,000 increase to an existing agreement with Computer Aid Incorporated to a new not to exceed amount of \$2,625,000 for staff augmentation support services for the operation and maintenance of the Metropolitan Cybersecurity Operations Center (CSOC) for an additional six months; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.



## Background

- In August 2023, the Board authorized an agreement with Computer Aid Incorporated (CAI) to provide temporary staff support services for the Cybersecurity Operations Center.
- In December 2023, RFP-DH-1367 for CSOC Co-Managed Services was released.

## Reasons for this action

- Metropolitan is continuing to evaluate proposals with oral presentations being conducted starting August 20, 2024.
- This action will allow CAI to continue to provide minimal CSOC staffing support services while Metropolitan completes consultant selection and conducts contract negotiations.

# Agreement Scope

***Remains Unchanged***

- CAI will provide six (6) dedicated on-site analyst resources to directly support the Metropolitan CSOC Team and CSOC Team efforts, including monitoring for cyber threats, conducting cyber-threat hunting, and support cyber incident response activities.
- On-site analysts may be assigned to the cyber incident response team as the situation may dictate.
- Provided analyst shall staff the CSOC 24 hours per day during Metropolitan's regular operating hours and for a period after regular hours where there will be limited availability of Metropolitan counterparts. These hours are as follows:

# Project Cost

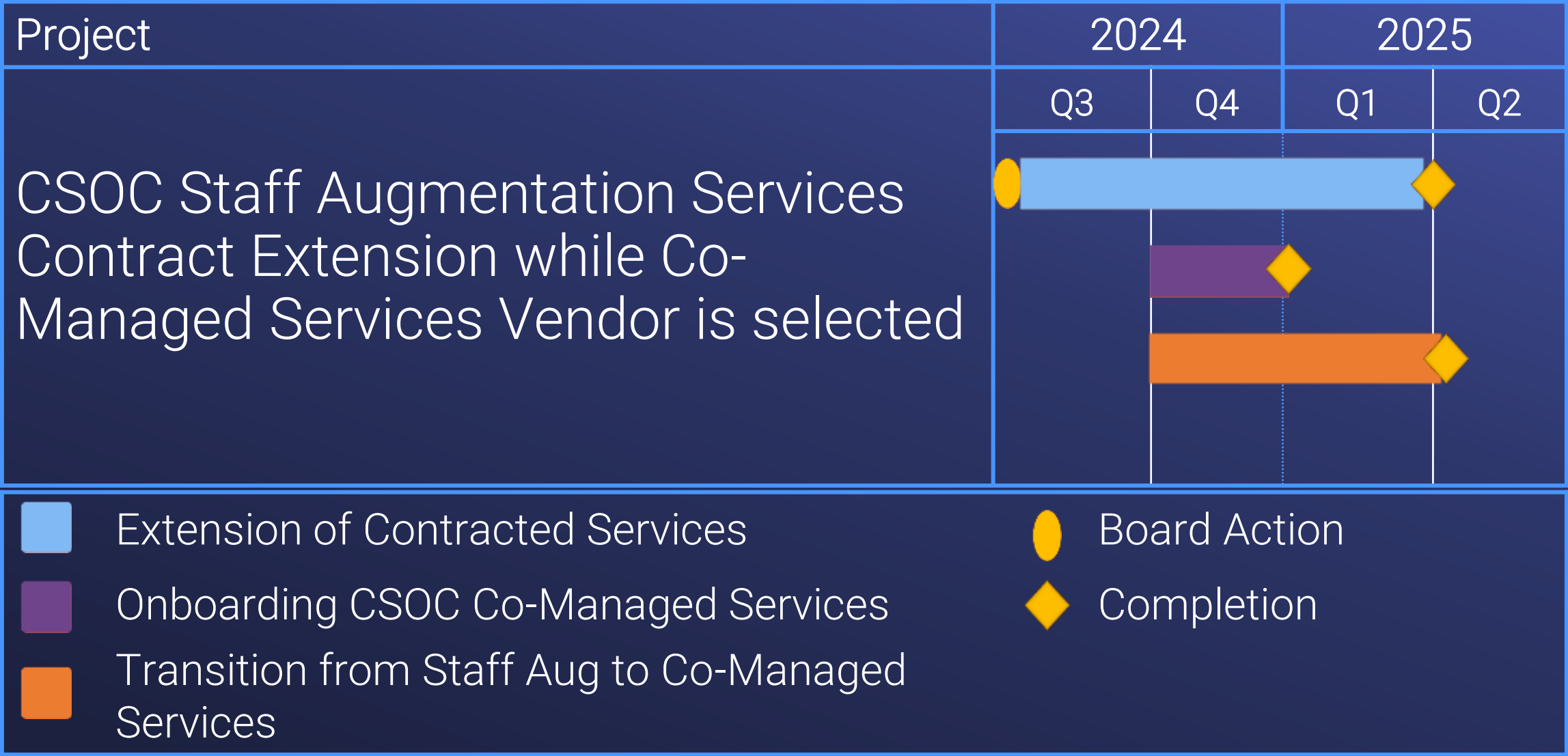
## -Current Costs-

Nine Months of Staff Augmentation Services	\$1,312,500
Month-to-Month Rate (Months 10, 11, and 12)	\$145,833
Contract Not to Exceed Total	\$1,750,000

# Proposed Additional Project Cost

Six Months Additional Services	\$875,000
Month-to-Month Rate	\$145,833
New Not to Exceed Total	\$2,625,000

# Project Schedule





# Board Options

- Option # 1  
Authorize a \$875,000 increase to an existing agreement with Computer Aid Incorporated to a new not-to-exceed amount of \$2,625,000 for staff augmentation support services for the operation and maintenance of the Metropolitan Cybersecurity Operations Center for an additional six months.
- Option # 2  
Do not proceed with this project at this time.

# Staff Recommendation

- Option # 1





- **Board of Directors**  
***Finance and Asset Management Committee***

8/20/2024 Board Meeting

7-7

## Subject

Approve and authorize the distribution of Appendix A for use in the issuance and remarketing of Metropolitan's Bonds; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

This board letter requests authorization to finalize and include Appendix A in Metropolitan's bond offering statements for use with future financings. With board approval, staff will finalize Appendix A for distribution to potential investors as part of an offering statement. Metropolitan expects to issue one or more series of bonds on or about September 11, 2024. The bonds are expected to price on or about September 5, 2024; however, distribution of the preliminary offering statement to investors is expected to occur on August 28, 2024. This window of time, between the distribution of the preliminary offering statement and the pricing date, enables Metropolitan and its underwriting team to market the bonds for broad investor participation to achieve the best pricing execution that produces the lowest debt service costs.

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

- Approve the draft of Appendix A (**Attachment 1**) attached to this board letter.
- Authorize the General Manager or other designee of the Ad Hoc Committee to finalize, with changes approved by the General Manager and General Counsel, Appendix A.
- Authorize distribution of Appendix A, finalized by the General Manager or other designee of the Ad Hoc Committee, in connection with the sale and/or remarketing of bonds.

**Fiscal Impact:** Approval will enable Metropolitan to undertake bond issuances and remarketings to meet the District's commitments for existing debt obligations, including mandatory tenders, in the most cost-effective manner in the current market.

**Business Analysis:** It is Metropolitan's practice to actively manage its debt portfolio in an efficient and cost-effective manner. This approval will enable staff to accomplish this objective and to transition certain short-term obligations to long-term bonds, thereby relieving cashflow pressures.

#### Option #2

Do not approve Option #1

**Fiscal Impact:** Metropolitan would not have a current disclosure in order to participate in bond financings and, therefore, would not be able to meet the District's commitments for existing debt obligations in the most cost-effective manner in the current market. Instead, Metropolitan would be required to use reserves on hand to meet its existing debt obligations, lowering reserve balances below the required minimums.

**Business Analysis:** Metropolitan would forgo the opportunity to take advantage of favorable market conditions to actively manage its debt portfolio in an efficient and cost-effective manner.

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**Alternatives Considered**

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Not applicable

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**Applicable Policy**

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Metropolitan Water District Disclosure Procedures

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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**Related Board Action(s)/Future Action(s)**

---

Not applicable

---

**Summary of Outreach Completed**

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Not applicable

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**California Environmental Quality Act (CEQA)**

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**CEQA determination(s) for Option #1:**

The proposed action is not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment. (State CEQA Guidelines Section 15378(b)(4).))

**CEQA determination(s) for Option #2:**

None required

---

**Details and Background**

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**Background**

Metropolitan's bond disclosures provide information to investors about Metropolitan's water supply, conservation and water shortage measures, regional water resources, water delivery system, capital investment plan, governance and management, revenues and expenses (including historical and projected), and power sources and costs in an appendix to its offering statements titled Appendix A, which is included as **Attachment 1**. Federal securities regulations require that bond disclosures not misstate facts that would be material to a reasonable investor in Metropolitan's bonds or omit material facts that, if undisclosed, would mislead investors.

Metropolitan's procedures to ensure compliance with federal securities regulations include, among others, board review and approval of Appendix A. Metropolitan's procedures provide for the Board's biannual approval of Appendix A, unless there are no financial transactions requiring an update. The Board's approval of the disclosures in Appendix A will support offering statements for financings through the next biannual update. Appendix A may be updated to describe events that occur after the distribution of this letter. However, material updates to Appendix A for financings made before the Board's next biannual update will be provided to the Board for review and comment in advance of its use.

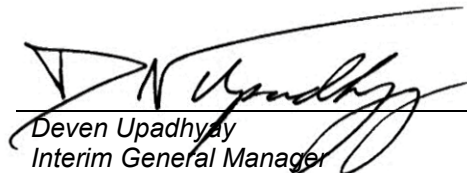
**Attachment 2** reflects changes to Appendix A that have been made to the disclosure since the Board's prior approval of Appendix A on April 9, 2024. With respect to updated financial information since April 2024, the proposed Appendix A reflects preliminary results for fiscal year ended June 30, 2024. The final version of Appendix A, distributed in connection with the sale of and/or remarketing of bonds, will be updated to reflect any changes to the budget ultimately adopted by the Board.

After Appendix A is approved, staff will work with a finance team, including disclosure counsel, bond counsel, underwriters, a municipal advisor, counsel for underwriters, and remarketing agents, where applicable, to finalize bond offering statements that include or incorporate Appendix A. Once completed, the General Manager or other designee of the Ad Hoc Committee authorized in Metropolitan's bond resolutions

will authorize distribution of the bond offering statements. The Ad Hoc Committee is comprised of the Chair of the Board, the Chair of the Finance and Asset Management Committee, and the General Manager.

The bond offering statements will then be electronically distributed to potential investors to provide material information concerning the issuance of bonds and the financial and operating condition of Metropolitan to assist with investment decisions concerning the bonds. As part of Metropolitan's most recent offering statements, Appendix A will be posted on the Budget & Finance page of Metropolitan's website ([MWD | Financial Reports & Documents \(mwdh2o.com\)](http://MWD.FinancialReports&Documents.mwdh2o.com)), on our investor relations portal ([Bonds, Documents, Resources | Metropolitan | BondLink \(buymetwaterbonds.com\)](http://Bonds,Documents,Resources|Metropolitan|BondLink.buymetwaterbonds.com)) and on the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System ([Municipal Securities Rulemaking Board:EMMA \(msrb.org\)](http://MunicipalSecuritiesRulemakingBoard:EMMA.msrb.org)).

  
\_\_\_\_\_  
Katano Kasaine  
Assistant General Manager/  
Chief Financial Officer  
8/13/2024  
Date

  
\_\_\_\_\_  
Deven Upadhyay  
Interim General Manager  
8/13/2024  
Date

**Attachment 1 – Appendix A [REVISED ATTACHMENT]**

**Attachment 2 – Appendix A (redline marked against prior approved Appendix A of April 9, 2024).  
[REVISED ATTACHMENT]**

Ref# cfo12701034



*Board Distribution Draft, 08/09/24*

## **APPENDIX A**

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### **The Metropolitan Water District of Southern California**

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## INTRODUCTION

*This Appendix A provides general information regarding The Metropolitan Water District of Southern California (“Metropolitan”), including information regarding Metropolitan’s operations and finances. Certain statements included or incorporated by reference in this Appendix A constitute “forward-looking statements.” Such statements are generally identifiable by the terminology used such as “plan,” “project,” “expect,” “estimate,” “budget” or other similar words. Such statements are based on facts and assumptions set forth in Metropolitan’s current planning documents including, without limitation, its most recent biennial budget. The achievement of results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results may differ from Metropolitan’s forecasts. Metropolitan is not obligated to issue any updates or revisions to the forward-looking statements in any event.*

*Metropolitan maintains a website that may include information on programs or projects described in this Appendix A; however, none of the information on Metropolitan’s website is incorporated by reference herein or is intended to assist investors in making an investment decision or to provide any additional information with respect to the information included in this Appendix A. The information presented on Metropolitan’s website is not part of the Official Statement and should not be relied upon in making investment decisions.*

### Formation and Purpose

Metropolitan is a metropolitan water district created in 1928 under the authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (the “Act”). The Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; impose charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan’s Board of Directors (the “Board”) is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan’s service area.

Metropolitan’s primary purpose is to provide a supplemental supply of water for domestic and municipal uses at wholesale rates to its member agencies. If additional water is available, such water may be sold for other beneficial uses. As a water wholesaler, Metropolitan has no retail customers.

The mission of Metropolitan, as promulgated by the Board, is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan’s rates and charges for water transactions and availability are set by its Board and are not subject to regulation or approval by the California Public Utilities Commission or any other state or federal agency. Metropolitan imports water from two principal sources: northern California via the Edmund G. Brown California Aqueduct (the “California Aqueduct”) of the State Water Project owned by the State of California (the “State” or “California”) and the Colorado River via the Colorado River Aqueduct (“CRA”) owned by Metropolitan. See “METROPOLITAN’S WATER SUPPLY” in this Appendix A.

### Member Agencies

Metropolitan is comprised of 26 member agencies, all of which are public entities, including 14 cities, 11 municipal water districts, and one county water authority, which collectively serve the residents

and businesses of more than 300 cities and unincorporated communities. Member agencies request water from Metropolitan at various delivery points within Metropolitan's system and pay for such water at uniform rates established by the Board for each class of water service. Metropolitan's water is a supplemental supply for its member agencies, most of whom have local supplies and other sources of water. See "METROPOLITAN REVENUES–Principal Customers" in this Appendix A for a listing of the ten member agencies representing the highest level of water transactions and revenues of Metropolitan during the fiscal year ended June 30, 2024. No member is required to purchase water from Metropolitan, but all member agencies are required to pay readiness-to-serve charges whether or not they purchase water from Metropolitan. See "METROPOLITAN REVENUES–Rate Structure," "–Member Agency Purchase Orders" and "–Other Charges" in this Appendix A. Local supplies include water produced by local agencies from various sources including but not limited to groundwater, surface water, locally-owned imported supplies, recycled water, and seawater desalination (see "REGIONAL WATER RESOURCES" in this Appendix A). Metropolitan's member agencies may develop additional sources of water and Metropolitan provides support for several programs to develop these local resources. See also "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

The following table lists the 26 member agencies of Metropolitan.

Municipal Water Districts		Cities		County Water Authority
Calleguas	Las Virgenes	Anaheim	Los Angeles	San Diego <sup>(1)</sup>
Central Basin	Orange County	Beverly Hills	Pasadena	
Eastern	Three Valleys	Burbank	San Fernando	
Foothill	West Basin	Compton	San Marino	
Inland Empire Utilities Agency		Fullerton	Santa Ana	
Upper San Gabriel Valley		Glendale	Santa Monica	
Western of Riverside County		Long Beach	Torrance	

<sup>(1)</sup> The San Diego County Water Authority, Metropolitan's largest customer based on water transactions for fiscal year 2023-24, is a plaintiff in litigation challenging certain rates adopted by the Board and asserting other claims against Metropolitan. See "METROPOLITAN REVENUES–Litigation Challenging Rate Structure" in this Appendix A.

## Service Area

Metropolitan's service area comprises approximately 5,200 square miles and includes all or portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,575 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies.

Metropolitan estimates that approximately 18.6 million people lived in Metropolitan's service area (as of July 2023), based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments ("SCAG") and the San Diego Association of Governments ("SANDAG"). The economy of Metropolitan's service area is exceptionally diverse. In 2023, the economy of the six counties which contain Metropolitan's service area had a gross domestic product larger than all but eleven nations of the world. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area. For additional economic and demographic information concerning the six county area containing Metropolitan's service area, see Appendix E–"SELECTED DEMOGRAPHIC AND ECONOMIC INFORMATION FOR METROPOLITAN'S SERVICE AREA."



The climate in Metropolitan's service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Since 2000, annual rainfall has ranged from approximately 4 to 23 inches along the coastal area, 6 to 42 inches in foothill areas, and 5 to 22 inches in inland areas. See also "METROPOLITAN'S WATER SUPPLY-General Overview," "Water Conditions in Recent Years," "Current Water Conditions, and "Climate Action Planning and Other Environmental, Social and Governance Initiatives," and "CONSERVATION AND WATER SHORTAGE MEASURES-Drought Response Actions."

## **GOVERNANCE AND MANAGEMENT**

### **Board of Directors**

Metropolitan is governed by a 38-member Board of Directors, made up of representatives from all of Metropolitan's 26 member agencies. Each member agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member agency. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019." Accordingly, the Board may, from time to time, have more than 38 directors.

The Board includes business, professional, and civic leaders. Directors are appointed by member agencies in accordance with those agencies' processes and the Act. They serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the "Administrative Code"), which was adopted by the Board in 1977. The Administrative Code is periodically amended to reflect new policies or changes to existing policies that occur from time to time.

### **Management**

Metropolitan's day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan's General Counsel, General Auditor, and Ethics Officer. Following are biographical summaries of Metropolitan's principal executive officers.

*Adel Hagekhalil, General Manager* – Mr. Hagekhalil was appointed as General Manager in June 2021. Before joining Metropolitan, Mr. Hagekhalil was appointed in 2018 by Los Angeles Mayor Eric Garcetti to serve as the executive director and general manager of the City of Los Angeles' Bureau of Street Services. His responsibilities included oversight of the management, maintenance and improvement of the city's network of streets, sidewalks, trees and bikeways. Mr. Hagekhalil also focused on climate change adaptation and multi-benefit integrated active transportation corridors. Previously, he served nearly 10 years as assistant general manager of the Los Angeles' Bureau of Sanitation, overseeing the city's wastewater collection system, stormwater and watershed protection program, water quality compliance, advance planning and facilities. He also helped develop the city's 2040 One Water LA Plan, a regional watershed approach to integrate water supply, reuse, conservation, stormwater management and wastewater facilities planning. Mr. Hagekhalil is a member of the American Public Works Association as well as the Water Environment Federation ("WEF"), which recognized him in 2019 as a WEF Fellow for his contribution to enhancing and forwarding the water industry. He also served for more than a decade as a board member of the National Association of Clean Water Agencies, including a term as president. Mr. Hagekhalil is a

registered civil engineer and national board-certified environmental engineer. He earned his bachelor's and master's degrees in civil engineering from the University of Houston, Texas.

On June 13, 2024, at a special meeting of the Board, the Board placed Mr. Hagekhalil on administrative leave from the position of General Manager, for up to 90 days, to investigate various allegations. Mr. Deven Upadhyay, Metropolitan's Executive Officer and Assistant General Manager of Water Resources and Engineering, was appointed by the Board to serve as Interim General Manager while such investigation is being undertaken.

*Deven Upadhyay, Interim General Manager/Executive Officer and Assistant General Manager, Water Resources and Engineering* – Mr. Upadhyay was appointed as Interim General Manager on June 13, 2024. Prior to such appointment, Mr. Upadhyay was serving as Metropolitan's Executive Officer and Assistant General Manager of Water Resources and Engineering. In such role, he focused primarily on key Metropolitan strategies and innovative planning efforts for the Colorado River and the State Water Project. He was responsible for managing the engineering services and water resources management groups, and the Colorado River and Bay Delta programs. Prior to that position, Mr. Upadhyay was formerly Metropolitan's Chief Operating Officer from November 2017. He has over 25 years of experience in the water industry. He joined Metropolitan in 1995, beginning as a Resource Specialist and then left Metropolitan in 2005 to work at the Municipal Water District of Orange County. In 2008, he returned to Metropolitan as a Budget and Financial Planning Section Manager and became a Water Resource Management Group Manager in 2010. Mr. Upadhyay has a Bachelor of Arts degree in economics from the California State University, Fullerton and a master's degree in public administration from the University of La Verne.

*Marcia Scully, General Counsel* – Ms. Scully was appointed as Metropolitan's General Counsel in March 2012. She previously served as Metropolitan's Interim General Counsel from March 2011 to March 2012. Ms. Scully joined Metropolitan in 1995, after a decade of private law practice, providing legal representation to Metropolitan on construction, employment, Colorado River and significant litigation matters. From 1981 to 1985 she was assistant city attorney for the City of Inglewood. Ms. Scully served as president of the University of Michigan's Alumnae Club of Los Angeles and is a recipient of the 1996 State Bar of California, District 7 President's Pro Bono Service Award and the Southern California Association of Non-Profit Housing Advocate of the Year Award. She is also a member of the League of Women Voters for Whittier and was appointed for two terms on the City of Whittier's Planning Commission, three years of which were served as chair. Ms. Scully earned a bachelor's degree in liberal arts from the University of Michigan, a master's degree in urban planning from Wayne State University and her law degree from Loyola Law School.

*Scott Suzuki, General Auditor* – Mr. Suzuki assumed the position of General Auditor in February 2023. As general auditor, Mr. Suzuki will independently review internal controls, financial records and reports, develop a flexible annual audit plan, ensure that assets and resources are properly accounted for and safeguarded against waste, loss or misuse, and administer Metropolitan's contract for audit services with an independent public accounting firm. Prior to joining Metropolitan, Mr. Suzuki served the County of Orange for almost 21 years in various auditing and accounting roles, concluding as assistant director of internal audit. He also held auditor positions at Home-Base, Deloitte, and the California State University system. Mr. Suzuki holds a Bachelor of Arts degree in business economics from the University of California, Los Angeles. He holds a certified public accountant (CPA) license and certified internal auditor (CIA), certified information systems auditor (CISA), and certified fraud examiner (CFE) designations.

*Abel Salinas, Ethics Officer* – Mr. Salinas was appointed as Metropolitan's Ethics Officer in July 2019. He is responsible for leading an independent oversight department, which includes ethics-related policymaking, education, advice, compliance and investigations. Prior to joining Metropolitan, Mr. Salinas

worked as a Special Agent in Charge at the U.S. Department of Labor-Office of Inspector General. Mr. Salinas holds a bachelor's degree in criminal justice from Pan American University and a master's degree in policy management from Georgetown University.

*Katano Kasaine, Assistant General Manager/Chief Financial Officer* – Ms. Kasaine is responsible for directing Metropolitan's financial activities, including accounting and financial reporting, debt issuance and management, financial planning and strategy, managing Metropolitan's investment portfolio, budget administration, financial analysis, financial systems management, and developing rates and charges. In addition, she is responsible for human resources, the diversity, equity and inclusion office, administrative services, risk management, and business continuity activities. Before joining Metropolitan in August 2019, Ms. Kasaine worked at the City of Oakland for 25 years, holding various leadership positions, notably as the city's Finance Director/Treasurer. She holds a bachelor's degree in business administration from Dominican University in San Rafael, California and a master's degree in public health from Loma Linda University.

*John Bednarski, Interim Assistant General Manager of Water Resources and Technical Services* – On June 25, 2024, Mr. Upadhyay named Mr. Bednarski to serve as the Interim Assistant General Manager of Water Resources and Technical Services during Mr. Upadhyay's tenure as Interim General Manager. In this role, Mr. Bednarski oversees the activities of the engineering services group, the water resources management group, the Bay-Delta initiatives group, and the office of safety, security, and protection. Mr. Bednarski joined Metropolitan in 1991 after a decade at the City of Los Angeles Department of Water and Power. A majority of Mr. Bednarski's career at Metropolitan has been in the area of managing the design and construction of large infrastructure projects and programs, including the Inland Feeder Program and the Pure Water Southern California Program. Prior to his current interim assignment, Mr. Bednarski was the Chief Engineer at Metropolitan for five and a half years. In this role, he was responsible for overseeing the planning, design and construction of Metropolitan's capital infrastructure, as well as the dam safety initiatives program. Mr. Bednarski has a bachelor's degree in chemistry from Claremont McKenna College and masters' degrees in environmental engineering and public administration from the University of Southern California. Mr. Bednarski is a licensed professional civil engineer in the State of California.

*Shane Chapman, Assistant General Manager, Operations* – Mr. Chapman is responsible for the strategic direction and management of Metropolitan's operations. His primary responsibilities include managing water system operations, information technology and cybersecurity. Prior to his current position, Mr. Chapman previously was Metropolitan's Chief Administrative Officer from January 2018 until September 2022. He joined Metropolitan as a Resource Specialist in 1991, progressing to the level of Program Manager in 2001. He became the Revenue, Rates and Budget Manager in 2003 and Assistant Group Manager in Water System Operations in 2006. Mr. Chapman previously served as General Manager of the Upper San Gabriel Valley Municipal Water District for seven years. Mr. Chapman has a Bachelor of Arts degree in economics from Claremont McKenna College and a master's degree in public administration from the University of Southern California.

*Dee Zinke, Assistant General Manager, External Affairs* – Ms. Zinke has been responsible for Metropolitan's communications, public outreach, education, member services, and legislative matters since January 2016. She joined Metropolitan in 2009 as Manager of the Legislative Services Section. Before coming to Metropolitan, Ms. Zinke was the Manager of Governmental and Legislative Affairs at the Calleguas Municipal Water District. Prior to her public service, she worked in the private sector as the Executive Officer and Senior Legislative Advocate for the Building Industry Association of Greater Los Angeles and Ventura Counties and as Director of Communications for E-Systems, a defense contractor specializing in communication, surveillance and navigation systems, based in Washington, D.C. Ms. Zinke holds a Bachelor of Arts degree in communication and psychology from Virginia Polytechnic Institute and State University.

## **Employee Relations**

The total number of regular full-time Metropolitan employees included in the fiscal year 2024-25 budget is 1,965. As of July 1, 2024, 1,819 positions were filled. Of the filled positions, 1,236 were represented by AFSCME Local 1902, 93 by the Supervisors Association, 317 by the Management and Professional Employees Association and 132 by the Association of Confidential Employees. The remaining 41 employees are unrepresented. The four bargaining units represent 98 percent of Metropolitan's current employees. The Memorandum of Understanding ("MOU") with each of AFSCME Local 1902, the Management and Professional Employees Association, the Association of Confidential Employees, and the Supervisors Association extends through December 31, 2026.

## **Risk Management**

Metropolitan is exposed to various risks of loss related to, among other things, the design and construction of facilities, and the treatment and delivery of water. With the assistance of third-party claims administrators, Metropolitan is self-insured for property losses, liability, and workers' compensation. Metropolitan self-insures the first \$25 million per liability occurrence, with commercial general liability coverage of \$75 million in excess of the self-insured retention. The \$25 million self-insured retention is maintained as a separate restricted reserve. Metropolitan is also self-insured for loss or damage to its property, with the \$25 million self-insured retention also being accessible for emergency repairs and Metropolitan property losses. In addition, Metropolitan obtains other excess and specialty insurance coverages such as directors' and officers' liability, fiduciary liability, cyber, and aircraft hull and liability coverage.

Metropolitan self-insures the first \$5 million for workers' compensation with statutory excess coverage. The self-insurance retentions and reserve levels currently maintained by Metropolitan may be modified by the Board at its sole discretion.

## **Cybersecurity**

Metropolitan has adopted and maintains an active Cybersecurity Program ("CSP") that includes policies reviewed by Metropolitan's Office of Enterprise Cybersecurity, Audit department and independent third-party auditors and consultants. Metropolitan has appointed an Information Security Officer who is responsible for overseeing the annual review of the CSP and its alignment with Metropolitan's Strategic Plan. Metropolitan's policies and procedures on information governance, risk management, and compliance are consistent with best practices outlined by the Cybersecurity and Infrastructure Security Agency (CISA) Shields Up initiative and are consistent with the requirements prescribed by the America's Water Infrastructure Act (AWIA) for risk assessment and emergency response. Metropolitan's Cybersecurity Team is responsible for identifying cybersecurity risks to Metropolitan, preventing, investigating, and responding to any cybersecurity incidents, and providing guidance and education on the implementation of new technologies at Metropolitan. All persons or entities authorized to use Metropolitan's computer resources are required to participate in Metropolitan's Cybersecurity Awareness Training, which is conducted annually. See also "RISK FACTORS – Cybersecurity; Other Safety and Security Risks" in the front part of this Official Statement.

## **Business Continuity**

Metropolitan maintains a Business Continuity Program that aligns with industry best practices to ensure that plans are in place across the District to mitigate, respond to and recover from disruptive events that may impact normal operations. In accordance with its Operating Policy A-06, Emergency Management and Business Continuity, Metropolitan's plans ensure that resiliency strategies are in place to continue critical operations in the event of impacts to information technology systems, facilities and infrastructure,

staffing levels, key vendors and resources. Using a continuous improvement model, Business Continuity Plans are reviewed, updated and exercised on a regular basis.

## **METROPOLITAN'S WATER SUPPLY**

### **General Overview**

Metropolitan's principal sources of water supplies are the State Water Project and the Colorado River. See "–State Water Project" and "–Colorado River Aqueduct." Metropolitan receives water delivered from the State Water Project under provisions of a State water supply contract, including contracted supplies, use of carryover storage in the San Luis Reservoir, and surplus supplies. Metropolitan holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount depending on the availability of surplus supplies. Water management programs supplement these Colorado River supplies. To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer and storage arrangements within and outside its service area. Metropolitan's principal water supply sources, and other supply arrangements and water management programs are more fully described in this Appendix A.

Metropolitan's water supply contract with the State (as amended, the "State Water Contract") provides for up to 1,911,500 acre-feet contracted amount of State Water Project supplies annually as set forth in "Table A" of Metropolitan's State Water Contract ("Table A State Water Project water" as further described under "–State Water Project – State Water Contract"). The amount of State Water Project water available for allocation under the State Water Contract each year is determined by the California Department of Water Resources ("DWR") based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Over the ten-year period 2014 through 2023, Metropolitan's State Water Project allocation ranged from five percent to 100 percent of contracted amounts, averaging approximately 41 percent, which is equal to roughly 784,000 acre-feet annually. (An acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 325,851 gallons, which represents the needs of three average families in and around the home for one year within Metropolitan's service area.)

From calendar year 2014 through 2023, the amount of water delivered to Metropolitan's service area via the State Water Project infrastructure, including water from allocated supplies, human health and safety supplies, carryover, flexible storage from Castaic Lake and Lake Perris, water transfer, groundwater banking and exchange programs delivered through the California Aqueduct varied from a low of 457,000 acre-feet in calendar year 2022 to a high of 1,374,000 acre-feet in 2017. See also "–Water Conditions in Recent Years" and "–Current Water Conditions."

Metropolitan's rights to Colorado River water include a fourth priority right to 550,000 acre-feet of Colorado River water annually (its basic apportionment) and a fifth priority right to an additional 662,000 acre-feet annually (when surplus is available, which availability has been limited since 2003). Metropolitan has additional available Colorado River supplies, totaling up to 526,000 acre-feet per year, under water supply programs, transfer, exchanges, and certain conservation and storage agreements. Over the ten-year period 2014 through 2023, Metropolitan's net diversions of Colorado River water have averaged approximately 917,020 acre-feet annually, with annual volumes dependent primarily on programs to augment supplies, including transfers of conserved water from agriculture.

Stored water is a critical component of Metropolitan's annual water supply and year-to-year operations. Metropolitan's storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan's service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre feet. Storage capacity provides the water system with year-to-year water supply carry-over capability and a mechanism

to assist Metropolitan in providing consistent water supply reliability notwithstanding fluctuations in available supply. Metropolitan's storage as of January 1, 2024 was estimated to be 4.18 million acre-feet. See "–Storage Capacity and Water in Storage."

The water supply for Metropolitan's service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to Metropolitan's member agencies. The demand for supplemental water supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. From calendar years 2014 through 2023, Metropolitan's water transactions (including water sales, exchanges and wheeling) with member agencies have averaged approximately 1.56 million acre-feet annually.

Metropolitan faces a variety of long-term challenges in providing adequate, reliable and high-quality supplemental water supplies for Southern California. These challenges include, among others: (1) population changes within the service area; (2) increased competition for low-cost water supplies; (3) variable weather conditions, including extended drought periods; (4) increased environmental regulations; and (5) climate change. Metropolitan's resources and strategies for meeting these long-term challenges are set forth in its Integrated Water Resources Plan, as updated from time to time. See "–Integrated Water Resources Plan and Climate Adaptation Master Plan for Water." In addition, Metropolitan manages water supplies in response to the prevailing hydrologic conditions by implementing its Water Surplus and Drought Management ("WSDM") Plan, and in times of prolonged or severe shortages, the Water Supply Allocation Plan (the "Water Supply Allocation Plan"). See "CONSERVATION AND WATER SHORTAGE MEASURES–Water Surplus and Drought Management Plan" and "–Water Supply Allocation Plan" in this Appendix A. The Water Supply Allocation Plan provides for the equitable distribution of available limited water supplies region-wide in case of extreme water shortages within Metropolitan's service area. Implementation of the Water Supply Allocation Plan for fiscal year 2024-25 is not expected. See also "–Current Water Conditions."

Hydrologic conditions can have a significant impact on Metropolitan's imported water supply sources. California's climate is such that most of the annual precipitation occurs during late fall and winter. For Metropolitan's State Water Project supplies, precipitation in the form of rain in the Feather River watershed helps replenish storage levels in Lake Oroville, a key State Water Project facility, during fall and winter. Precipitation in the form of snow in California's Northern Sierra provides the additional storage for the subsequent runoff from the spring snowmelt that helps satisfy regulatory requirements in the San Francisco Bay/Sacramento-San Joaquin River Delta ("Bay-Delta") bolstering water supply reliability in the same year. See "–State Water Project – Bay-Delta Proceedings Affecting State Water Project." The source of Metropolitan's Colorado River supplies is primarily the watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. See "–Colorado River Aqueduct." Although precipitation in the Upper Colorado River Basin is primarily observed in the winter and spring, summer storms are common and can affect water supply conditions.

Uncertainties from potential future temperature and precipitation changes in a climate driven by increased concentrations of atmospheric carbon dioxide and other greenhouse gases ("GHGs") also present challenges. Areas of concern to California water planners identified by researchers include: reduction in Sierra Nevada and Colorado Basin snowpack; increased intensity and frequency of extreme weather events; shifting runoff patterns to earlier in the year when reservoir storage is more constrained due to flood protection; saltwater intrusion to groundwater supplies; and rising sea levels resulting in increased risk of damage from storms, high-tide events, and the erosion of levees and potential cutbacks of deliveries of imported water. While the range of potential impacts from climate change remain subject to further study, climate change is among the uncertainties that Metropolitan seeks to address through its planning processes. See "–Integrated Water Resources Plan and Climate Adaptation Master Plan for Water" and "–Climate Action Planning and Other Environmental, Social and Governance Initiatives."



## Water Conditions in Recent Years

A Water Year begins on October 1 and ends on the following September 30. Water Years 2020 through 2022 represented a record dry period in California's statewide precipitation. In calendar years 2021 and 2022, DWR's allocation to State Water Project contractors was five percent of contracted amounts, or 95,575 acre-feet for Metropolitan per year, and it was the first time in the history of the State Water Project with two consecutive years at five percent of contracted amounts. In addition to its allocation of State Water Project contracted amounts, in 2022, due to the historically dry conditions, Metropolitan received delivery from DWR of an additional approximately 134,000 acre-feet of human health and safety supplies under a provision of the State water supply contract. This additional supply was returned to DWR by Metropolitan in calendar year 2023. See "CONSERVATION AND WATER SHORTAGE MEASURES –Drought Response Actions."

Water Year 2023 (October 1, 2022 through September 30, 2023) also started as a dry year but a series of atmospheric rivers occurred in California during the winter of 2023, bringing extreme precipitation and a massive amount of snowfall. On April 20, 2023, DWR established the final State Water Project allocation for calendar year 2023 at 100 percent of contracted amounts, or 1,911,500 acre-feet for Metropolitan. This made calendar year 2023 the first time since 2006 that DWR was able to allocate the full contracted amounts of the State Water Project. Such extreme hydrology following a severe multi-year drought may become more common in the future in California due to the effects of climate change.

The amount of water delivered to Metropolitan's service area from its available State Water Project supplies can be constrained by local conditions, preventive maintenance or emergency outages of physical facilities, operational considerations due to water quality, and the State Water Project allocation. In calendar year 2023, Metropolitan took delivery into its service area of 1.06 million acre-feet of supplies via the State Water Project infrastructure, excluding supplies taken on behalf of Desert Water Agency ("DWA") and Coachella Valley Water District ("CVWD") pursuant to a set of agreements between and/or among Metropolitan, DWA and CVWD (see "–State Water Project and Colorado River Aqueduct Arrangements – Metropolitan/CVWD/Desert Water Agency Amended and Restated Agreement for the Exchange and Advance Delivery of Water"). After the sequence of atmospheric rivers that occurred during the winter of 2023, in March 2023, DWR made available interruptible supplies in addition to the then-applicable allocation of 75 percent of contracted amounts. Metropolitan took delivery of approximately 134,000 acre-feet of those interruptible supplies and used them to start refilling Diamond Valley Lake (approximately 32,000 acre-feet included in the deliveries to Metropolitan's service area) and start replenishment of the Castaic Lake and Lake Perris flexible storage accounts. With the increased State Water Project allocation to 100 percent, Metropolitan was also able to repay the 134,000 acre-feet of human health and safety water provided by DWR in 2022 (described above), further replenish the Castaic Lake and Lake Perris flexible accounts and add maximum contractual storage in San Luis Reservoir as Article 56c carryover. See "–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Metropolitan Article 56 Carryover*." Metropolitan further stored approximately 55,000 acre-feet in the groundwater banks in the San Joaquin valley. The volume able to be stored in the groundwater banks was somewhat limited by the historic flooding in the San Joaquin valley that hindered the groundwater banks' operations. In addition, of Metropolitan's available State Water Project supplies, approximately 8,000 acre-feet could not be delivered to one of Metropolitan's member agencies for groundwater replenishment due to local conditions and approximately 19,000 acre-feet could not be delivered in the East Branch of the California Aqueduct due to DWR outages in late 2023. These 27,000 acre-feet of undelivered volumes were approved by DWR for delivery in 2024 and are included in Metropolitan's State Water Project carryover storage. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage."

## Current Water Conditions

After a slow start to Water Year 2024 with below-average hydrologic conditions, a series of atmospheric rivers in January and early February brought much-needed precipitation to the northern Sierra. The State Water Project allocation for calendar year 2024 started at ten percent of contracted amounts on December 1, 2023, but was subsequently increased (through three increases) to 40 percent as of April 23, 2024, or 764,600 acre-feet for Metropolitan. This allocation takes into account snow survey measurements and data through June 1, 2024.

As of August 8, 2024, northern Sierra precipitation was 90 percent of the 30-year average for the time of year, while the snowpack peaked on April 1, 2024 at 123 percent of the 30-year April 1st peak average. As of June 11, 2024, the median water year unimpaired runoff forecast for the Sacramento River was 17.4 million acre-feet or 99 percent of the 30-year average. As of August 7, 2024, Lake Oroville, a key State Water Project facility, was at 2.65 million acre-feet, while the State Water Project share of San Luis Reservoir was at 413,734 acre-feet for the State Water Project or 39 percent of its capacity in the shared San Luis Reservoir. Environmental and regulatory constraints are limiting DWR's ability to export water from the Delta. See “–State Water Project – Bay-Delta Proceedings Affecting State Water Project” and “–Endangered Species Act and Other Environmental Considerations Relating to Water Supply.”

As of August 8, 2024, the Upper Colorado River Basin precipitation was 98 percent of the 30-year median for the time of year, while the snowpack peaked on April 3, 2024 at 115 percent of the 30-year April 1st peak median. As of August 1, 2024, the median water year runoff forecast into Lake Powell was 83 percent of the 30-year average. Despite normal conditions at such point in time, the Colorado River Basin is still experiencing an extended drought. On August 4, 2024, the total system storage in the Colorado River Basin was 44 percent of capacity or 25.85 million acre-feet. See “–Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines.” As of August 6, 2024, Metropolitan estimates approximately 910,100 acre-feet of Colorado River water in calendar year 2024, which includes approximately 277,700 acre-feet pursuant to the Exchange Agreement (defined below) between Metropolitan and San Diego County Water Authority (“SDCWA”), to be available to Metropolitan. Additional Colorado River supply tends to be available from higher priority water users as the year progresses. Based on recent higher priority water use, Metropolitan expects final Colorado River supplies to be approximately 930,000 acre-feet.

Metropolitan's storage as of January 1, 2024, was estimated to be 4.18 million acre-feet. This is the highest beginning-of-year total water storage in Metropolitan's history. See “–Storage Capacity and Water in Storage.” As of August 7, 2024, Metropolitan's projected amount of surplus supply to manage in calendar year 2024 was approximately 315,000 acre-feet based upon its demand estimate of 1.36 million acre-feet, and its supply estimate of 1.68 million acre-feet.

## Integrated Water Resources Plan and Climate Adaptation Master Plan for Water

**Overview and Background.** The Integrated Water Resources Plan (the “IRP”) is Metropolitan's principal water resources planning document. Metropolitan, its member agencies, sub-agencies and groundwater basin managers developed Metropolitan's first IRP as a long-term planning guideline for resources and capital investments over a 25-year planning cycle. The purpose of the IRP was the development of a portfolio of preferred resources to meet the water supply reliability and water quality needs for the region in a cost-effective and environmentally sound manner. The first IRP was adopted by the Board in January 1996 to cover a planning cycle through 2020. An IRP update has been subsequently undertaken approximately every five years (*i.e.*, in 2004, 2010 and 2015). In February 2020, Metropolitan initiated a new process for the development of the 2020 IRP, which will guide a 25-year planning cycle through 2045. The development of the 2020 IRP utilizing this new process is ongoing, and was intended to include two phases: (i) a Regional Needs Assessment (which was completed in April 2022), and (ii) a Phase

2 One Water Implementation Phase. This intended second phase subsequently became the development process for the Climate Adaption Master Plan for Water (“CAMP4W”) process, which is currently in progress. The Regional Needs Assessment and CAMP4W are described below. See “–2020 IRP Regional Needs Assessment” and “–Climate Adaptation Master Plan for Water.”

**2020 IRP Regional Needs Assessment.** Metropolitan’s new process for the 2020 IRP builds upon Metropolitan’s adaptive management strategy by utilizing a scenario planning approach. Under this approach, Metropolitan anticipates ranges for how much water Southern California can expect from its imported and local supplies, as well as regional water demands, across four plausible scenarios through 2045.

The initial development of the 2020 IRP utilizing this approach was completed in April 2022, with the adoption by the Board of the 2020 IRP Regional Needs Assessment. The Regional Needs Assessment analyzed potential gaps between the expected supplies and the forecasted demands in Southern California across the four IRP scenarios characterized by divergent outcomes of imported supply stability and water demands on Metropolitan.

The Regional Needs Assessment outcomes can be summarized through a set of findings grounded in the scenario reliability analysis. The findings fall within five key focus areas:

- SWP Dependent Areas – addressing identified vulnerabilities in the portion of Metropolitan’s service area dependent upon State Water Project deliveries (the “SWP Dependent Areas”);
- Storage – storage capacity, put/take capabilities, and accessibility as critical considerations in reliability and reducing the need for new core supply development;
- Retail Demand/Demand Management – managing variability in demand through appropriate regional measures and efficient water use;
- Metropolitan Imported Supplies – maintaining existing imported supply reliability and addressing risks to existing imported supplies from various drivers of uncertainty; and
- Local Supply – maintaining existing and developing new local supplies as a critical element of managing demands on Metropolitan.

The Regional Needs Assessment presents key technical findings and examines the effectiveness of generalized portfolio categories. The Regional Needs Assessment also frames and guides the establishment of more specific targets to maintain reliability over the planning period and informs Metropolitan’s Board on resource investment decisions as well as the establishment of a plan to fund them. In light of the future uncertainties inherent in long-term resource planning, including uncertainties about climate change and regulatory requirements, as well as Southern California’s population and economy, this scenario planning approach better prepares the region for a wider range of potential outcomes by identifying solutions and policies across a variety of possible future conditions. This strategy is designed to enable Metropolitan and its member agencies to manage future challenges and changes in California’s water conditions and to balance investments with water reliability benefits.

The Board’s adoption of the 2020 IRP Regional Needs Assessment allows the analysis and findings to serve as a foundation for the CAMP4W process, which is described below.

**Climate Adaptation Master Plan for Water.** The current phase of water resource planning expands the intended 2020 IRP implementation into a more comprehensive CAMP4W. CAMP4W will integrate

water resource, climate resilience and financial planning into a cohesive strategy and approach. Metropolitan incorporates the results and findings of the Regional Needs Assessment into a collaborative process to identify integrated regional solutions. The intent of CAMP4W is to translate the high-level portfolio analysis from the 2020 IRP Regional Needs Assessment into guidance for specific policies, programs, and projects to address the findings and mitigate the potential shortages. Comprehensive, adaptive management strategy and evaluation criteria will be developed to guide these specific actions. Criteria are being developed through a climate lens with the goal of ensuring that climate resilience and water supply reliability are the primary focus areas. The adaptive management strategy will also establish a process for monitoring key reliability indicators to support decision-making.

Information and materials relating to Metropolitan's 2020 IRP Regional Needs Assessment and ongoing development of its CAMP4W are available at: <https://www.mwdh2o.com/how-we-plan/integrated-resource-plan/>. The materials and other information set forth on Metropolitan's website are not incorporated into this Appendix A and should not be construed to be a part of this Appendix A by virtue of the foregoing reference to such materials and website.

Specific projects identified by Metropolitan in connection with the implementation of the 2020 IRP and CAMP4W are subject to Board consideration and approval, as well as environmental and regulatory documentation and compliance.

### **Climate Action Planning and Other Environmental, Social and Governance Initiatives**

**General; Background.** Metropolitan has long supported sustainability efforts, dating back to its founding in 1928, when planners and engineers designed the CRA to deliver water primarily by gravity across 242 miles of California desert to the State's south coastal plain. Metropolitan recognized the need for a reliable supply of power by investing in the construction of Hoover Dam and Parker Dam. Together, these dams produce clean, carbon-free energy that have historically supplied more than half of the energy needed to power the CRA pumps. See "METROPOLITAN EXPENSES—Power Sources and Costs; Related Long-Term Commitments – *Colorado River Aqueduct*" in this Appendix A.

In the decades that followed, Metropolitan has continued to make investments in clean energy and energy-efficient design to reduce GHG emissions, as well as climate adaptation investments to bolster water supply availability, particularly during times of drought. In addition, Metropolitan has partnered with the scientific community, including academic research institutions and the private sector, to test and ultimately implement advanced technologies that monitor and enhance Metropolitan's water supplies. Metropolitan's efforts to date in this area have focused not only on the goal of achieving broad environmental sustainability and efficiency objectives but also environmental risk mitigation.

Metropolitan has adopted several planning documents that address the core issues of environmental sustainability, improving climate resiliency of operations, and advancing the goal of carbon neutrality. These documents include the Climate Action Plan (discussed below), the Energy Sustainability Plan, Metropolitan's Capital Investment Plan, and its IRP and CAMP4W discussed above. Metropolitan coordinates its ongoing sustainability efforts through its Chief Sustainability, Resilience, and Innovation Officer ("SRI Officer").

Information and materials related to Metropolitan's planning actions associated with climate change are available at: <https://www.mwdh2o.com/planning-for-tomorrow/addressing-climate-change/>. The materials and other information set forth on Metropolitan's website are not incorporated into this Appendix A and should not be construed to be a part of this Appendix A by virtue of the foregoing reference to such materials and website.

***Climate Change Adaptation.*** Climate change is expected to increase average temperatures across the western United States. In the Colorado River Basin, that is expected to result in decreased runoff and lower flows as less snow is coupled with increased evapotranspiration from trees and plants. In the Sierra Nevada, precipitation is anticipated to increasingly fall as rain in a few large storms, rather than as snow. Sierra snowpack, a critical storage tool in California's water management as it holds water high in the mountains until peak summer demand, has been projected to decrease by up to 65 percent by the end of the century. In the local Southern California region, climate change threatens groundwater basins with saltwater intrusion and less natural replenishment. These factors are expected to reduce the reliability of Metropolitan's imported water supply for Southern California.

Metropolitan has long recognized the threat to its water supply posed by these long-term impacts and has been addressing climate change for 25 years through its IRP. Pursuant to its IRP, Metropolitan has invested in local supplies, developed new storage, and increased the flexibility of its water system facilities to be able to take delivery of water from diverse sources when available. Below are a few examples:

- Metropolitan has increased the water storage capacity of its dams and reservoirs by more than 13-fold since 1990 and has built the Inland Feeder, a large conveyance pipeline that allows for the movement of water into that storage. See "METROPOLITAN'S WATER DELIVERY SYSTEM" in this Appendix A. In years when snowpack is low, these investments provide a valuable opportunity to capture water in wet years and save it for dry ones.
- Metropolitan has increased the operational flexibility of its water delivery system through infrastructure improvements, such as the Inland Feeder, which provides the ability to capture and store high allocations of State Water Project supplies when available, and agreements to deliver Colorado River water supplies when State supplies are in drought, and vice versa. See "Water Transfer, Storage and Exchange Programs."
- Metropolitan has invested approximately \$910 million in conservation programs, which have helped decrease potable per capita water consumption over time in Metropolitan's service area from 209 gallons per person per day in 1990 to 126 gallons per person per day in 2022 – a 40 percent reduction. Metropolitan plans to continue to expand these efforts into the future. See "CONSERVATION AND WATER STORAGE MEASURES" in this Appendix A.
- Metropolitan's Local Resources Program accelerates the development of local water supply reliability projects by incentivizing agencies within Metropolitan's service area to construct recycled water, groundwater recovery and seawater desalination projects. Since 1982, Metropolitan has invested approximately \$542 million in recycled water projects and \$199 million in groundwater recovery projects. See "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.
- Metropolitan has partnered with other utilities and organizations across the nation to understand both the effects of climate change and potential opportunities to build resilience. These collaborators include the Water Utility Climate Alliance, a collaboration of large water providers working on climate issues affecting the country's water agencies, and the California Resilience Challenge, a collaboration of businesses, utilities, and non-profit organizations developing climate adaptation planning projects.

***Climate Action Plan.*** In May 2022, Metropolitan adopted a Climate Action Plan, a comprehensive planning document that outlines Metropolitan's strategy for reducing GHG emissions associated with Metropolitan's future construction, operation, and maintenance activities. The Climate Action Plan includes an analysis of Metropolitan's historical GHG emissions, a forecast of future GHG emissions, sets a GHG reduction target for reducing emissions consistent with applicable state policies, and identifies a suite of

specific GHG reduction actions that Metropolitan can implement to achieve its adopted targets. The Climate Action Plan establishes a GHG emissions reduction goal of 40 percent by 2030 and carbon neutrality by 2045. The Climate Action Plan includes nine strategies that target the reduction of direct emissions from natural gas and fuel combustion by supporting the transition to a zero emissions vehicle fleet and reduction of natural gas combustion; reducing indirect emissions associated with electricity consumption through improved energy efficiency and utilizing low-carbon and carbon-free electricity; and implementing GHG reduction measures that incentivize sustainable employee commutes and increase waste diversion; increasing water conservation and local water supply; and investigating and implementing carbon capture and carbon sequestration opportunities on Metropolitan-owned lands.

Metropolitan's Climate Action Plan includes an implementation strategy, annual GHG inventories, a public-facing tracking and monitoring tool to ensure progress towards meeting its goal, and five-year updates to capture new and emerging technologies for GHG emissions reductions. The strategies included in the Climate Action Plan provide the co-benefits of improved infrastructure reliability, greater energy resiliency, and expected reduced costs associated with energy procurement and maintenance.

***Energy Sustainability.*** Metropolitan meets its energy demands through its investments in hydroelectric and solar power and the purchase of more than 2,000 GWh of electricity annually from the regional power grid. In November 2020, Metropolitan developed an Energy Sustainability Plan. The Energy Sustainability Plan includes a framework of sustainable actions focused on energy cost containment, reliability, affordability, conservation and adaptation, including reconfiguring certain existing power plants and variable-speed pump drives at pumping stations, and assessing the integration of islanded operations for microgrid purposes. Metropolitan invests in renewable energy resources, including buying and generating hydroelectric power to help meet much of its electricity needs. Currently, over three-quarters of Metropolitan's pumping and water treatment energy needs are met through renewable/sustainable energy resources. In addition to using power generated at Parker and Hoover Dams, Metropolitan has built 15 in-stream hydroelectric plants throughout its distribution system with a total capacity of about 130 megawatts. Metropolitan has also installed 3.5 megawatts of photovoltaic solar power at its facilities and is implementing a project to add battery energy storage at three of its water treatment plants to store green energy when power rates are low and discharge that energy when rates are higher. The completion of construction of the project to add battery storage at the three treatment plants is expected to occur by the end of 2026.

***Diversity, Equity and Inclusion and Governance.*** In its dedication to improving workplace culture for all employees, in October 2021, Metropolitan's Board adopted a statement pledging its support of diversity, equity and inclusion initiatives. The Statement of Commitment is the result of a collaborative discussion among the 38-member board and provides guidance so that staff can develop, implement and maintain policies and practices to support diversity, equity and inclusion. In May 2022, Metropolitan hired its first Chief Diversity, Equity and Inclusion officer to help plan, develop, and implement strategies and initiatives designed to ensure that Metropolitan is a diverse and inclusive organization.

## **State Water Project**

### **Background and Current Supply**

One of Metropolitan's two major sources of water is the State Water Project, which is owned by the State, and managed and operated by DWR. The State Water Project is the largest state-built, multipurpose, user-financed water project in the country. It was designed and built primarily to deliver water, but also provides flood control, generates power for pumping, is used for recreation, and enhances habitat for fish and wildlife. The State Water Project provides irrigation water to 750,000 acres of farmland, mostly in the San Joaquin Valley, and provides municipal and industrial water to approximately 27 million



of California's estimated 39.1 million residents, including the population within the service area of Metropolitan.

The State Water Project's watershed encompasses the mountains and waterways around the Feather River, the principal tributary of the Sacramento River, in the Sacramento Valley of Northern California. Through the State Water Project, Feather River water stored in and released from Oroville Dam (located about 70 miles north of Sacramento, east of the city of Oroville, California) and unregulated flows diverted directly from the Bay-Delta are transported south through the Central Valley of California, over the Tehachapi Mountains and into Southern California, via the California Aqueduct, to three delivery points near the northern and eastern boundaries of Metropolitan's service area. The total length of the California Aqueduct is approximately 444 miles. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Primary Facilities and Method of Delivery —*State Water Project*" in this Appendix A.

From calendar year 2014 through 2023, the amount of water delivered to Metropolitan's service area via the State Water Project infrastructure, including water from allocated supplies, human health and safety supplies, carryover, flexible storage from Castaic Lake and Lake Perris, water transfer, groundwater banking and exchange programs delivered through the California Aqueduct varied from a low of 457,000 acre-feet in calendar year 2022 to a high of 1,374,000 acre-feet in 2017.

As more fully described under "— State Water Contract — General Terms of the Contract," under the terms of each State water supply contract, DWR provides the initial allocation estimate of State Water Project water for the following calendar year by each December 1. Based upon updated runoff forecast and environmental, regulatory and operational constraints, DWR's total water supply availability projections are refined during the calendar year and allocations to the State Water Project contractors are adjusted accordingly. On December 1, 2023, DWR announced an initial calendar year 2024 allocation of ten percent of contracted amounts, based on DWR's assessment of reservoir storage and an assumption of dry conditions. On February 21, 2024, DWR increased the State Water Project annual allocation to 15 percent of State Water Project contractors' requested Table A amounts. DWR subsequently increased the allocation on March 22, 2024 to 30 percent of State Water Project contractors' requested Table A amounts, and again increased the State Water Project annual allocation on April 23, 2024 to 40 percent of State Water Project contractors' requested Table A amounts. Further changes to the 2024 allocation may occur and are dependent on the developing hydrologic conditions. In addition, Metropolitan began 2024 with approximately 227,000 acre-feet of State Water Project carryover supplies from calendar year 2023. See "— Water Transfer, Storage and Exchange Programs" and "—Storage Capacity and Water in Storage." See also "—Water Conditions in Recent Years" and "—Current Water Conditions."

### **State Water Contract**

***General Terms of the Contract.*** In 1960, Metropolitan signed a water supply contract (as amended, the "State Water Contract") with DWR to receive water from the State Water Project. Metropolitan is one of 29 agencies and districts that have long-term contracts for water service from DWR (known collectively as the "State Water Project contractors" and sometimes referred to herein as "Contractors"). Metropolitan is the largest of the State Water Project contractors in terms of the number of people it serves (approximately 19 million), the share of State Water Project water that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water supply contracts (approximately 50 percent for calendar year 2024). Metropolitan received its first delivery of State Water Project water in 1972.

Pursuant to the terms of the State water supply contracts, all water supply related expenditures for capital and operations, maintenance, power, and replacement costs associated with the State Water Project facilities are paid for by the State Water Project contractors as components of their annual payment obligations to DWR. In exchange, Contractors have the right to participate in the system, with an

entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them. Each year DWR estimates the total State Water Project water available for delivery to the State Water Project contractors and allocates the available project water among the State Water Project contractors in accordance with the State Water Project supply contracts.

Under its State Water Contract, Metropolitan has a contractual right to its proportionate share of the State Water Project water that DWR determines annually is available for allocation to the Contractors. This determination is made by DWR each year based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Available State Water Project water is then allocated to the Contractors in proportion to the amounts set forth in “Table A” of their respective State water supply contract (sometimes referred to herein as Table A State Water Project water); provided, that in accordance with the terms of the State water supply contracts, the State may allocate on some other basis if such action is required to meet minimum demands of contractors for domestic supply, fire protection, or sanitation during the year. Pursuant to Table A of its State Water Contract, Metropolitan is entitled to approximately 46 percent of the total annual allocation made available to State Water Project contractors each year. Metropolitan’s State Water Contract, under a 100 percent allocation, provides Metropolitan 1,911,500 acre-feet of water. The 100 percent allocation is referred to as the contracted amount. See also “–Current Water Conditions” for information regarding Metropolitan’s allocation of State Water Project water for 2024.

The term of Metropolitan’s State Water Contract currently extends to December 31, 2085, or until all DWR bonds issued to finance construction of State Water Project facilities are repaid, whichever is longer. Upon expiration of the State Water Contract term, Metropolitan has the option to continue service under substantially the same terms and conditions. See also “–*Amendment of Contract Term.*”

***Project Improvement Amendments.*** Metropolitan’s State Water Contract has been amended a number of times since its original execution and delivery. Several of the amendments, entered into by DWR and various subsets of State Water Project contractors, relate to the financing and construction of a variety of State Water Project facilities and improvements and impose certain cost responsibility therefor on the affected Contractors, including Metropolitan. For a description of Metropolitan’s financial obligations under its State Water Contract, including with respect to such amendments, see “METROPOLITAN EXPENSES–State Water Contract Obligations” in this Appendix A.

***Water Management Amendments.*** Metropolitan and other State Water Project contractors have undertaken negotiations with DWR to amend their State water supply contracts to clarify the criteria applicable to certain water management tools including single and multi-year water transfers and exchanges. The water management provisions amendment allows for greater flexibility for transfers and exchanges among the State Water Project contractors. Specifically, the amendment confirms existing practices for exchanges, allows more flexibility for non-permanent water transfers, and allows for the transfer and exchange of certain portions of Article 56 carryover water (see “–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Metropolitan Article 56 Carryover*”). DWR certified a final EIR for the water management amendments in August 2020. In September 2020, North Coast Rivers Alliance, California Water Impact Network and others separately filed two lawsuits challenging DWR’s final EIR and approval of the State water supply contract water management provisions amendment under the California Environmental Quality Act (“CEQA”). North Coast Rivers Alliance also alleges violations of the Delta Reform Act, and public trust doctrine, and seeks declaratory and injunctive relief. The cases were deemed related and assigned to the same judge. DWR filed notice of certification of the administrative record and filed answers in both cases on December 20, 2022. Any adverse impact of this litigation and rulings on Metropolitan’s State Water Project supplies cannot be determined at this time. Despite the pending litigation, enough of the State Water Project contractors approved and executed the amendment as required by DWR for it to be deemed fully executed.

The amendments went into effect on February 28, 2021. The State Water Contractors association, made up of 27 State Water Project contractors, has intervened in the two related cases to protect the interests of the Contractors.

***Amendment of Contract Term.*** In 2014, DWR and the State Water Project contractors reached an Agreement in Principle (the “Agreement in Principle”) on an amendment to extend their State water supply contracts to December 31, 2085 and to make certain other changes related to financial management of the State Water Project. The Agreement in Principle served as the “proposed project” for purposes of the environmental review required under CEQA, which such review was completed in December 2018. Following DWR’s approval of the proposed project, three separate lawsuits were filed: one by DWR seeking to validate the contract extension amendment, and two by environmental groups and other entities challenging DWR’s approval of the amendment and the adequacy of the underlying environmental review. These cases were deemed related by the court and assigned to a single judge. After a three-day trial in January 2022, the court issued a final statement of decision on March 9, 2022, in which it ruled that the amendments were valid and rejected all other challenges and claims. On January 5, 2024, the Third District Court of Appeal affirmed the decision. Appellants have filed petitions for review by the California Supreme Court. Any potential adverse impact of the appeals on Metropolitan’s State Water Project supplies cannot be determined at this time. As of May 1, 2023, 27 of the 29 State Water Project contractors, including Metropolitan, had executed the amendment, exceeding the DWR established thresholds needed for the amendment to become effective. These Contractors also executed waivers allowing the amendment to be implemented notwithstanding the pending litigation. As a result, the contract extension amendment became effective on January 1, 2023 and the term of the water supply contracts of the State Water Project contractors executing the amendment was extended to December 31, 2085. While an adverse outcome in the pending appeal could potentially affect the ongoing validity and future implementation of the amendment, Metropolitan considers the risk to be low given the favorable outcome at trial and the Court of Appeal.

***Amendments for Allocation of Conveyance Costs.*** Metropolitan and other State Water Project contractors embarked on a third public process to further negotiate proposed amendments to their State water supply contracts related to cost allocation for a potential Delta Conveyance project. Pursuant to the terms of a prior settlement, negotiations for this State Water Project contract amendment were completed in public. In March 2021, DWR and the State Water Project contractors concluded public negotiations and reached an Agreement in Principle (the “Delta Conveyance AIP”) that will be the basis for amendment of the State water supply contracts. The future contract amendment contemplated by the Delta Conveyance AIP would provide a mechanism that would allow for the costs related to any Delta Conveyance project to be allocated and collected by DWR. The Delta Conveyance AIP also provides for the allocation of benefits for any Delta Conveyance project in proportion to each State Water Project contractor’s participation. DWR will maintain a table reflecting decisions made by public agency governing boards regarding that agency’s participation. Contract language for the proposed amendments is under development. See “*Bay-Delta Planning Activities*” and “*Delta Conveyance*” under “Bay-Delta Proceedings Affecting State Water Project” below.

### **Coordinated Operations with Central Valley Project**

DWR operates the State Water Project in coordination with the federal Central Valley Project, which is operated by the Bureau of Reclamation. Since 1986, the coordinated operations have been undertaken pursuant to a Coordinated Operations Agreement for the Central Valley Project and State Water Project (the “COA”). The COA defines how the State and federal water projects share water quality and environmental flow obligations imposed by regulatory agencies. The agreement calls for periodic review to determine whether updates are needed in light of changed conditions. After completing a joint review process, DWR and the Bureau of Reclamation agreed to amend the COA to reflect water quality regulations, biological opinions and hydrology updated since the 1986 agreement was signed. On December 13, 2018, DWR and the Bureau of Reclamation executed an Addendum to the COA (the “COA Addendum”). The

COA Addendum provides for DWR's adjustment of State Water Project operations to modify pumping operations, as well as project storage withdrawals to meet in-basin uses, pursuant to revised calculations based on Water Year types. The COA Addendum will shift responsibilities for meeting obligations between the Central Valley Project and the State Water Project, resulting in a shift of approximately 120,000 acre-feet in long-term average annual exports from the State Water Project to the Central Valley Project.

In executing the COA Addendum, DWR found the agreement to be exempt from environmental review under CEQA as an ongoing project and that the adjustments in operations are within the original scope of the project. On January 16, 2019, commercial fishing groups and an American Indian tribe ("petitioners") filed a lawsuit against DWR alleging that entering the COA Addendum violated CEQA, the Delta Reform Act, and the public trust doctrine. Westlands Water District ("Westlands") and North Delta Water Agency have been granted approval to intervene in the lawsuit. The petitioners are still in the process of preparing the administrative record. The effect of this lawsuit on the COA Addendum and State Water Project operations cannot be determined at this time.

### **2017 Oroville Dam Spillway Incident**

Oroville Dam, the earthfill embankment dam on the Feather River which impounds Lake Oroville, is operated by DWR as a facility of the State Water Project. On February 7, 2017, the main flood control spillway at Oroville Dam, a gated and concrete lined facility, experienced significant damage as DWR released water to manage higher inflows driven by continued precipitation in the Feather River basin. The damaged main spillway impaired DWR's ability to manage lake levels causing water to flow over the emergency spillway structure, an ungated, 1,730-foot-long concrete barrier located adjacent to the main flood control spillway structure. Use of the emergency spillway structure resulted in erosion that threatened the stability of the emergency spillway structure. This concern prompted the Butte County Sheriff to issue an evacuation order for approximately 200,000 people living in Oroville and the surrounding communities.

On November 1, 2018, DWR completed reconstruction of the main spillway to its original design capacity of approximately 270,000 cubic feet per second ("cfs"), a capacity almost twice its highest historical outflow. Work on the emergency spillway was substantially completed in April 2019. Mitigation measures such as slope revegetation were completed in 2021. DWR has estimated the total costs of the recovery and restoration project prior to any federal or other reimbursement to be approximately \$1.2 billion. As of January 2024, DWR had received or expected to receive reimbursement of a total of approximately \$617 million of these costs under the Public Assistance Program of the Federal Emergency Management Agency ("FEMA"). Remaining costs of about \$567 million were charged to the State Water Project contractors under the State water supply contracts, of which Metropolitan's share totaled about \$259 million. DWR financed these remaining costs with DWR bonds.

Various lawsuits were filed against DWR asserting claims for property damage, economic losses, environmental impacts and civil penalties related to this incident. Neither Metropolitan nor any other State Water Project contractor was named as a defendant in any of these lawsuits. These cases, which were coordinated in Sacramento Superior Court (Case No. JCCP 4974), have now been resolved, either through decisions in favor of DWR or settlements with terms favorable to DWR. Cumulative payments for all claims related to the Oroville Dam spillway incident totaled less than \$40 million.

The State water supply contracts provide that Metropolitan and the other State Water Project contractors are not liable for any claim of damage of any nature arising out of or connected to the control, carriage, handling, use, disposal or distribution of State Water Project water prior to the point where it reaches their turnouts. However, DWR has asserted that regardless of legal liability all costs of the State Water Project system must be borne by State Water Project contractors. Thus, DWR indicated its intent to bill the State Water Project contractors for any expenditures related to litigation (cost of litigation, settlements, damages awards/verdicts) arising from the Oroville Dam spillway incident and costs incurred

by DWR to date have been reflected in DWR charges. Metropolitan has established that all charges related to this litigation are being paid under protest, and it has an existing tolling agreement with DWR to preserve its legal right to seek recovery of these charges and/or dispute any future charges that DWR may seek to assess related to such litigation.

### **Bay-Delta Proceedings Affecting State Water Project**

**General.** In addition to being a source of water for diversion into the State Water Project, the Bay-Delta is the source of water for local agricultural, municipal, and industrial needs. The Bay-Delta also supports significant resident and anadromous fish and wildlife resources, as well as recreational uses of water. Both the State Water Project's upstream reservoir operations and its Bay-Delta diversions can at times affect these other uses of Bay-Delta water directly, or indirectly, through impacts on Bay-Delta water quality. A variety of proceedings and other activities are ongoing with the participation of various State and federal agencies, as well as California's environmental, urban and agricultural communities, in an effort to develop long-term, collectively negotiated solutions to the environmental and water management issues concerning the Bay-Delta. Metropolitan actively participates in these proceedings. Metropolitan cannot predict the outcome of any of the litigation or regulatory processes described below but believes that a materially adverse impact on the operation of State Water Project pumps could negatively impact Metropolitan's State Water Project deliveries and/or Metropolitan's water reserves.

**SWRCB Regulatory Activities and Decisions.** The State Water Resources Control Board (the "SWRCB") is the agency responsible for setting water quality standards and administering water rights throughout California. The SWRCB exercises its regulatory authority over the Bay-Delta by means of public proceedings leading to regulations and decisions that can affect the availability of water to Metropolitan and other users of State Water Project water. These include the Water Quality Control Plan ("WQCP") for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes the water quality objectives and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights permits.

Since 2000, SWRCB's Water Rights Decision 1641 ("D-1641") has governed the State Water Project's ability to export water from the Bay-Delta for delivery to Metropolitan and other agencies receiving water from the State Water Project. D-1641 allocated responsibility to water rights holders for meeting flow requirements and salinity and other water quality objectives established earlier by the WQCP.

The WQCP gets reviewed periodically and new standards and allocations of responsibility can be imposed on the State Water Project as a result. The SWRCB's current review and update of the WQCP is being undertaken in phased proceedings. In December 2018, the SWRCB completed Phase 1 of the WQCP proceedings, adopting the plan amendments and environmental documents to support new flow standards for the Lower San Joaquin River tributaries and revised southern Delta salinity objectives. The Phase 1 plan amendments include certain "unimpaired flow" requirements on the three San Joaquin River tributaries. The term unimpaired flow is used to describe a theoretically available water supply assuming existing river channel conditions in the absence of storage and stream diversions. It is theoretical and it does not represent such conditions as they have occurred historically. Various stakeholders filed suit against the SWRCB challenging these Phase 1 plan amendments. In March 2024, the Sacramento Superior Court upheld the Phase 1 plan amendments, denying the challengers' claims. The decision is subject to appeal.

Plan amendments being considered as part of Phase 2 of the WQCP proceedings are focused on the Sacramento River and its tributaries, Delta eastside tributaries, Delta outflows, and interior Delta flows. The SWRCB has also encouraged all stakeholders to work together to reach one or more Voluntary Agreements for consideration by the SWRCB that could implement the proposed amendments to the WQCP through a variety of tools, including non-flow habitat restoration for sensitive salmon and smelt species,

while seeking to protect water supply reliability. Metropolitan is participating in the Phase 2 proceedings and Voluntary Agreement negotiations. On March 29, 2022, Metropolitan's General Manager signed a Memorandum of Understanding Advancing a Term Sheet for the Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan, and Other Related Actions (the "VA MOU"). Other parties include the California Natural Resources Agency ("Natural Resources"), the California Environmental Protection Agency, the California Department of Fish and Wildlife ("CDFW"), the Bureau of Reclamation, DWR, the State Water Contractors association and additional agricultural and municipal water users. Under the VA MOU, the parties "seek to take a comprehensive approach to integrate flow and non-flow measures, including habitat restoration, subject to ongoing adaptive management based on a science program" as described in an attached term sheet. The proposed approach under the VA MOU provides for implementation over eight years with a potential extension to up to 15 years. To be implemented any Voluntary Agreement package of agreed upon flow and non-flow measures would need to be reviewed by the SWRCB and formally considered and adopted as part of a comprehensive update to the WQCP.

In September 2023, the staff for the SWRCB released a Draft Staff Report/Substitute Environmental Document (the "Draft Staff Report") for the WQCP Phase 2 updates for the Sacramento River watershed, Delta eastside tributaries, interior Delta, and Delta. The Draft Staff Report analyzes several alternatives for WQCP updates, including the proposed Healthy Rivers and Landscapes (HRL) proposal (previously referred to as "Voluntary Agreements"), several variations of unimpaired hydrograph outflow objectives, several modular alternatives that would limit State Water Project and Central Valley Project operations, and several narrative objectives. As described in the Draft Staff Report, the SWRCB could adopt more than one alternative, providing for layered implementation. The Draft Staff Report's Proposed Action includes a flow objective of 55 percent of the unimpaired hydrograph. The Draft Staff Report's Proposed Action flow objective is predicted to result in an annual average reduction of 446,000 acre-feet for southern California municipal supplies, which provides an estimate of the potential water cost for Metropolitan. The public comment period for the Draft Staff Report closed on January 19, 2024. Metropolitan provided comments individually and through the State Water Contractors association. The SWRCB staff will consider public comments and finalize the Staff Report in the first quarter of calendar year 2025. The eventual consideration by the SWRCB of adoption of Phase 2 updates to the WQCP is expected to occur in the second quarter of calendar year 2025 or later.

***Bay-Delta Planning Activities.*** In 2000, several State and federal agencies released the CALFED Bay-Delta Programmatic Record of Decision and Environmental Impact Report/Environmental Impact Statement ("EIR/EIS") that outlined and disclosed the environmental impacts of a 30-year plan to improve the Bay-Delta's ecosystem, water supply reliability, water quality, and levee stability. CALFED is the consortium of State and federal agencies with management and regulatory responsibilities in the San Francisco Bay/ Sacramento-San Joaquin Delta Estuary. The CALFED Record of Decision remains in effect and many of the State, federal, and local projects begun under CALFED continue.

In 2006, multiple State and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan ("BDCP"). The BDCP was originally conceived as a comprehensive conservation strategy for the Bay-Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework to be implemented over a 50-year time frame with corresponding long-term permit authorizations from fish and wildlife regulatory agencies. The BDCP includes both alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta.

The existing State Water Project Delta water conveyance system needs to be improved and modernized to address operational constraints on pumping in the south Delta as well as risks to water supplies and water quality from climate change, earthquakes, and flooding. Operational constraints are



largely due to biological opinions and incidental take permits to which the State Water Project is subject that substantially limit the way DWR operates the State Water Project.

In 2015, the State and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed “California WaterFix” and “California EcoRestore,” respectively. Planned water conveyance improvements, California WaterFix (a proposed project that was subsequently withdrawn and reconfigured as an alternative Delta conveyance project as described under “–Delta Conveyance” below), would have been implemented by DWR and the Bureau of Reclamation as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. Ecosystem improvements and habitat restoration more generally, California EcoRestore, would be undertaken under a more phased approach.

**California EcoRestore.** As part of California EcoRestore, which was initiated in 2015, the State is pursuing more than 30,000 acres of Delta habitat restoration. As of the end of the first five-year period of 2015 through December 2020, California EcoRestore was on track to restore 3,500 acres of non-tidal wetland and projected to restore 14,000 acres of tidal and subtidal habitat, 18,580 acres of floodplain, and 1,650 acres of riparian and upland habitat, exceeding initial estimates. Over such period, California EcoRestore represented an investment of approximately \$500 million for implementation and planning costs. This includes certain amounts being paid by the State Water Project contractors, including Metropolitan, for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions. Work on several California EcoRestore projects is ongoing. The overall estimated cost to complete the current list of 32 California EcoRestore projects is \$750 to \$950 million, with approximately half expected to be paid from the State Water Project by State Water Project contractors and half from other funding sources. See also “–Endangered Species Act and Other Environmental Considerations Relating to Water Supply – Endangered Species Act Considerations – State Water Project.”

**Delta Conveyance.** On April 29, 2019, Governor Newsom issued an executive order directing identified State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system, directing the State agencies to inventory and assess the current planning for modernizing conveyance through the Bay-Delta with a new single tunnel project (rather than the previously contemplated two-tunnel California WaterFix). Consistent with the Governor’s direction, in January 2020, DWR commenced a formal environmental review process under CEQA for a proposed single tunnel Delta Conveyance Project. On July 27, 2022, DWR released the Delta Conveyance Project Draft EIR for public and agency comment under CEQA. DWR certified its Final EIR on December 8, 2023 and approved the Bethany Reservoir Alignment alternative on December 21, 2023. The approved conveyance facilities include intake structures on the Sacramento River, with a total capacity of 6,000 cfs, and a single tunnel to convey water to a new pumping facility in the south Delta that would lift water into the existing Bethany Reservoir, part of the California Aqueduct. Additional permitting processes, including federal and State Endangered Species Act (“ESA”) permits, the SWRCB Change in Point of Diversion petition and the Delta Stewardship Council Delta Plan Consistency certification, are expected to continue through at least the end of 2026. Ten lawsuits have been filed by various organizations, including Tulare Lake Basin Water Storage District, Sierra Club, City of Stockton, County of San Joaquin, County of Butte, Sacramento Area Sewer District, County of Sacramento, San Francisco Baykeeper, South Delta Water Agency and North Delta Water Agency, challenging the adequacy of DWR’s Final EIR under CEQA and several other environmental laws. Motions for preliminary injunctive relief seeking to halt pre-construction geotechnical work to characterize subsurface soil and groundwater conditions were granted in five of the cases on June 21, 2024 enjoining such geotechnical work until DWR completes the certification procedure required under the Delta Reform Act. DWR has filed a motion to modify the injunction to allow some geotechnical work to continue or, the alternative, to temporarily stay the injunction pending a decision on the merits in DWR’s appeal. A hearing on the matter has been scheduled for August 23, 2024.

On August 20, 2020, the U.S. Army Corps of Engineers (“Army Corps”), the lead agency for the Delta Conveyance Project under the National Environmental Policy Act (“NEPA”), issued a notice of intent of the development of the EIS for the Delta Conveyance Project. On December 16, 2022, the Army Corps released the Draft EIS for public and agency comment under NEPA. The comment period closed on March 16, 2023. Certification of the Final EIS by the Army Corps is not expected before the end of 2024.

Metropolitan’s Board has previously authorized Metropolitan’s participation in two joint powers agencies relating to a Bay-Delta conveyance project (originally formed in connection with California WaterFix): the Delta Conveyance Design and Construction Authority (the “DCA”), formed by the participating water agencies to actively participate with DWR in the design and construction of the conveyance project in coordination with DWR and under the control and supervision of DWR; and the Delta Conveyance Finance Authority (the “Financing JPA”), formed by the participating water agencies to facilitate financing for the conveyance project. The DCA is providing engineering and design activities to support DWR’s planning and environmental analysis for the potential new Delta Conveyance Project.

In August 2020, the DCA released preliminary cost information for the proposed Delta Conveyance Project based on an early cost assessment prepared by the DCA. The DCA’s early assessment was based on preliminary engineering, not a full conceptual engineering report, and includes project costs for construction, management, oversight, mitigation, planning, soft costs, and contingencies. Based on these assumptions, the DCA’s early project cost assessment estimate was approximately \$15.9 billion in 2020 un-discounted dollars, which includes a 44 percent overall contingency applied to the preliminary construction costs. In May 2024, the DCA released an updated cost estimate for the Bethany Reservoir Alignment configuration of the Delta Conveyance Project as approved by DWR. The updated total project cost estimate includes construction and other program costs (including, among other things, planning, design, construction management, land acquisition, environmental mitigation and costs of a community benefit program), as well as certain contingency and risk treatment costs to address uncertainty at the conceptual stage of project development. The updated total project cost estimate considers items such as labor, materials, equipment, level of effort, and other relevant cost items for a defined scope of work as described in the Delta Conveyance Project Final EIR certified by DWR in December 2023 and the supporting engineering project report prepared by the DCA. The updated total project cost estimate prepared by the DCA is primarily intended to support project financial and economic analysis and to provide guidance for further project development. If constructed, actual project costs would depend on actual labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. Based on these assumptions, the DCA’s updated total cost estimate is approximately \$20.1 billion in 2023 un-discounted dollars, which includes a 30 percent overall contingency applied to the construction cost estimate, and a contingency between 15 percent and 30 percent added to each element of other program costs. The DCA is also evaluating potential design modifications and construction innovations to enhance cost efficiency and feasibility.

Approximately \$340.7 million of investment was estimated to be needed over four years (2021 through 2024) to fund planning and pre-construction costs for the proposed Delta Conveyance Project. At its December 8, 2020 Board meeting, Metropolitan’s Board authorized the General Manager to execute a funding agreement with DWR and commit funding for a Metropolitan participation level of 47.2 percent of such costs of preliminary design, environmental planning and other pre-construction activities to assist in the environmental process for the proposed Delta Conveyance Project. Metropolitan’s 47.2 percent share represents an estimated funding commitment of \$160.8 million over the four years 2021 through 2024. Eighteen other State Water Project contractors also have approved funding a share of the planning and pre-construction costs. Like prior agreements for BDCP and California WaterFix, the funding agreement provides that funds would be reimbursed to Metropolitan if the project is approved and when the first bonds, if any, for the project are issued. In connection with approving the funding agreement, at its December 2020 Board meeting, the Board also authorized the General Manager to execute an amendment to the DCA joint

exercise of powers agreement. The amendment, which was effective December 31, 2020, addressed changes in the anticipated participation structure for the proposed Delta Conveyance Project from that contemplated for California WaterFix.

Metropolitan's December 8, 2020 action to approve the funding of planning and pre-construction costs does not commit Metropolitan to participate in the Delta Conveyance Project. Any additional funding for planning and pre-construction costs would require Board approval, a vote on which is expected to be considered in 2024 or later. Any final decision to commit to the Delta Conveyance Project and incur final design and construction costs would require further Board approval, a vote on which is not expected to occur until after key permits are obtained, likely in 2025 or later.

On August 6, 2020, DWR adopted certain resolutions to authorize the issuance of bonds to finance costs of the Delta Conveyance Project environmental review, planning, design and, if and when such a project is approved, the costs of acquisition and construction thereof. The same day, it filed a complaint in Sacramento County Superior Court seeking to validate its authority to issue the bonds. Fourteen answers were filed in the validation action. In May 2023, a bench trial was conducted by the court in connection with the validation action. On January 16, 2024, the Sacramento County Superior Court denied DWR's request for a validation order, finding that DWR exceeded its statutorily delegated authority when it adopted the bond resolutions to authorize the issuance of its bonds to finance the Delta Conveyance Project. On February 14, 2024, Metropolitan and four other supporting public water agencies filed a Notice of Appeal in California's Court of Appeal, Third Appellate District, of the Sacramento County Superior Court's ruling denying DWR's request for an order validating bond resolutions to finance the Delta Conveyance Project. DWR filed a Notice of Appeal on February 16, 2024. Eight cross appeals were filed by March 2024. In April 2024, DWR filed a motion to dismiss the cross appeals as untimely. In May 2024, DWR's motion to dismiss the cross appeals was denied without prejudice to renewing the motion in the merits briefing. The parties filed a merits briefing schedule.

Additional lawsuits could be filed in the future with respect to the Delta Conveyance Project and may impact the anticipated timing and costs.

## **Colorado River Aqueduct**

### **Background**

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River and its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (collectively, the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has the right to delivery of 1.5 million acre-feet of Colorado River water annually except as provided under shortage conditions described in Treaty Minute 323. The United States and Mexico agreed to conditions for reduced deliveries of Colorado River water to Mexico in Treaty Minute 323, adopted in 2017. Treaty Minute 323 established the rules under which Mexico agreed to take shortages and create reservoir storage in Lake Mead. Those conditions are in parity with the requirements placed on the Lower Basin States (defined below) in the Lower Basin Drought Contingency Plan (described under "– Colorado River Operations: Surplus and Storage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead*"). Mexico can also schedule delivery of an additional 200,000 acre-feet of Colorado River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

Construction of the CRA, which is owned and operated by Metropolitan, was undertaken by Metropolitan to provide for the transportation of its Colorado River water entitlement to its service area. The CRA originates at Lake Havasu on the Colorado River and extends approximately 242 miles through a series of pump stations and reservoirs to its terminus at Lake Mathews in Riverside County. Up to 1.25 million acre-feet of water per year may be conveyed through the CRA to Metropolitan's member agencies, subject to the availability of Colorado River water for delivery to Metropolitan as described below. Metropolitan first delivered CRA water to its member agencies in 1941.



#### **Colorado River Water Apportionment and Seven-Party Agreement**

Pursuant to the federal Boulder Canyon Project Act of 1928, California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in the Lower Basin States of Arizona, California and Nevada. Under an agreement entered into in 1931 among the California entities that expected to receive a portion of California's apportionment of Colorado River water (the "1931 Seven-Party Agreement") and which has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and water apportioned to Arizona and Nevada that was not needed by those states. However, during the 1990s Arizona and Nevada increased their use of water from the Colorado River, and by 2002 no unused apportionment was available for California. As a result, California has limited its annual use to 4.4 million acre-feet since 2003, not including supplies made available under water supply programs such as Intentionally Created Surplus ("ICS") and certain conservation and storage agreements. In addition, a severe drought in the Colorado River Basin from 2000-2004 reduced storage in system reservoirs, ending the availability of surplus deliveries to Metropolitan. Prior to 2003, Metropolitan could divert over 1.25 million acre-feet in any year. Since 2003, Metropolitan's net diversions of Colorado River water have ranged from a low of 537,607 acre-feet in 2019 to a high of approximately 1,179,000 acre-feet in 2015. Average annual net diversions over the ten-year period 2014 through 2023 were 917,020 acre-feet, with annual volumes dependent primarily on programs to augment supplies, including transfers of conserved water from agriculture and water made available to Metropolitan pursuant to the Exchange Agreement, in exchange for which Metropolitan delivers a like amount to SDCWA from any Metropolitan supply. See "— Quantification Settlement Agreement", "— Metropolitan and San Diego County Water Authority Exchange Agreement", and "— Colorado River Operations: Surplus and Shortage Guidelines." See also "—Current Water Conditions" and "—Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs." In 2023, Metropolitan's total available Colorado River supply was just over 1.1 million acre-feet. A portion of the available supply was stored in Metropolitan's Lake Mead ICS supplies. See also "—Storage Capacity and Water in Storage."

The following table sets forth the existing priorities of the California users of Colorado River water established under the 1931 Seven-Party Agreement.

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**PRIORITIES UNDER THE CALIFORNIA 1931 SEVEN-PARTY AGREEMENT<sup>(1)</sup>**

<b>Priority</b>	<b>Description</b>	<b>Acre-Feet Annually</b>
1	Palo Verde Irrigation District gross area of 104,500 acres of land in the Palo Verde Valley	 3,850,000
2	Yuma Project in California not exceeding a gross area of 25,000 acres in California	
3(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys <sup>(2)</sup> to be served by All-American Canal	
3(b)	Palo Verde Irrigation District – 16,000 acres of land on the Lower Palo Verde Mesa	
4	Metropolitan Water District of Southern California for use on the coastal plain	550,000
	<b>SUBTOTAL</b>	4,400,000
5(a)	Metropolitan Water District of Southern California for use on the coastal plain	550,000
5(b)	Metropolitan Water District of Southern California for use on the coastal plain <sup>(3)</sup>	112,000
6(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys to be served by the All-American Canal	 300,000
6(b)	Palo Verde Irrigation District – 16,000 acres of land on the Lower Palo Verde Mesa	
	<b>TOTAL</b>	5,362,000
7	Agricultural use in the Colorado River Basin in California	Remaining surplus

*Source: Metropolitan.*

- (1) Agreement dated August 18, 1931, among Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley County Water District, Metropolitan, the City of Los Angeles, the City of San Diego and the County of San Diego. These priorities were memorialized in the agencies' respective water delivery contracts with the Secretary of the Interior.
- (2) The Coachella Valley Water District serves Coachella Valley.
- (3) In 1946, the City of San Diego, the San Diego County Water Authority, Metropolitan and the Secretary of the Interior entered into a contract that merged and added the City and County of San Diego's rights to storage and delivery of Colorado River water to the rights of Metropolitan.

**Quantification Settlement Agreement**

The Quantification Settlement Agreement ("QSA"), which was executed by the Coachella Valley Water District ("CVWD"), Imperial Irrigation District ("IID"), and Metropolitan in October 2003, together with various QSA-related agreements including those in which SDCWA is a party, established Colorado River water use limits for IID and CVWD, and provided for specific acquisitions of conserved water and water supply arrangements. The QSA and related agreements provide a framework for Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California's Colorado River water agencies.

Specific programs under the QSA and related agreements include lining portions of the All-American and Coachella Canals, which were completed in 2009 and conserve over 98,000 acre-feet annually. Metropolitan receives this water and delivers over 77,000 acre-feet of exchange water annually to SDCWA, and provides 16,000 acre-feet of water annually by exchange to the United States for use by the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido, and the Vista Irrigation District. Water became available for exchange with the United States following a May 17, 2017 notice from the Federal Energy Regulatory Commission (“FERC”) satisfying the last requirement of Section 104 of the San Luis Rey Indian Water Rights Settlement Act (Title I of Public Law 100-675, as amended). The QSA and related agreements also authorized the transfer of conserved water annually by IID to SDCWA (up to a maximum amount in 2021 of 205,000 acre-feet, then stabilizing to 200,000 acre-feet per year). Metropolitan receives this water and delivers an equal amount of exchange water annually to SDCWA. See description under “– Metropolitan and San Diego County Water Authority Exchange Agreement” below; see also “METROPOLITAN REVENUES–Principal Customers” in this Appendix A. Also included under the QSA related agreements is a delivery and exchange agreement between Metropolitan and CVWD that provides for Metropolitan, when requested, to deliver annually up to 35,000 acre-feet of Metropolitan’s State Water Project contractual water to CVWD by exchange with Metropolitan’s available Colorado River supplies.

#### **Metropolitan and San Diego County Water Authority Exchange Agreement**

No facilities exist to deliver conserved water acquired by SDCWA from IID and water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals. See “–Quantification Settlement Agreement.” Accordingly, in 2003, Metropolitan and SDCWA entered into an exchange agreement (the “Exchange Agreement”), pursuant to which SDCWA makes available to Metropolitan at its intake at Lake Havasu on the Colorado River the conserved Colorado River water SDCWA receives under the QSA related agreements. Metropolitan delivers an equal volume of water from its own sources of supply through its delivery system to SDCWA. The Exchange Agreement limits the amount of water that Metropolitan delivers to 277,700 acre-feet per year, except that an additional 5,000 acre-feet was exchanged in 2021 and an additional 2,500 acre-feet was exchanged in 2022. In consideration for the exchange of the conserved water made available to Metropolitan by SDCWA with the exchange water delivered by Metropolitan, SDCWA pays the agreement price. The price payable by SDCWA is calculated using the charges set by Metropolitan’s Board from time to time to be paid by its member agencies for the conveyance of water through Metropolitan’s facilities. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A for a description of Metropolitan’s charges for the conveyance of water through Metropolitan’s facilities and litigation in which SDCWA is challenging such charges. The term of the Exchange Agreement, as it relates to conserved water transferred by IID to SDCWA, extends through 2047, and as it relates to water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals, extends through 2112; subject, in each case, to the right of SDCWA, upon a minimum of five years’ advance written notice to Metropolitan, to permanently reduce the aggregate quantity of conserved water made available to Metropolitan under the Exchange Agreement to the extent SDCWA decides continually and regularly to transport such conserved water to SDCWA through alternative facilities (which do not presently exist). In 2023, the preliminary estimate of water delivered to Metropolitan by SDCWA for exchange was approximately 227,700 acre-feet, consisting of 150,000 acre-feet of IID conservation plus 77,700 acre-feet of conserved water from the Coachella Canal and All-American Canal lining projects. The volume from IID conservation exchanged under the agreement in 2023 was less than the stabilized volume of 200,000 acre-feet described above because 50,000 acre-feet were left in Lake Mead as a part of 2023 system conservation agreements among the Bureau of Reclamation, Metropolitan, SDCWA, and IID under the Bureau of Reclamation’s Lower Colorado River Basin System Conservation and Efficiency Program.



### **Colorado River Operations: Surplus and Shortage Guidelines**

**General.** The Secretary of the Interior is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. Each year, the Secretary of the Interior is required to declare the Colorado River water supply availability conditions for the Lower Basin States in terms of “normal,” “surplus” or “shortage” and has adopted operations criteria in the form of guidelines to determine the availability of surplus or potential shortage allocations among the Lower Basin States and reservoir operations for such conditions.

**Interim Surplus Guidelines.** In January 2001, the Secretary of the Interior adopted guidelines (the “Interim Surplus Guidelines”), initially for use through 2016, in determining the availability and quantity of surplus Colorado River water available for use in California, Arizona and Nevada. The Interim Surplus Guidelines were amended in 2007 and now extend through 2026. The purpose of the Interim Surplus Guidelines was to provide mainstream users of Colorado River water, particularly those in California and Nevada who had been utilizing surplus flows, a greater degree of predictability with respect to the availability and quantity of surplus water. Under the Interim Surplus Guidelines, Metropolitan initially expected to divert up to 1.25 million acre-feet of Colorado River water annually under foreseeable runoff and reservoir storage scenarios from 2004 through 2016. However, as described above, an extended drought in the Colorado River Basin reduced these initial expectations, and Metropolitan has not received any surplus water since 2002 and does not expect to receive any surplus water in the foreseeable future.

**Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.** In May 2005, the Secretary of the Interior directed the Bureau of Reclamation to develop additional strategies for improving coordinated management of the reservoirs of the Colorado River system. In November 2007, the Bureau of Reclamation issued a Final EIS regarding new federal guidelines concerning the operation of the Colorado River system reservoirs, particularly during drought and low reservoir conditions. These guidelines provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provide a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead, and extend the Interim Surplus Guidelines through 2026 (as noted above). The Secretary of the Interior issued the final guidelines through a Record of Decision signed in December 2007. The Record of Decision and accompanying agreement among the Colorado River Basin States protect reservoir levels by reducing deliveries during low inflow periods, encouraging agencies to develop conservation programs and allowing the Colorado River Basin States to develop and store new water supplies. The Colorado River Basin Project Act of 1968 insulates California from shortages in all but the most extreme hydrologic conditions. Consistent with these legal protections, under the guidelines, Arizona and Nevada are first subject to the initial annual shortages identified by the Secretary in a shared amount of up to 500,000 acre-feet.

The guidelines also created the ICS program, which allows water contractors in the Lower Basin States to store conserved water in Lake Mead. Under this program, ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by Metropolitan. ICS can be created through 2026 and delivered through 2036. See the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage.” Under the guidelines and the subsequent Colorado River Drought Contingency Plan Authorization Act, California can create and deliver up to 400,000 acre-feet of extraordinary conservation ICS (“EC ICS”) annually and accumulate up to 1.5 million acre-feet of EC ICS in Lake Mead. In December 2007, California contractors for Colorado River water executed the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (the “California ICS Agreement”), which established terms and conditions for the creation, accumulation, and delivery of EC ICS by California contractors receiving Colorado River water. Under the California ICS Agreement, the State’s EC ICS creation, accumulation, and delivery limits provided to California under the 2007 interim shortage guidelines are apportioned between IID and Metropolitan. No other California contractors were

permitted to create or accumulate ICS. Under the terms of the agreement, IID is allowed to store up to 25,000 acre-feet per year of EC ICS in Lake Mead with a cumulative limit of 50,000 acre-feet, in addition to any acquired Binational ICS water (water that has been conserved through conservation projects in Mexico). Metropolitan is permitted to use the remaining available ICS creation, delivery, and accumulation limits provided to California.

The Secretary of the Interior delivers the stored ICS water to Metropolitan in accordance with the terms of December 13, 2007, January 6, 2010, and November 20, 2012 Delivery Agreements between the United States and Metropolitan. As of January 1, 2024, Metropolitan had an estimated 1,544,000 acre-feet in its ICS accounts. These ICS accounts include water conserved by fallowing in the Palo Verde Valley, projects implemented with IID in its service area, groundwater desalination, the Warren H. Brock Reservoir Project, and international agreements that converted water conserved by Mexico to the United States.

***Colorado River Drought Contingency Plans.*** Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience drought conditions. The seven Colorado River Basin States, the U.S. Department of the Interior (“Department of the Interior”) through the Bureau of Reclamation, and water users in the Colorado River Basin, including Metropolitan, began developing Drought Contingency Plans (“DCPs”) to reduce the risk of Lake Powell and Lake Mead declining below critical elevations through 2026.

In April 2019, the President of the United States signed the Colorado River Drought Contingency Plan Authorization Act (referenced above), directing the Secretary of the Interior to sign and implement four DCP agreements related to the Upper and Lower Basin DCPs without delay. The agreements were executed and the Upper and Lower Basin DCPs became effective on May 20, 2019. The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead’s elevation is projected to be 1,045 feet above sea level or below on January 1. Depending on the lake’s elevation, California’s contributions would range from 200,000 to 350,000 acre-feet a year (“DCP Contributions”). Pursuant to intrastate implementation agreements and a settlement agreement with IID, Metropolitan will be responsible for 90 percent of California’s DCP Contributions under the Lower Basin DCP. CVWD will be responsible for 7 percent of California’s required DCP Contributions. While IID is not a party to the DCP, if Metropolitan is required to make a DCP contribution, IID will assist Metropolitan in making DCP contributions by contributing the lesser of either: (a) three percent of California’s DCP contribution or (b) the amount of water IID has stored with Metropolitan. The terms of the settlement agreement with IID referenced above and the mechanism by which IID will contribute to California’s DCP Contributions is described in more detail under “–Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs – *California ICS Agreement Intrastate Storage Provisions*” in this Appendix A. No DCP contribution is required by California in 2024.

Implementation of the Lower Basin DCP enhances Metropolitan’s ability to store water in Lake Mead and ensures that water in storage can be delivered later. The Lower Basin DCP increases the total volume of water that California may store in Lake Mead by 200,000 acre-feet, for a total of 1.7 million acre-feet, which Metropolitan will have the right to use. However, under the September 12, 2019 DCP Contributions and ICS Accumulation Limits Sharing Agreement, California agreed to make up to 50,000 acre-feet of its accumulation space available to Arizona through 2026. Arizona has used this accumulation space, therefore making the effective increase in the volume of water California may store 1.65 million acre-feet. Both EC ICS and Binational ICS count towards the total volume of water that California may store in Lake Mead. Water stored as ICS will be available for delivery as long as Lake Mead’s elevation remains above 1,025 feet. Previously, that water would likely have become inaccessible below a Lake Mead elevation of 1,075 feet. DCP Contributions may be made through conversion of existing ICS, including at times when Lake Mead’s elevation falls below 1,025 feet, allowing Metropolitan to deliver the full amount of its basic apportionment and available water under its CRA water transfer and exchange programs even

in years when a DCP Contribution is required. DCP Contributions made through conversion of existing ICS become DCP ICS. DCP Contributions may also be made by leaving water in Lake Mead that there was a legal right to have delivered. This type of DCP Contribution becomes system water and may not be recovered. Rules are set for delivery of DCP ICS through 2026 and between 2027-2057. The Lower Basin DCP will be effective through 2026, however, the SEIS (which is described under “*Ongoing Activities Relating to Colorado River Operations*” below) could alter provisions of the DCP.

**Lake Mead 500+ Plan.** In December 2021, Metropolitan, the Department of the Interior, the Arizona Department of Water Resources, the Central Arizona Project, and the Southern Nevada Water Authority (“SNWA”) executed a memorandum of understanding for an agreement to invest up to \$200 million in projects over the two years 2022 and 2023 to keep Lake Mead from dropping to critically low levels. The agreement, known as the “500+ Plan,” aimed to add 500,000 acre-feet of additional water to Lake Mead in both 2022 and 2023 by facilitating actions to conserve water across the Lower Colorado River Basin through voluntary measures such as creation of system conservation, creation of ICS and decreases in planned ICS releases. The additional water, enough water to serve about 1.5 million households per year, would add about 16 feet total to the reservoir’s level. Under the memorandum of understanding, the Arizona Department of Water Resources committed to provide up to \$40 million to the initiative over two years, with Metropolitan, the Central Arizona Project and SNWA each agreeing to contribute up to \$20 million. The federal government planned to match those commitments, providing an additional \$100 million. As of the end of calendar year 2022, over 500,000 acre-feet of additional water was added to Lake Mead. Metropolitan’s financial contribution through the end of calendar year 2022 totaled approximately \$4 million. In 2023, existing conservation projects for the Lower Colorado River Basin were terminated to allow the programs to enroll in the Bureau of Reclamation’s Lower Colorado River Basin System Conservation and Efficiency Program as part of the Inflation Reduction Act of 2022 (the “IRA”), which included funds (described below) to assist in addressing the Lower Colorado River drought conditions. California Lower Colorado River Basin contract and entitlement holders continue to pursue a goal of conserving 400,000 acre-feet annually through 2026. See also “–Endangered Species Act and Other Environmental Considerations Relating to Water Supply – Endangered Species Act Considerations - Colorado River.”

**Lower Colorado River Basin System Conservation and Efficiency Program.** The United States Congress appropriated \$4 billion for drought mitigation in the IRA. Using funds made available through the IRA, the Bureau of Reclamation established the Lower Colorado River Basin System Conservation and Efficiency Program as part of a commitment made by the U.S. Department of the Interior on August 16, 2022 to take actions designed to address the unprecedented drought in the Lower Colorado River Basin. The program is in the process of selecting projects for funding proposed by Colorado River water delivery contract or entitlement holders for system conservation and efficiencies in the Lower Colorado River Basin that also lead to additional conservation and bridge the immediate conservation need while moving toward improved system efficiency and more durable long-term solutions. Metropolitan submitted several proposals for funding system conservation in both the short- and long-term.

In the short-term, Metropolitan has executed contracts with the Bureau of Reclamation pursuant to which the Bureau of Reclamation, rather than Metropolitan, will pay for conserved water from Metropolitan’s PVID Land Management, Crop Rotation and Water Supply Program from August 1, 2023 to July 31, 2026, and from the Quechan Forbearance Program for calendar years 2023 through 2025. Water generated from these programs and these time periods will benefit Lake Mead as system water rather than accrue to Metropolitan. Later in 2024, Metropolitan also anticipates executing an additional contract with the Bureau of Reclamation where the Bureau of Reclamation will pay for conserved water from Metropolitan’s Bard Seasonal Fallowing Program for calendar years 2024 through 2026 and water generated from that program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan.

In the long-term, Metropolitan has submitted a proposal for the creation of system water through adoption of new conservation and local supply programs, or enhancements of existing programs. Negotiations on long-term system conservation are still on-going.

***Ongoing Activities Relating to Colorado River Operations.*** Before the DCP and 2007 Lower Basin shortage guidelines terminate in 2026, the U.S. Department of the Interior through the Bureau of Reclamation, the seven Colorado River Basin States, and water users in the Colorado River Basin, including Metropolitan, are expected to develop new shortage guidelines for the management and operation of the Colorado River.

In a process separate from the post-2026 guidelines development process, in November 2022, the Bureau of Reclamation initiated an expedited process to modify the 2007 interim guidelines for Colorado River operations in 2023, 2024, and possibly through 2026 to address the potential for continued low-runoff conditions and water shortages in the Colorado River Basin. In April 2023, the Bureau of Reclamation released a draft Supplemental Environmental Impact Statement (“SEIS”) for public comment to modify the 2007 interim guidelines for proposed changes to operations starting in 2024 and to inform potential operations in 2025 and 2026 that would include reduced releases from Glen Canyon Dam and increased lower basin shortages. On May 22, 2023, representatives of the States of Arizona, California, and Nevada (the “Lower Basin States”) sent a letter to the Bureau of Reclamation outlining the terms of a consensus proposal to conserve an additional volume of at least three million acre-feet of Colorado River water in the lower basin by the end of calendar year 2026, with at least 1.5 million acre-feet of that additional total being conserved by the end of calendar year 2024 (the “Lower Basin Plan”). This conservation would be in addition to existing shortage apportionments and DCP contribution obligations under the current 2007 interim guidelines, Lower Basin DCP, and Treaty Minute 323. On May 22, 2023, the Department of the Interior announced that it was temporarily withdrawing the draft SEIS so that it could fully analyze the effects of the proposal submitted by the Lower Basin States. In October 2023, the Bureau of Reclamation released a revised draft SEIS, which was published in the Federal Register on October 27, 2023. The revised draft SEIS analyzed two alternatives in detail: a “No Action Alternative” and the Lower Basin Plan proposal as the “Proposed Action” alternative. The revised draft SEIS also reflected the improved hydrology in the Colorado River Basin since the original draft SEIS analysis. In light of these improved conditions, the probability of Lake Powell and Lake Mead falling below critical elevation levels during the 2024 through 2026 timeframe that any adopted modifications of the 2007 interim guidelines would be operable has been reduced. On March 5, 2024, the Bureau of Reclamation released its Final SEIS selecting the Lower Basin Plan as the “Preferred Alternative” for Colorado River operations through 2025. The Bureau of Reclamation issued a Record of Decision to modify the 2007 interim guidelines consistent with the Lower Basin Plan in May 2024. The modified guidelines will also be used to set operating conditions in 2026.

Under the Lower Basin Plan, California is anticipated to conserve at least 1.6 million acre-feet of the additional three million acre-feet by the end of 2026. It is expected that up to 2.3 million acre-feet of the conservation will be made through projects submitted to, and if awarded, implemented under the Bureau of Reclamation’s Lower Colorado River Basin System Conservation and Efficiency Program and funded through the IRA (as referenced above under “–Lake Mead 500+ Plan”), with the remainder achieved through other compensated and uncompensated conservation. Uncompensated conservation commitments may be met with the use of newly created EC ICS. Any ICS designated as meeting the new conservation goal cannot be delivered, transferred or assigned through December 31, 2026. See also “–*Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.*”

On October 11, 2023, the Bureau of Reclamation also submitted a request for initiation of formal consultation to the U.S. Fish and Wildlife Service (“USFWS”) for short-term additional reduction in Colorado River flows and activities provided under the Lower Colorado River Multi-Species Conservation Program beginning in water accounting year 2023 and ending with the issuance of a new biological opinion to cover new or revised post-2026 Colorado River operating guidelines. This new biological opinion would

provide the additional ESA coverage for flow reductions anticipated in the SEIS Proposed Action alternative. See also “–Endangered Species Act and Other Environmental Considerations Relating to Water Supply – Endangered Species Act Considerations - Colorado River.”

On June 16, 2023, the Department of the Interior formally initiated the process for the development of new post-2026 operating guidelines to replace the 2007 interim shortage guidelines and coordinated management strategies and published a Notice of Intent in the Federal Register to prepare the EIS related to such post-2026 guidelines and to solicit comments and hold public scoping meetings on their development. The public scoping period closed on August 15, 2023. The Bureau of Reclamation is currently developing alternatives for evaluation in the EIS. On March 6, 2024, the Upper Basin states of Wyoming, Colorado, New Mexico and Utah submitted a proposal for evaluation by the Bureau of Reclamation in the EIS (the “Upper Division States Alternative”). The Upper Division States Alternative proposed water supply reductions would be made on the Lower Basin States based on the combined volume in Lake Mead and Lake Powell, with reductions to be determined using actual water conditions in October, rather than predictions in August as currently employed under the 2007 interim shortage guidelines. The Upper Division States Alternative also includes rules for Glen Canyon Dam releases. The Lower Basin States (California, Arizona, and Nevada) submitted a joint proposal for evaluation on March 6, 2024. The proposal submitted by the Lower Basin States for evaluation by the Bureau of Reclamation (the “Lower Basin Alternative”) includes new higher reductions in water supply across a wider range of system conditions than those implemented in the 2007 interim guidelines, including reductions for California. Under this proposal, reductions to water users in the Lower Basin would be determined based on the total live storage in seven reservoirs in the Colorado River Basin (referred to as total system contents), including Lakes Powell, Mead, Mohave, Havasu as well as Flaming Gorge, Blue Mesa, and Navajo Reservoirs. Reductions for Lower Basin water users are proposed to phase-in starting when the collective volume at these reservoirs is less than 69 percent of water that can be withdrawn. Reductions for Lower Basin water users are proposed to reach a static level of 1.5 million acre-feet when the collective volume at these reservoirs is less than 58 percent and California’s proposed share of this 1.5 million acre-foot reduction is 440,000 acre-feet. Further reductions are assumed when the collective volume at these reservoirs is less than 38 percent, however, the proposal did not include details for how those additional reductions would be shared at a state level. The Lower Basin Alternative also includes rules for Glen Canyon Dam releases.

The impacts to California and Metropolitan of the current alternatives proposed for consideration by the Bureau of Reclamation in the development of the post-2026 operating guidelines are still unknown and subject to analysis by the Bureau of Reclamation, the selection of a Preferred Alternative, and continued negotiations. The draft Environmental Impact Statement (“DEIS”) is expected to be published in December 2024. As of January 1, 2024, Metropolitan’s storage in Lake Mead was estimated to be approximately 1.54 million acre-feet. This storage is expected to provide flexibility to Metropolitan in meeting potential additional water reductions that may occur under new post-2026 operating guidelines. See “–Storage Capacity and Water in Storage.”

***Related Litigation–Navajo Nation Suit.*** In 2003, the Navajo Nation filed litigation against the Department of the Interior, specifically the Bureau of Reclamation and the Bureau of Indian Affairs, alleging that the Bureau of Reclamation has failed to determine the extent and quantity of the water rights of the Navajo Nation in the Colorado River and that the Bureau of Indian Affairs has failed to otherwise protect the interests of the Navajo Nation. The complaint challenged the adequacy of the environmental review for the Interim Surplus Guidelines (described under “–Colorado River Operations: Surplus and Shortage Guidelines – *Interim Surplus Guidelines*”) and sought to prohibit the Department of the Interior from allocating any “surplus” water until such time as a determination of the rights of the Navajo Nation is completed. Metropolitan and other California water agencies filed motions to intervene in this action. In October 2004, the court granted the motions to intervene and stayed the litigation to allow negotiations among the Navajo Nation, federal defendants, Central Arizona Water Conservation District, State of Arizona and Arizona Department of Water Resources. After years of negotiations, a tentative settlement

was proposed in 2012 that would have provided the Navajo Nation with specified rights to water from the Little Colorado River and groundwater basins under the reservation, along with federal funding for the development of water supply systems on the tribe's reservation. The proposed agreement was rejected by tribal councils for both the Navajo and the Hopi, who were seeking to intervene. In June 2013, the Navajo Nation amended its complaint and added a legal challenge to the Lower Basin Shortage Guidelines adopted by the Secretary of the Interior in 2007 that allow Metropolitan and other Colorado River water users to store water in Lake Mead (described under “– Colorado River Operations: Surplus and Shortage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead*”). Metropolitan has used these new guidelines to store over 1,000,000 acre-feet of water in Lake Mead, a portion of which has been delivered, and the remainder of which may be delivered at Metropolitan's request in future years.

Following years of procedural challenges and appeals, on June 22, 2023, the U.S. Supreme Court issued its ruling in the *Department of Interior v. Navajo Nation* and *State of Arizona v. Navajo Nation* consolidated cases. The Court held that the 1868 treaty establishing the Navajo Reservation reserved necessary water to accomplish the purpose of the Navajo Reservation, but did not require the United States to take affirmative steps to secure the water for the Navajo Nation. As a result the Lower Basin Shortage Guidelines remain in effect and unchanged.

## **Endangered Species Act and Other Environmental Considerations Relating to Water Supply**

### **Endangered Species Act Considerations - State Water Project**

**General.** DWR has altered the operations of the State Water Project to accommodate species of fish listed as threatened or endangered under the federal ESA and/or California ESA.

The federal ESA requires that before any federal agency authorizes, funds, or carries out an action that may affect a listed species or designated critical habitat, it must consult with the appropriate federal fishery agency (either the National Marine Fisheries Service (“NMFS”) or the USFWS depending on the species) to determine whether the action would jeopardize the continued existence of any threatened or endangered species, or adversely modify habitat critical to the species' needs. The result of the consultation is known as a “biological opinion.” In a biological opinion, a federal fishery agency determines whether the action would cause jeopardy to a threatened or endangered species or adverse modification to critical habitat; and if jeopardy or adverse modification is found, recommends reasonable and prudent alternatives that would allow the action to proceed without causing jeopardy or adverse modification. If no jeopardy or adverse modification is found, the fish agency issues a “no jeopardy opinion.” The biological opinion also includes an “incidental take statement.” The incidental take statement allows the action to go forward even though it will result in some level of “take,” including harming or killing some members of the species, incidental to the agency action, provided that the agency action does not jeopardize the continued existence of any threatened or endangered species and complies with reasonable mitigation and minimization measures recommended by the federal fishery agency or as incorporated into the project description.

The California ESA generally requires an incidental take permit or consistency determination for any action that may cause take of a State-listed species of fish or wildlife. To issue an incidental take permit or consistency determination, CDFW must determine that the impacts of the authorized take will be minimized and fully mitigated and will not cause jeopardy.

**Federal ESA–Biological Opinions.** On August 2, 2016, DWR and the Bureau of Reclamation requested that USFWS and NMFS reinitiate federal ESA consultation on the coordinated operations of the State Water Project and the federal Central Valley Project to update them with the latest best available science and lessons learned operating under the prior 2008 and 2009 biological opinions. In January 2019, the Bureau of Reclamation submitted the initial biological assessment to USFWS and NMFS. The



biological assessment contains a description of the Bureau of Reclamation's and DWR's proposed long-term coordinated operations plan (the "2019 Long-Term Operations Plan"). On October 22, 2019, USFWS and NMFS issued new federal biological opinions (the "2019 biological opinions") that provide incidental take coverage for the 2019 Long-Term Operations Plan. On February 18, 2020, the Bureau of Reclamation signed a Record of Decision, pursuant to NEPA, completing its environmental review and adopting the 2019 Long-Term Operations Plan.

The 2019 Long-Term Operations Plan incorporates and updates many of the requirements contained in the previous 2008 and 2009 biological opinions. It also includes over \$1 billion over a ten-year period in costs for conservation, monitoring and new science, some of which is in the form of commitments carried forward from the previous biological opinions. Those costs are shared by the State Water Project and the federal Central Valley Project. The prior 2008 and 2009 biological opinions resulted in an estimated reduction in State Water Project deliveries of 0.3 million acre-feet during critically dry years to 1.3 million acre-feet in above normal Water Years as compared to the previous baseline. The 2019 Long-Term Operations Plan and 2019 biological opinions were originally expected to increase State Water Project deliveries by an annual average of 200,000 acre-feet as compared to the previous biological opinions, although this possible increase in supply was never realized due to State permit requirements.

On January 20, 2021, President Biden issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (the "President's Executive Order on Public Health and the Environment") directing all executive departments and agencies to immediately review, and, as appropriate and consistent with applicable law, take action to address the promulgation of federal regulations and other actions during the prior four years for consistency with the new administration's policies. Among numerous actions identified for review, the U.S. Department of Commerce and the Department of the Interior heads reviewed the 2019 biological opinions. On September 30, 2021, the Bureau of Reclamation Regional Director for Interior Region 10 sent a letter to the USFWS and NMFS re-initiating consultation on the long-term operations of the state and federal water projects. The consultation process requires the Bureau of Reclamation and DWR to develop a biological assessment describing the proposed operating criteria and perform an effects analysis. NMFS and USFWS are required to review the biological assessment and determine whether the proposed operating criteria would cause jeopardy or adverse modification of critical habitat. On February 28, 2022, the Notice of Intent was published in the Federal Register officially starting the federal ESA and NEPA process. On July 26, 2024, the Bureau of Reclamation released a public Draft EIS for the long-term operation of the Central Valley Project and the State Water Project. The Draft EIS considers four alternatives and two sub-alternatives, as well as a no-action alternative for the operation of the Central Valley Project and the State Water Project, and addresses the review of the 2019 biological opinions required by the President's Executive Order on Public Health and the Environment. The Bureau of Reclamation is taking public comment on the Draft EIS through September 9, 2024.

***Federal ESA–Litigation.*** On December 2, 2019, a group of non-governmental organizations, including commercial fishing groups and the Natural Resources Defense Council (the "NGOs"), sued USFWS and NMFS, alleging the 2019 biological opinions were arbitrary and capricious, later amending the lawsuit to include claims under the federal ESA and NEPA related to decisions made by the Bureau of Reclamation. On February 20, 2020, Natural Resources, the California Environmental Protection Agency, and the California Attorney General (collectively, the "State Petitioners") sued the federal agencies, making similar allegations. The State Water Contractors association intervened in both cases to defend the 2019 biological opinions. After a series of State motions for injunctive relief in 2020 and 2021, the State and federal governments agreed on an interim operations plan ("IOP") in 2022 and 2023 to address drought conditions and to better align Central Valley Project operations with the State Water Project, as it is operated under its California ESA incidental take permit. After extensive briefing, the court ultimately approved the IOP as a consent decree in 2022 and 2023, and a decision is pending in regard to the 2024 IOP. As part of the IOP orders, the court has stayed the litigation in anticipation of a new biological opinions by the end of

2024. Metropolitan is unable to predict the outcome of any litigation or any potential effect on Metropolitan's State Water Project water supplies.

***California ESA–DWR Permit Litigation.*** As described above, operations of the State Water Project require both federal ESA and California ESA authorizations. DWR described and analyzed its proposed State Water Project long-term operations plan for purposes of obtaining a new California ESA permit in its November 2019 Draft EIR under CEQA. Its 2019 Draft EIR proposed essentially the same operations plan as for the federal 2019 biological opinions, with the addition of operations for the State-only listed species, Longfin smelt. In December 2019, DWR submitted its application for an incidental take permit under the California ESA to CDFW, with a modified State operation plan that added new outflow and environmental commitments. On March 27, 2020, DWR released its final EIR and Notice of Determination, describing and adopting a State operation plan with additional operational restrictions and additional conservation commitments. On March 31, 2020, CDFW issued an incidental take permit for the State Water Project that included further operational restrictions and outflow. As issued, the incidental take permit reduces State Water Project deliveries by more than 200,000 acre-feet on an average annual basis as compared to the 2019 biological opinions and includes \$218 million over a ten-year period in environmental commitments for the State Water Project.

On April 28, 2020, Metropolitan and the Mojave Water Agency (“Mojave”) jointly sued CDFW, DWR and Natural Resources, alleging that the new California ESA permit and final EIR violate CEQA and the California ESA. Metropolitan and Mojave also allege that DWR breached the State Water Contract and the implied covenant of good faith and fair dealing by, among other things, accepting an incidental take permit containing mitigation requirements in excess of that required by law. Subsequently, two State Water Project contractors and a Metropolitan member agency joined with Metropolitan and Mojave in a first amended complaint. Various other water agencies, including the State Water Contractors association, also filed CEQA and CESA actions, or subsequently joined in a first amended complaint in which the individual water contractors allege causes of action for breach of contract and the implied covenant of good faith and fair dealing. In addition, another State Water Project contractor, the San Bernardino Valley Municipal Water District (“SBVMWD”), filed a complaint alleging violations of CEQA and CESA, as well as breach of contract and the implied covenant of good faith and fair dealing, unconstitutional takings, and anticipatory repudiation of contract. Several federal Central Valley Project water contractors also filed a CEQA challenge. Four other lawsuits have been filed by certain commercial fishing groups and an American Indian tribe, several environmental groups, and two in-Delta water agencies challenging the final EIR as inadequate under CEQA and alleging violations of the Delta Reform Act, public trust doctrine and, in one of the cases, certain water right statutes.

All eight cases have been coordinated in Sacramento County Superior Court. On May 7, 2021 the coordination trial judge ordered the CEQA and CESA causes of action as well as certain other administrative record-based claims alleged by petitioners in several other cases bifurcated from the State Water Project contractors' respective contractual and unconstitutional takings causes of action, with the CEQA and CESA causes of action to be tried first. The administrative records were certified in the fall of 2023. The parties are currently meeting and conferring on a merits briefing schedule for the CEQA and CESA claims. Metropolitan is unable to assess at this time the likely outcome of litigation relating to the California ESA permit, including any future litigation or any future claims that may be filed, or any potential effect on Metropolitan's State Water Project water supplies.

### **Endangered Species Act Considerations - Colorado River**

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations. A number of species that are on either “endangered” or “threatened” lists under the federal and state ESAs are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow flycatcher, and Yuma

clapper rail. To address this issue, a broad-based state/federal/tribal/private regional partnership that includes water, hydroelectric power and federal and state wildlife management agencies in Arizona, California, and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program or “MSCP”). The MSCP provides Metropolitan federal and state ESA compliance for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The MSCP also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by Metropolitan and other agencies. The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years (commencing in 2005). Over the 50-year term of the program, the total cost to Metropolitan is estimated to be about \$88.5 million (in 2003 dollars), with annual costs ranging between \$0.8 million and \$4.7 million (in 2003 dollars).

On December 7, 2023, the USFWS issued a biological opinion to the Bureau of Reclamation that provided additional incidental take due to reductions in Colorado River flows in excess of flow-related covered actions and activities provided under the Lower Colorado River Multi-Species Conservation Program, beginning October 1, 2023 and ending with the issuance of a future biological opinion to cover new or revised post-2026 Colorado River operating guidelines. The consultation for this biological opinion was initiated due to the anticipated reduction in flow between Hoover Dam and the Imperial Dam due to the proposed 500+ Plan conservation activities described under “–Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines – Lake Mead 500+ Plan.” This biological opinion is currently being utilized by the Bureau of Reclamation as part of the MSCP.

#### **Invasive Species - Mussel Control Programs**

Zebra and quagga mussels are established in many regions of the United States. Mussels can reproduce quickly and, if left unmanaged, can reduce flows by clogging intakes and raw water conveyance systems, alter or destroy fish habitats, and affect lakes and beaches. Mussel management activities may require changes in water delivery protocols to reduce risks of spreading mussel populations and increase operation and maintenance costs.

In January 2007, quagga mussels were discovered in Lake Mead. All pipelines and facilities that transport raw Colorado River water are considered to be infested with quagga mussels. Metropolitan has a quagga mussel control plan, approved by the CDFW to address the presence of mussels in the CRA system and limit further spread of mussels. Year-round monitoring for mussel larvae is conducted at various locations in the CRA system and at select non-infested areas of Metropolitan’s system and some locations in the State Water Project. Shutdown inspections have demonstrated that control activities effectively limit mussel infestation in the CRA. Metropolitan’s costs for controlling quagga mussels in the CRA system have been approximately \$5 million per year.

An established quagga mussel population is located within ten miles of the State Water Project. A few adult mussels were also detected in the West Branch of the State Water Project in 2016 and 2021. Since 2023, veligers (larval stage of quagga mussels) have been repeatedly detected in water leaving Castaic Lake and more adult mussels were found in Pyramid Lake and Castaic Lake. Although the number of adult mussels and veligers detected so far is relatively low, the number of veligers has been slowly increasing. These recent monitoring results indicate that a reproducing population of quagga mussels is established in the West Branch of the State Water Project, but the eventual extent of infestation and magnitude of impacts cannot be easily predicted at this early stage. However, Metropolitan is investigating potential control measures for water leaving Castaic Lake.

In July 2024, Colorado Parks and Wildlife announced that zebra mussel larvae were detected in the Colorado River upstream of Lake Powell. The potential impact of this first appearance of zebra mussels in a region of the Colorado River that does not currently have quagga mussels is not currently known.

## **Water Transfer, Storage and Exchange Programs**

### **General**

To supplement its State Water Project and Colorado River water supplies, Metropolitan has developed and actively manages a portfolio of water supply programs, including water transfers, storage, and exchange agreements. Supplies are conveyed through the California Aqueduct, utilizing Metropolitan's rights under its State Water Contract to use the portion of the State Water Project conveyance system necessary to deliver water to it, or through available CRA capacity. Consistent with its long-term planning efforts, Metropolitan continues to pursue voluntary water transfer and exchange programs with State, federal, public and private water districts, and individuals to help mitigate supply/demand imbalances and provide additional dry-year supply sources. A summary description of Metropolitan's supply programs is set forth below. In addition to the arrangements described below, Metropolitan is entitled to storage and access to stored water in connection with various storage programs and facilities. See "Colorado River Aqueduct" above, as well as the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "Storage Capacity and Water in Storage" below.

### **State Water Project Agreements and Programs**

In addition to the basic State Water Project contract provisions, Metropolitan has other contract rights that accrue to the overall value of the State Water Project. Because each Contractor is paying for physical facilities, they also have the right to use the facilities to move water supplies associated with agreements, water transfers and water exchanges. Metropolitan has entered into agreements and exchanges with third parties that provide additional water supplies.

Existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board. Under voluntary water transfers and exchanges with agricultural users, agricultural communities may periodically sell or conserve a portion of their agricultural water supply to make it available to support the State's urban areas. The portfolio of supplemental supplies that Metropolitan has developed to be conveyed through the California Aqueduct extend from north of the Bay-Delta to Southern California. Certain of these arrangements are described below.

***Castaic Lake and Lake Perris.*** Metropolitan has contractual rights to withdraw up to 65,000 acre-feet of water in Lake Perris (East Branch terminal reservoir) and 153,940 acre-feet of water in Castaic Lake (West Branch terminal reservoir), in addition to the annual "Table A" allocation. Any water used must be returned to the State Water Project within five years or it is deducted from allocated amounts in the sixth year. Metropolitan's storage balance as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "Storage Capacity and Water in Storage" below.

***Metropolitan Article 56 Carryover.*** Metropolitan has the right to store in San Luis Reservoir, its allocated contract amount for delivery in subsequent years. Metropolitan can store between 100,000 and 200,000 acre-feet per year, depending on the final "Table A" allocation. Metropolitan's storage balance as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "Storage Capacity and Water in Storage" below.

***Yuba River Accord.*** Metropolitan entered into an agreement with DWR in December 2007 to purchase a portion of the water released by the Yuba County Water Agency ("YCWA"). YCWA was involved in a SWRCB proceeding in which it was required to increase Yuba River fishery flows. Within

the framework of agreements known as the Yuba River Accord, DWR entered into an agreement for the long-term purchase of water from YCWA. The agreement permits YCWA to transfer additional supplies at its discretion. Metropolitan, other State Water Project contractors, and the San Luis & Delta-Mendota Water Authority entered into separate agreements with DWR for the purchase of portions of the water made available. Metropolitan's agreement allows Metropolitan to purchase, in dry years through 2025, available water supplies which have ranged from approximately 8,135 acre-feet to 67,068 acre-feet per year.

Metropolitan has also developed other groundwater storage and exchange programs, certain of which are described below. See "METROPOLITAN'S WATER DELIVERY SYSTEM–Water Quality and Treatment" in this Appendix A for information regarding certain water quality regulations and developments that impact or may impact some of Metropolitan's groundwater storage programs.

***Arvin-Edison/Metropolitan Water Management Program.*** In December 1997, Metropolitan entered into an agreement with the Arvin-Edison Water Storage District ("Arvin-Edison"), an irrigation agency located southeast of Bakersfield, California. Under the program, Arvin-Edison stores water on behalf of Metropolitan. In January 2008, Metropolitan and Arvin-Edison amended the agreement to enhance the program's capabilities and to increase the delivery of water to the California Aqueduct. To facilitate the program, new wells, spreading basins and a return conveyance facility connecting Arvin-Edison's existing facilities to the California Aqueduct have been constructed. The agreement also provides Metropolitan priority use of Arvin-Edison's facilities to convey high-quality water available on the east side of the San Joaquin Valley to the California Aqueduct. Up to 350,000 acre-feet of Metropolitan's water may be stored, and Arvin-Edison is obligated to return up to 75,000 acre-feet of stored water in any year to Metropolitan, upon request. The agreement will terminate in 2035 unless extended. Metropolitan's estimated storage account balance under the Arvin-Edison/Metropolitan Water Management Program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below. As a result of detecting 1,2,3-trichloropropane ("TCP") in Arvin-Edison wells above the maximum contaminant level ("MCL") in 2018, Metropolitan has suspended the return of groundwater from the program until the water quality concerns can be further evaluated and managed. Instead, Metropolitan has requested that Arvin-Edison provide only surface water that can satisfy DWR's standards for direct pump-back into the California Aqueduct, or alternative methods satisfactory to Metropolitan, in order to meet both the DWR pump-in requirements and Metropolitan's request for the return of water. In 2021 and 2022, Metropolitan recovered in aggregate 23,130 acre-feet from Arvin-Edison by exchanges with surface water. In 2023, Metropolitan recovered 19,000 acre-feet from surface water supplies. Staff are exploring opportunities for exchanges in 2024 but the estimated recovery of surface water supplies has yet to be determined.

In October 2021, Arvin-Edison sued The Dow Chemical Company, Shell Oil Company, and others regarding TCP in Arvin-Edison's groundwater. According to Arvin-Edison's complaint, the defendants are the manufacturers and distributors of the TCP that caused the contamination of Arvin-Edison's groundwater supplies. Arvin-Edison alleges that the widespread presence of TCP at concentrations above the MCL in its wells has caused certain of its water banking partners (including Metropolitan) to reduce and/or suspend their water banking and management programs. Based upon a mitigation feasibility study dated November 4, 2021 prepared for Arvin-Edison, Arvin-Edison estimates that treatment would cost approximately \$465 million, which includes capital costs and the present worth of operation and maintenance treatment costs over a 50-year period. The litigation is ongoing. If Arvin-Edison prevails in its litigation, a monetary recovery, if any, would be available to offset costs associated with treatment facilities to remediate the groundwater contamination.

***Semitropic/Metropolitan Groundwater Storage and Exchange Program.*** In 1994, Metropolitan entered into an agreement with the Semitropic Water Storage District ("Semitropic"), located adjacent to the California Aqueduct north of Bakersfield, to store water in the groundwater basin underlying land within Semitropic. The minimum annual yield available to Metropolitan from the program is 38,200 acre-feet of

water, and the maximum annual yield is 239,700 acre-feet of water depending on the available unused capacity and the State Water Project allocation. The agreement extends to November 2035. Metropolitan's estimated storage account balance under the Semitropic program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below. TCP has been detected in the groundwater supplies within Semitropic; however, detection levels at the turn-in locations for the Semitropic program have remained below the MCL and, to date, the return of groundwater to Metropolitan under the program has not been impacted.

In October 2021, Semitropic, as well as its several affiliated improvement districts (collectively referred to in this paragraph as "Semitropic"), sued The Dow Chemical Company, Shell Oil Company, and others regarding TCP in Semitropic's groundwater. According to Semitropic's complaint, the defendants are the manufacturers and distributors of the TCP that caused the contamination of Semitropic's groundwater supplies. The litigation is ongoing. If Semitropic prevails in its litigation, a monetary recovery, if any, would be available to offset costs associated with any needed treatment facilities to remediate the groundwater contamination.

***Kern Delta Storage Program.*** Metropolitan entered into an agreement with Kern Delta Water District ("Kern Delta") in May 2003, for a groundwater banking and exchange transfer program to allow Metropolitan to store up to 250,000 acre-feet of State Water Contract water in wet years and to permit Metropolitan, at Metropolitan's option, a return of up to 50,000 acre-feet of water annually during hydrologic and regulatory droughts. The agreement extends through 2028. Metropolitan's estimated storage account balance under this program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Mojave Storage Program.*** Metropolitan entered into a groundwater banking and exchange transfer agreement with Mojave in October 2003. The agreement allows for Metropolitan to store water in an exchange account for later return. The agreement allows Metropolitan to annually withdraw Mojave State Water Project contractual amounts, after accounting for local needs. Under a 100 percent allocation, the State Water Contract provides Mojave 89,800 acre-feet of water. This agreement was amended in 2011 to allow for the cumulative storage of up to 390,000 acre-feet. The term of this agreement extends through 2035. Metropolitan's estimated storage account balance under this program as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern Storage and Exchange Program.*** In 2016, Metropolitan entered into an agreement with the Antelope Valley-East Kern Water Agency ("AVEK"), the third largest State Water Project contractor, to both exchange supplies and store water in the Antelope Valley groundwater basin. Under the exchange, AVEK would provide at least 30,000 acre-feet over ten years of its unused Table A State Water Project water to Metropolitan. For every two acre-feet provided to Metropolitan as part of the exchange, AVEK would receive back one acre-foot in the future. For the one acre-foot that is retained by Metropolitan, Metropolitan would pay AVEK under a set price schedule based on the State Water Project allocation at the time. Under this agreement, AVEK also provides Metropolitan up to 30,000 acre-feet of storage. Metropolitan's estimated storage account balance under this program as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern High Desert Water Bank Program.*** In 2019, Metropolitan entered into an agreement with AVEK for a groundwater banking program referred to as the High Desert Water Bank Program. The original estimated cost of construction of the facilities to be funded by Metropolitan to implement the program was \$131 million, but the estimated cost subsequently increased to \$211 million due to inflation, finalization of the off-site power distribution design, and revisions to the design. In September 2023, Metropolitan's Board authorized \$80 million for the additional costs. Water quality testing



of the deeper recovery wells installed in 2021 revealed that arsenic levels in all four wells were above the federal and State MCL of 10 micrograms per liter (“µg/L”), ranging from 11 to 19 µg/L. Arsenic naturally occurs in the Antelope Valley groundwater basin, with levels detected throughout the basin but such levels are generally higher in the deeper aquifer. Based on the current water quality data, recovered water from the High Desert Water Bank Program requires treatment before delivery to the California Aqueduct. Metropolitan is working with AVEK to complete additional groundwater modeling and analysis to understand arsenic’s behavior in the basin, identify other constituents of concern, and optimize the design of the remaining recovery wells and treatment system. Staff will return to the Board in Fall 2024 to request authorization for additional costs related to the recommended treatment system. Following completion of construction, which is expected by the end of 2027, Metropolitan would have the right to store up to 70,000 acre-feet per year of its unused Table A State Water Project water or other supplies in the Antelope Valley groundwater basin for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. At Metropolitan’s direction, up to 70,000 acre-feet of stored water annually would be available for return by direct pump back into the East Branch of the California Aqueduct. In 2023, a portion of the recharge facilities was completed and Metropolitan began storing water in September. Metropolitan’s estimated storage account balance under this program as of January 1, 2024, is shown in the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “–Storage Capacity and Water in Storage” below. Upon full completion of construction (expected by the end of 2027), this program would provide additional flexibility to store and recover water for emergency or water supply needs through 2057.

***San Gabriel Valley Municipal Water District and Other Exchange Programs.*** In 2013, Metropolitan entered into an agreement with the San Gabriel Valley Municipal Water District (“SGVMWD”). Under this agreement, Metropolitan delivers treated water to a SGVMWD subagency in exchange for twice as much untreated water in the groundwater basin. Metropolitan’s member agencies can then use the groundwater supplies to meet their needs. Metropolitan can exchange and purchase at least 5,000 acre-feet per year. This program has the potential to increase Metropolitan’s reliability by providing 115,000 acre-feet through 2035.

***Irvine Ranch Water District Strand Ranch Banking Program.*** In 2011, Metropolitan entered into an agreement with the Municipal Water District of Orange County (“MWDOC”) and the Irvine Ranch Water District (“IRWD”) to authorize the delivery of State Water Project supplies from IRWD’s Strand and Stockdale Ranches into Metropolitan’s service area. IRWD facilitates Metropolitan entering into unbalanced exchanges with other State Water Project contractors. A portion of the water is returned to the partnering State Water Project contractor with the remaining balance delivered to Metropolitan’s service area. MWDOC/IRWD takes delivery of the water through Metropolitan’s distribution system and pays the Metropolitan full-service water rate. Metropolitan can call on stored supplies; in return, Metropolitan is obliged to return an equal amount of water to MWDOC in future years for IRWD’s benefit. This agreement extends to November 2035 and enhances regional reliability by providing Metropolitan with access to additional supplies.

***San Bernardino Valley Municipal Water District Exchange Program.*** In 2020, Metropolitan signed a coordinated operating and surplus water agreement with SBVMWD. In 2021, in accordance with the terms of such agreement, Metropolitan’s Board authorized an agreement with SBVMWD that provides a framework which allows for the exchange of both local and State Water Project supplies. The exchanges are equal if they occur within the same calendar year and up to two-to-one if water is returned in a subsequent calendar year. The agreement, which extends through 2031, provides for improved coordination to respond to outages and emergencies of either party.

***San Diego County Water Authority Semitropic Agreement.*** In 2021, Metropolitan’s Board approved an agreement with SDCWA for the purchase by Metropolitan of 4,200 acre-feet and a lease of 5,000 acre-feet of return capacity from SDCWA’s Semitropic Program for 2022. See “–Semitropic/Metropolitan Groundwater Storage and Exchange Program.” Similarly, in 2023, Metropolitan

and SDCWA executed an agreement for Metropolitan to purchase 4,200 acre-feet and lease of 4,381 acre-feet of delivery capacity from SDCWA's Semitropic Program. The agreement provided for improved regional reliability and also allows for the exchange of previously stored water with Metropolitan in the future.

***Sites Reservoir Storage Project.*** The Sites Reservoir is a proposed reservoir project of approximately 1.5 million acre-feet to be located in Colusa County, that is being developed by the Sites Project Authority, a joint exercise of powers authority. The water stored in the proposed project would be diverted from the Sacramento River. As currently proposed, the Sites Reservoir would have dedicated water storage and yield that would be used for fishery enhancement, water quality, and other environmental purposes. The proposed project could also provide an additional water supply that could be used for dry-year benefits. Metropolitan is a member of the Sites Reservoir Committee, a group of 22 agencies that are participating in certain planning activities in connection with the proposed development of the project, including project permitting and proposed reservoir operations. The Sites Project Authority Board, with a recommendation from the Sites Reservoir Committee, approved the Final EIR and approved the Sites Reservoir project on November 17, 2023. In April 2022, Metropolitan's Board approved \$20 million in funding for Metropolitan's continued participation in such planning activities through the end of 2024. Metropolitan's agreement to participate in the funding of this phase of project development does not commit Metropolitan to participate in the Sites Reservoir project in the future.

***Other Ongoing Activities.*** Metropolitan has been negotiating, and will continue to pursue, water purchase, storage and exchange programs with other agencies in the Sacramento and San Joaquin Valleys. These programs involve the storage of both State Water Project supplies and water purchased from other sources to enhance Metropolitan's dry-year supplies and the exchange of normal year supplies to enhance Metropolitan's water reliability and water quality, in view of dry conditions and potential impacts from the ESA considerations discussed above under the heading "–Endangered Species Act and Other Environmental Considerations Relating to Water Supply– Endangered Species Act Considerations – State Water Project." In January 2023, the Board authorized the General Manager to secure additional one-year transfer supplies from various water districts and private water purveyors throughout the State at a maximum cost of up to \$100 million. Under this authority, Metropolitan executed an agreement with SDCWA to purchase water and lease delivery capacity from SDCWA's Semitropic Storage Program, as described above under "–*San Diego County Water Authority Semitropic Agreement.*" In February 2024, the Board authorized the General Manager to secure additional one-year transfer supplies from various water districts and private water purveyors throughout the State at a maximum cost of up to \$50 million.

### **Colorado River Aqueduct Agreements and Programs**

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water, including through cooperative programs with other water agencies to conserve and develop supplies and through programs to exchange water with other agencies. These supplies are conveyed through the CRA. Metropolitan determines the delivery schedule of these supplies throughout the year based on changes in the availability of State Water Project and Colorado River water. Under certain of these programs, water may be delivered to Metropolitan's service area in the year made available or in a subsequent year as ICS water from Lake Mead storage. See "–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.*"

***IID/Metropolitan Conservation Agreement.*** Under a 1988 water conservation agreement, as amended in 2003 and 2007 (the "1988 Conservation Agreement") between Metropolitan and IID, Metropolitan provided funding for IID to construct and operate a number of conservation projects that have conserved up to 109,460 acre-feet of water per year that has been provided to Metropolitan. As amended, the agreement's initial term has been extended to at least 2041 or 270 days after the termination of the QSA.

Under a 2014 letter agreement, starting in 2016, 105,000 acre-feet of conserved water are made available by IID to Metropolitan each year. Under the QSA and related agreements, Metropolitan, at the request of CVWD, forgoes up to 20,000 acre-feet of this water each year for diversion by CVWD from the Coachella Canal. In each of 2018 and 2019, CVWD's requests were for 0 acre-feet, leaving 105,000 acre-feet in 2018 and 2019 for Metropolitan. In December 2019, Metropolitan signed a revised agreement with CVWD in which CVWD will limit its annual request of water from this program to 15,000 acre-feet through 2026. See “–Colorado River Aqueduct –Quantification Settlement Agreement.”

***Palo Verde Land Management, Crop Rotation and Water Supply Program.*** In August 2004, Metropolitan and Palo Verde Irrigation District (“PVID”) signed the program agreement for a Land Management, Crop Rotation and Water Supply Program. Under this program, participating landowners in the PVID service area are compensated for reducing water use by not irrigating a portion of their land. This program provides up to 133,000 acre-feet of water to be available to Metropolitan in certain years. The term of the program is 35 years. Fallowing began on January 1, 2005. The following table shows annual volumes of water saved and made available to Metropolitan during the 10 calendar years 2014 through 2023 under the Land Management, Crop Rotation and Water Supply Program with PVID:

**WATER AVAILABLE FROM PVID LAND MANAGEMENT,  
CROP ROTATION AND WATER SUPPLY PROGRAM**

<b>Calendar Year</b>	<b>Volume (acre-feet)</b>
2014	43,000
2015	94,500
2016	125,400
2017	111,800
2018	95,800
2019	44,500
2020	43,900
2021	42,305
2022	29,736
2023	20,000 (est)

*Source: Metropolitan.*

This program is being funded by the federal government for the period from August 1, 2023 to July 31, 2026 pursuant to the Lower Colorado River Basin System Conservation and Efficiency Program established by the Bureau of Reclamation. Water generated from the program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan. See “–Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines – *Lower Colorado River Basin System Conservation and Efficiency Program.*”

***Bard Water District Seasonal Fallowing Program.*** In 2019, Metropolitan entered into agreements with Bard Water District (“Bard”) and farmers within the Bard Unit, to provide incentives for land fallowing under the Bard Seasonal Fallowing Program. The program reduces water consumption in Bard and that helps augment Metropolitan’s Colorado River supplies. It incentivizes farmers to fallow their land for four months in exchange for a fixed payment per irrigable acre (initially, \$452), escalated annually. Metropolitan estimates water savings of approximately 2.0 acre-feet per fallowed acre. Bard diverts Colorado River water for crop irrigation grown year-round in the warm dry climate. Farmers typically grow high-value crops in the winter (vegetable crops) followed by a lower-value, water-intensive, field crop (such as Bermuda and Sudan grass, small grains, field grains, or cotton) in the spring and summer. Participating farmers will

reduce their water consumption through land fallowing of up to 3,000 acres in aggregate annually between April and July. In calendar year 2024, the incentive payment is \$530.61 per irrigable acre fallowed. The program is currently scheduled to end on December 31, 2026. For calendar years 2024 through 2026, this program is being funded by the federal government pursuant to the Lower Colorado River Basin System Conservation and Efficiency Program established by the Bureau of Reclamation. Water generated from the program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – *Lower Colorado River Basin System Conservation and Efficiency Program.*”

***Quechan Forbearance Program.*** In 2005, Metropolitan entered into a settlement agreement in Arizona v. California with the Quechan Indian Tribe (the “Quechan Tribe”) and other parties. The Quechan Tribe uses Colorado River water on the Fort Yuma Indian Reservation. In addition to the amount of water decreed for the benefit of the Reservation in the 1964 Arizona v. California decree, under the 2005 settlement agreement, the Quechan Tribe is entitled to (a) 20,000 acre-feet of diversions from the Colorado River or (b) the amount necessary to supply the consumptive use required for irrigation of a specified number of acres, and for the satisfaction of related uses, whichever is less. Of the additional diversions, 13,000 acre-feet became available to the Quechan Tribe in 2006. An additional 7,000 acre-feet will become available to the Quechan Tribe in 2035. Metropolitan agreed to provide annual incentive payments to the Quechan Tribe if the tribe forbore diversion of the additional water, thereby allowing Metropolitan to divert it. The value of these payments was \$125 per acre-foot in 2006 and is escalated at 2.5 percent per year. In 2024, the payment is \$190.20 per acre-foot. For calendar years 2023 through 2025, this program is being funded by the federal government pursuant to the Lower Colorado River Basin System Conservation and Efficiency Program established by the Bureau of Reclamation. Water generated from the program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – *Lower Colorado River Basin System Conservation and Efficiency Program.*”

***Quechan Tribe of the Fort Yuma Indian Reservation Seasonal Fallowing Pilot Program.*** In December 2021, Metropolitan entered into a two-year agreement with the Quechan Tribe to launch the voluntary Quechan Seasonal Fallowing Pilot Program (the “Pilot Program”) for fallowing in 2022 and 2023. In December 2023, Metropolitan and the Quechan Tribe amended the agreement to extend the Pilot Program for an additional three years through 2026. Under the Pilot Program, Metropolitan provides incentives to farmers on Quechan tribal land for land fallowing that reduces water consumption to help augment Metropolitan’s Colorado River supplies. Desert agriculture realizes a market advantage in the winter for high-value vegetables such as lettuce and broccoli. In the hot summer, farmers typically grow lower-value, water-intensive commodities such as grains and grasses. Farmers participating in the Pilot Program agree to decrease their water consumption through land fallowing of up to 1,600 acres annually during April through July. In calendar year 2022, 118.3 acres were fallowed and in calendar year 2023, 148 acres were fallowed. Metropolitan provided \$472.40 and \$503.29 per irrigable acre fallowed, respectively. The payment is escalated annually. Metropolitan estimates water savings between 1.5 and 2.0 acre-feet per irrigable acre fallowed, with actual savings to be determined throughout the Pilot Program.

***Lake Mead Storage Program.*** As described under “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,*” Metropolitan has entered into agreements to set forth the guidelines under which ICS water is developed and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead must be created through extraordinary conservation, system efficiency, tributary, imported, or binational conservation methods. Metropolitan has participated in projects to create ICS as described below:

**Drop 2 (Warren H. Brock) Reservoir.** In 2008, Metropolitan, CAWCD and SNWA provided funding for the Bureau of Reclamation’s construction of an 8,000 acre-foot off-stream regulating reservoir near

Drop 2 of the All-American Canal in Imperial County (officially named the Warren H. Brock Reservoir). Construction was completed in October 2010. The Warren H. Brock Reservoir conserves about 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost from the system. In return for its funding, Metropolitan received 100,000 acre-feet of water that was stored in Lake Mead for its future use and has the ability to receive up to 25,000 acre-feet of water in any single year. Besides the additional water supply, the addition of the Warren H. Brock Reservoir adds to the flexibility of Colorado River operations by storing underutilized Colorado River water orders caused by unexpected canal outages, changes in weather conditions, and high tributary runoff into the Colorado River. As of January 1, 2024, Metropolitan had taken delivery of 35,000 acre-feet of this water and had 65,000 acre-feet remaining in storage.

International Water Treaty Minutes 319 and 323. In November 2012, as part of the implementation of Treaty Minute 319, Metropolitan executed agreements in support of a program to augment Metropolitan's Colorado River supply between 2013 through 2017 through an international pilot project in Mexico. Metropolitan's total share of costs was \$5 million for 47,500 acre-feet of project supplies. In December 2013, Metropolitan and IID executed an agreement under which IID paid half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, or 23,750 acre-feet. As such, 23,750 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account in 2017. See "*Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.*" In September 2017, as part of the implementation of Treaty Minute 323, Metropolitan agreed to fund additional water conservation projects in Mexico that will yield approximately 27,275 acre-feet of additional supply for Metropolitan by 2026 at a cost of approximately \$3.75 million. In 2020, Metropolitan made the first payment related to Treaty Minute 323 of \$1.25 million, and 9,092 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account. In October 2023, the next payment of \$1.25 million was made, however the crediting of 9,092 acre-feet of Binational ICS was delayed until 2026 to preserve ICS accumulation space. The final payment of \$1.25 million is expected to be made in 2026 and an additional 9,091 acre-feet of Intentionally Created Mexican Allocation will be converted to Binational ICS and credited to Metropolitan's binational ICS water account.

***Storage and Interstate Release Agreement with Nevada.*** In May 2002, SNWA and Metropolitan entered into an Agreement Relating to Implementation of Interim Colorado River Surplus Guidelines, in which SNWA and Metropolitan agreed to the allocation of unused apportionment as provided in the Interim Surplus Guidelines and on the priority of SNWA for interstate banking of water in Arizona. SNWA and Metropolitan entered into a storage and interstate release agreement on October 21, 2004. Under this agreement, SNWA can request that Metropolitan store unused Nevada apportionment in California. The amount of water stored through 2014 under this agreement was approximately 205,000 acre-feet. In October 2015, SNWA and Metropolitan executed an additional amendment to the agreement under which Metropolitan paid SNWA approximately \$44.4 million and SNWA stored an additional 150,000 acre-feet with Metropolitan during 2015. Of that amount, 125,000 acre-feet have been added to SNWA's storage account with Metropolitan, increasing the total amount of water stored to approximately 330,000 acre-feet. In subsequent years, SNWA may request recovery of the stored water. When SNWA requests the return of any of the stored 125,000 acre-feet, SNWA will reimburse Metropolitan for an equivalent proportion of the \$44.4 million plus inflation based on the amount of water returned. SNWA has not yet requested the return of any of the water stored with Metropolitan and it is not expected that SNWA will request a return of any of the stored water before 2026.

***California ICS Agreement Intrastate Storage Provisions.*** As described under "*Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,*" in 2007, IID, Metropolitan and other Colorado River contractors in California executed the California ICS Agreement,

which divided California's ICS storage space in Lake Mead between Metropolitan and IID. It also allowed IID to store up to 50,000 acre-feet of conserved water in Metropolitan's system. In 2015, the California ICS Agreement was amended to allow IID to store additional amounts of water in Metropolitan's system during 2015 through 2017. Under the 2015 amendment, IID was permitted to store up to 100,000 acre-feet per year of conserved water within Metropolitan's system with a cumulative limit of 200,000 acre-feet, for the three-year term. When requested by IID, Metropolitan has agreed to return to IID the lesser of either 50,000 acre-feet per year, or in a year in which Metropolitan's member agencies are under a shortage allocation, 50 percent of the cumulative amount of water IID has stored with Metropolitan under the 2015 amendment. IID currently has 154,000 acre-feet of water stored with Metropolitan pursuant to the terms of the California ICS Agreement and its amendment.

In 2018, IID had reached the limit on the amount of water it was able to store in Metropolitan's system under the California ICS Agreement and entered into discussions with Metropolitan to further amend the agreement, but no such agreement was reached. On December 4, 2020, IID filed a complaint against Metropolitan alleging that Metropolitan breached the California ICS Agreement, breached the implied covenant of good faith and fair dealing, and that Metropolitan converted IID's intentionally created surplus for its own use. IID's complaint sought the imposition of a constructive trust over 87,594 acre-feet of water in Lake Mead that was received by Metropolitan in 2018.

In October 2021, Metropolitan and IID agreed to settle the dispute, and on December 6, 2021, the lawsuit was dismissed with prejudice. Under the terms of the settlement agreement, Metropolitan will, after applying storage losses, retain approximately 40 percent of the disputed 87,594 acre-feet that Metropolitan received in 2018 and will have stored the remaining approximately 60 percent for IID to be returned to IID in 2026. If Metropolitan does not have sufficient ICS to make a DCP contribution in 2026, Metropolitan may use the remaining stored water to do so. From 2021 through 2026, IID may store up to an additional 25,000 acre-feet per year (with an accumulation limit of an additional 50,000 acre-feet) of conserved water in Metropolitan's Lake Mead ICS account. While IID will still not be a party to the DCP, if Metropolitan is required to make a DCP contribution, IID will assist Metropolitan in making DCP contributions by contributing the lesser of either: (a) three percent of California's DCP contribution; or (b) the amount of water IID has stored with Metropolitan. Between 2021 and 2022, IID had stored and accumulated 34,528 acre-feet of conserved water in Metropolitan's Lake Mead ICS account. IID did not elect to store any additional water in Metropolitan's Lake Mead ICS account for 2023.

### **State Water Project and Colorado River Aqueduct Arrangements**

***Metropolitan/CVWD/Desert Water Agency Amended and Restated Agreement for the Exchange and Advance Delivery of Water.*** Metropolitan has agreements with CVWD and the Desert Water Agency ("DWA") under which Metropolitan exchanges its Colorado River water for the agencies' State Water Project contractual water and other State Water Project water acquisitions on an annual basis. Because CVWD and DWA do not have a physical connection to the State Water Project, Metropolitan takes delivery of CVWD's and DWA's State Water Project supplies and delivers a like amount of Colorado River water to the agencies. In accordance with these agreements, Metropolitan may deliver Colorado River water in advance of receiving State Water Project supplies to these agencies for storage in the Upper Coachella Valley groundwater basin. In years when it is necessary to augment available supplies to meet local demands, Metropolitan may meet the exchange delivery obligation through drawdowns of the advance delivery account, in lieu of delivering Colorado River water in that year. Metropolitan's estimated storage account under the CVWD/DWA program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below. In addition to the storage benefits of the CVWD/DWA program, Metropolitan receives water quality benefits with increased deliveries of lower salinity water from the State Water Project in lieu of delivering higher saline Colorado River water. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under



the amended agreements, CVWD and DWA pay a portion of Metropolitan's water storage management costs in wet years, up to a combined total of \$4 million per year.

***Operational Shift Cost Offset Program.*** In 2021, Metropolitan's Board approved the Operational Shift Cost Offset Program ("OSCOPE") to help Metropolitan maximize resources available from Colorado River and State Water Project storage in calendar years 2021 and 2022. In October 2022, Metropolitan's Board extended the OSCOP through the end of calendar year 2023. Metropolitan worked with member agencies that have service connections to both State Water Project supplies and Colorado River water to shift their points of delivery to meet demands wherever possible to preserve State Water Project storage during the recent drought. Although member agencies can make some shifts in delivery locations, these shifts may result in additional operational costs. Under the OSCOP, Metropolitan offset costs member agencies accrued due to shifting deliveries at Metropolitan's request. In calendar year 2023, Metropolitan offset incurred costs of up to \$359 per acre-foot for shifts made at Metropolitan's request. This allowed Metropolitan to fully utilize its diverse portfolio and increased reliability for the entire region by improving the availability of State Water Project storage reserves to supplement supplies during dry years.

### **Storage Capacity and Water in Storage**

Metropolitan's storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan's service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre-feet. In 2023, approximately 750,000 acre-feet of total stored water in Metropolitan's reservoirs and other storage resources was emergency storage. Metropolitan's emergency storage is a regional planning objective established periodically to prevent severe water shortages for the region in the event of supply interruptions from catastrophic earthquakes or similar events (see "METROPOLITAN'S WATER DELIVERY SYSTEM—Seismic Considerations and Emergency Response Measures" in this Appendix A). The current emergency storage objective of 750,000 acre-feet is based on an outage duration of 6 to 12 months, retail water demand reduction of 25 to 35 percent based on achievable conservation actions, and aggregated loss of 10 to 20 percent of local production. Retail demand calculations for purposes of the emergency storage objective were based on a 2015 IRP forecast of demand for the year 2018 under average conditions. Metropolitan replenishes its storage accounts when available imported supplies exceed demands. Metropolitan's ability to replenish water storage, both in the local groundwater basins and in surface storage and banking programs, has been limited by Bay-Delta pumping restrictions under the biological opinions issued for listed species. See "—Endangered Species Act and Other Environmental Considerations Relating to Water Supply —Endangered Species Act Considerations — State Water Project — *Federal ESA-Biological Opinions.*" Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. See "CONSERVATION AND WATER SHORTAGE MEASURES—Water Supply Allocation Plan" in this Appendix A. Metropolitan's storage as of January 1, 2024 was estimated to be 4.18 million acre-feet. This is the highest beginning-of-year total water storage in Metropolitan's history. The following table shows three years of Metropolitan's water in storage as of January 1, including emergency storage.

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**METROPOLITAN'S WATER STORAGE CAPACITY AND WATER IN STORAGE<sup>(1)</sup>**  
(in Acre-Feet)

<b>Water Storage Resource</b>	<b>Storage Capacity</b>	<b>Water in Storage January 1, 2024</b>	<b>Water in Storage January 1, 2023</b>	<b>Water in Storage January 1, 2022</b>
<b><u>Colorado River Aqueduct</u></b>				
DWA/CVWD Advance Delivery Account	800,000	205,000	281,000	293,000
Lake Mead ICS <sup>(2)</sup>	<u>1,657,000</u>	<u>1,544,000<sup>(10)</sup></u>	<u>1,140,000<sup>(10)</sup></u>	<u>1,251,500<sup>(10)</sup></u>
<b>Subtotal</b>	<b>2,457,000</b>	<b>1,749,000</b>	<b>1,421,000</b>	<b>1,544,500</b>
<b><u>State Water Project</u></b>				
Arvin-Edison Storage Program <sup>(3)</sup>	350,000	100,000	119,000	136,000
Semitropic Storage Program	350,000	190,000	158,000	218,000
Kern Delta Storage Program	250,000	141,000	137,000	149,000
Mojave Storage Program	330,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>
AVEK Storage Program	30,000	27,000	27,000	27,000
AVEK High Desert Water Bank	112,000 <sup>(11)</sup>	11,000	N/A	N/A
Castaic Lake and Lake Perris <sup>(4)</sup>	219,000	219,000	3,000	49,000
State Water Project Carryover <sup>(5)</sup>	350,000 <sup>(7)</sup>	325,000	31,000	38,000
Emergency Storage	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>
<b>Subtotal</b>	<b>2,372,000</b>	<b>1,413,000</b>	<b>875,000</b>	<b>1,017,000</b>
<b><u>Within Metropolitan's Service Area</u></b>				
Diamond Valley Lake	810,000	753,000	494,000	600,000
Lake Mathews	182,000	168,000	155,000	140,000
Lake Skinner	<u>44,000</u>	<u>39,000</u>	<u>39,000</u>	<u>39,000</u>
<b>Subtotal<sup>(8)</sup></b>	<b>1,036,000</b>	<b>960,000</b>	<b>688,000</b>	<b>779,000</b>
<b><u>Member Agency Storage Programs</u></b>				
Conjunctive Use	<u>210,000</u>	<u>56,000</u>	<u>10,000</u>	<u>16,000</u>
<b>Total</b>	<b>6,075,000</b>	<b>4,178,000</b>	<b>2,994,000</b>	<b>3,356,500</b>

Source: Metropolitan.

- (1) Water storage capacity and water in storage are measured based on engineering estimates and are subject to change.
- (2) See “–Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead*” and “–Colorado River Drought Contingency Plans” for additional information regarding the Lake Mead ICS program and use of ICS water.
- (3) Metropolitan has suspended the return of groundwater from the Arvin-Edison storage program. Stored supplies can still be recovered via surface water exchange. See “–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Arvin-Edison/Metropolitan Water Management Program*.” See also “METROPOLITAN'S WATER DELIVERY SYSTEM–Water Quality and Treatment” in this Appendix A.
- (4) Flexible storage allocated to Metropolitan under its State Water Contract. Withdrawals must be returned within five years.
- (5) Includes Article 56 Carryover of Metropolitan, Coachella Valley Water District, and Desert Water Agency, prior-year carryover, non-project carryover, and carryover of curtailed deliveries pursuant to Article 14(b) and Article 12(e) of Metropolitan's State Water Contract. See “–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Metropolitan Article 56 Carryover*.”
- (6) The Mojave storage agreement was amended in 2011 to allow for cumulative storage of up to 390,000 acre-feet. Since January 1, 2011, Metropolitan has stored 60,000 acre-feet, resulting in a remaining balance of storage capacity of 330,000 acre-feet. 41,000 acre-feet of the 60,000 acre-feet stored have been returned, leaving a remaining balance in storage of 19,000 acre-feet. See “–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Mojave Storage Program*.”
- (7) A capacity of 350,000 acre-feet is estimated to be the practical operational limit for carryover storage considering Metropolitan's capacity to take delivery of carryover supplies before San Luis Reservoir fills.
- (8) Includes 369,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2022, 2023, and 2024.
- (9) Represents Metropolitan's historical highest level of water in storage.
- (10) This amount does not include water Metropolitan stores for IID in Lake Mead.
- (11) Currently constructed storage capacity. The storage capacity at completion of construction is anticipated to be 280,000 acre-feet. See “– Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Antelope Valley-East Kern High Desert Water Bank Program*.”

## CONSERVATION AND WATER SHORTAGE MEASURES

### General

The central objective of Metropolitan's water conservation program is to help ensure adequate, reliable and affordable water supplies for Southern California by actively promoting efficient water use. The importance of conservation to the region has increased in recent years because of occurring drought conditions in the State Water Project watershed and court-ordered restrictions on Bay-Delta pumping, as described under "METROPOLITAN'S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project" and "–Endangered Species Act and Other Environmental Considerations Relating to Water Supply –Endangered Species Act Considerations-State Water Project – *Federal ESA-Biological Opinions*" in this Appendix A. Ongoing drought conditions in the Colorado River have further emphasized the need for additional conservation efforts. See "METROPOLITAN'S WATER SUPPLY–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines" in this Appendix A. Conservation reduces the need to import water to deliver to member agencies through Metropolitan's system. Water conservation is an integral component of Metropolitan's IRP, WSDM Plan, and Water Supply Allocation Plan.

Metropolitan's conservation program has largely been developed to assist its member agencies in meeting the conservation goals established by the 2015 IRP Update. See "METROPOLITAN'S WATER SUPPLY–Integrated Water Resources Plan and Climate Adaptation Master Plan for Water" in this Appendix A. All users of Metropolitan's system benefit from the reduced infrastructure costs and system capacity made available by investments in demand management programs like the Conservation Credits Program. Under the terms of Metropolitan's Conservation Credits Program, Metropolitan administers regional conservation programs and co-funds member agency conservation programs designed to achieve greater water use efficiency in residential, commercial, industrial, institutional and landscape uses. Spending by Metropolitan and its member agencies on active conservation incentives, including rebates for water-saving plumbing fixtures, appliances and equipment totaled about \$57 million in fiscal year 2022-23. During fiscal year 2022-2023, water savings achieved through new and prior-year conservation investments under Metropolitan's Conservation Credits Program were approximately 207,000 acre-feet.

Metropolitan has worked proactively with its member agencies to conserve water supplies in its service area, and significantly expanded its water conservation and outreach programs and increased funding for conservation incentive programs. Historically, revenues collected by Metropolitan's Water Stewardship Rate and available grant funds funded conservation incentives, local resource development incentives, and other water demand management programs. Until December 31, 2020, the Water Stewardship Rate was charged on every acre-foot of water conveyed by Metropolitan, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES–Water Rates" and "–Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. Beginning with calendar year 2021, the Water Stewardship Rate has no longer been incorporated into Metropolitan's rates and charges. See "METROPOLITAN REVENUES–Rate Structure – *Water Stewardship Rate*" in this Appendix A.

In addition to ongoing conservation, Metropolitan has developed a WSDM Plan, which splits resource actions into two major categories: Surplus Actions and Shortage Actions. See "–Water Surplus and Drought Management Plan." Conservation and water efficiency programs are part of Metropolitan's resource management strategy which makes up these surplus and shortage actions.

The Water Supply Allocation Plan allocates Metropolitan's water supplies among its member agencies, based on the principles contained in the WSDM Plan, to reduce water use and drawdowns from water storage reserves. See "–Water Supply Allocation Plan." Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also can implement water conservation and allocation

programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures.

State legislation has provided an additional catalyst for conservation by member agencies and retail suppliers. Legislation approved in November 2009 set a statewide conservation target for urban per capita potable water use of 20 percent reductions (from a baseline per capita use determined utilizing one of four State-approved methodologies) by 2020 (with credits for existing conservation) at the retail level. Legislation approved in 2018 (Assembly Bill 1668 and Senate Bill 606) directed the SWRCB to adopt water use efficiency standards for all residential water use and outdoor commercial, industrial, and institutional water use and also performance measures for indoor commercial, industrial, and institutional water use. Pursuant to such directive, on July 3, 2024, the SWRCB adopted a new regulation, termed "Making Conservation a California Way of Life," which will require urban retail water suppliers to calculate a water use objective annually, beginning January 1, 2025, based on the characteristics of the supplier's service area, and beginning January 1, 2027, demonstrate compliance with its objectives, implement established performance standards, and submit annual progress reports.

Metropolitan's water transactions projections incorporate an estimate of conservation savings that will reduce retail demands. Current projections include an estimate of additional water use efficiency savings resulting from Metropolitan's 2015 IRP Update goals that included the reduction of overall regional per capita water use by 20 percent by 2020 from a baseline of average per capita water use from 1996-2005 in Metropolitan's service area. As of calendar year 2020, per capita water use in Metropolitan's service area had reached the 20 percent reduction by 2020 target.

### **Water Surplus and Drought Management Plan**

In addition to the long-term planning guidelines and strategy provided by its IRP, Metropolitan has developed its WSDM Plan for the on-going management of its resources and water supplies in response to hydrologic conditions. The WSDM Plan, which was adopted by Metropolitan's Board in April 1999, evolved from Metropolitan's experiences during the droughts of 1976-77 and 1987-92. The WSDM Plan is a planning document that Metropolitan uses to guide inter-year and intra-year storage operations, and splits resource actions into two major categories: surplus actions and shortage actions. The surplus actions emphasize storage of surplus water inside the region, followed by storage of surplus water outside the region. The shortage actions emphasize critical storage programs and facilities and conservation programs that make up part of Metropolitan's response to shortages. Implementation of the plan is directed by a WSDM team, made up of Metropolitan staff, that meets regularly throughout the year and more frequently between November and April as hydrologic conditions develop. The WSDM team develops and recommends storage actions to senior management on a regular basis and provides updates to the Board on hydrological conditions, storage levels and planned storage actions through detailed reports.

### **Water Supply Allocation Plan**

In times of prolonged or severe water shortages, Metropolitan manages its water supplies through the implementation of its Water Supply Allocation Plan. The Water Supply Allocation Plan was originally approved by Metropolitan's Board in February 2008, and has been implemented three times since its adoption, including most recently in April 2015. The Water Supply Allocation Plan provides a formula for equitable distribution of available water supplies in case of extreme water shortages within Metropolitan's service area and if needed is typically approved in April with implementation beginning in July. In December 2014, the Board approved certain adjustments to the formula for calculating member agency supply allocations during subsequent periods of implementation of the Water Supply Allocation Plan. Although the Act gives each of Metropolitan's member agencies a preferential entitlement to purchase a portion of the water served by Metropolitan (see "METROPOLITAN REVENUES-Preferential Rights" in this Appendix A), historically, these rights have not been used in allocating Metropolitan's water.

Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also may implement water conservation and allocation programs within their respective service territories in times of shortage. See also "–Drought Response Actions" below. Based upon current hydrology and Metropolitan's available storage balances, the Water Supply Allocation Plan has not been implemented for fiscal year 2024-25.

### **Drought Response Actions**

The most recent drought in California lasted from 2020 through 2022. The Water Years 2020 through 2022 combined ranked as the three driest years in California's statewide precipitation record. Beginning in April 2021, Governor Newsom issued a series of drought emergency proclamations affecting various counties throughout the State, culminating in an October 19, 2021, proclamation declaring a drought state of emergency to be in effect statewide and directing local water suppliers to implement water shortage contingency plans at a level appropriate to local conditions. On March 28, 2022, Governor Newsom issued an executive order directing the SWRCB to consider adopting regulations by May 25, 2022, to require urban water suppliers with water shortage contingency plans to implement, at a minimum, shortage response actions for a shortage level of up to 20 percent (a "Level 2" shortage). On May 24, 2022, in response to the executive order, the SWRCB adopted an emergency water conservation regulation. The adopted regulation temporarily banned irrigating turf with potable water at commercial, industrial, and institutional properties, such as grass in front of or next to large industrial or commercial buildings. The ban did not include watering turf used for recreation or other community purposes, water used at residences or water to maintain trees. The regulation also required all urban water suppliers to implement conservation actions under Level 2 of their water shortage contingency plans.

From early 2021, in response to dry conditions, Metropolitan implemented certain operational measures and programs to minimize State Water Project deliveries, such as delivering Diamond Valley Lake water for the first time to the Henry J. Mills Treatment Plant, and expanding the delivery of Colorado River water. These measures were made possible by Metropolitan's continued investment in facility upgrades and improvements. Metropolitan also paid for several member agencies to shift from service connections that utilize State Water Project supplies to service connections that use Colorado River water to conserve State Water Project supplies.

Following the Governor's October 2021 proclamation of a statewide drought emergency, on November 9, 2021, Metropolitan's Board of Directors declared a drought emergency and called on its member agencies in the portion of Metropolitan's service area that can only receive Metropolitan's supplies through the State Water Project system (referred to herein as the SWP Dependent Area) to use increased conservation measures or other means to reduce their use of those supplies. To assist in these conservation efforts, Metropolitan's Board also approved a series of measures to expand various rebate and water-efficiency programs. On April 26, 2022, Metropolitan's Board approved the framework of an Emergency Water Conservation Program for the SWP Dependent Area to further reduce demand on State Water Project supplies. In 2022, due to historically dry conditions, DWR exercised a provision of the State water supply contracts that allowed DWR to provide State Water Project water to certain State Water Project contractors, that was in addition to the contracted amounts, to meet minimum demands for domestic supply, fire protection or sanitation. The human health and safety supplies received were required to be returned within five calendar years of the calendar year of delivery, with certain mandatory returns to be made in years when State Water Project allocations were 40 percent of contracted amounts or greater. Under this provision, Metropolitan requested and received from DWR delivery of an additional 133,842 acre-feet of certain human health and safety supplies to the SWP Dependent Area. In addition to the human health and safety supplies and mandatory water use reductions for the SWP Dependent Area agencies, Metropolitan met the water demands in its service area in calendar year 2022 using a combination of CRA deliveries, storage reserves and supplemental water transfers and purchases. In 2022, approximately 28,000 acre-feet of water transfers were secured.

Metropolitan has planned and prepared for dry conditions by investing in vital infrastructure to increase its storage capacity and enhance operational flexibility. The Emergency Water Conservation Program was intended as a short-term policy in response to the severe drought conditions that existed and infrastructure constraints that severely limited the delivery of State Water Project supplies. Metropolitan has committed to providing equitable reliability to the SWP Dependent Area by increasing access to existing supplies and storage, and development of new supplies and storage. Metropolitan was awarded \$50 million in reimbursement grant funding from the State of California in the State's fiscal year 2022-23 budget for a set of drought emergency mitigation projects to move locally stored water into the SWP Dependent Area.

Due to improved hydrologic conditions and an increased State Water Project allocation for 2023, the Board voted to rescind the Emergency Water Conservation Program on March 14, 2023. On March 24, 2023, the Governor announced that several of the Statewide water conservation measures previously imposed would be eased. All of the 133,842 acre-feet of health and safety supplies received by Metropolitan in 2022 were returned by the end of June 2023. Metropolitan continues to encourage responsible and efficient water use.

Actions taken in response to the 2020-2022 drought by the State, Metropolitan's Board and Metropolitan's member agencies, as well as the subsequent extreme precipitation in 2023 and a wet winter in 2024, have contributed to reduced water demands in Metropolitan's service area. Such significant variances in hydrology may become more common in the future due to the effects of climate change. Metropolitan's financial reserve policy provides funds to manage through periods of reduced sales. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. In years when actual sales are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenditures below budgeted levels, reducing funding of capital projects from revenues, and drawing on reserves. See also "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

## **REGIONAL WATER RESOURCES**

### **General**

The water supply for Metropolitan's service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to members. Non-Metropolitan sources include water imported by the City of Los Angeles (the "City") from the Owens Valley/Mono Basin east of the Sierra Nevada through the City's Los Angeles Aqueduct to serve customers of the City. See "— Los Angeles Aqueduct." The balance of water within the region is produced locally, from sources that include groundwater and surface water production, recycled water and recovery of contaminated or degraded groundwater, and seawater desalination. Programs to develop these local resources include projects funded by Metropolitan's Local Resources Program (the "LRP"), as well as local agency funded programs. See "—Local Water Supplies."

Based on a ten-year average from calendar years 2013 through 2022 (the most recent full year information available), non-Metropolitan sources met about 54 percent of the region's water needs. These non-Metropolitan sources of supply fluctuate in response to variations in rainfall. During prolonged periods of below-normal rainfall, local water supplies decrease. Conversely, prolonged periods of above-normal rainfall increase local supplies. Sources of groundwater basin replenishment include local precipitation, runoff from the coastal ranges, and artificial recharge with imported water supplies. In addition to runoff, recycled water provides an increasingly important source of replenishment water for the region.

Metropolitan's member agencies are not required to purchase or use any of the water available from Metropolitan. Some agencies depend on Metropolitan to supply nearly all of their water needs, regardless of the weather. Other agencies, with local surface reservoirs or aqueducts that capture rain or snowfall, rely on Metropolitan more in dry years than in years with heavy rainfall, while others, with ample groundwater

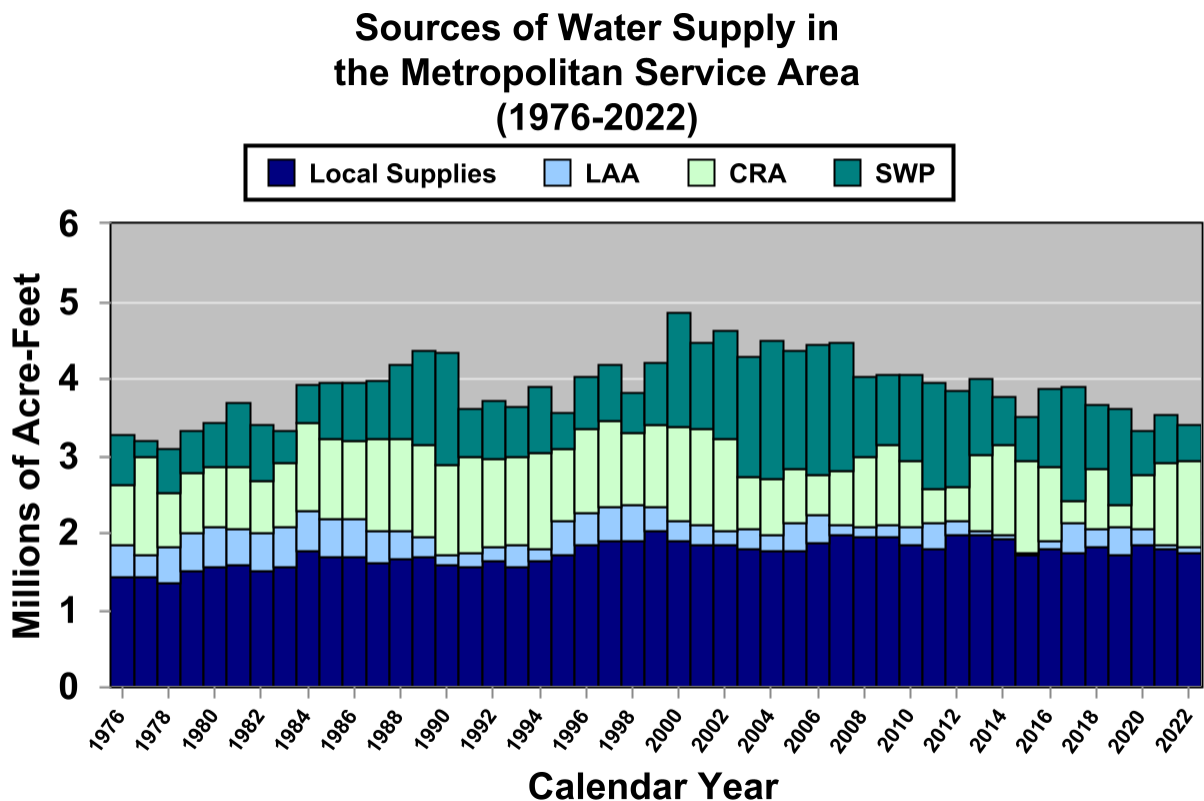


supplies, purchase Metropolitan water only to supplement local supplies and to recharge groundwater basins. Consumer demand and locally supplied water vary from year to year, resulting in variability in the volume of Metropolitan's water transactions.

In recent years, supplies and demands have been affected by drought, water use restrictions, economic conditions, weather conditions and environmental laws, regulations and judicial decisions, as described in this Appendix A under "METROPOLITAN'S WATER SUPPLY." The demand for supplemental supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A and "Local Water Supplies" below.

Future reliance on Metropolitan supplies will depend on, among other things, current and future local projects that may be developed and the amount of water that may be derived from sources other than Metropolitan. For information on Metropolitan's water revenues, see "METROPOLITAN REVENUES" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The following graph shows a summary of the regional sources of water supply for calendar years 1976 to 2022 (the most recent full year information available). In the graph below, LAA refers to the Los Angeles Aqueduct. See "Los Angeles Aqueduct." The graph below includes updated local supply numbers that include Santa Ana River baseflow below Prado Dam, which was not included from 1980 through 2009.



Source: Metropolitan.

The major sources of water available to some or all of Metropolitan's member agencies in addition to supplies provided by Metropolitan are described below.

## **Los Angeles Aqueduct**

The City of Los Angeles, through its Department of Water and Power (“LADWP”), operates its Los Angeles Aqueduct system to import water from the Owens Valley and the Mono Basin on the eastern slopes of the Sierra Nevada in eastern California. Water imported by the City on the Los Angeles Aqueduct system comes primarily from surface water rights of the City in eastern Sierra Nevada watersheds along various streams, creeks and rivers in the Mono Basin, Long Valley and Owens Valley, and groundwater resources in the Owens Valley from the City’s ownership of approximately 330,000 acres of land and associated water rights. This water supply of the City, which serves LADWP’s customers, currently meets about five percent of the region’s water needs based on a ten-year average from calendar years 2013 through 2022 (the most recent full year information available).

Surface runoff (snowmelt) is subject to substantial annual variability, which influences the amount of water delivered by the Los Angeles Aqueduct. In addition, the City is subject to several environmental commitments in the Mono Basin and Owens Valley which impact the availability of water to the City for import on the Los Angeles Aqueduct. These include: (i) the SWRCB’s Mono Lake Basin Water Rights Decision 1631, which limits the City’s water exports from the Mono Basin based on Mono Lake’s surface elevation; and (ii) the City’s legal obligations under a long-term groundwater management plan relating to the City’s groundwater resources in the Owens Valley.

Los Angeles Aqueduct water deliveries to the City vary from one year to the next. Since calendar year 2013, Los Angeles Aqueduct water deliveries to the City have varied from as little as 33,000 acre-feet in calendar year 2015 to as much as 380,000 acre-feet of water in calendar year 2017. Average water deliveries to the City from the Los Angeles Aqueduct were approximately 186,000 acre-feet per calendar year between calendar years 2018 and 2022 (meeting approximately 37 percent of the City’s annual water needs). However, during calendar year 2022, water deliveries to the City from the Los Angeles Aqueduct were approximately 71,000 acre-feet (meeting approximately 15 percent of the City’s water need for calendar year 2022). Consequently, the amount of water purchased by the City from Metropolitan also varies with the fluctuations of Los Angeles Aqueduct supply. During the past five calendar years 2018 through 2022, the City’s water purchases from Metropolitan (billed water transactions) ranged from a low of 103,000 acre-feet in calendar year 2019 to a high of 368,000 acre-feet in calendar year 2021.

## **Local Water Supplies**

Local water supplies are made up of groundwater, groundwater recovery, surface runoff, recycled water, and seawater desalination. Metropolitan supports local resources development through its LRP, which provides financial incentives of up to \$340 per acre-foot of water production (based on actual project unit costs that exceed Metropolitan’s water rates) from local water recycling, groundwater recovery, and seawater desalination projects. LRP agreement terms are for 25 years and terminate automatically if construction does not commence within two full fiscal years of agreement execution or if water deliveries are not realized within four full fiscal years of agreement execution. Metropolitan utilizes conjunctive use of groundwater to encourage storage in groundwater basins. Member agencies and other local agencies have also independently funded and developed additional local supplies, including groundwater clean-up, recycled water and desalination of brackish or high salt content water. See also “METROPOLITAN’S WATER DELIVERY SYSTEM–Water Quality and Treatment” in this Appendix A for information regarding certain water quality regulations and developments that impact or may impact certain local groundwater supplies.

Metropolitan’s water transaction projections are based in part on projections of locally-supplied water. Projections of future local supplies are based on estimated yields of projects that are currently producing water or are under construction at the time a water transaction projection is made. Estimated yields of projects currently producing water are calculated based on the projects’ previous four-year

production average. Estimated yields of projects that are under construction at the time a water transaction projection is made are based on data provided by the member agencies. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES–Water Transactions Projections” and “METROPOLITAN’S WATER SUPPLY–Integrated Water Resources Plan and Climate Adaptation Plan for Water” in this Appendix A.

**Groundwater.** Local groundwater basins are the region’s largest source of local supply. Since 2013, approximately 1.14 million acre-feet per year, about one-third of the annual water demands for approximately 19 million residents of Metropolitan’s service area, are met through local groundwater production. Local groundwater basins are supported by recycled water and imported water used for replenishing basins and for creating seawater barriers that protect coastal aquifers from seawater intrusion.

**Member Agency Storage Programs.** Metropolitan has developed a number of local programs to work with its member agencies to increase storage in groundwater basins. Metropolitan has encouraged storage through its cyclic and conjunctive use storage programs. These programs allow Metropolitan to deliver water into a groundwater basin in advance of agency demands. Metropolitan has drawn on dry-year supply from nine contractual conjunctive use storage programs to address shortages from the State Water Project and the CRA.

Cyclic storage agreements allow pre-delivery of imported water for recharge into groundwater basins in excess of an agency’s planned and budgeted deliveries making best use of available capacity in conveyance pipelines, use of storm channels for delivery to spreading basins, and use of spreading basins. This water is then purchased at a later time when the agency has a need for groundwater replenishment deliveries.

Conjunctive use agreements provide for storage of imported water that can be called for use by Metropolitan during dry, drought, or emergency conditions. During a dry period, Metropolitan has the option to call water stored in the groundwater basins pursuant to its contractual conjunctive use agreements. At the time of the call, the member agency pays Metropolitan the prevailing rate for that water. Nine conjunctive use projects provide about 210,000 acre-feet of groundwater storage and have a combined extraction capacity of about 70,000 acre-feet per year. See the table entitled “Metropolitan’s Water Storage Capacity and Water in Storage” under “METROPOLITAN’S WATER SUPPLY–Storage Capacity and Water in Storage” in this Appendix A.

**Reverse Cyclic Program.** In 2022, Metropolitan’s Board authorized the General Manager to enter into reverse-cyclic agreements with participating member agencies to preserve the availability of Metropolitan’s State Water Project supplies. Metropolitan’s General Manager initiated deferrals under the Reverse-Cyclic Program (“RCP”) when the General Manager determined that the supply conditions warranted deferring the use of State Water Project supplies due to the risk of shortage of these supplies. Metropolitan executed agreements with Calleguas Municipal Water District, Three Valleys Municipal Water District, and Upper San Gabriel Valley Municipal Water District in 2022. Under these agreements and at Metropolitan’s request, participating member agencies agreed to defer Metropolitan deliveries of 25,000 acre-feet of water (in aggregate) purchased in calendar year 2022 to allow Metropolitan to preserve its State Water Project supplies. Metropolitan billed participating member agencies the 2022 full-service rate and applicable treatment charge. In doing so, the participating member agencies avoid paying the projected higher service rate that would be in place when Metropolitan makes the deferred delivery. Metropolitan will deliver water to the participating member agencies no later than December 2027, which is five full calendar years from the date of purchase. This program was not reauthorized for 2023 nor 2024.

**Recovered Groundwater.** Contamination of groundwater supplies is a growing threat to local groundwater production. Metropolitan has been supporting increased groundwater production and improved regional supply reliability by offering financial incentives to agencies for the production and

treatment of degraded groundwater since 1989 through the LRP. Metropolitan has executed LRP agreements with local agencies to provide financial incentives to 28 projects that recover contaminated groundwater with total contract yields of about 125,000 acre-feet per year. Total groundwater recovery use under executed agreements with Metropolitan was estimated to be approximately 53,700 acre-feet in calendar year 2022. Additionally, 81,000 acre-feet of recovered groundwater was produced by local agencies through other independently funded and developed sources in 2022.

***Surface Runoff.*** Local surface water resources consist of runoff captured in storage reservoirs and diversions from streams. Since 2013, member agencies have used an average of 76,000 acre-feet per calendar year of local surface water. Local surface water supplies are heavily influenced by year to year local weather conditions, varying from a high during such period of 124,000 acre-feet in calendar year 2020 to a low of 37,500 acre-feet in calendar year 2016.

Stormwater is another local water supply and is surface runoff that is captured and contained on-site as opposed to captured in storage reservoirs or diverted from streams. In 2020, Metropolitan launched two pilot programs to better understand the costs and benefits of stormwater capture, yield, and use. One program examines opportunities to capture stormwater for direct use and the other explores stormwater capture for groundwater recharge. The programs accepted applications through December 31, 2021. Together, Metropolitan committed up to \$12.5 million under these programs. The projects funded under these programs are in either the design, construction, or monitoring phase. The pilot programs are expected to last at least five years, including the construction and monitoring phases. The data collected during the pilot programs will assist Metropolitan in evaluating the water supply benefits of stormwater capture and provide guidance for future funding strategies.

***Recycled Water-Local Agency Projects.*** Metropolitan has supported recycled water use to offset water demands and improve regional supply reliability by offering financial incentives to agencies for production and sales of recycled water since 1982 through the LRP. Since the inception of the LRP, Metropolitan has executed agreements with local agencies to provide financial incentives to 88 recycled water projects with total expected contract yields of about 357,000 acre-feet per year. During fiscal year 2022-23, Metropolitan provided incentives for approximately 56,500 acre-feet of recycled water under these agreements. Additionally, 422,000 acre-feet of recycled water (including wastewater discharged to the Santa Ana River that percolates into downstream groundwater basins) was produced in fiscal year 2022-23 by local agencies through other independently funded and developed sources. Total recycled water use under executed agreements with Metropolitan currently in place is estimated to be approximately 54,000 acre-feet in calendar year 2024.

Metropolitan also supports recycled water conversions for property owners through the On-Site Retrofit Program. The On-Site Retrofit Program provides a financial incentive of \$195 per acre-foot of estimated offset water for ten years to property owners who convert an imported water demand to a recycled water system. As of March 1, 2024, the On-Site Retrofit Program has provided \$13.17 million to 499 projects that offset approximately 14,010 acre-feet per year of imported water supplies.

***Recycled Water-Metropolitan Pure Water Southern California Program.*** Since 2010, Metropolitan has been evaluating the potential and feasibility of implementing a regional recycled water program, now referred to as Pure Water Southern California (“PWSC”). Chronic drought conditions have resulted in significant reductions in local surface supplies and groundwater production and have increased the need for recharge supplies to groundwater and surface water reservoirs to improve their sustainable yields and operating integrity. In 2015, Metropolitan executed an agreement with the Los Angeles County Sanitation Districts (“LACSD”) to implement a demonstration project and to establish a framework of terms and conditions of PWSC. The objectives of PWSC are to enable the potential reuse of up to 150 million gallons per day (“mgd”) of cleaned wastewater effluent from LACSD’s A.K. Warren Facility (formerly the Joint Water Pollution Control Plant ). Purified water from a new advanced treatment plant could be

delivered through pipelines to the region's groundwater basins, industrial facilities, and two of Metropolitan's water treatment plants.

Construction of a 0.5-mgd advanced water treatment demonstration plant was approved in 2017 and was completed in September 2019. Testing and operation of the plant began in October 2019 to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process. The tertiary membrane bioreactor ("MBR") first testing phase was completed in 2021 and has been followed by secondary MBR testing which was completed in 2023. The testing will form the basis for the design, operation, and optimization of the advanced treatment plant and will help inform Metropolitan's Board decision whether to move forward with, the potential full-scale program. If approved, design and construction of PWSC would be expected to take approximately eight years and occur in two phases. Phase 1, which, if completed, would be expected to have a capacity of approximately 115 mgd; and Phase 2, which if completed, would be expected to increase capacity by approximately 35 mgd, for a total of treatment plant capacity of 150 mgd.

If implemented, PWSC as proposed would have the flexibility to produce purified water suitable for Direct Potable Reuse ("DPR") through raw water augmentation at two of Metropolitan's treatment plants (Weymouth and Diemer). The SWRCB Division of Drinking Water ("DDW") has proposed new regulations for DPR in California that would allow recycled water to be used directly in the potable water system without first passing through an environmental buffer, such as groundwater or a lake, prior to using it as potable water. On December 19, 2023, the SWRCB approved a resolution to adopt the final DPR regulations. The regulations were subsequently approved by California's Office of Administrative Law on August 6, 2024, and will be effective on October 1, 2024. With these new regulations in place, a greater percentage of water produced by PWSC would be available for the potable water system.

On November 10, 2020, Metropolitan's Board voted to begin environmental planning work on PWSC. The Notice of Preparation was published in September 2022 with scoping meetings held in October 2022. The draft EIR is scheduled for completion in the first quarter of 2025, with an action requesting Board approval anticipated to occur at the end of 2025 or the beginning of 2026. The biennial budget for fiscal years 2024-25 and 2025-26 includes \$9 million for planning costs of PWSC as part of the operations and maintenance budget.

Metropolitan has also been active in pursuing partnerships with other agencies. In November 2020, Metropolitan and LACSD executed an amendment to the existing collaboration agreement to contribute up to approximately \$4.4 million for the environmental planning phase costs. In December 2020, Metropolitan and SNWA executed a funding agreement under which SNWA will contribute up to \$6 million for the environmental planning costs for PWSC. In the event either SNWA or Metropolitan decides not to proceed or participate in PWSC in the future, SNWA's financial contribution to PWSC's environmental planning would be returned by Metropolitan. In 2021, Metropolitan signed an agreement with the Arizona Parties (Central Arizona Project and Arizona DWR) for a \$6 million financial contribution similar to the SNWA agreement. Overall, Metropolitan has received ten letters of interest in the project from 15 different agencies.

In addition, Metropolitan received \$80 million in grant funding for PWSC from the State of California in the State's fiscal year 2022-23 budget. Work performed under this funding will continue into 2026. In May 2024, the Bureau of Reclamation announced they intend to grant Metropolitan \$99 million to advance the PWSC planning and design efforts. Funding provided from the federal government through this grant can only provide 25 percent of the costs, thus requiring 75 percent in non-federal matching funds. Metropolitan is working to identify various sources of matching funds that will help utilize this grant funding.

If approved, the total costs of design and construction of PWSC are currently estimated to be approximately \$6.4 billion (in 2023 dollars). If ultimately undertaken, the amount of the costs of design and construction of PWSC costs that may be incurred by Metropolitan would be dependent on, among other things, the ultimate design and timing of any approved project, the availability and receipt of potential grant funding sources, and the level of contributions from potential PWSC partners that may participate in any such approved project. The amount of any partner carried costs has not been determined at this time.

Metropolitan's Board has not approved PWSC and the costs of design and construction are not included in Metropolitan's Capital Investment Plan ("CIP"). However, for planning purposes, Metropolitan has made certain assumptions about the potential capital costs that may be incurred by Metropolitan over the ten-year financial forecast provided in its biennial budget for fiscal years 2024-25 and 2025-26, including with respect to projected future debt financing for a portion of PWSC costs, certain assumptions regarding the potential amounts of and sources of funding for PWSC that may be available from grants and contributions by potential partners. Metropolitan's financial projections for fiscal years 2024-25 through 2028-29 assume that if PWSC is approved and implemented a portion of the capital costs incurred by Metropolitan in connection with any approved project would be financed with proceeds of revenue bonds to be issued by Metropolitan during the five-year projection period. See "CAPITAL INVESTMENT PLAN" for additional information regarding the capital expenditures Metropolitan has assumed may be incurred with respect to PWSC (if approved) in addition to its projected CIP expenditures for fiscal years 2024-25 through 2028-29. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A for additional information regarding the future debt financing Metropolitan has assumed may be incurred with respect to PWSC (if approved).

***Seawater Desalination.*** Metropolitan supports seawater desalination as a part of the region's supply portfolio as well as a mechanism to increase regional supply resiliency under different climate change and population growth scenarios.

In 2007, the Board approved Metropolitan's role as a regional facilitator for seawater desalination. This includes supporting local projects during permitting and providing technical assistance when requested. Metropolitan's regional facilitation includes active participation in organizations advocating for desalination and salinity management, including CalDesal and the Southern California Salinity Coalition within California, and the Multi-State Salinity Coalition nationally. Metropolitan also participates in the National Alliance for Water Innovation ("NAWI"). NAWI is a Department of Energy-led, \$100 million research effort focused on accelerating the commercialization of early-stage desalination technologies. New technologies developed by NAWI could reduce cost and environmental barriers to seawater desalination in California.

In October 2014, seawater desalination projects became eligible for funding under Metropolitan's LRP. There is currently one local seawater desalination project in the permitting stage that could receive LRP incentives. South Coast Water District ("South Coast") is proposing a 5-mgd Doheny Ocean Desalination project (the "Doheny Project") in south Orange County. South Coast has obtained key State permits for the Doheny Project and is expected to award a contract to a progressive design build consultant in 2024. The 50-mgd Huntington Beach Seawater Desalination is no longer under development after failing to obtain a coastal development permit. LRP applications for potential projects would be considered by Metropolitan's Board after they are permitted, free of litigation, and authorized to proceed by their developing agencies.

In 2015, Poseidon Resources LLC ("Poseidon") began operating the 56,000 acre-foot per year (50-mgd) Carlsbad Desalination Project and associated pipeline. SDCWA has a purchase agreement with Poseidon for a minimum of 48,000 acre-feet per year with an option to purchase an additional 8,000 acre-feet per year.



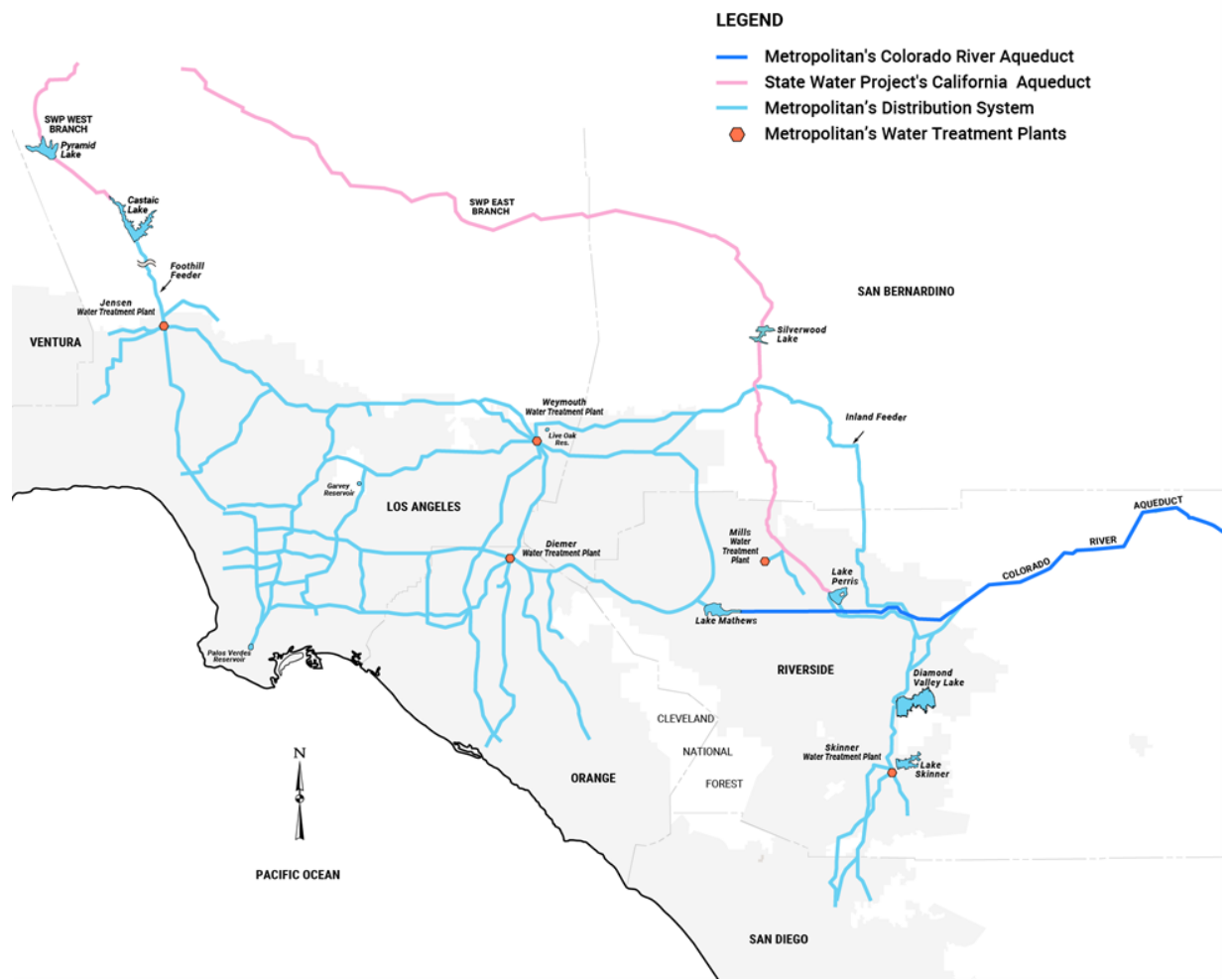
## METROPOLITAN'S WATER DELIVERY SYSTEM

### Primary Facilities and Method of Delivery

Metropolitan's water delivery system is made up of three basic components: the Colorado River Aqueduct (CRA), the California Aqueduct of the State Water Project, and Metropolitan's water distribution system. Metropolitan's delivery system is integrated and designed to meet the differing needs of its member agencies. Metropolitan seeks redundancy in its delivery system to assure reliability in the event of an outage. Improvements are designed to increase the flexibility of the system. Since local sources of water are generally used to their maximum each year, growth in the demand for water is partially met by Metropolitan. The operation of Metropolitan's water system is being made more reliable through the rehabilitation of key facilities as needed, improved preventive maintenance programs and the upgrading of Metropolitan's operational control systems. See "CAPITAL INVESTMENT PLAN" in this Appendix A.

The graphic that follows depicts Metropolitan's water delivery system, which is further described below.

## METROPOLITAN'S WATER DELIVERY SYSTEM



Source: Metropolitan.

**Colorado River Aqueduct.** Work on the CRA commenced in 1933 and water deliveries started in 1941. Additional facilities were completed by 1961 to meet additional requirements of Metropolitan's member agencies. The CRA is 242 miles long, starting at the Lake Havasu intake and ending at the Lake Mathews terminal reservoir. Metropolitan owns all the components of the CRA, which include five pumping plants, 64 miles of canal, 92 miles of tunnels, 55 miles of concrete conduits, four reservoirs, and 144 underground siphons totaling 29 miles in length. The pumping plants lift the water approximately 1,617 feet over several mountain ranges to Metropolitan's service area. See "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct" in this Appendix A.

**State Water Project.** The initial portions of the State Water Project serving Metropolitan were completed in 1973. The State Water Project, managed and operated by DWR, is one of the largest water supply projects undertaken in the history of water development. The State Water Project facilities dedicated to water delivery consist of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. Water from rainfall and snowmelt runoff is captured and stored in State Water Project conservation facilities and then delivered through State Water Project transportation facilities to water agencies and districts located throughout the Upper Feather River, Bay Area, Central Valley, Central Coast, and Southern California. Metropolitan receives water from the State Water Project through the main stem of the aqueduct system, the California Aqueduct, which is 444 miles long and includes 381 miles of canals and siphons, 49 miles of pipelines or tunnels and 13 miles of channels and reservoirs.

As described herein, Metropolitan is the largest (in terms of number of people it serves, share of State Water Project water it has contracted to receive, and percentage of total annual payments made to DWR therefor) of 29 agencies and districts that have entered into contracts with DWR to receive water from the State Water Project. Contractors pay all costs of the facilities in exchange for participation rights in the system. Thus, Contractors also have the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. See "METROPOLITAN'S WATER SUPPLY-State Water Project" in this Appendix A.

**Distribution System.** Metropolitan's distribution system is a complex network of facilities which routes water from the CRA and State Water Project to Metropolitan's member agencies. The water distribution system includes components that were built beginning in the 1930s and through the present. Metropolitan owns all of these components, including nine reservoirs, five regional treatment plants, over 800 miles of transmission pipelines, feeders and canals, and 15 hydroelectric plants with an aggregate capacity of 130 megawatts.

In 2022, Metropolitan committed to equivalent water supply reliability for all member agencies. Based on performance during the 2020-2022 drought, improvements to the distribution system are planned or underway to achieve this commitment.

**Diamond Valley Lake.** Diamond Valley Lake, a man-made reservoir, built, owned and operated by Metropolitan, is located southwest of the city of Hemet, California. Excavation at the project site began in May 1995. Diamond Valley Lake was completed in March 2000, at a total cost of \$2 billion, and was in full operation in December 2001. It covers approximately 4,410 acres and has capacity to hold approximately 810,000 acre-feet or 265 billion gallons of water. Imported water is delivered to Diamond Valley Lake during surplus periods. The reservoir provides more reliable delivery of imported water from the State Water Project during summer months, droughts and emergencies. In addition, Diamond Valley Lake can provide more than one-third of Southern California's water needs from storage for approximately six months after a major emergency (assuming that there has been no impairment of Metropolitan's internal distribution network). See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY-Storage Capacity and Water in Storage" in this Appendix A for the amount of water in storage at Diamond Valley Lake.

***Inland Feeder.*** Metropolitan's Inland Feeder is a 44-mile-long conveyance system that connects the State Water Project to Diamond Valley Lake and the CRA. Construction of the Inland Feeder was completed in September 2009 at a total cost of \$1.14 billion. The Inland Feeder provides greater flexibility in managing Metropolitan's major water supplies and allows additional 1,000 cfs from the East Branch of the California Aqueduct to be moved into Metropolitan's service area, primarily into Diamond Valley Lake for storage.

***Operations Control Center.*** Metropolitan's water conveyance and distribution system operations are coordinated from the Eagle Rock Operations Control Center (the "OCC") centrally located in Los Angeles County. The OCC plans, balances and schedules daily water and power operations to meet member agencies' demands, taking into consideration the operational limits of the entire system.

## **Water Quality and Treatment**

***General.*** Metropolitan filters and disinfects water at five water treatment plants: the F.E. Weymouth Treatment Plant in La Verne, the Joseph Jensen Treatment Plant in Granada Hills, the Henry J. Mills Treatment Plant in Riverside, the Robert B. Diemer Treatment Plant in Yorba Linda, and the Robert A. Skinner Treatment Plant in Winchester. In recent years, the plants typically treat between 0.8 billion and 1.0 billion gallons of water per day and have a maximum capacity of approximately 2.4 billion gallons per day. Approximately 50 percent of Metropolitan's water deliveries are treated water.

Metropolitan is operating in compliance with current State and federal drinking water regulations and permit requirements.

Federal and state regulatory agencies routinely identify potential contaminants and establish new water quality standards. Metropolitan continually monitors new water quality laws and regulations and frequently comments on new legislative proposals and regulatory rules. New water quality standards could affect the availability of water and impose significant compliance costs on Metropolitan. The federal Safe Drinking Water Act ("SDWA") establishes drinking water quality standards, monitoring, and public notification and enforcement requirements for public water systems. To achieve these objectives, the U.S. Environmental Protection Agency (the "USEPA"), as the lead regulatory authority, promulgates national drinking water regulations and develops the mechanism for individual states to assume primary enforcement responsibilities. The SWRCB DDW has primary responsibility for the regulation of public water systems in the State. Drinking water delivered to customers must comply with statutory and regulatory water quality standards designed to protect public health and safety. Metropolitan operates its five water treatment plants under a domestic water supply permit issued by DDW, which is amended, as necessary, such as when significant facility modifications occur. Metropolitan operates and maintains water storage, treatment and conveyance facilities, implements watershed management and protection activities, performs inspections, monitors drinking water quality, and submits monthly and annual compliance reports. In addition, public water system discharges to state and federal waters are regulated under general National Pollutant Discharge Elimination System ("NPDES") permits. These NPDES permits, which the SWRCB issued to Metropolitan, contain numerical effluent limitations, monitoring, reporting, and notification requirements for water discharges from the facilities and pipelines of Metropolitan's water supply and distribution system.

***Groundwater.*** As described herein, Metropolitan has established five groundwater storage programs with other water agencies that allow Metropolitan to store available supplies in the Central Valley for return later. These programs help manage supplies by putting into storage surplus water in years when it is available and converting that to dry year supplies to be returned when needed. These programs can also provide emergency supplies. See "METROPOLITAN'S WATER SUPPLY—Water Transfer, Storage and Exchange Programs—State Water Project Agreements and Programs" and "—Storage Capacity and Water in Storage" in this Appendix A. Generally, water returned to Metropolitan under these groundwater storage

programs (“return water”) may be made available in one of two ways: by direct pump back from a groundwater well to the California Aqueduct or, when available, by an exchange with a supply already in the aqueduct. Water quality issues can arise in water returned by direct pumping as a result of the presence of a water quality contaminant in the groundwater storage basin and due to the imposition of stricter water quality standards by federal or State regulation.

In 2017, the SWRCB adopted a regulation setting an MCL for TCP of five parts per trillion (“ppt”) based upon a running annual average. TCP is a manufactured chemical used as a cleaning and degreasing solvent and has been found at industrial and hazardous waste sites. It is also associated with pesticide products used in agricultural practices. TCP has been recognized by the State of California as a likely human carcinogen. In January 2018, the new regulation went into effect. Under the new regulation, drinking water agencies are required to perform quarterly monitoring of TCP. There have been no detections of this chemical in Metropolitan’s system. However, TCP has been detected above the MCL in groundwater wells of three of Metropolitan’s groundwater storage program partners through monitoring performed by these agencies. Levels detected in groundwater wells of Arvin-Edison are the highest and impact Metropolitan’s ability to put water into storage and take return water under that program. As noted under “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs –State Water Project Agreements and Programs – *Arvin-Edison/Metropolitan Water Management Program*” in this Appendix A, Metropolitan has suspended the return of groundwater by direct pump back into the State Water Project from this program until the water quality concerns can be further evaluated and managed. When surface water storage is available to Arvin-Edison, it may provide that water to Metropolitan in lieu of groundwater and deduct an equivalent amount from Metropolitan’s groundwater storage account. In 2023, Metropolitan took return of approximately 18,900 acre-feet via surface water exchanges under this arrangement. In 2024, Metropolitan is exploring opportunities to access stored water via surface water exchanges. However, the potential exchange amount to be available through surface water exchanges is significantly less than Metropolitan’s contractual capacity. The levels of TCP detected at Metropolitan’s other groundwater storage programs are much lower and impact fewer groundwater wells. Metropolitan is evaluating the effects of TCP on the return capability of those programs.

Possible remediation measures include, for example, return water with other surface water supplies, removal of wells from service, return water by exchange, or treatment. Additional capital and/or operation and maintenance costs could be incurred by Metropolitan in connection with remediation options, but the magnitude of such costs is not known at this time. To the extent return water under one or more groundwater storage programs could not be utilized due to groundwater quality, the available supply of stored water during extended drought or emergency periods would be reduced.

**Perchlorate.** Perchlorate is both a naturally occurring and man-made chemical used in the production of rocket fuel, missiles, fireworks, flares and explosives. It is also sometimes present in bleach and in some fertilizers. Groundwater in the Henderson, Nevada (“Henderson”) area has been contaminated with perchlorate as a result of two former chemical manufacturing facilities, and there are ongoing remediation programs to mitigate its release into the Las Vegas Wash and the downstream Colorado River. On July 21, 2020, the USEPA withdrew its 2011 determination to regulate perchlorate under the SDWA and issued a new determination that perchlorate does not meet the statutory criteria for regulation. Thus, there is currently no federal drinking water standard for perchlorate, which could potentially affect remediation efforts at two sites in the Henderson area (described below). The Natural Resources Defense Council challenged the USEPA’s action, and the U.S. Court of Appeals for the District of Columbia ruled in May 2023 that the USEPA must regulate perchlorate. In January 2024, the USEPA agreed to propose a maximum contaminant level goal (“MCLG”) and a national primary drinking water regulation (“NPDWR”) for perchlorate by November 21, 2025, and to publish a final MCLG and NPDWR for perchlorate by May 21, 2027.

California is reviewing its MCL for perchlorate in light of a revised Public Health Goal (“PHG”) of 1 µg/L adopted in February 2015. PHGs are established by the California Office of Environmental Health Hazard Assessment (“OEHHA”) and used as the basis for the development of a State regulation setting an MCL. The SWRCB is required to set an MCL for a chemical as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health. DDW is conducting an in-depth risk management analysis to determine whether to revise the perchlorate MCL of 6 µg/L. The detection limit for purposes of reporting (“DLR”) for perchlorate was lowered to 2 µg/L in July 2021, and it was further reduced to 1 µg/L in January 2024. With a revised DLR, new occurrence data can be collected to support the development of a revised California MCL for perchlorate, if appropriate. If California’s MCL for perchlorate is revised to a level less than 6 µg/L, it will be important for the oversight agencies, the USEPA and the Nevada Division of Environmental Protection, to ensure that the perchlorate contamination originating at the two former chemical manufacturing facilities in Henderson is remediated to a level that minimizes impacts to the Colorado River and that perchlorate concentrations at Metropolitan’s Whitsett Intake at Lake Havasu stay at levels below California’s MCL. Metropolitan was successful in 2023 in convincing the USEPA and the Nevada Division of Environmental Protection to require the Nevada Environmental Response Trust (“NERT,” which is responsible for cleaning up the former site of one of the chemical manufacturers in Henderson) to use California’s current MCL of 6 µg/L for perchlorate, California’s PHG for perchlorate of 1 µg/L, California’s current MCL of 50 µg/L for total chromium, and California’s proposed MCL of 10 µg/L for hexavalent chromium as to-be-considered criteria (“TBCs”) for remedial action objectives. The designation of these regulatory levels as TBCs requires the NERT to explicitly consider these values throughout the upcoming feasibility study and to follow all applicable guidance related to doing so. The feasibility study is the mechanism for the development, screening, and detailed evaluation of alternative remedial actions. Metropolitan will continue to monitor the cleanup of the two former chemical manufacturing facilities in Henderson and to monitor and participate in federal and state rulemaking proceedings.

**PFAS.** Per- and poly-fluoroalkyl substances (“PFAS”) are substances widely used in consumer and industrial products such as fabrics, carpets, firefighting foams, food packaging, and nonstick cookware and are known for their nonstick, waterproof, and heat and stain resistant properties. Perfluorooctane sulfonate (“PFOS”) and perfluorooctanoic acid (“PFOA”) are the two most common synthetic organic chemicals in the group of compounds referred to as PFAS. In August 2019, DDW lowered the notification levels (“NLs”) for PFOS from 13 ppt to 6.5 ppt and for PFOA from 14 ppt to 5.1 ppt. NLs are non-regulatory, precautionary health-based measures for concentrations of chemicals in drinking water that warrant notification and further monitoring and assessment. If a chemical concentration is greater than its NL in drinking water that is provided to consumers, DDW recommends that the utility inform its customers and consumers about the presence of the chemical, and about health concerns associated with exposure to it. In February 2020, DDW lowered the response levels (“RLs”) for PFOA and PFOS from 70 ppt for individual or combined concentrations to 10 ppt for PFOA and 40 ppt for PFOS. An RL is set higher than an NL and represents a chemical concentration level at which DDW recommends a water system consider taking a water source out of service or providing treatment if that option is available to them. Legislation that took effect on January 1, 2020 (California Assembly Bill 756) requires that water systems that receive a monitoring order from the SWRCB and detect levels of PFAS that exceed their respective RL must either take a drinking water source out of use or provide specified public notification if they continue to supply water above the RL. In March 2021, DDW issued an NL of 0.5 parts per billion (“ppb”) and an RL of 5 ppb for perfluorobutane sulfonic acid (“PFBS”), another PFAS chemical. In October 2022, the SWRCB issued an NL of 3 ppt and an RL of 20 ppt for perfluorohexane sulfonic acid (“PFHxS”). Also in October 2022, the SWRCB issued a general order requiring select public water systems to monitor for PFAS. In April 2024, OEHHA adopted PHGs for PFOA at 0.007 ppt and PFOS at 1 ppt, a further step in the process of establishing MCLs in drinking water.

The USEPA established non-enforceable and non-regulatory health advisories in 2016 for PFOA and PFOS at single or combined concentrations of 70 ppt in treated drinking water. These advisories indicate the level of drinking water contamination below which adverse health effects are not expected to occur. On January 19, 2021, the USEPA announced that it is considering whether to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA”) and/or hazardous waste under the Resource Conservation and Recovery Act (“RCRA”). On February 22, 2021, the USEPA announced its proposed revisions to the Fifth Unregulated Contaminant Monitoring Rule (“UCMR 5”) for public water systems which includes monitoring for 29 PFAS in drinking water. On March 3, 2021, the USEPA published its final regulatory determination to regulate PFOA and PFOS in drinking water. On April 10, 2024, the USEPA announced final regulations establishing the first national drinking water standards for six PFAS. The regulations will be effective 60 days after they are published in the Federal Register and set limits for five individual PFAS: PFOA, PFOS, perfluorononanoic acid (“PFNA”), hexafluoropropylene oxide dimer acid (commonly known as “GenX chemicals”), and PFHxS. In addition, the regulations set a hazard index MCL for any two or more of four PFAS as a mixture: PFNA, PFHxS, GenX chemicals, and PFBS. Under the regulations, the USEPA has set: (1) legally enforceable MCLs of 4 ppt for PFOA and PFOS; (2) non-enforceable health-based MCLGs for PFOA and PFOS at 0; (3) a MCL and MCLG of 10 ppt for PFNA, PFHxS and GenX chemicals; and (4) a hazard index of 1.0 as MCLs and MCLGs for any mixture containing two or more of the four PFAS: PFNA, PFHxS, GenX chemicals, and PFBS. The hazard index is a tool used to evaluate health risks from exposure to multiple chemicals. To determine the hazard index for these four PFAS, water systems would compare the amount of each of the four PFAS in drinking water to its associated Health Based Water Concentration (“HBWC”), which is the level below which no health effects are expected for that PFAS. Water systems would add the comparison value for each PFAS (expressed as a fraction) contained within the mixture. If the sum value is greater than 1.0, it would be an exceedance of the hazard index MCL for PFNA, PFHxS, GenX chemicals, and PFBS. The adopted rule would require public water systems to monitor for the regulated PFAS, notify the public if monitoring detects such PFAS at levels that exceed the regulatory standards, and reduce the levels of such PFAS in drinking water if they exceed the standards. Regulated public water systems will have three years to complete their initial monitoring for these PFAS and must include information about the results of their monitoring in their annual water quality reports to customers. Public water systems that detect PFAS above the new standards will have five years to implement solutions to reduce the PFAS to meet the standards.

On October 18, 2021, the USEPA published a “PFAS Strategic Roadmap: EPA’s Commitments to Action, 2021-2024” (PFAS Roadmap). The document outlines four main drinking water actions that the USEPA intends to complete from 2021 to 2024: (1) conduct nationwide monitoring for PFAS in drinking water as part of the UCMR 5 process; (2) establish national primary drinking water regulations for PFOA and PFOS by Fall 2023; (3) publish health advisories for GenX chemicals and PFBS by Spring 2022; and (4) publish updates to PFAS analytical methods to monitor drinking water by Fall 2024. On December 27, 2021, the USEPA published the final UCMR 5 for public water systems which includes monitoring for 29 PFAS in drinking water. UCMR 5 requires pre-sampling preparations in 2022, sample collection from 2023-2025, and reporting of final results through 2026. On June 15, 2022, the USEPA established new interim, updated drinking water health advisories for PFOA and PFOS to replace the health advisories established in 2016. The non-enforceable and non-regulatory interim, updated lifetime health advisories for PFOA and PFOS in drinking water are established at concentrations of 0.004 ppt and 0.02 ppt, respectively. In its announcement, the USEPA noted that such concentrations are below the ability to detect under current detection methods. On June 15, 2022, the USEPA also established final health advisories for GenX and PFBS of 10 ppt and 2,000 ppt, respectively. On September 6, 2022, the USEPA issued a proposed rule designating PFOA and PFOS as hazardous substances under CERCLA. On April 13, 2023, EPA requested public input on whether to designate: (i) seven additional PFAS (PFBS, PFHxS, PFNA, GenX, PFBA, PFHxA, and perfluorodecanoic acid (“PFDA”), (ii) precursors to these seven PFAS and to PFOA and PFOS, and (iii) groups or categories of PFAS, as hazardous substances under CERCLA. Metropolitan provided

comments on these proposals and urged USEPA to further evaluate the potentially significant impacts of the proposed CERCLA designation on water and wastewater utilities. On February 8, 2024, the USEPA issued two proposed rules: (1) listing 9 PFAS (PFOA, PFOS, PFBS, HFPO-DA or GenX, PFNA, PFHxA, PFDA, PFHxA, and PFBA) as hazardous constituents under the RCRA; and (2) amending RCRA's definition of "hazardous waste" to clarify the USEPA's authority to address releases of all substances that meet the definition of hazardous waste under RCRA. These two proposed rules may be the first step in the USEPA possibly naming these PFAS as RCRA hazardous waste. Listing any PFAS as hazardous waste under RCRA would result in the automatic designation of that PFAS as a hazardous substance under CERCLA. Metropolitan will continue to monitor and participate in federal and state rulemaking proceedings.

PFOA and PFBS have not been detected in Metropolitan's imported or treated water supplies. In 2019, 2020, 2021, and 2022, Metropolitan detected in its supplies low levels of PFHxA, which is not acutely toxic or carcinogenic and is not currently regulated in California or at the federal level. In 2021, Metropolitan detected for the first time in its supplies low levels of perfluorobutanoic acid ("PFBA"), perfluoropentanoic acid ("PFPeA"), and PFOS. Low levels of PFBA and PFPeA were again detected in Metropolitan's supplies in 2022. Metropolitan has not identified any specific sources of these PFAS that have reached its water supplies, and the concentrations detected to date are well below the State's required reporting values.

Although Metropolitan has not identified any specific sources of these PFAS in its supplies, PFHxA is a common PFAS believed to be an impurity that is inadvertently produced during the manufacture of other PFAS. It is also a breakdown product from lubricants, coatings on food packaging, and household products. PFOS is widely used in surface treatments of carpets, textiles, leather, paper, and cardboard, as a surfactant in extinguishing foams, as a mist suppressant in chrome plating, and as a surfactant in the mining and oil industries. PFBA is a breakdown product of other PFAS that are used in stain-resistant fabrics, paper food packaging, and carpets; it is also used for manufacturing photographic film. It has been used as a substitute for longer chain perfluoroalkyl carboxylic acids in consumer products. PFPeA is a breakdown product of stain- and grease-proof coatings on food packaging, couches, and carpets. PFOA and PFOS have also been detected in groundwater wells in the region, including those of certain member agencies. Metropolitan may experience increased demands for its imported water to help offset the potential loss of any affected local supplies.

More than 7,000 cases regarding PFAS in aqueous film-forming foams ("AFFF") have been filed in the AFFF Multi-District Litigation ("MDL") Master Docket No. 2:18-mn-2873-RMG (the "AFFF MDL") since 2018. On June 2, 2023, E.I. Du Pont de Nemours and Company (n/k/a EIDP, Inc.), DuPont de Nemours Inc., The Chemours Company, The Chemours Company FC, LLC, and Corteva, Inc. (collectively, "DuPont") announced a proposed settlement with all eligible public water systems ("PWSs") in which DuPont agreed to pay \$1.185 billion (the "DuPont Settlement"). On June 22, 2023, the 3M Company ("3M") announced a proposed settlement with eligible PWSs in which, starting in July 2024, 3M would pay PWSs between \$10.5 billion and \$12.5 billion ("3M Settlement"), which would be the largest contaminated drinking water settlement in U.S. history. On April 12, 2024, Tyco Fire Products LP ("Tyco") announced a proposed class action settlement with all eligible PWSs where it agreed to pay \$750 million ("Tyco Settlement"). The class of PWSs in the Tyco Settlement includes any PWS that has detected PFAS in its drinking water sources as of May 15, 2024. On May 21, 2024, BASF Corporation agreed to pay \$316.5 million to all eligible PWSs as part of a proposed class action settlement ("BASF Settlement"). The class of PWSs in the BASF Settlement is the same as the class of PWSs in the Tyco Settlement. The terms of the Tyco and BASF Settlements are substantially similar to those in the 3M and DuPont Settlements. All eligible PWSs will be automatically included in the settlements and bound by the settlements' very broad release provisions unless they "opt out" by the deadlines applicable to the respective settlements. The funds in each settlement proposal would then be allocated among all eligible PWSs that do not "opt out" and who



submit claims to the funds. The settlement classes in each of these settlements could include thousands of PWSs.

In order to preserve its rights to pursue independent legal action for potential future claims, on November 14, 2023, Metropolitan's Board voted to opt out of both the DuPont and 3M Settlements. Metropolitan submitted its opt-out requests by the deadlines, and confirmed its requests to opt out of the DuPont and 3M Settlements have been accepted. However, Metropolitan continues to evaluate the potential impact of one of the parties' guidance documents regarding the settlements which the judge approved and which indicates that even if a wholesaler opts out of the settlements, if its retail customer is a settlement class member, the broad releases would extend to the wholesaler as to the water it provided to the settlement class member except to the extent the wholesaler shows it had the obligation for and bore unreimbursed PFAS-treatment costs for that water independent of the retail customer. The judge granted final approval of the DuPont Settlement on February 8, 2024. Final approval of the 3M Settlement was granted on March 29, 2024. On June 11, 2024, the judge granted preliminary approval of the Tyco Settlement, and on July 3, 2024, granted preliminary approval of the BASF Settlement. The last day to opt out of the Tyco Settlement is September 23, 2024, and the last day to opt out of the BASF Settlement is October 15, 2024. The final fairness hearing on the Tyco Settlement and the BASF Settlement is scheduled for November 1, 2024.

### **Seismic Considerations and Emergency Response Measures**

**General.** Metropolitan's system overlays a region of high seismicity. The conveyance and distribution systems traverse numerous faults capable of generating large magnitude earthquakes and some of Metropolitan's treatment plants, pressure control facilities, and other structures have the potential of experiencing high levels of earthquake-induced shaking. To mitigate this risk, Metropolitan routinely assesses the seismic hazards and potential risks to its facilities. It makes strategic investments through projects to limit overall system damage, improve post-earthquake recovery time, and reduce the impacts felt by the population and businesses. Metropolitan's strategy utilizes a defense-in-depth approach to prepare for and respond to the event adequately. Metropolitan's defense-in-depth approach includes the following priorities: (1) provide a diversified water supply portfolio, increase system flexibility, and maintain adequate levels of emergency storage to be able to withstand the potential disruption of imported supplies; (2) prevent damage to water delivery infrastructure in probable seismic events and limit damage in extreme events through the systematic review and upgrade of facilities for which deficiencies are identified; and (3) minimize the duration of water delivery interruptions through a dedicated emergency response and recovery organization, including in-house design, construction, and fabrication capability.

As part of its goal to increase the diversification of the local water portfolio, Metropolitan has provided monetary assistance to member agencies to develop new local water supplies. Increased and improved diversification of local supplies also improves the region's reliability in the event of a significant seismic event. In addition, Metropolitan is evaluating the feasibility of implementing a regional recycled water program referred to as PWSC. See "REGIONAL WATER RESOURCES—Local Water Supplies – *Recycled Water-Metropolitan Pure Water Southern California Program*" in this Appendix A. If completed, it is expected that PWSC would provide up to 150 million gallons per day of advanced treated recycled water for groundwater replenishment. The program, if completed, could provide an additional reliable water source within Metropolitan's service area in the event of an interruption of imported supplies.

In 2000, Metropolitan completed Diamond Valley Lake, an 810,000-acre-foot capacity reservoir located on the coastal side of the San Andreas Fault. With the completion of Diamond Valley Lake, Metropolitan nearly doubled its available in-region surface storage and improved its ability to capture water from Northern California in wet years. Water from Diamond Valley Lake can supply four of Metropolitan's five water treatment plants. Planned system flexibility improvements currently in design and construction will make it possible to transport water from Diamond Valley Lake throughout Metropolitan's distribution system. Diamond Valley Lake, along with the other in-region reservoirs, are used to maintain a six-month

emergency storage reserve outside of the operational storage in case of disruption of the imported water supplies. See “–Primary Facilities and Method of Delivery –*Diamond Valley Lake*.”

Metropolitan has developed a Seismic Upgrade Program to systematically evaluate its above-ground facilities for seismic risk and prioritize its upgrade effort. Structures undergo an initial rapid evaluation and, if a potential deficiency is identified, will then undergo a detailed structural evaluation to assess the required upgrades. Deficient facilities are upgraded to meet current seismic standards based on criticality to the water delivery system. Previous projects include seismic upgrades to the pump plant buildings for the CRA and upgrades to various facilities at Metropolitan’s treatment plants, such as wash water tanks, filter basins, and administration buildings. For existing pipelines, seismic resilience will be incorporated as a component of pipeline rehabilitation projects. Metropolitan will evaluate each upgrade individually to balance risk, performance, and cost-effectiveness. Metropolitan is currently implementing a long-term program to replace or reline its prestressed concrete cylinder pipe with a welded steel pipe to extend its service life. Providing a steel liner insert will also improve the seismic performance of these pipelines. Another example of Metropolitan’s continued effort to enhance the seismic resilience of its pipelines is the completion in early 2023 of a project to install earthquake-resistant ductile iron pipe at a location where the CRA crosses the Casa Loma Fault.

Metropolitan has an ongoing surveillance program that monitors the safety and structural performance of its dams and reservoirs permitted by DWR’s Division of Safety of Dams. Operating personnel perform regular inspections that include monitoring and analyzing seepage flows and pressures. Engineers responsible for dam safety review the inspection data and monitor each dam’s horizontal and vertical movements. Major on-site inspections are performed at least twice each year. Instruments that transmit seismic acceleration time histories for analysis are installed at critical sites when a dam is subjected to strong motion during an earthquake.

Metropolitan has developed an emergency plan that calls for specific response levels appropriate to an earthquake’s magnitude and location. Included in this plan are various communication tools, as well as a structured plan of management that varies with the severity of the event. Pre-designated personnel follow detailed steps for field facility inspection and distribution system patrol. Approximately 200 employees are designated to respond immediately if seismic events exceed a certain magnitude. An Emergency Operations Center (“EOC”) is maintained at the OCC. The OCC/EOC, specifically designed to be earthquake resistant, contains communication equipment, including a radio transmitter, microwave capability, and a response line linking Metropolitan with its member agencies and DWR. The OCC/EOC also has the capability of communicating with other utilities, County EOCs, and the State’s Office of Emergency Services. Metropolitan also maintains in-house capability to address two major pipeline breaks simultaneously as part of its emergency response plan to restore operation shortly after a significant seismic event.

In conjunction with DWR and LADWP, Metropolitan has formed the Seismic Resilience Water Supply Task Force to collaborate on studies and mitigation measures aimed at improving the reliability of imported water supplies to Southern California. Specific task force goals include revisiting historical assumptions regarding potential aqueduct outages after a seismic event; establishing a common understanding about individual agency aqueduct vulnerability assessments, projected damage scenarios, and planning assumptions; and discussing ideas for improving the resiliency of Southern California’s imported water supplies through multi-agency cooperation. The task force has established multi-year goals and will continue to meet on these issues and develop firm plans for mitigating seismic vulnerabilities.

Metropolitan’s resiliency efforts include manufacturing, pipe fabrication, and coating capabilities in its facilities in La Verne, California. Investments to upgrade the La Verne shop facilities in order to enhance and expand Metropolitan’s capacity to provide fabrication, manufacturing, and coating services for rehabilitation work, maintenance activities, and capital projects are ongoing, with currently approved

projects anticipated to be completed in early 2025. Metropolitan can also provide manufacturing, coating, and fabrication services upon request through reimbursable agreements to member agencies and DWR. These agreements have enhanced timely and cost-effective emergency response capabilities. Materials to fabricate pipe and other appurtenant fittings are kept on site. In the event of earthquake damage, Metropolitan has taken measures to provide the capacity to design and fabricate pipe and manufacture fittings. Metropolitan is also staffed to perform emergency repairs.

DWR has in place a seismic assessment program that evaluates the State Water Project's vulnerability to seismic events and makes recommendations for improvements. The assessment is important because the California Aqueduct crosses many major faults. The State Water Project delivers water supplies from Northern California that must traverse the Bay-Delta through hundreds of miles of varying levels of engineered levees that are potentially susceptible to significant damage due to flood and seismic risk. In the event of a failure of the Bay-Delta levees, the quality of the Bay-Delta's water could be severely compromised as saltwater comes in from the San Francisco Bay. Metropolitan's supply of State Water Project water would be adversely impacted if pumps that move Bay-Delta water southward to the Central Valley and Southern California are shut down to contain the saltwater intrusion. Metropolitan estimates that stored water supplies, CRA supplies and local water resources that would be available in case of a levee breach or other interruption in State Water Project supplies would meet demands in Metropolitan's service area for approximately six months. See "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

Metropolitan, in cooperation with the other State Water Project contractors, developed recommendations to DWR for emergency preparedness measures to maintain continuity in export water supplies and water quality during seismic and other emergency events, which recommendations have been implemented or implementation is in progress. These measures include improvements to emergency construction materials stockpiles in the Bay-Delta, improved emergency contracting capabilities, strategic levee improvements and other structural measures of importance to Bay-Delta water export interests, including development of an emergency freshwater pathway to export facilities in a severe earthquake.

### **Wildfires Risk Management Response**

Wildfires are an ever-present reality in Southern California. Metropolitan continues to actively prepare for wildfires by collaborating with partner agencies such as the California Department of Forestry and Fire Protection (Cal Fire), DWR, and counties to implement preparedness measures to protect watersheds. Examples of these efforts include removing brush from fire prone areas, as well as removing by-products of large fires such as ash, fire retardant, and other debris that could negatively affect water quality. Metropolitan also collaborates frequently with its member agencies and first-responders from other public agencies. This collaboration includes coordination with local fire departments during and after nearby wildfire events, as well as participating in joint training and exercises throughout the year. Additionally, Metropolitan has a five-year exercise plan that provides member agencies the opportunity to run exercises together before a disaster happens. Metropolitan tests its emergency communications processes through regular tests of emergency radio networks, satellite phones, mass-communication alerting systems, and online information sharing systems.

Metropolitan has also implemented measures to protect employees from the impacts of wildfires such as upgrading HVAC systems in control centers to improve the filtration of smoke and other pollutants and sending emergency notifications to employees to warn them of unhealthy air quality due to nearby fires.

### **Security Measures**

Metropolitan's water and energy facilities are federally-determined critical infrastructure. Metropolitan deploys multiple layers of physical security and collaborates with federal and state partners

to mitigate malevolent threats. It manages a physical security system consisting of electronic access controls, a surveillance and intrusion warning system, and a round-the-clock security watch center. Metropolitan maintains professional, in-house security specialists and retains a 200+ contract security guard force. It directs a capital improvement program to harden physical infrastructure. Metropolitan collaborates with key federal and State security partners, which entails on-site consultations, inter-agency mock exercises, real-time monitoring, and first response coordination. It follows the chain-of-custody protocols of the FERC and the North American Electric Reliability Corporation. Finally, Metropolitan complies with regulations authorized under the Bioterrorism Response Act of 2002, the Aviation and Transportation Security Act of 2001, and the America's Water Infrastructure Act of 2018.

## **CAPITAL INVESTMENT PLAN**

### **General Description**

Metropolitan's current Capital Investment Plan (the "Capital Investment Plan" or "CIP") describes Metropolitan's infrastructure and system reliability projects, either as new assets, upgrades to existing capital assets or refurbishment and replacements of existing facilities. The CIP is Metropolitan's planning document to ensure asset reliability, enhance operational efficiency and flexibility, and ensure compliance with water quality regulations.

Metropolitan's CIP is regularly reviewed and updated. Metropolitan's biennial budget process includes a review of the projected long-term capital needs and the development of a capital expenditure forecast for the next ten years, as well as the identification of the capital priorities of Metropolitan over the biennial budget term. The award of major contracts and professional services agreements is subject to approval by Metropolitan's Board. Pursuant to the Administrative Code, following the adoption of the biennial budget, a Board action is presented to (1) appropriate the total amount of approved biennial CIP expenditures and (2) authorize the General Manager to initiate or proceed with work on capital projects identified in the CIP for such biennial period. The amount and timing of borrowings to fund capital expenditures will depend upon the status of construction activity and water demands within Metropolitan's service area, among other factors. From time to time, projects that have been undertaken are delayed, redesigned, or deferred by Metropolitan for various reasons, and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule or that any project will be completed as currently planned. In addition, from time to time, when circumstances warrant, Metropolitan's Board may approve capital expenditures other than or in addition to those contemplated by the CIP at the time of the then-current biennial budget.

### **Projection of Capital Investment Plan Expenditures**

The table below sets forth the projected CIP expenditures by project type for the fiscal years ending June 30, 2025 through 2029, as reflected in the biennial budget for fiscal years 2024-25 and 2025-26.

In addition to the projected CIP expenditures, a projection of estimated capital expenditures by Metropolitan for PWSC for the fiscal years ending June 30, 2025 through June 30, 2029 has been provided in the table below in the event PWSC is approved by Metropolitan's Board as a CIP project, as reflected in the ten-year expenditures projection provided in Metropolitan's biennial budget for fiscal years 2024-25 and 2025-26. The PWSC program is not currently included in Metropolitan's CIP as a capital program. It is currently anticipated that Metropolitan's Board will consider whether to include PWSC in the CIP in fall or winter of 2025. For a description of PWSC, see "REGIONAL WATER RESOURCES – Local Water Supplies – Recycled Water-Metropolitan Pure Water Southern California Program" in this Appendix A.

Metropolitan's actual capital expenditures are subject to change as projects progress or are advanced. The biennial budget is updated every two years as a result of the periodic review and adoption

of the capital budget by Metropolitan's Board. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

**CAPITAL INVESTMENT PLAN  
PROJECTION OF EXPENDITURES<sup>(1)</sup>  
(Fiscal Years Ending June 30 - Dollars in Thousands)**

	2025	2026	2027	2028	2029	Total
Infrastructure R&R	\$ 223,275	\$ 254,200	\$ 276,461	\$ 296,624	\$ 297,679	\$1,348,239
Infrastructure Upgrade	6,799	5,076	8,100	1,861	9,163	30,999
Regulatory Compliance	1,047	1,141	1,135	1	7,195	10,519
Stewardship	19,633	13,108	16,299	36,917	16,028	101,985
Supply Reliability	3,275	11,315	8,118	8	0	22,716
System Flexibility	55,084	27,007	19,271	15,186	32,871	149,419
Water Quality	2,887	12,633	8,075	361	2,060	26,016
<b>CIP Total</b>	<b>\$ 312,000</b>	<b>\$ 324,480</b>	<b>\$ 337,459</b>	<b>\$ 350,958</b>	<b>\$ 364,996</b>	<b>\$1,689,893</b>
PWSC <sup>(2)</sup>	0	0	1,052,057	1,333,219	1,805,740	4,191,016
<b>Total CIP and PWSC<sup>(2)</sup></b>	<b>\$ 312,000</b>	<b>\$ 324,480</b>	<b>\$1,389,516</b>	<b>\$1,684,177</b>	<b>\$2,170,736</b>	<b>\$5,880,909</b>

Source: Metropolitan.

- (1) Metropolitan's CIP expenditures for fiscal years 2022-23 and 2023-24 totaled approximately \$624.7 million. Projected CIP expenditures for fiscal years 2024-25 through 2028-29 are based on the ten-year financial forecast provided in the biennial budget for fiscal years 2024-25 and 2025-26.
- (2) PWSC is not a capital program in Metropolitan's CIP, but the projected capital expenditures based on the most recent cost estimates have been included for planning purposes. Approval by Metropolitan's Board is required to include PWSC in the CIP, which has not occurred. The projected capital expenditures for PWSC, if approved, as set forth in the table above reflect the total estimated capital costs expected to be incurred for the project in the specified years without any offset for potential grant funding sources or contributions from potential partners. Metropolitan's projections of future debt financing in the event PWSC is approved (as described under "Capital Investment Plan Financing" below) assume that a portion of the projected capital expenditures for PWSC (approximately \$325.3 million in fiscal year 2026-27, \$482.4 million in fiscal year 2027-28, and \$653.4 million in fiscal year 2028-29) will be funded from other sources, including grants and contributions from potential partners.

In developing the CIP, projects are reviewed, scored, and prioritized towards the objectives of ensuring the sustainable delivery of reliable, high-quality water, while meeting all regulatory requirements and maintaining affordability. Additional capital costs may arise in the future as a result of, among other things, federal and state water quality regulations, project changes and mitigation measures necessary to satisfy environmental and regulatory requirements, and additional facilities' needs. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.

Construction projects included in the CIP are subject to ordinary construction risks and delays, including but not limited to: inclement weather or natural hazards affecting work and timeliness of completion; contractor claims or nonperformance; work stoppages or slowdowns; unanticipated project site conditions encountered during construction; errors or omissions in contract documents requiring change orders; and/or higher than anticipated construction bids or costs (including as a result of steeper inflationary increases), any of which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors, and result in increased CIP costs. The majority of Metropolitan's construction projects exceeding \$5 million over the next five years will be covered by a project labor agreement between labor unions and construction contractors, which will reduce the risk of work stoppages or slowdowns. While the construction schedules for certain Metropolitan projects were initially delayed because of impacts due to COVID-19, normal construction activities and schedules have

resumed. However, some projects continue to be impacted by supply chain issues, particular electrical components such as transformers, switchgear, and other highly specialized equipment. Although not currently anticipated, additional delays in the future are possible.

### **Capital Investment Plan Financing**

The CIP requires debt financing (see “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A) as well as pay-as-you-go funding. In connection with the biennial budget process and the development of the ten-year financial forecast provided therein, an internal funding objective is established for the funding of capital program expenditures from current revenues. An internal funding objective to fund 56 percent and 54 percent of capital program expenditures from current revenues for fiscal years 2024-25 and 2025-26, respectively, was established in connection with the adoption of the biennial budget for fiscal years 2024-25 and 2025-26. The remainder of capital program expenditures are expected to be funded through the issuance from time to time of water revenue bonds, which are payable from Net Operating Revenues. However, as in prior years, pay-as-you-go funding or debt financing may be reduced or increased by the Board at any time.

For planning purposes, Metropolitan has estimated the potential capital costs of PWSC that may be incurred by Metropolitan over the ten-year financial forecast provided in its biennial budget for fiscal years 2024-25 and 2025-26 as set forth for fiscal years 2026-27 through 2028-29 in the table above. In addition, Metropolitan’s financial forecast includes assumptions with respect to future debt financing for a portion of the costs of PWSC, including assumptions regarding the potential amounts of and sources of funding for the PWSC that may be available from grants and contributions by potential partners.

Projections for fiscal years 2024-25 through 2028-29 assume approximately \$640 million of the projected CIP expenditures (excluding any projected capital expenditures associated with PWSC) will be funded by revenue bonds over such period, which may include remaining proceeds from prior bond issuances. Projections for the same period with PWSC assume \$3,380 million in additional water revenue bonds over such period to finance a portion of the CIP, and Metropolitan’s estimated share of the projected capital costs of PWSC if it is approved as a capital project, taking into account Metropolitan’s assumptions with respect to the amount of funding that may be available from grants and contributions from potential partners. These revenue bonds may be issued either as Senior Revenue Bonds under the Senior Debt Resolutions or as Subordinate Revenue Bonds under the Subordinate Debt Resolutions (each as defined under “METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds” in this Appendix A). The cost of these projected bond issues is reflected in the financial projections under “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

### **Major Projects of Metropolitan’s Capital Investment Plan**

**Colorado River Aqueduct Facilities.** As previously noted, deliveries through the CRA began in 1941. Through annual inspections and maintenance activities, the performance and reliability of the various components of the CRA are regularly evaluated. Projects under the CRA facilities program are designed to replace or refurbish facilities and components on the CRA system in order to reliably convey water from the Colorado River to Southern California. The current projected cost estimate for all prior and planned refurbishment or replacement projects under the CRA facilities program from fiscal year 1998-99 through fiscal year 2033-34 is \$1.04 billion. Costs through June 30, 2024 were \$514.1 million. Budgeted aggregate capital expenditures for improvements on the CRA for fiscal years 2024-25 and 2025-26 are \$85.8 million.

**Distribution System – Prestressed Concrete Cylinder Pipe.** Metropolitan’s distribution system is comprised of approximately 830 miles of pipelines ranging in diameter from 30 inches to over 200 inches. (See “METROPOLITAN’S WATER DELIVERY SYSTEM” in this Appendix A.) There are 163 miles of the distribution system that are made up of prestressed concrete cylinder pipe (“PCCP”). In response to

PCCP failures experienced by several water agencies, Metropolitan initiated the PCCP Assessment Program in December 1996 to evaluate the condition of Metropolitan's PCCP lines and investigate inspection and refurbishment methods. As part of this program, Metropolitan made improvements to several sections of PCCP. Rather than continue to make spot repairs to the pipe segments, Metropolitan initiated a long-term capital program to rehabilitate approximately 100 miles of PCCP in five pipelines by relining with a welded steel liner. Significant projects over the next several years include relining of portions of Second Lower, Sepulveda Feeders and Allen McColloch Pipeline. Pipeline rehabilitation is prioritized based on the condition of the pipe segment and the criticality of the pipeline. The estimated cost to reline all 100 miles of PCCP is approximately \$5.1 billion. Through June 30, 2024, approximately 18.8 miles have been relined and it is expected to take over 30 years to complete the remainder of the pipelines. Costs through June 30, 2024 for all PCCP work (including the prior repairs) were \$423.4 million. Budgeted aggregate capital expenditures for PCCP rehabilitation for fiscal years 2024-25 and 2025-26 are \$66.5 million.

***Distribution System – Refurbishments and Improvements.*** In addition to the long-term program to rehabilitate Metropolitan's PCCP lines, several other components of the distribution system, including dams and reservoirs, are being refurbished and/or improved. Significant projects over the next several years include retrofitting of the distribution system to improve resiliency against earthquake; rehabilitation of reservoirs, relining of pipelines; and refurbishment of pump stations, pressure control structures, hydroelectric plants, and service connections. The projected cost estimate for refurbishment or replacement projects, other than the PCCP relining, from fiscal year 2004-05 through fiscal year 2033-34 is \$1.4 billion. Costs through June 30, 2024 totaled approximately \$584.3 million. For fiscal years 2024-25 and 2025-26, budgeted aggregate capital expenditures for refurbishing and improvements on the distribution system, other than PCCP rehabilitation, are \$174.1 million.

***Drought Response and System Flexibility.*** In response to the recent historic statewide drought that ended in 2023, several drought response projects that address decreasing water supplies both in specific parts of Metropolitan's service area and across the entire district have been added to the CIP. This is in addition to the ongoing projects to increase the system flexibility of Metropolitan's water supply and delivery infrastructure to meet service demands. Metropolitan continues investigating capital improvements that mitigate drought impacts and more projects are expected to be developed in the coming years. Some of the projects commenced in the last two years. Significant projects in this category include Inland Feeder-Rialto Pipeline Intertie, Inland Feeder-Foothill Pump Station Intertie, Wadsworth Pumping Plant Bypass Pipeline, Badlands Tunnel Surge Protection Facility, Sepulveda Feeder Pump Stations, Sepulveda Feeder West Area Water Supply Reliability Pipeline Improvements, Sepulveda Canyon PCS to Venice PCS Valve Replacements and Perris Valley Pipeline Tunnels. The current projected cost estimate for the prior and planned drought response and system flexibility projects from fiscal year 2004-05 through fiscal year 2033-34 is \$496.8 million, with \$273.7 million spent through June 30, 2024 for improving system flexibility. Budgeted aggregate capital expenditures for drought response and system flexibility projects for fiscal years 2024-25 and 2025-26 are \$66.3 million.

***Water Treatment Plant Improvements.*** The F. E. Weymouth Water Treatment Plant, which was placed into service in 1941, is Metropolitan's oldest water treatment facility. Four more water treatment plants were constructed throughout Metropolitan's service area with the Henry J. Mills Water Treatment Plant being the newest water treatment facility, which was placed into service in 1978. These plants treat water from the CRA and/or the State Water Project. These plants have been subsequently expanded since their original construction. Metropolitan has completed numerous upgrades and refurbishment/replacement projects to maintain the plants' reliability and improve efficiency. Significant projects over the next several years include refurbishment of settling basins and strengthening of inlet channels at the Weymouth plant, rehabilitation of filtration system at the Robert B. Diemer Water Treatment Plant, second stage of electrical upgrades at the Mills plant, ozonation system upgrade at the Joseph Jensen Water Treatment Plant, and chemical system rehabilitation at the Robert A. Skinner Plant. The cost estimate for all prior and projected



improvements at all five plants, not including the ozone facilities and water treatment capacity expansions, from fiscal year 2004-05 through fiscal year 2033-34 is approximately \$1.7 billion, with \$1.2 billion spent through June 30, 2024. Budgeted aggregate capital expenditures for improvements at all five plants for fiscal years 2024-25 and 2025-26 are \$122.8 million.

## METROPOLITAN REVENUES

### General

Until water deliveries began in 1941, Metropolitan's activities were, by necessity, supported entirely through the collection of *ad valorem* property taxes. Since the mid-1980s, water revenues, which includes revenues from water sales, wheeling and exchanges, have provided approximately 80 percent of total revenues annually. Over that period, *ad valorem* property taxes have accounted for about 11 percent of total revenues, and in fiscal year 2023-24, *ad valorem* property taxes accounted for approximately 12 percent of total revenues. See "–Revenue Allocation Policy and Tax Revenues." The remaining revenues have been derived principally from the sale of hydroelectric power, interest on investments, and additional revenue sources (water standby charges and availability of service charges) beginning in 1992. *Ad valorem* taxes do not constitute a part of Operating Revenues and are not available to make payments with respect to the water revenue bonds issued by Metropolitan.

The basic rate for untreated water service for domestic and municipal uses is \$903 per acre-foot at the Tier 1 level, which became effective January 1, 2024. The basic rate for untreated water service for domestic and municipal uses will increase to \$912 per acre-foot effective January 1, 2025. See "–Rate Structure" and "–Water Rates." The *ad valorem* tax rate for Metropolitan purposes has gradually been reduced from a peak equivalent rate of 0.1250 percent of full assessed valuation in fiscal year 1945-46 to 0.0035 percent of full assessed valuation for fiscal year 2023-24. The biennial budget for fiscal years 2024-25 and 2025-26 assumes the Board will increase the *ad valorem* tax rate to 0.0070 percent of full assessed valuation beginning in fiscal year 2024-25. [*if new tax rate established in August add the following:*] As assumed by the biennial budget for fiscal years 2024-25 and 2025-26, in August 2024, the Board established the *ad valorem* tax rate for fiscal year 2024-25 to 0.0070 percent.] The rates charged by Metropolitan represent the cost of Metropolitan's wholesale water service to its member agencies, and not the cost of water to the ultimate consumer. Metropolitan does not exercise control over the rates charged by its member agencies or their subagencies to their customers.

### Summary of Revenues by Source

The following table sets forth Metropolitan's sources of revenues for the five fiscal years ended June 30, 2024. Data for the three fiscal years ended on or prior to June 30, 2022 is presented on a modified accrual basis, consistent with Metropolitan's budgetary reporting for such fiscal years. In fiscal year 2022-23, the basis for budgeting was changed, therefore data for the fiscal years ended June 30, 2023 and 2024 is presented on a cash basis. All information is unaudited. Audited financial statements for the fiscal years ended June 30, 2023 and June 30, 2022, are included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED MARCH 31, 2024 AND 2023 (UNAUDITED)."

**SUMMARY OF REVENUES BY SOURCE<sup>(1)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

	<b>Modified Accrual</b>			<b>Cash</b>	
	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024<sup>(6)</sup></b>
Water Revenues <sup>(2)</sup>	\$ 1,188	\$ 1,405	\$ 1,515	\$ 1,323	\$ 1,167
Taxes, Net <sup>(3)</sup>	147	161	147	136	124
Additional Revenue Sources <sup>(4)</sup>	165	165	172	184	197
Interest on Investments	20	10	7	21	42
Hydroelectric Power Sales	16	19	8	6	13
Other Revenues <sup>(5)</sup>	14	14	39	166	99
<b>Total Revenues</b>	<b>\$ 1,550</b>	<b>\$ 1,774</b>	<b>\$ 1,888</b>	<b>\$ 1,836</b>	<b>\$ 1,642</b>

Source: Metropolitan.

- (1) Does not include any proceeds from the sale of bonded indebtedness.
- (2) Water revenues include revenues from water sales, exchanges, and wheeling.
- (3) *Ad valorem* taxes levied by Metropolitan are applied solely to the payment of outstanding general obligation bonds of Metropolitan and to State Water Contract obligations; taxes available to pay for SWC O&M costs are reflected as Other Revenue.
- (4) Includes revenues derived from water standby charges, readiness-to-serve, and capacity charges.
- (5) Includes miscellaneous revenues and Build America Bonds (BABs) subsidy payments of \$2.9 million in fiscal year 2019-20, and \$0 in fiscal year 2020-21 and thereafter. All of Metropolitan's then-outstanding BABs were retired as of July 1, 2020. Includes property taxes applied to SWC O&M Costs of \$21.0 million in fiscal year 2021-22, \$62.4 million in fiscal year 2022-23, and \$77.6 million in fiscal year 2023-24. Fiscal year 2022-23 also includes \$80 million in grant funding from the State for PWSC.
- (6) Fiscal year 2023-24 information is based on preliminary results.

### Revenue Allocation Policy and Tax Revenues

The Board determines the water revenue requirement for each fiscal year after first projecting the *ad valorem* tax levy for that year. The tax levy for any year is subject to limits imposed by the State Constitution, the Act and Board policy and to the requirement under the State Water Contract that in the event that Metropolitan fails or is unable to raise sufficient funds by other means, Metropolitan must levy upon all property within its boundaries not exempt from taxation a tax or assessment sufficient to provide for all payments under the State Water Contract. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. The Act limits Metropolitan's tax levy to the amount needed to pay debt service on Metropolitan's general obligation bonds and to satisfy a portion of Metropolitan's State Water Contract obligations. However, Metropolitan has the authority to impose a greater tax levy if, following a public hearing, the Board finds that such revenue is essential to Metropolitan's fiscal integrity. For each fiscal year since 2013-14, the Board has exercised that authority and voted to suspend the tax limit clause in the Act, maintaining the fiscal year 2012-13 *ad valorem* tax rate to pay for a greater portion of Metropolitan's State Water Contract obligations. More recently, in 2022, the Board exercised its authority under the Act to suspend the tax limit clause for each of fiscal years 2022-23 through 2025-26. The biennial budget for fiscal years 2024-25 and 2025-26 assumes the Board will increase the *ad valorem* tax rate beginning in fiscal year 2024-25. [if new tax rate established in August add the following:] As assumed by the biennial budget for fiscal years 2024-25 and 2025-26, in August 2024, the Board increased the *ad valorem* tax rate for fiscal year 2024-25.] Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt

Resolutions (defined in this Appendix A under “METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds”).

### **Water Revenues**

**General; Authority.** Water rates are established by the Board and are not subject to regulation or approval by the California Public Utilities Commission or by any other local, State, or federal agency. In accordance with the Act, water rates must be uniform for like classes of service. Metropolitan, a wholesaler, provides one type of service: full-service water service (treated or untreated). See “—Classes of Water Service.”

No member agency of Metropolitan is obligated to purchase water from Metropolitan. However, 21 of Metropolitan’s 26 member agencies have entered into 10-year voluntary water supply purchase orders (“Purchase Orders”) effective through December 31, 2024. See “—Member Agency Purchase Orders.” Consumer demand and locally supplied water vary from year to year, resulting in variability in water revenues. See “REGIONAL WATER RESOURCES” in this Appendix A. Metropolitan uses its financial reserves and budgetary tools to manage the financial impact of the variability in revenues due to fluctuations in annual water transactions. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**Payment Procedure.** Water is delivered to the member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of one percent of the delinquent payment is assessed for a payment that is delinquent for no more than five business days. A late charge of two percent of the amount of the delinquent payment is charged for a payment that is delinquent for more than five business days for each month or portion of a month that the payment remains delinquent. Metropolitan has the authority to suspend service to any member agency delinquent for more than 30 days. Delinquencies have been rare; in such instances late charges have been collected. No service has been suspended because of delinquencies.

**Water Revenues.** The following table sets forth water transactions (which include water sales, exchanges, and wheeling) in acre-feet and water revenues (which include revenues from water sales, exchanges, and wheeling) for the five fiscal years ended June 30, 2024. As reflected in the table below, estimated water revenues for the fiscal year ended June 30, 2024 aggregated \$1,167.4 million, of which \$990.3 million was generated from water sales and \$267.1 million was generated from exchanges and wheeling. Water revenues of Metropolitan for the fiscal years ended June 30, 2023, and June 30, 2022, on an accrual basis, are shown in Metropolitan’s audited financial statements included in Appendix B.

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**SUMMARY OF WATER TRANSACTIONS AND REVENUES**  
**Fiscal Years Ended June 30<sup>(1)</sup>**

<b>Fiscal Year</b>	<b>Water Transactions in Acre-Fee Member Agencies</b>	<b>Water Transactions in Acre-Feet Other</b>	<b>Water Transactions in Acre-Feet Total<sup>(2)</sup></b>	<b>Water Revenues<sup>(3)</sup> (in millions)</b>	<b>Dollars Per Acre-Foot</b>	<b>Average Dollars Per 1,000 Gallons</b>
2020	1,367,819	51,337	1,419,156	1,188.0	837	2.57
2021	1,573,965	75,551	1,649,516	1,404.7	892	2.61
2022	1,645,805	36,027	1,681,833	1,515.1	921	2.76
2023	1,385,776	13,076	1,398,852	1,322.7	954	2.93
2024	1,169,263	72,760	1,242,023	1,167.4	998	3.06

*Source: Metropolitan.*

- (1) Information for the fiscal years 2019-20 through 2021-22 is presented on a modified accrual basis; information for fiscal years 2022-23 and 2023-24 is presented on a cash basis. Fiscal year 2023-24 information is based on preliminary results.
- (2) Water transactions include water sales, exchanges and wheeling with member agencies and third parties.
- (3) Water Revenues include revenues from water sales, exchanges, and wheeling. Water Revenues from wheeling and exchange transactions were \$140.1 million, \$167.0 million, \$165.0 million, \$148.8 million and \$267.1 million in the fiscal years ended June 30, 2020 through 2024, respectively.

**Principal Customers**

Total water transactions accrued for the fiscal year ended June 30, 2024, were 1.19 million acre-feet, generating \$1.22 billion in water revenues for such period (based on preliminary results for fiscal year 2023-24). Metropolitan's ten largest water customers for the year ended June 30, 2024 are shown in the following table, on an accrual basis. SDCWA has filed litigation challenging Metropolitan's rates. See "—Litigation Challenging Rate Structure."

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**TEN LARGEST WATER CUSTOMERS**  
**Year Ended June 30, 2024**  
**Accrual Basis<sup>(1)</sup>**

<b>Agency</b>	<b>Water Revenues<sup>(2)</sup> (in Millions)</b>	<b>Percent of Total</b>	<b>Water Transactions in Acre Feet<sup>(3)</sup></b>	<b>Percent of Total</b>
San Diego CWA	\$ 206.8	17.0%	310,993	26.1%
City of Los Angeles	155.6	12.8	139,834	11.8
West Basin MWD	115.5	9.5	99,738	8.4
MWD of Orange County	113.0	9.3	93,840	7.9
Eastern MWD	102.0	8.4	100,71	8.5
Calleguas MWD	85.0	7.0	69,328	5.8
Western MWD of Riverside County	67.0	5.5	63,268	5.3
Upper San Gabriel Valley MWD	58.1	4.8	45,460	3.8
Three Valleys MWD	48.5	4.0	67,398	5.7
Inland Empire Utility Agency	33.5	2.8	38,416	3.2
<b>Total</b>	<b>\$ 985.0</b>	<b>81.1%</b>	<b>1,028,929</b>	<b>86.5%</b>
<b>Total Water Revenues<sup>(2)</sup> \$ 1,216.1      Total Acre-Feet<sup>(3)</sup> 1,190,069</b>				

*Source: Metropolitan.*

(1) All information in this table is presented on an accrual basis. Fiscal year 2023-24 information is based on preliminary results.

(2) Water Revenues include revenues from water sales, exchanges, and wheeling.

(3) Water Transactions include water sales, exchanges, and wheeling with member agencies.

### Rate Structure

The following rates and charges are elements of Metropolitan's unbundled rate structure. See also "–Water Rates."

***Tier 1 and Tier 2 Water Supply Rates.*** The rate structure effective through calendar year 2024 recovers supply costs through a two-tiered price structure. The Tier 1 Supply Rate supports a regional approach through the uniform, postage stamp rate. The Tier 1 Supply Rate is calculated as the amount of the total supply revenue requirement that is not covered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's costs of Tier 1 and Metropolitan's cost of purchasing water transfers north of the Delta. The higher costs reflected in the Tier 2 Supply Rate encourage the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. Pursuant to Board direction in November 2021, all demand management costs comprise a portion of the costs of supply and are collected on the Tier 1 and Tier 2 Supply Rates. Member agencies are charged the Tier 1 or Tier 2 Supply Rate for water purchases, as described under "–Member Agency Purchase Orders" below. The Tier 2 Supply Rate is not included in the biennial budget for fiscal years 2024-25 and 2025-26 and calendar year 2025 and 2026 adopted rates.

**System Access Rate.** The System Access Rate recovers the cost of the conveyance, distribution, and storage of water on an average annual basis through a uniform, volumetric rate. The System Access Rate is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. The System Access Rate is charged for each acre-foot of water transported by Metropolitan to its member agencies and delivered as a full-service water transaction.

**System Power Rate.** The System Power Rate recovers the cost of energy required to pump water to Southern California through the State Water Project and CRA. The cost of power is recovered through a uniform, volumetric rate. The System Power Rate is applied to all deliveries of Metropolitan water to member agencies.

**Treatment Surcharge.** The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions. The Treatment Surcharge is charged for all treated water transactions.

**Water Stewardship Rate.** Through December 31, 2020, a Water Stewardship Rate was charged on each acre-foot of water delivered by Metropolitan, except on SDCWA Exchange Agreement deliveries as explained below, and allocated to Metropolitan's transportation rates. The Water Stewardship Rate was designed to provide a dedicated source of funding for conservation and local resources development through a uniform, volumetric rate. All users (including member agencies and third-party wheelers) benefited from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in demand management programs like Metropolitan's Conservation Credits Program and LRP. Therefore, all users paid the Water Stewardship Rate, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "–Water Rates" and "–Litigation Challenging Rate Structure" below) in calendar years 2018, 2019, and 2020. Beginning with calendar year 2021, the Water Stewardship Rate has no longer been incorporated into Metropolitan's rates and charges and therefore has not been collected on any water transactions after December 31, 2020. In November 2021, the Board directed staff to allocate all demand management costs as an element of Metropolitan's supply costs. See also "CONSERVATION AND WATER SHORTAGE MEASURES–General" in this Appendix A.

In 2017, in *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* (see "–Litigation Challenging Rate Structure" below), the Court of Appeal held that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's Water Stewardship Rate full allocation to transportation rates, but the court did not address the allocation in subsequent years based on a different record. On April 10, 2018, the Board suspended the billing and collection of the Water Stewardship Rate on Exchange Agreement deliveries to SDCWA in calendar years 2018, 2019, and 2020, pending Metropolitan's completion of a cost allocation study of its demand management costs recovered through the Water Stewardship Rate. For calendar year 2018, the suspension was retroactive to January 1, 2018.

Having completed a demand management cost allocation process, on December 10, 2019, Metropolitan's Board directed staff to incorporate the use of the 2019-20 fiscal year-end balance of the Water Stewardship Fund to fund demand management costs in the proposed biennial budget for fiscal years 2020-21 and 2021-22 and to not incorporate the Water Stewardship Rate (or any other rates or charges to recover demand management costs), with the proposed rates and charges for calendar years 2021 and 2022, to allow the Board to consider demand management funding in relation to the 2020 IRP and to undergo a rate structure refinement process.

In 2021, in *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, the Court of Appeal clarified that its Water Stewardship Rate ruling applied to years after 2014 as well. In November 2021, the Board voted to allocate demand management costs to supply rate

elements in calendar year 2023 forward. The 2021-22 fiscal year-end balance of the Water Stewardship Fund was applied to partially offset demand management expenditures in fiscal year 2022-23.

The amount of each of these rates since January 1, 2020, is shown in the table entitled “SUMMARY OF WATER RATES” under “–Water Rates” below.

### **Member Agency Purchase Orders**

The rate structure effective through calendar year 2024 allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. Under the Purchase Orders, member agencies have the option to purchase a greater amount of water (based on past purchase levels) over the term of the Purchase Order. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, Metropolitan’s Board approved Purchase Orders effective January 1, 2015 through December 31, 2024 (the “Purchase Order Term”). Twenty-one of Metropolitan’s 26 member agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the “Purchase Order Commitment”).

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency’s choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989-90 through fiscal year 2001-02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002-03 through 2013-14. The demand base is unique for each member agency, reflecting the use of Metropolitan’s system water over time;
- An overall Purchase Order Commitment by the member agency based on the demand base period chosen, times ten to reflect the ten-year Purchase Order Term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency;
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order Commitment obligation; and
- An appeal process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that commenced operation on or after January 1, 2014.

Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency’s highest fiscal year demand between 1989-90 and 2001-02) annually.

On November 14, 2023, staff presented to the Board the status of the current Purchase Order commitments, which will end on December 31, 2024. Staff proposed to not renew the Purchase Order commitments. As a result, the Tier 2 Supply Rate is not included in the biennial budget for fiscal year 2024-25 and fiscal year 2025-26 and calendar years 2025 and 2026 adopted rates. Metropolitan will revisit



Purchase Order commitments and structure as needed through the business model review during the CAMP4W planning process. See “METROPOLITAN’S WATER SUPPLY–Integrated Water Resources Plan and Climate Adaptation Master Plan for Water – *Climate Adaptation Master Plan for Water.*”

### Other Charges

The following paragraphs summarize the additional charges for the use of Metropolitan’s distribution system:

***Readiness-to-Serve Charge.*** The Readiness-to-Serve Charge (“RTS”) recovers the cost of the portion of the system that is available to provide emergency service and available capacity during outages and hydrologic variability. The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal year rolling average of firm demands. Water transfers and exchanges, except SDCWA Exchange Agreement transactions, are included for purposes of calculating the ten-fiscal year rolling average. The Standby Charge, described below, will continue to be collected at the request of a member agency and applied as a direct offset to the member agency’s RTS obligation. The RTS (including RTS charge amounts collected through the Standby Charge) generated \$135.0 million in fiscal year 2021-22, and \$144.4 million in fiscal year 2022-23, and are estimated to have generated \$160.4 million in fiscal year 2023-24. Based on the adopted rates and charges, the RTS (including RTS charge amounts expected to be collected through the Standby Charge described below) is projected to generate \$174.0 million in fiscal year 2024-25, and \$184.5 million in fiscal year 2025-26.

***Water Standby Charges.*** The Standby Charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992-93. Metropolitan will continue to levy the Standby Charge only within the service areas of the member agencies that request that the Standby Charge be utilized to help fund a member agency’s RTS obligation. See “– Readiness-to-Serve Charge” above. The Standby Charge for each acre or parcel of less than an acre will vary from member agency to member agency, reflecting current rates, which have not exceeded the rates set in fiscal year 1993-94, and range from \$5 to \$15 for each acre or parcel less than an acre within Metropolitan’s service area, subject to specified exempt categories. Standby charges are assessments under the terms of Proposition 218, a State constitutional ballot initiative approved by the voters on November 5, 1996, but Metropolitan’s current standby charges are exempt from Proposition 218’s procedural requirements. See “–California Ballot Initiatives.”

Twenty-two of Metropolitan’s member agencies collect their RTS charges through Standby Charges. RTS charges, on a cash basis, collected by means of such Standby Charges were \$42.0 million in fiscal year 2021-22, \$43.7 million in fiscal year 2022-23, and are estimated to be \$43.3 million in fiscal year 2023-24.

***Capacity Charge.*** The Capacity Charge recovers costs incurred to provide peak capacity within Metropolitan’s distribution system. The Capacity Charge provides a price signal to encourage agencies to reduce peak demands on the distribution system and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period. This results in more efficient utilization of Metropolitan’s existing infrastructure and deferring capacity expansion costs. Each member agency will pay the Capacity Charge per cfs based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency’s peak day is likely to occur on different days; therefore, this measure approximates peak week demands on Metropolitan. The Capacity Charge was \$12,200 per cfs effective as of January 1, 2022, \$10,600 per cfs effective as of January 1, 2023 and \$11,200 per cfs effective as of January 1, 2024. The Capacity Charge will be \$13,000 per cfs effective as of January 1, 2025. The Capacity Charge generated \$37.0 million in fiscal year 2021-22 and \$37.8 million in fiscal year 2022-23, and are estimated to have generated \$36.1 million in fiscal year 2023-24. Based on the adopted rates and charges, the Capacity Charge is projected to generate \$39.8 million in fiscal year 2024-25, and \$45.9 million in fiscal year 2025-26.

## Classes of Water Service

Metropolitan, as a wholesaler, provides one type of service: full-service water service (treated or untreated). Metropolitan has one class of customers: its member agencies. On August 18, 2020, the Board repealed the Administrative Code sections that established the wheeling service it previously made available to its member agencies (short-term wheeling service under one year) and the pre-set wheeling rate for that wheeling service. As a result of the Board's action, short-term wheeling to member agencies is now determined on a case-by-case basis by contract, as has been done for wheeling service for member agencies lasting more than one year and wheeling for third parties. The level of rate unbundling in Metropolitan's rate structure provides transparency to show that rates and charges recover only those functions involved in the applicable service, and that no cross-subsidy of costs exists. Metropolitan's cost of service process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

The applicable rate components and fixed charges for each class of water service are shown in the chart below.

### Current Services and Rate Components

Service	System Access	Rates & Charges That Apply					
		Water Stewardship <sup>(1)</sup>	System Power	Tier 1/ Tier 2 <sup>(2)</sup>	Readiness to Serve	Capacity Charge	Treatment Surcharge
Full Service Untreated	Yes	No	Yes	Yes	Yes	Yes	No
Full Service Treated	Yes	No	Yes	Yes	Yes	Yes	Yes

(1) As described under “–Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been collected on water transactions after December 31, 2020. In November 2021, the Board directed staff to allocate all demand management costs as an element of Metropolitan's supply costs.

(2) As described under “–Member Agency Purchase Orders,” the Tier 2 Supply Rate is not included in the biennial budget for fiscal years 2024-25 and 2025-26 and calendar years 2025 and 2026 adopted rates. Metropolitan will revisit Purchase Order commitments and structure as needed through the business model review during the CAMP4W planning process.

Metropolitan offers five programs that encourage the member agencies to increase groundwater and emergency storage and for which certain Metropolitan charges are inapplicable.

(1) *Conjunctive Use Program.* The Conjunctive Use Program is operated through individual agreements with member and retail agencies for groundwater storage within Metropolitan's service area. Wet year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Metropolitan has the option to call water stored in the groundwater basins for the participating member agency pursuant to its contractual conjunctive use agreement. At the time of the call, the member agency pays the prevailing rate for that water, but the deliveries are excluded from the calculation of the Capacity Charge because Conjunctive Use Program deliveries are made at Metropolitan's discretion. Conjunctive use programs may also contain cost-sharing terms related to operational costs. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

(2) *Cyclic Program.* The Cyclic Program refers collectively to the existing Cyclic Program agreements and the Cyclic Cost-Offset Program approved in 2019. This Program is operated through individual agreements with member agencies for groundwater or surface water storage or pre-deliveries within Metropolitan's service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Deliveries to the cyclic accounts are at Metropolitan's discretion while member agencies have discretion on whether they want to accept the water. At the time the water is

delivered from the cyclic account, the prevailing full service rate applies, but deliveries are excluded from the calculation of the Capacity Charge because Cyclic Program deliveries are made at Metropolitan's discretion. Cyclic agreements may also contain a credit payable to the member agencies under terms approved by the Board in April 2019 and amended by the Board in August 2023 for the Cyclic Cost-Offset Program. See "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

(3) *Reverse-Cyclic Program.* The Reverse-Cyclic Program is operated through individual agreements with member agencies. These agreements allowed member agencies to purchase water in calendar year 2022 for delivery in a future wet year. Metropolitan will deliver the water within five years at its sole discretion. Under the Program, billing occurs before delivery is made at the full-service water rate, plus the treatment surcharge, if applicable, and the purchases are counted towards the member agency's Readiness-to-Serve Charge. However, deliveries are excluded from the calculation of the Capacity Charge because Reverse-Cycle Program deliveries are made at Metropolitan's discretion.

(4) *Emergency Storage Program.* The Emergency Storage Program is used for delivering water for emergency storage in surface water reservoirs and storage tanks. Emergency Storage Program purposes include initially filling a newly constructed reservoir or storage tank and replacing water used during an emergency. Because Metropolitan could interrupt delivery of this water, Emergency Storage Program Deliveries are excluded from the calculation of the RTS Charge, the Capacity Charge, and the Tier 1 maximum.

(5) *Operational Shift Cost Offset Program.* The OSCOP is operated through individual agreements with member agencies. Through these agreements, cost-offset credits are offered to member agencies to offset the estimated additional costs and risks incurred by an agency as a result of voluntary operational changes requested by Metropolitan for the purpose of maximizing Metropolitan's water resources. All water delivered under the OSCOP is billed at Metropolitan's applicable full-service rate. Credits are reported as supply program costs.

The applicable rate components and fixed charges applicable for each such program are shown in the following chart.

#### **Current Programs and Rate Components**

Program	Supply	Rates & Charges That Apply				
		System Access	System Power	Readiness to Serve	Capacity Charge	Tier 1 Maximum
Full Service	Yes	Yes	Yes	Yes	Yes	Yes
Conjunctive Use	Yes	Yes	Yes	Yes	No	Yes
Cyclic	Yes	Yes	Yes	Yes	No	Yes
Reverse-Cyclic	Yes	Yes	Yes	Yes	No	Yes
Emergency Storage	Yes	Yes	No	Yes	No	No <sup>(1)</sup>
Operational Shift Cost Offset	Yes	Yes	Yes	Yes	Yes	Yes

<sup>(1)</sup> Emergency Storage Program pays the Tier 1 Supply Rate; purchases under Emergency Storage program do not count towards a member agency's Tier 1 Maximum.

#### **Water Rates**

The following table sets forth Metropolitan's water rates by category beginning January 1, 2020. See also "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND

EXPENSES—Water Revenues” in this Appendix A. In addition to the base rates for untreated water sold in the different classes of service, the columns labeled “Treated” include the surcharge that Metropolitan charges for water treated at its water treatment plants. See “—Rate Structure” and “—Classes of Water Service” for descriptions of current rates. See also “—Litigation Challenging Rate Structure” for a description of litigation challenging Metropolitan’s water rates.

**SUMMARY OF WATER RATES**  
**(Dollars Per Acre-Foot)**

	<b>SUPPLY RATE</b>		<b>SYSTEM ACCESS RATE</b>	<b>WATER STEWARDSHIP RATE<sup>(1)</sup></b>	<b>SYSTEM POWER RATE</b>	<b>TREATMENT SURCHARGE</b>
	<b>Tier 1</b>	<b>Tier 2<sup>(4)</sup></b>				
January 1, 2020	\$ 208	\$ 295	\$ 346	\$ 65	\$ 136	\$ 323
January 1, 2021	\$ 243	\$ 285	\$ 373	\$ —	\$ 161	\$ 327
January 1, 2022	\$ 243	\$ 285	\$ 389	\$ —	\$ 167	\$ 344
January 1, 2023	\$ 321	\$ 530	\$ 368	\$ —	\$ 166	\$ 354
January 1, 2024	\$ 332	\$ 531	\$ 389	\$ —	\$ 182	\$ 353
January 1, 2025*	\$ 290	\$ —	\$ 463	\$ —	\$ 159	\$ 483
January 1, 2026*	\$ 313	\$ —	\$ 492	\$ —	\$ 179	\$ 544

	<b>FULL SERVICE TREATED<sup>(2)</sup></b>		<b>FULL SERVICE UNTREATED<sup>(3)</sup></b>	
	<b>Tier 1</b>	<b>Tier 2<sup>(4)</sup></b>	<b>Tier 1</b>	<b>Tier 2<sup>(4)</sup></b>
January 1, 2020	\$ 1,078	\$ 1,165	\$ 755	\$ 842
January 1, 2021	\$ 1,104	\$ 1,146	\$ 777	\$ 819
January 1, 2022	\$ 1,143	\$ 1,185	\$ 799	\$ 841
January 1, 2023	\$ 1,209	\$ 1,418	\$ 855	\$ 1,064
January 1, 2024	\$ 1,256	\$ 1,455	\$ 903	\$ 1,102
January 1, 2025*	\$ 1,395	\$ —	\$ 912	\$ —
January 1, 2026*	\$ 1,528	\$ —	\$ 984	\$ —

*Source: Metropolitan.*

\* Rates effective January 1, 2025 and January 1, 2026 were adopted by Metropolitan’s Board on April 9, 2024.

(1) As described under “—Rate Structure —Water Stewardship Rate,” the Water Stewardship Rate has not been collected on water transactions after December 31, 2020. In November 2021, the Board directed staff to allocate all demand management costs to Metropolitan’s supply elements.

(2) Full service treated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate, System Power Rate and Treatment Surcharge.

(3) Full service untreated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate and System Power Rate.

(4) As described under “—Member Agency Purchase Orders,” the Tier 2 rate is not included in the biennial budget for fiscal years 2024-25 and 2025-26 and calendar years 2025 and 2026 rates. Metropolitan will revisit Purchase Order commitments and structure as needed through the business model review during the CAMP4W planning process.

## **Financial Reserve Policy**

Metropolitan's reserve policy provides for a minimum reserve requirement and target amount of unrestricted reserves at June 30 of each year. The minimum reserve requirement at June 30 of each year is equal to the portion of fixed costs estimated to be recovered by water revenues for the 18 months beginning with the immediately succeeding July. Funds representing the minimum reserve requirement are held in the Revenue Remainder Fund. Any funds in excess of the minimum reserve requirement are held in the Water Rate Stabilization Fund. The target amount of unrestricted reserves is equal to the portion of the fixed costs estimated to be recovered by water revenues during the two years immediately following the 18-month period used to calculate the minimum reserve requirement. Funds in excess of the target amount are to be utilized for capital expenditures in lieu of the issuance of additional debt, or for the redemption, defeasance or purchase of outstanding bonds or commercial paper as determined by the Board. Provided that the fixed charge coverage ratio is at or above 1.2, amounts in the Water Rate Stabilization Fund may be expended for any lawful purpose of Metropolitan, as determined by the Board. See "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.

At June 30, 2024, unrestricted reserves, which consist of the Water Rate Stabilization Fund and the Revenue Remainder Fund, are estimated to total \$323 million on a cash basis. As of June 30, 2024, the minimum reserve requirement was \$266.6 million, and the target reserve level was \$665.9 million.

Metropolitan projects that its unrestricted reserves as of June 30, 2025 will be approximately \$340 million on a cash basis. This projection is based on the assumptions set forth in the table entitled "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

Due to SDCWA's litigation challenging Metropolitan's rates and pursuant to the Exchange Agreement between Metropolitan and SDCWA, Metropolitan was required to set aside funds based on the quantities of exchange water provided by Metropolitan to SDCWA and the amount of charges disputed by SDCWA. In April 2016, Metropolitan transferred these funds from unrestricted financial reserves to a new designated fund, the Exchange Agreement Set-Aside Fund. In 2021, Metropolitan paid to SDCWA the final judgment contract damages amount in the 2010 and 2012 SDCWA v. Metropolitan cases for Water Stewardship Rate payments under the Exchange Agreement in 2011 through 2014, plus interest. Following the 2021 Court of Appeal opinion clarifying that its Water Stewardship Rate ruling applies to later years, Metropolitan paid to SDCWA Water Stewardship Rate payments from 2015 to 2017, plus pre-judgment interest. These payments included all amounts sought related to breach of the Exchange Agreement resulting from the inclusion of the Water Stewardship Rate in the contract price for Exchange Agreement transactions occurring from 2010 until the Water Stewardship Rate was no longer charged in the contract price for Exchange Agreement transactions, beginning in 2018. Accordingly, there are no amounts held in the Exchange Agreement Set-Aside Fund. See "—Litigation Challenging Rate Structure."

## **California Ballot Initiatives**

Proposition 218, a State ballot initiative known as the "Right to Vote on Taxes Act," was approved by the voters on November 5, 1996 adding Articles XIII C and XIII D to the California Constitution. Article XIII D provides substantive and procedural requirements on the imposition, extension or increase of any "fee" or "charge" levied by a local government upon a parcel of real property or upon a person as an incident of property ownership. As a wholesaler, Metropolitan serves water to its member agencies, not to persons or properties as an incident of property ownership. Thus, water rates charged by Metropolitan to its member agencies are not property related fees and charges and therefore are exempt from the requirements of Article XIII D. Fees for retail water service by Metropolitan's member agencies or their agencies are subject to the requirements of Article XIII D.

Article XIID also imposes certain procedures with respect to assessments. Under Article XIID, “standby charges” are considered “assessments” and must follow the procedures required for “assessments,” unless they were in existence on the effective date of Article XIID. Metropolitan has imposed its water standby charges since 1992 and therefore its current standby charges are exempt from the Article XIID procedures. Changes to Metropolitan’s current standby charges could require notice to property owners and approval by a majority of such owners returning mail-in ballots approving or rejecting any imposition or increase of such standby charge. Twenty-two of Metropolitan’s member agencies have elected to collect all or a portion of their readiness-to-serve charges through standby charges. See “–Other Charges – *Readiness-to-Serve Charge*” and “– *Water Standby Charges*” above. Even if Article XIID is construed to limit the ability of Metropolitan and its member agencies to impose or collect standby charges, the member agencies will continue to be obligated to pay the Readiness-to-Serve charges.

Article XIIC makes all taxes either general or special taxes and imposes voting requirements for each kind of tax. It also extends the people’s initiative power to reduce or repeal previously authorized local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIIC to fees imposed after November 6, 1996, or to property-related fees and charges and, absent other authority could result in retroactive reduction in existing taxes, assessments or fees and charges.

Proposition 26, a State ballot initiative aimed at restricting regulatory fees and charges, was approved by a majority of California voters on November 2, 2010. Proposition 26 broadens the definition of “tax” in Article XIIC of the California Constitution to include: levies, charges and exactions imposed by local governments, except for charges imposed for benefits or privileges or for services or products granted to the payor (and not provided to those not charged) that do not exceed their reasonable cost; regulatory fees that do not exceed the cost of regulation and are allocated in a fair or reasonable manner; fees for the use of local governmental property; fines and penalties imposed for violations of law; real property development fees; and assessments and property-related fees imposed under Article XIID of the California Constitution. Special taxes imposed by local governments including special districts are subject to approval by two-thirds of the electorate. Proposition 26 applies to charges imposed or increased by local governments after the date of its approval. Metropolitan believes its water rates and charges are not taxes under Proposition 26. SDCWA’s lawsuit challenging the rates adopted by Metropolitan in April 2012 (part of which became effective January 1, 2013 and part of which became effective January 1, 2014) alleged that such rates violate Proposition 26. On June 21, 2017, the California Court of Appeal ruled that whether or not Proposition 26 applies to Metropolitan’s rates, the System Access Rate and System Power Rate challenged by SDCWA in such lawsuit comply with Proposition 26. SDCWA’s lawsuits challenging the rates adopted by Metropolitan in April 2014, April 2016, and April 2018 also alleged that such rates violate Proposition 26. On May 11, 2022, the San Francisco Superior Court ruled that Proposition 26 applies to Metropolitan’s rates and charges. See “–Litigation Challenging Rate Structure.” The trial court decision is subject to appeal. Under Proposition 26, the agency holds the burden of proof in a rate or charge challenge. Otherwise, due to the uncertainties of evolving case law and potential future judicial interpretations of Proposition 26, Metropolitan is unable to predict at this time the extent to which Proposition 26, if ultimately determined to apply to Metropolitan’s rates and charges, would impose stricter standards on Metropolitan’s setting of rates and charges.

Propositions 218 and 26 were adopted as measures that qualified for the ballot pursuant to the State’s initiative process. Other initiative measures have been proposed from time to time, or could be proposed in the future, which if qualified for the ballot, could be adopted, or legislative measures could be approved by the Legislature, which may place limitations on the ability of Metropolitan or its member agencies to increase revenues or to increase appropriations in the future, or, if such measures are retroactive, affect previously adopted revenue increasing actions. Such measures may further affect Metropolitan’s ability to collect taxes, assessments or fees and charges, which could have an adverse effect on Metropolitan’s revenues.

## Preferential Rights

Section 135 of the Act gives each of Metropolitan's member agencies a preferential right to purchase for domestic and municipal uses within the agency a portion of the water served by Metropolitan, based upon a ratio of all payments on tax assessments and otherwise, except purchases of water, made to Metropolitan by the member agency compared to total payments made by all member agencies on tax assessments and otherwise since Metropolitan was formed, except purchases of water. Historically, these rights have not been used in allocating Metropolitan's water. In 2004, the California Court of Appeal upheld Metropolitan's methodology for calculation of the respective member agencies' preferential rights under Section 135 of the Act. SDCWA's litigation challenging Metropolitan's rate structure also challenged Metropolitan's exclusion of payments for Exchange Agreement deliveries from the calculation of SDCWA's preferential right. On June 21, 2017, the California Court of Appeal held that SDCWA's payments under the Exchange Agreement must be included in the preferential rights calculation. See "–Litigation Challenging Rate Structure."

## Litigation Challenging Rate Structure

Through several lawsuits filed by SDCWA since 2010, SDCWA has challenged the rates adopted by Metropolitan's Board in 2010, 2012, 2014, 2016 and 2018. Each of these lawsuits and the status thereof are briefly described below.

***The 2010 and 2012 Cases.*** SDCWA filed *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* on June 11, 2010 challenging the rates adopted by the Board on April 13, 2010, which became effective January 1, 2011, and January 1, 2012 (the "2010 Case"). The complaint requested a court order invalidating the rates adopted April 13, 2010, and that Metropolitan be mandated to allocate certain costs associated with the State Water Contract and the Water Stewardship Rate to water supply rates and not to transportation rates.

As described under "METROPOLITAN'S WATER SUPPLY–Colorado River Aqueduct – Metropolitan and San Diego County Water Authority Exchange Agreement" in this Appendix A, the contract price payable by SDCWA under the Exchange Agreement between Metropolitan and SDCWA is Metropolitan's transportation rates. Therefore, SDCWA also alleged that Metropolitan breached the Exchange Agreement by allocating certain costs related to the State Water Contract and the Water Stewardship Rate to its transportation rates because it resulted in an overcharge to SDCWA for water delivered pursuant to the Exchange Agreement.

On June 8, 2012, SDCWA filed a new lawsuit challenging the rates adopted by Metropolitan on April 10, 2012, and effective on January 1, 2013, and January 1, 2014 (the "2012 Case") based on similar claims, and further alleging that Metropolitan's rates adopted in 2012 violated Proposition 26.

Following a trial of both lawsuits in two phases and subsequent trial court ruling, the parties appealed. On June 21, 2017, the California Court of Appeal ruled that Metropolitan may lawfully include its State Water Project transportation costs in the System Access Rate and System Power Rate that are part of the Exchange Agreement's price term, and that Metropolitan may also lawfully include the System Access Rate in its wheeling rate, reversing the trial court decision on this issue. The court held Metropolitan's allocation of the State Water Project transportation costs as its own transportation costs is proper and does not violate the Wheeling Statutes (Water Code, §1810, *et seq.*), Proposition 26 (Cal. Const., Article XIII C, §1, subd. (e)), whether or not that Proposition applies to Metropolitan's rates, California Government Code Section 54999.7, the common law, or the terms of the parties' Exchange Agreement.

The Court of Appeal also ruled that the record did not support Metropolitan's inclusion of its Water Stewardship Rate as a transportation cost in the Exchange Agreement price or the wheeling rate, under the



common law and the Wheeling Statutes. The court noted that its holding does not preclude Metropolitan from including the Water Stewardship Rate in Metropolitan's full-service rate. See also "*Rate Structure – Water Stewardship Rate*" above.

The Court of Appeal held that because the Water Stewardship Rate was included in the Exchange Agreement price, there was a breach by Metropolitan of the Exchange Agreement in 2011 through 2014 and remanded the case to the trial court for a redetermination of damages in light of its ruling concerning the Water Stewardship Rate. The Court of Appeal also found that the Exchange Agreement may entitle the prevailing party to attorneys' fees for both phases of the case, and directed the trial court on remand to make a new determination of the prevailing party, if any.

On September 27, 2017, the California Supreme Court denied SDCWA's petition for review, declining to consider the Court of Appeal's decision. The Court of Appeal's decision is therefore final.

After tendering payment in 2019, which SDCWA rejected, in February 2021, Metropolitan paid to SDCWA the same amount previously tendered of \$44.4 million for contract damages for SDCWA's Water Stewardship Rate payments from 2011 to 2014 and pre-judgment and post-judgment interest. In September 2021, following a 2021 Court of Appeal opinion clarifying that its Water Stewardship Rate ruling applies to later years, Metropolitan paid to SDCWA the amount of \$35.9 million for SDCWA's Water Stewardship Rate payments from 2015 to 2017 and pre-judgment interest. These payments included all amounts sought related to breach of the Exchange Agreement resulting from the inclusion of the Water Stewardship Rate in the contract price for Exchange Agreement transactions occurring from 2010 until the Water Stewardship Rate was no longer charged in the contract price for Exchange Agreement transactions, beginning in 2018 (See "*Rate Structure*" above). The payments included \$58.1 million withdrawn from the Exchange Agreement Set-Aside Fund (See "*Financial Reserve Policy*" above) and \$22.1 million withdrawn from reserves (the remainder of the statutory interest).

Following the issuance of an order of the Superior Court and Metropolitan's appeal, on March 17, 2022, the Court of Appeal held that SDCWA was the prevailing party in the 2010 and 2012 cases and was therefore entitled to attorney's fees under the parties' Exchange Agreement and litigation costs. On March 21, 2022, Metropolitan paid to SDCWA \$14,296,864.99 (\$13,397,575.66 fees award, plus statutory interest) and \$352,247.79 for costs (\$326,918.34 costs award, plus statutory interest).

On July 27, 2022, Metropolitan paid SDCWA \$411,888.36 for attorneys' fees on appeals of post-remand orders.

***The 2014, 2016 and 2018 Cases.*** SDCWA has also filed lawsuits challenging the rates adopted in 2014, 2016 and 2018 and asserting breach of the Exchange Agreement. Metropolitan filed cross-complaints in the three cases, asserting claims relating to rates and the Exchange Agreement, including reformation.

The operative Petitions for Writ of Mandate and Complaints allege the same Water Stewardship Rate claim and breach of the Exchange Agreement as in the 2010 and 2012 cases, but because Metropolitan paid the amounts sought to SDCWA, and the writ in the 2010 and 2012 cases encompasses these claims, Metropolitan contended that these claims and cross-claims are moot. The cases also alleged that in 2020 and 2021, Metropolitan misallocated its California WaterFix costs as transportation costs and breached the Exchange Agreement by including those costs in the transportation rates charged. In April 2022, the parties requested the court's dismissal with prejudice of the claims and cross-claims relating to California WaterFix. The cases also claim Metropolitan's wheeling rate fails to provide wheelers a reasonable credit for "offsetting benefits" pursuant to Water Code Section 1810, *et seq.*, and that Metropolitan breached the Exchange Agreement by failing to reduce the price for an "offsetting benefits" credit. The cases additionally requested a judicial declaration that Proposition 26 applies to Metropolitan's rates and charges, and a judicial declaration that SDCWA is not required to pay any portion of a judgment in the litigation.

Metropolitan filed cross-complaints in each of these cases, asserting claims relating to rates and the Exchange Agreement.

The cases were stayed pending resolution of the 2010 and 2012 cases, but the stays were subsequently lifted and the cases were consolidated in the San Francisco Superior Court.

Metropolitan and SDCWA each filed motions for summary adjudication of certain issues in the 2014, 2016 and 2018 cases with the court. Summary adjudication is a procedure by which a court may determine the merits of a particular claim or affirmative defense, a claim for damages, and/or an issue of duty before trial.

On May 4, 2022, the San Francisco Superior Court issued an order granting Metropolitan's motion for summary adjudication on its cross-claim for declaratory relief that the conveyance facility owner, Metropolitan, determines fair compensation, including any offsetting benefits; and denying its motion on certain other cross-claims and an affirmative defense.

On May 11, 2022, the San Francisco Superior Court issued an order granting SDCWA's motion for summary adjudication on: Metropolitan's cross-claim in the 2018 case for a declaration with respect to the lawfulness of the Water Stewardship Rate's inclusion in the wheeling rate and transportation rates in 2019 and 2020; certain Metropolitan cross-claims and affirmative defenses on the ground that Metropolitan has a duty to charge no more than fair compensation, which includes reasonable credit for any offsetting benefits pursuant to Water Code section 1811(c), with the court also stating that whether that duty arose and whether Metropolitan breached that duty were issues to be resolved at trial; Metropolitan's affirmative defenses that SDCWA's claims were untimely and SDCWA had not satisfied claims presentation requirements; Metropolitan's affirmative defense in the 2018 case that SDCWA had not satisfied dispute resolution requirements under the Exchange Agreement; SDCWA's claim, Metropolitan's cross-claims, and Metropolitan's affirmative defenses regarding the applicability of Proposition 26, finding that Proposition 26 applies to Metropolitan's rates and charges, with the court also stating that whether Metropolitan violated Proposition 26 is a separate issue; and Metropolitan's cross-claims and affirmative defenses regarding the applicability of Government Code section 54999.7, finding that section 54999.7 applies to Metropolitan's rates. The court denied SDCWA's motion on certain other Metropolitan cross-claims and affirmative defenses.

Damages sought by SDCWA in connection with its claims for offsetting benefits credit under the Exchange Agreement exceed \$334 million for the six years (2015 through 2020) at issue in these cases. In the event that SDCWA were to prevail in a final adjudication of this issue, a determination of offsetting benefits credit due to SDCWA, if any, could impact the Exchange Agreement price in future years.

Trial of the 2014, 2016 and 2018 cases occurred May 16 to July 1, 2022 and the parties filed post-trial briefs on August 19, 2022.

On December 27, 2022, the court entered the parties' stipulation memorializing the earlier resolution of the Water Stewardship Rate claims in SDCWA's favor based on the 2021 Court of Appeal decision in the 2010 and 2012 cases.

On March 14, 2023, the court issued an order on SDCWA's motion for partial judgment to address Metropolitan's request for a declaration on its cost-causation obligations when setting rates. The court ruled that this is not a proper subject for declaratory relief.

On April 25, 2023, the court issued its final statement of decision concerning the trial in the 2014, 2016, and 2018 cases. For each claim litigated at trial, the court ruled in favor of Metropolitan or found the claim to be moot based on the rulings in Metropolitan's favor. In particular, the court concluded: (1) the

duty to include a reasonable credit for any offsetting benefits pursuant to the Wheeling Statutes did not arise and Metropolitan did not breach the Exchange Agreement by failing to calculate a reasonable credit for any offsetting benefits; (2) because Metropolitan did not breach the Exchange Agreement, the court need not address damages; (3) Metropolitan's conditional claims to reform the Exchange Agreement, if SDCWA prevailed, are moot; (4) Metropolitan's conditional claim for a declaration of its rights and duties under the Wheeling Statutes, if SDCWA prevailed on its claim that the Wheeling Statutes apply to the Exchange Agreement is moot (the court stated that while it finds offsetting benefits under the Wheeling Statutes do not apply to the Exchange Agreement's price term, the court "has made no express finding whether the Wheeling Statutes apply"); (5) SDCWA's rate challenges are rejected; and (6) SDCWA's request for a declaration that it could not be required to contribute to a damages, fees, or costs award in the cases is moot.

On April 3, 2024, the court issued a final judgment memorializing the pre-trial and post-trial decisions and stipulations described above. The judgment included entry of judgment in favor of SDCWA on breach of contract in the 2014 and 2016 cases, due to the inclusion of Water Stewardship Rate claims and the parties' stipulation; and entry of judgment in favor of Metropolitan on breach of contract in the 2018 case, which concerned only the offsetting benefits claim. On April 3, 2024, the court also issued a writ of mandate commanding Metropolitan to exclude demand management costs (previously collected through the Water Stewardship Rate) from its pre-set wheeling rate and transportation rates, a practice Metropolitan earlier ceased.

Also on April 3, 2024, SDCWA filed its notice of appeal from the final judgment. On April 17, 2024, Metropolitan filed a notice of cross-appeal, and on May 3, 2024, the seven member agencies that have joined the litigation as interested parties in support of Metropolitan filed a notice of appeal.

Both Metropolitan and SDCWA contend that it is the prevailing party in these cases and is therefore entitled to an award of fees and costs under the Exchange Agreement. Following briefing, on July 17, 2024, the court issued a tentative ruling that there is no prevailing party due to the mixed results. After a hearing on July 18, 2024, the court took the matter under submission, stating it expects to issue its ruling in mid-August 2024.

Metropolitan is unable to assess at this time the likelihood of success of the pending appeal, settlements or any future claims.

## **Other Revenue Sources**

***Hydroelectric Power Revenues.*** Metropolitan has constructed 15 small hydroelectric plants on its distribution system. The combined generating capacity of these plants is approximately 130 megawatts, and is dependent on available water sources. The plants are located in Los Angeles, Orange, Riverside, and San Diego Counties at existing pressure control structures and other locations. In addition, the power requirements for the CRA are offset, in part, by Metropolitan's hydroelectric power generation entitlements from Hoover and Parker dams. A net revenue stream results when the CRA power needs are less than Metropolitan's Hoover and Parker power entitlements, and in which the excess energy is imported and sold into the California Independent System Operator ("CAISO") market.

Since 2000, annual energy generation sales revenues have ranged between \$6.0 million and nearly \$44.9 million, fluctuating with available water supplies. Hydroelectric power revenues are estimated to be approximately \$9.4 million for fiscal year 2023-24.

***Investment Income.*** In fiscal years 2021-22, 2022-23, and 2023-24, Metropolitan's earnings on investments, including adjustments for gains and losses and premiums and discounts, excluding construction account and trust fund earnings, excluding gains and losses on swap terminations, on a cash basis (unaudited) were \$10.2 million, \$21.3 million, and \$42.2 million, respectively.

## **Investment of Moneys in Funds and Accounts**

The Board has delegated to the Treasurer the authority to invest funds. All moneys in any of the funds and accounts established pursuant to Metropolitan's water revenue or general obligation bond resolutions are managed by the Treasurer in accordance with Metropolitan's Statement of Investment Policy. All Metropolitan funds available for investment are currently invested in United States Treasury and agency securities, supranationals, commercial paper, negotiable certificates of deposit, bank deposits (certificate of deposit), corporate notes, municipal bonds, government-sponsored enterprise, money market funds, California Asset Management Program ("CAMP") and the California Local Agency Investment Fund ("LAIF"). CAMP is a program created through a joint powers agency as a pooled short-term portfolio and cash management vehicle for California public agencies. CAMP is a permitted investment for all local agencies under California Government Code Section 53601(p). LAIF is a voluntary program created by statute as an investment alternative for California's local governments and special districts. LAIF permits such local agencies to participate in an investment portfolio, which invests billions of dollars, managed by the State Treasurer's Office.

The Statement of Investment Policy provides that in managing Metropolitan's investments, the primary objective shall be to safeguard the principal of the invested funds. The secondary objective shall be to meet all liquidity requirements and the third objective shall be to achieve a return on the invested funds. Although the Statement of Investment Policy permits investments in some government-sponsored enterprise, the portfolio does not include any of the special investment vehicles related to sub-prime mortgages. Metropolitan's current investments comply with the Statement of Investment Policy.

As of June 30, 2024, the total market value (cash-basis) of all Metropolitan invested funds was \$1.4 billion. The market value of Metropolitan's investment portfolio is subject to market fluctuation and volatility and general economic conditions. Over the three years ended June 30, 2024, the market value of the month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) averaged approximately \$1.2 billion. The minimum month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) during such period was approximately \$1.0 billion on October 31, 2023. See Note 3 to Metropolitan's audited financial statements in Appendix B for additional information on the investment portfolio.

Metropolitan's Administrative Code requires that (1) the Treasurer provide an annual Statement of Investment Policy for approval by Metropolitan's Board, (2) the Treasurer provide a monthly investment report to the Board and the General Manager showing by fund the description, maturity date, yield, par, cost and current market value of each security, and (3) the General Counsel review as to eligibility the securities invested in by the Treasurer for that month and report his or her determinations to the Board. The Board approved the Statement of Investment Policy for fiscal year 2024-25 on June 11, 2024.

Subject to the provisions of Metropolitan's water revenue or general obligation bond resolutions, obligations purchased by the investment of bond proceeds in the various funds and accounts established pursuant to a bond resolution are deemed at all times to be a part of such funds and accounts and any income realized from investment of amounts on deposit in any fund or account therein will be credited to such fund or account. The Treasurer is required to sell or present for redemption any investments whenever it may be necessary to do so in order to provide moneys to meet required payments or transfers from such funds and accounts. For the purpose of determining at any given time the balance in any such funds, any such investments constituting a part of such funds and accounts will be valued at the then estimated or appraised market value of such investments.

All investments, including those authorized by law from time to time for investments by public agencies, contain certain risks. Such risks include, but are not limited to, a lower rate of return than expected and loss or delayed receipt of principal. The occurrence of these events with respect to amounts held under

Metropolitan's water revenue or general obligation revenue bond resolutions, or other amounts held by Metropolitan, could have a material adverse effect on Metropolitan's finances. These risks may be mitigated, but are not eliminated, by limitations imposed on the portfolio management process by Metropolitan's Statement of Investment Policy.

The Statement of Investment Policy requires that investments have a minimum credit rating of "A-1/P-1/F1" for short-term securities and "A" for longer-term securities, without regard to modifiers, at the time of purchase. If a security is downgraded below the minimum rating criteria specified in the Statement of Investment Policy, the Treasurer shall determine a course of action to be taken on a case-by-case basis considering such factors as the reason for the downgrade, prognosis for recovery, or further rating downgrades, and the market price of the security. The Treasurer is required to note in the Treasurer's monthly report any securities which have been downgraded below Policy requirements and the recommended course of action.

The Statement of Investment Policy also limits the amount of securities that can be purchased by category, as well as by issuer, and prohibits investments that can result in zero interest income. Metropolitan's securities are settled on a delivery versus payment basis and are held by an independent third-party custodian. See Metropolitan's financial statements included in APPENDIX B- "THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED MARCH 31, 2024 AND 2023 (UNAUDITED)" for a description of Metropolitan's investments at June 30, 2023, and March 31, 2024.

Metropolitan retains an outside investment firm to manage its core portfolio, a portion of the liquidity portfolio, and the Endowment Portfolio. The Endowment Portfolio includes the Lake Matthews Trust, DVR Multi-Species Reserve Fund, Habitat Maintenance Fund-Lower Colorado, Water Utility Climate Alliance Membership, and the HCP Remedial Measures Fund. This firm managed approximately \$862.8 million in total investments on behalf of Metropolitan as of June 30, 2024. All outside managers are required to adhere to Metropolitan's Statement of Investment Policy.

Metropolitan's Statement of Investment Policy may be changed at any time by the Board (subject to State law provisions relating to authorized investments). There can be no assurance that State law and/or the Statement of Investment Policy will not be amended in the future to allow for investments that are currently not permitted under State law or the Statement of Investment Policy, or that the objectives of Metropolitan with respect to investments or its investment holdings at any point in time will not change.

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## METROPOLITAN EXPENSES

### General

The following table sets forth a summary of Metropolitan's expenses, by major function, for the five years ended June 30, 2024. Data for the three fiscal years ended on or prior to June 30, 2022 is presented on a modified accrual basis, consistent with Metropolitan's budgetary reporting for such fiscal years. In fiscal year 2022-23, the basis for budgeting was changed, therefore data for the fiscal years ended June 30, 2023 and 2024 is presented on a cash basis. All information is unaudited. Expenses of Metropolitan for the fiscal years ended June 30, 2023 and June 30, 2022, on an accrual basis, are shown in Metropolitan's audited financial statements included in Appendix B.

### SUMMARY OF EXPENSES Fiscal Years Ended June 30 (Dollars in Millions)

	Modified Accrual			Cash	
	2020	2021	2022	2023	2024 <sup>(6)</sup>
Operation and Maintenance Costs <sup>(1)(2)</sup>	\$ 641	\$ 636	\$ 797	\$ 940	\$ 896
Total State Water Project <sup>(3)</sup>	519	547	547	579	708
Total Debt Service	185	286	283	301	327
Construction Expenses from Revenues <sup>(4)</sup>	39	110	135	135	35
Other <sup>(5)</sup>	6	6	55	7	9
Total Expenses (net of reimbursements)	<u>\$ 1,390</u>	<u>\$ 1,585</u>	<u>\$ 1,817</u>	<u>\$ 1,962</u>	<u>\$ 1,975</u>

Source: Metropolitan.

- (1) Includes operation and maintenance, debt administration, conservation and local resource programs, CRA power, and water supply expenses. Fiscal year 2020-21, fiscal year 2021-22, fiscal year 2022-23, and fiscal year 2023-2024 include \$25 million, \$25 million, \$34.5 million, and \$64.5 million for Delta Conveyance expenses, respectively. See "METROPOLITAN'S WATER SUPPLY-State Water Project – Bay-Delta Proceedings Affecting State Water Project – *Delta Conveyance*."
- (2) The higher level of increases in Operation and Maintenance costs in fiscal years 2021-22 and 2022-23 over prior years primarily reflects significant increases in the costs of chemicals and other materials resulting from shortages or supply chain issues and higher than average CRA power and supply program costs.
- (3) Includes operating and capital expense portions and Delta Conveyance.
- (4) At the discretion of the Board, in any given year, Metropolitan may increase or decrease funding available for construction disbursements to be paid from revenues. Does not include expenditures of bond proceeds.
- (5) Includes operating equipment. Fiscal year 2021-22 includes \$51 million for SDCWA litigation payments.
- (6) Fiscal year 2023-24 information is based on preliminary results.

### Revenue Bond Indebtedness and Other Obligations

As of September 1, 2024, Metropolitan will have total outstanding indebtedness secured by a lien on Net Operating Revenues of \$4.04 billion. This indebtedness was comprised of (a)(i) \$2.70 billion of Senior Revenue Bonds issued under the Senior Debt Resolutions (each as defined below), which includes \$2.37 billion of fixed rate Senior Revenue Bonds, and \$331.9 million of variable rate Senior Revenue Bonds; and (ii) \$384.4 million of senior lien short-term notes issued pursuant to Metropolitan's Short-Term Revolving Credit Facility (described below), which bear interest at a variable rate, and which are Senior Parity Obligations (which includes all obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds) (see "Outstanding Senior Revenue Bonds and Senior Parity Obligations –Senior Parity Obligations"); and (b) \$953.2 million of Subordinate Revenue Bonds issued under the Subordinate

Debt Resolutions (each as defined below), which includes \$650.7 million of fixed rate Subordinate Revenue Bonds, and \$302.6 million of variable rate Subordinate Revenue Bonds. In addition, Metropolitan has \$272.9 million of fixed-payor interest rate swaps which provides a fixed interest rate hedge to an equivalent amount of variable rate debt. Metropolitan's revenue bonds and other revenue obligations are more fully described below.

**REVENUE BOND INDEBTEDNESS AND OTHER OBLIGATIONS**  
(as of September 1, 2024)

	Variable Rate	Fixed Rate	Total
Senior Lien Revenue Bonds	\$ 331,875,000	\$ 2,367,560,000	\$ 2,699,435,000
Senior Lien Short-Term Notes	384,400,000	—	384,400,000
Subordinate Lien Revenue Bonds	302,550,000	650,695,000	953,245,000
<b>Total</b>	<b>\$1,018,825,000</b>	<b>\$ 3,018,255,000</b>	<b>\$ 4,037,080,000</b>
Fixed-Payor Interest Rate Swaps	(272,870,000)	272,870,000	—
<b>Net Amount (after giving effect to Swaps)</b>	<b>\$ 745,955,000</b>	<b>\$ 3,291,125,000</b>	<b>\$ 4,037,080,000</b>

*Source: Metropolitan.*

As described under “—Outstanding Senior Revenue Bonds and Senior Parity Obligations—Senior Parity Obligations,” in March 2024, Metropolitan entered into a Short-Term Revolving Credit Facility pursuant to which Metropolitan may issue senior lien short-term notes from time-to-time, bearing interest at a variable rate, and payable on parity with Metropolitan's Senior Revenue Bonds. As of September 1, 2024, \$384,400,000 of senior lien short-term notes are outstanding under such Short-Term Revolving Credit Facility. Approximately \$316.0 million of such outstanding short-term notes are expected to be refunded with proceeds of Metropolitan's Water System Revenue and Refunding Bonds, 2024 Series C (the “2024C Bonds”) and Variable Rate Subordinate Water Revenue Refunding Bonds, 2024 Series D (the “2024D Subordinate Bonds”). See “PLAN OF FINANCE” in the front part of this Official Statement.

**Limitations on Additional Revenue Bonds**

Resolution 8329, adopted by Metropolitan's Board on July 9, 1991, as amended and supplemented (the “Master Senior Resolution,” and collectively with all such supplemental resolutions, the “Senior Debt Resolutions”), provides for the issuance of Metropolitan's senior lien water revenue bonds. The Senior Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Senior Debt Resolutions, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any water revenue bonds authorized by the Senior Debt Resolutions (“Senior Revenue Bonds”) or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with such Senior Revenue Bonds (“Senior Parity Obligations”). No additional Senior Revenue Bonds or Senior Parity Obligations may be issued or incurred unless the conditions of the Senior Debt Resolutions have been satisfied.

Resolution 9199, adopted by Metropolitan's Board on March 8, 2016, as amended and supplemented (the “Master Subordinate Resolution,” and collectively with all such supplemental resolutions, the “Subordinate Debt Resolutions,” and together with the Senior Debt Resolutions, the “Revenue Bond Resolutions”), provides for the issuance of Metropolitan's subordinate lien water revenue bonds and other obligations secured by a pledge of Net Operating Revenues that is subordinate to the pledge securing Senior Revenue Bonds and Senior Parity Obligations. The Subordinate Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Subordinate Debt Resolutions, with the exception of Senior Revenue Bonds and Senior Parity Obligations,



no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any subordinate water revenue bonds authorized by the Subordinate Debt Resolutions (“Subordinate Revenue Bonds” and, together with Senior Revenue Bonds, “Revenue Bonds”) or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with the Subordinate Revenue Bonds (“Subordinate Parity Obligations”). No additional Subordinate Revenue Bonds or Subordinate Parity Obligations may be issued or incurred unless the conditions of the Subordinate Debt Resolutions have been satisfied.

The laws governing Metropolitan’s ability to issue water revenue bonds currently provide two additional limitations on indebtedness that may be incurred by Metropolitan. The Act provides for a limit on general obligation bonds, water revenue bonds and other evidences of indebtedness of 15 percent of the assessed value of all taxable property within Metropolitan’s service area. As of September 1 2024, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the amount of \$4.06 billion represented approximately 0.10 percent of the fiscal year 2023-24 taxable assessed valuation of \$3,861.4 billion. *{to be updated for fy 2024-25 assessed valuation when available}* The second limitation under the Act specifies that no revenue bonds may be issued, except for the purpose of refunding, unless the amount of net assets of Metropolitan as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of such bonds, equals at least 100 percent of the aggregate amount of revenue bonds outstanding following the issuance of such bonds. The net assets of Metropolitan at June 30, 2023 were \$7.45 billion. The aggregate amount of revenue bonds outstanding as of September, 2024 was \$3.65 billion. The limitation does not apply to other forms of financing available to Metropolitan. Audited financial statements including the net assets of Metropolitan as of June 30, 2023 and June 30, 2022 are shown in Metropolitan’s audited financial statements included in APPENDIX B–“THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED MARCH 31, 2024 AND 2023 (UNAUDITED).”

Metropolitan provides no assurance that the Act’s limitations on indebtedness will not be revised or removed by future legislation. Limitations under the Revenue Bond Resolutions respecting the issuance of additional obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds and Subordinate Revenue Bonds of Metropolitan will remain in effect so long as any Senior Revenue Bonds and Subordinate Revenue Bonds authorized pursuant to the applicable Revenue Bond Resolutions are outstanding, provided however, that the Revenue Bond Resolutions are subject to amendment and supplement in accordance with their terms.

### **Variable Rate Exposure Policy**

As of September 1, 2024, Metropolitan will have outstanding \$716.3 million of variable rate obligations issued as Senior Revenue Bonds under the Senior Debt Resolutions and variable rate short-term notes incurred as Senior Parity Obligations under Metropolitan’s Short-Term Revolving Credit Facility (described under “–Outstanding Senior Revenue Bonds and Senior Parity Obligations” below). In addition, as of September 1, 2024, \$302.6 million of variable rate Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions were outstanding (described under “–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations” below).

As of September 1, 2024, of Metropolitan’s \$1.02 billion of variable rate obligations, \$272.9 million of such variable rate demand obligations are treated by Metropolitan as fixed rate debt, by virtue of interest rate swap agreements (described under “–Outstanding Senior Revenue Bonds and Senior Parity Obligations –Variable Rate and Swap Obligations – *Interest Rate Swap Transactions*” below), for the purpose of calculating debt service requirements. The remaining \$746.0 million of variable rate

obligations represent approximately 19.1 percent of total outstanding water revenue secured indebtedness (including Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations), as of September 1, 2024.

Metropolitan's variable rate exposure policy requires that variable rate debt be managed to limit net interest cost increases within a fiscal year as a result of interest rate changes to no more than \$5 million. In addition, the maximum amount of variable interest rate exposure (excluding variable rate bonds associated with interest rate swap agreements) is limited to 40 percent of total outstanding water revenue bond debt. Variable rate debt capacity will be reevaluated as interest rates change and managed within these parameters.

## **Outstanding Senior Revenue Bonds and Senior Parity Obligations**

### **Senior Revenue Bonds**

The water revenue bonds issued under the Senior Debt Resolutions outstanding as of September 1, 2024 are set forth below:

### **Outstanding Senior Revenue Bonds**

<b>Name of Issue</b>	<b>Principal Outstanding</b>
Water Revenue Refunding Bonds, 2011 Series C	\$ 29,315,000
Water Revenue Bonds, 2015 Authorization, Series A	35,120,000
Water Revenue Refunding Bonds, 2016 Series A	112,415,000
Special Variable Rate Water Revenue Refunding Bonds, 2016 Series B-2 <sup>(1)</sup>	25,325,000
Water Revenue Bonds, 2017 Authorization, Series A <sup>(1)</sup>	24,275,000
Water Revenue Refunding Bonds, 2018 Series B	114,615,000
Water Revenue Refunding Bonds, 2019 Series A	218,090,000
Water Revenue Bonds, 2020 Series A	207,355,000
Water Revenue Refunding Bonds, 2020 Series C	245,970,000
Water Revenue Bonds, 2021 Series A	188,890,000
Water Revenue Refunding Bonds, 2021 Series B	74,465,000
Water Revenue Refunding Bonds, 2022 Series A	268,360,000
Water Revenue Refunding Bonds, 2022 Series B	253,365,000
Special Variable Rate Water Revenue Refunding Bonds, 2022 Series C-1 and C-2 <sup>(1)</sup>	282,275,000
Water Revenue Bonds, 2023 Series A	252,595,000
Water Revenue Refunding Bonds, 2024 Series A	367,005,000
<b>Total</b>	<b>\$ 2,699,435,000</b>

*Source: Metropolitan.*

<sup>(1)</sup> Outstanding variable rate obligation.

### **Variable Rate Bonds and Swap Obligations**

As of September 1, 2024, of Metropolitan's \$2.70 billion of outstanding Senior Revenue Bonds, \$331.9 million are variable rate Senior Revenue Bonds issued under the Senior Debt Resolutions (described under this caption "–Variable Rate Bonds and Swap Obligations") in either a daily mode or a weekly mode and supported by standby bond purchase agreements between Metropolitan and various liquidity providers ("Liquidity Supported Senior Revenue Bonds").

**Liquidity Supported Senior Revenue Bonds.** Metropolitan’s outstanding variable rate demand obligations issued under the Senior Debt Resolutions, totaling \$331.9 million as of September 1, 2024, consisted of \$49.6 million principal amount of variable rate Senior Revenue Bonds, the interest rates on which are currently reset on a daily basis, and \$282.3 million principal amount of variable rate Senior Revenue Bonds, the interest rates on which are reset on a weekly basis. The variable rate demand obligations bearing interest at a daily rate are subject to optional tender on any business day with same day notice by the owners thereof and mandatory tender upon specified events. The variable rate demand obligations bearing interest at a weekly rate are subject to optional tender on any business day upon seven days’ notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by standby bond purchase agreements between Metropolitan and liquidity providers that provide for purchase of variable rate bonds by the applicable liquidity provider upon tender of such variable rate bonds and a failed remarketing. Metropolitan has secured its obligation to repay principal and interest advanced under the standby bond purchase agreements as Senior Parity Obligations. A decline in the creditworthiness of a liquidity provider will likely result in an increase in the interest rate of the applicable variable rate bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate bonds. Variable rate bonds purchased by a liquidity provider (“bank bonds”) would initially bear interest at a per annum interest rate equal to, depending on the liquidity facility, either: (a) the highest of (i) the Prime Rate, (ii) the Federal Funds Rate plus one-half of a percent, or (iii) seven and one-half percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (a) by one percent after 60 days); or (b) the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (b) by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of the earlier of the 60<sup>th</sup> day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the related liquidity facility, Metropolitan’s obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the current liquidity facilities in semi-annual installments over a period ending on the third anniversary of the date on which the variable rate bonds were purchased by the liquidity provider. In addition, upon an event of default under any such liquidity facility, including a failure by Metropolitan to perform or observe its covenants under the applicable standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody’s below “A–” or “A3”), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the current liquidity providers, the current expiration date of each facility, and the principal amount of outstanding variable rate demand obligations covered under each facility as of September 1, 2024.

**Liquidity Facilities and Expiration Dates**

<b>Liquidity Provider</b>	<b>Bond Issue</b>	<b>Principal Outstanding</b>	<b>Facility Expiration</b>
TD Bank, N.A.	2016 Series B-2	\$ 25,325,000	January 2026
TD Bank, N.A.	2022 Series C-1	147,650,000	January 2026
PNC Bank, N.A.	2017 Authorization Series A	24,275,000	January 2026
PNC Bank, N.A.	2022 Series C-2	134,625,000	January 2026
<b>Total</b>		<b>\$ 331,875,000</b>	

*Source: Metropolitan.*

***Interest Rate Swap Transactions.*** By resolution adopted on September 11, 2001, Metropolitan's Board authorized the execution of interest rate swap transactions and related agreements in accordance with a master swap policy, which was subsequently amended by resolutions adopted on July 14, 2009 and May 11, 2010. Metropolitan may execute interest rate swaps if the transaction can be expected to reduce exposure to changes in interest rates on a particular financial transaction or in the management of interest rate risk derived from Metropolitan's overall asset/liability balance, result in a lower net cost of borrowing or achieve a higher net rate of return on investments made in connection with or incidental to the issuance, incurring or carrying of Metropolitan's obligations or investments, or manage variable interest rate exposure consistent with prudent debt practices and Board-approved guidelines. The Assistant General Manager, Finance & Administration reports to the Finance and Asset Management Committee of Metropolitan's Board each quarter on outstanding swap transactions, including notional amounts outstanding, counterparty exposures and termination values based on then-existing market conditions.

Metropolitan currently has one type of interest rate swap, referred to in the table below as "Fixed Payor Swaps." Under this type of swap, Metropolitan receives payments that are calculated by reference to a floating interest rate and makes payments that are calculated by reference to a fixed interest rate.

Metropolitan's obligations to make regularly scheduled net payments under the terms of the interest rate swap agreements are payable on a parity with the Senior Parity Obligations. Termination payments under the 2002A and 2002B interest rate swap agreements would be payable on a parity with the Senior Parity Obligations. Termination payments under all other interest rate swap agreements would be on parity with the Subordinate Parity Obligations.

The periodic payments due to Metropolitan from counterparties under its outstanding interest rate swap agreements were previously calculated by reference to the London interbank offering rate ("LIBOR"). On June 30, 2023, LIBOR rates for all tenors used to determine the periodic payments due to Metropolitan from swap counterparties ceased to be published. Prior to such date, Metropolitan adopted the terms of the ISDA 2020 IBOR Fallbacks Protocol for its existing swap agreements. Under the terms of the ISDA 2020 IBOR Fallbacks Protocol, the floating rate calculations based on a USD LIBOR rate switched to a term-adjusted Secured Overnight Financing rate ("SOFR") plus an adjustment. For Metropolitan swaps that had used one-month and three-month LIBOR, the new floating rate for one-month LIBOR will be SOFR plus 0.11448 basis points ("bps"), and the new floating rate for three-month LIBOR will be SOFR plus 0.26161 bps.

The following swap transactions are outstanding as of September 1, 2024:

**FIXED PAYOR SWAPS:**

<b>Designation</b>	<b>Notional Amount Outstanding</b>	<b>Swap Counterparty</b>	<b>Fixed Payor Rate</b>	<b>Metropolitan Receives</b>	<b>Maturity Date</b>
2002 A	\$ 12,270,000	Morgan Stanley Capital Services, Inc.	3.300%	57.74% x (SOFR plus 11.448 bps)	7/1/2025
2002 B	4,590,000	JPMorgan Chase Bank	3.300	57.74% x (SOFR plus 11.448 bps)	7/1/2025
2003	97,777,500	Wells Fargo Bank	3.257	61.20% x (SOFR plus 11.448 bps)	7/1/2030
2003	97,777,500	JPMorgan Chase Bank	3.257	61.20% x (SOFR plus 11.448 bps)	7/1/2030
2004 C	4,672,250	Morgan Stanley Capital Services, Inc.	2.980	61.55% x (SOFR plus 11.448 bps)	10/1/2029
2004 C	3,822,750	Citigroup Financial Products, Inc.	2.980	61.55% x (SOFR plus 11.448 bps)	10/1/2029
2005	25,980,000	JPMorgan Chase Bank	3.360	70.00% x (SOFR plus 26.161 bps)	7/1/2030
2005	<u>25,980,000</u>	Citigroup Financial Products, Inc.	3.360	70.00% x (SOFR plus 26.161 bps)	7/1/2030
<b>Total</b>	<b>\$ 272,870,000</b>				

*Source: Metropolitan.*

These interest rate swap agreements entail risk to Metropolitan. One or more counterparties may fail or be unable to perform, interest rates may vary from assumptions, Metropolitan may be required to post collateral in favor of its counterparties and Metropolitan may be required to make significant payments in the event of an early termination of an interest rate swap. Metropolitan seeks to manage counterparty risk by diversifying its swap counterparties, limiting exposure to any one counterparty, requiring collateralization or other credit enhancement to secure swap payment obligations, and by requiring minimum credit rating levels. Initially, swap counterparties must be rated at least “Aa3” or “AA-”, or equivalent by any two of the nationally recognized credit rating agencies; or use a “AAA” subsidiary as rated by at least one nationally recognized credit rating agency. Should the credit rating of an existing swap counterparty drop below the required levels, Metropolitan may enter into additional swaps if those swaps are “offsetting” and risk-reducing swaps. Each counterparty is initially required to have minimum capitalization of at least \$150 million. See Note 5(e) in Metropolitan’s audited financial statements in Appendix B.

Early termination of an interest rate swap agreement could occur due to a default by either party or the occurrence of a termination event (including defaults under other specified swaps and indebtedness, certain acts of insolvency, if a party may not legally perform its swap obligations, or, with respect to Metropolitan, if its credit rating is reduced below “BBB-” by Moody’s or “Baa3” by S&P (under most of the interest rate swap agreements) or below “BBB” by Moody’s or “Baa2” by S&P (under one of the interest rate swap agreements)). As of June 30, 2024, Metropolitan would have been required to pay to its counterparties termination payments if its swaps were terminated on that date. Metropolitan’s net exposure to its counterparties for all such termination payments on that date was approximately \$3.6 million. Metropolitan does not presently anticipate early termination of any of its interest rate swap agreements due to default by either party or the occurrence of a termination event. However, Metropolitan has previously exercised, and may in the future exercise, from time to time, optional early termination provisions to terminate all or a portion of certain interest rate swap agreements.

Metropolitan is required to post collateral in favor of a counterparty to the extent that Metropolitan's total exposure for termination payments to that counterparty exceeds the threshold specified in the applicable swap agreement. Conversely, the counterparties are required to release collateral to Metropolitan or post collateral for the benefit of Metropolitan as market conditions become favorable to Metropolitan. As of June 30, 2024, Metropolitan had no collateral posted with any counterparty. The highest, month-end, amount of collateral posted was \$36.8 million, on June 30, 2012, which was based on an outstanding swap notional amount of \$1.4 billion at that time. The amount of required collateral varies from time to time due primarily to interest rate movements and can change significantly over a short period of time. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. In the future, Metropolitan may be required to post additional collateral, or may be entitled to a reduction or return of the required collateral amount. Collateral deposited by Metropolitan is held by the counterparties; a bankruptcy of any counterparty holding collateral posted by Metropolitan could adversely affect the return of the collateral to Metropolitan. Moreover, posting collateral limits Metropolitan's liquidity. If collateral requirements increase significantly, Metropolitan's liquidity may be materially adversely affected. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A.

### **Senior Parity Obligations**

***Short-Term Revolving Credit Facility.*** In March 2024, Metropolitan entered into a note purchase and continuing covenant agreement with Bank of America, N.A. ("BANA"), for the purchase by BANA and sale by Metropolitan from time-to-time of short-term flexible rate revolving notes (the "Short-Term Revolving Credit Facility"). Pursuant to the Short-Term Revolving Credit Facility, Metropolitan may borrow, pay down and re-borrow amounts through the issuance and sale from time to time of short-term notes (with maturity dates not exceeding one year from their delivery date), in an aggregate principal amount not to exceed \$400 million (including, subject to certain terms and conditions, notes to refund maturing notes) to be purchased by BANA during the term of BANA's commitment to purchase notes thereunder, which commitment currently extends to March 19, 2027. As of September 1, 2024, Metropolitan had \$384.4 million principal amount of short-term notes outstanding under the Short-Term Revolving Credit Facility, consisting of \$348.4 million of tax-exempt notes and \$36.0 million of taxable notes. Approximately \$316.0 million of such outstanding short-term notes (consisting of \$280.0 million of the outstanding tax-exempt notes and all of the outstanding taxable notes) are expected to be refunded with proceeds of Metropolitan's 2024C Bonds and 2024D Subordinate Bonds. See "PLAN OF FINANCE" in the front part of this Official Statement.

Notes under the Short-Term Revolving Credit Facility bear interest at a fluctuating rate of interest per annum equal to: (A) for taxable borrowings, SOFR as administered by the Federal Reserve Bank of New York (or a successor administrator) as determined for each day in accordance with the Short-Term Revolving Credit Facility ("Daily Simple SOFR" as further defined in the Short-Term Credit Facility) plus 0.80 percent (so long as the current credit ratings on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions are maintained); and (B) for tax-exempt borrowings, 80 percent of Daily Simple SOFR plus 0.60 percent (so long as the current credit ratings on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions are maintained), subject, in each case to an applicable maximum interest rate, which shall not, in any case, exceed 18 percent. Subject to the satisfaction of certain terms and conditions, any unpaid principal borrowed under the Short-Term Revolving Credit Facility remaining outstanding at the March 19, 2027 stated commitment expiration date of the Short-Term Revolving Credit Facility may be refunded by and exchanged for term notes payable by Metropolitan in approximately equal semi-annual principal installments over a period of approximately three years. Any such term notes will bear interest at a fluctuating rate of interest per annum equal to, for each day: (A) for taxable borrowings, (1) the greatest of (i) the Prime Rate plus one percent, (ii) the Federal Funds Rate in effect at such time plus two percent, and (iii) ten percent (such rate as from time to time in effect, the "Taxable Base Rate"), plus (2) two percent; and (B) for tax-exempt borrowings, (1) the greatest of (i) the Prime Rate plus one percent, (ii) the Federal Funds Rate in effect at such time plus two percent, and

(iii) seven percent (such rate as from time to time in effect, the “Tax-Exempt Base Rate”), plus (2) two percent.

Under the Short-Term Revolving Credit Facility, upon a failure by Metropolitan to pay principal of or interest on any note thereunder, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if any of Fitch, S&P or Moody’s shall have assigned a credit rating below “A-” or “A3,” or if each of Fitch, S&P and Moody’s shall have assigned a credit rating below “BBB-” or “Baa3,” to Senior Revenue Bonds issued under the Senior Debt Resolutions), BANA has the right to terminate its commitments and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days’ notice, or, in connection with certain acts of bankruptcy or insolvency or in the event of an acceleration of Metropolitan debt by another lender, credit enhancer or swap counterparty, immediately) Metropolitan’s obligation to repay its borrowings.

Metropolitan has secured its obligation to pay principal and interest on notes evidencing borrowings under the Short-Term Revolving Credit Facility as Senior Parity Obligations.

In connection with the execution of the Short-Term Revolving Credit Facility, Metropolitan designated the principal and interest payable on the notes issued thereunder as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable under the Short-Term Revolving Credit Facility on a schedule of Assumed Debt Service for any outstanding draws.

Metropolitan has previously entered, and may in the future enter, into one or more other or alternative short-term revolving credit facilities, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

## **Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations**

### **Subordinate Revenue Bonds**

The water revenue bonds issued under the Subordinate Debt Resolutions outstanding as of September 1, 2024, are set forth below:

### **Outstanding Subordinate Revenue Bonds**

<b>Name of Issue</b>	<b>Principal Outstanding</b>
Subordinate Water Revenue Refunding Bonds, 2017 Series A	\$ 140,660,000
Subordinate Water Revenue Bonds, 2018 Series B	57,740,000
Subordinate Water Revenue Refunding Bonds, 2019 Series A	150,340,000
Subordinate Water Revenue Refunding Bonds, 2020 Series A	125,570,000
Subordinate Water Revenue Refunding Bonds, 2021 Series A <sup>(1)</sup>	222,160,000
Variable Rate Subordinate Water Revenue Refunding Bonds, 2024 Series B-1 <sup>(1)</sup>	80,390,000
Subordinate Water Revenue Refunding Bonds, 2024 Series B-2 <sup>(2)</sup>	89,445,000
Subordinate Water Revenue Refunding Bonds, 2024 Series B-3 <sup>(3)</sup>	86,940,000
<b>Total</b>	<b>\$ 953,245,000</b>

*Source: Metropolitan.*

<sup>(1)</sup> Outstanding variable rate obligations.

<sup>(2)</sup> Initially delivered in a term rate mode at a fixed interest rate to July 1, 2029.

<sup>(3)</sup> Initially delivered in a term rate mode at a fixed interest rate to July 1, 2031.



### **Variable Rate Bonds**

As of September 1, 2024, of the \$953.2 million outstanding Subordinate Revenue Bonds, \$302.6 million are variable rate obligations. The outstanding variable rate obligations include Subordinate Revenue Bonds that are variable rate demand obligations supported by standby bond purchase agreements between Metropolitan and a liquidity provider (“Liquidity Supported Subordinate Revenue Bonds”).

***Liquidity Supported Subordinate Revenue Bonds.*** As of September 1, 2024, Metropolitan will have \$302.6 million of outstanding Liquidity Supported Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions as variable rate Subordinate Revenue Bonds, the interest rates on which are currently reset on a weekly basis. While bearing interest at a weekly rate, such variable rate demand obligations are subject to optional tender on any business day upon seven days’ notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by standby bond purchase agreements each by and between Metropolitan and Bank of America, N.A., as liquidity provider, that provide for the purchase of the applicable variable rate bonds by the liquidity provider upon tender of such variable rate bonds and a failed remarketing. Metropolitan has secured its obligation to repay principal and interest advanced under each standby bond purchase agreement as First Tier Parity Obligations payable on parity with the Subordinate Revenue Bonds. A decline in the creditworthiness of the liquidity provider will likely result in an increase in the interest rate of the applicable variable rate bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate bonds. Variable rate bonds purchased by the liquidity provider (“bank bonds”) would initially bear interest at a per annum interest rate equal to, the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of the earlier of the 90th day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the liquidity facility, Metropolitan’s obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the liquidity facility in ten equal semi-annual installments over a period ending on the fifth anniversary of the date on which the variable rate bonds were purchased by the liquidity provider. In addition, upon an event of default under the liquidity facility, including a failure by Metropolitan to pay principal or interest due to the liquidity provider, failure by Metropolitan to perform or observe its covenants under the standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody’s below “A–” or “A3,” as applicable), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the current liquidity provider, the current expiration date of each facility, and the principal amount of outstanding variable rate demand obligations covered under each facility as of September 1, 2024.

#### **Liquidity Facilities and Expiration Dates**

<b>Liquidity Provider</b>	<b>Bond Issue</b>	<b>Principal Outstanding</b>	<b>Facility Expiration</b>
Bank of America, N.A.	2021 Series A	\$ 222,160,000	June 2025
Bank of America, N.A.	2024 Series B-1	80,390,000	June 2027
<b>Total</b>		<b>\$ 302,550,000</b>	

*Source: Metropolitan.*

### **Term Rate Mode Bonds**

As of September 1, 2024, Metropolitan will have outstanding approximately \$176.4 million of Subordinate Revenue Bonds bearing interest in a term rate mode, comprised of \$89.4 million of 2024 Series B-2 Bonds and \$86.9 million of 2024 Series B-3 Bonds (collectively, the “Term Rate Mode Bonds”). The Term Rate Mode Bonds initially bear interest at a fixed rate for a specified period from their date of issuance, after which: (i) there shall be determined a new interest mode for the applicable series of bonds (which may be a flexible index mode, an index mode, a daily mode, a weekly mode or a short-term mode), (ii) the Term Rate Mode Bonds may continue under the term rate mode for another specified period or (iii) the Term Rate Mode Bonds may be converted to bear fixed interest rates through the maturity date thereof. The owners of the Term Rate Mode Bonds of a series must tender for purchase, and Metropolitan must purchase, all of the Term Rate Mode Bonds of such series on the specified scheduled mandatory purchase date of each term rate period for such series. The Term Rate Mode Bonds outstanding as of September 1, 2024, are summarized in the following table:

#### **Term Rate Mode Bonds**

<b><u>Bond Issue</u></b>	<b><u>Original Principal Amount Issued</u></b>	<b><u>Next Scheduled Mandatory Purchase Date</u></b>
2024 Series B-2	\$ 89,445,000	July 1, 2029
2024 Series B-3	86,940,000	July 1, 2031
<b>Total</b>	<b>\$ 176,385,000</b>	

*Source: Metropolitan.*

Metropolitan will pay the principal of, and interest on, the Term Rate Mode Bonds on parity with its other Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan anticipates that it will pay the purchase price of tendered Term Rate Mode Bonds from the proceeds of remarketing such Term Rate Mode Bonds or from other available funds. Metropolitan’s obligation to pay the purchase price of any such tendered Term Rate Mode Bonds is a special limited obligation of Metropolitan payable solely from Net Operating Revenues subordinate to the Senior Revenue Bonds and Senior Parity Obligations and on parity with the other outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of the Term Rate Mode Bonds on any mandatory purchase date. Failure to pay the purchase price of any Term Rate Mode Bonds on a scheduled mandatory purchase date for such Term Rate Mode Bonds for a period of five business days following written notice by any Owner of such Term Rate Mode Bonds will constitute an event of default under the Subordinate Debt Resolutions, upon the occurrence and continuance of which the owners of 25 percent in aggregate principal amount of the Subordinate Revenue Bonds then outstanding may elect a bondholders’ committee to exercise rights and powers of such owners under the Subordinate Debt Resolutions, including the right to declare the entire unpaid principal of the Subordinate Revenue Bonds then outstanding to be immediately due and payable.

### **Other Junior Obligations**

Metropolitan currently is authorized to issue up to \$400,000,000 of Commercial Paper Notes payable from Net Operating Revenues on a basis subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Although no Commercial Paper Notes are currently outstanding, the authorization remains in full force and effect and Metropolitan may issue Commercial Paper Notes from time to time.

## General Obligation Bonds

As of September 1, 2024, \$18,210,000 aggregate principal amount of general obligation bonds payable from *ad valorem* property taxes are outstanding. See “METROPOLITAN REVENUES–General” and “–Revenue Allocation Policy and Tax Revenues” in this Appendix A. Metropolitan’s revenue bonds are not payable from the levy of *ad valorem* property taxes.

<b>General Obligation Bonds</b>	<b>Amount Issued<sup>(1)</sup></b>	<b>Principal Outstanding</b>
Waterworks General Obligation Refunding Bonds, 2019 Series A	\$16,755,000	\$ 4,545,000
Waterworks General Obligation Refunding Bonds, 2020 Series A	13,665,000	13,665,000
<b>Total</b>	<b>\$30,420,000</b>	<b>\$18,210,000</b>

*Source: Metropolitan.*

<sup>(1)</sup> Voters authorized Metropolitan to issue \$850,000,000 of Waterworks General Obligation Bonds, Election 1966, in multiple series, in a special election held on June 7, 1966. This authorization has been fully utilized. This table lists bonds that refunded such Waterworks General Obligation Bonds, Election 1966.

## State Water Contract Obligations

**General.** As described herein, in 1960, Metropolitan entered into its State Water Contract with DWR to receive water from the State Water Project. All expenditures for capital and operations, maintenance, power and replacement costs associated with the State Water Project facilities used for water delivery are paid for by the 29 Contractors that have executed State water supply contracts with DWR, including Metropolitan. Contractors are obligated to pay allocable portions of the cost of construction of the system and ongoing operating and maintenance costs, regardless of quantities of water available from the project. Other payments are based on deliveries requested and actual deliveries received, costs of power required for actual deliveries of water, and offsets for credits received. In exchange, Contractors have the right to participate in the system, with an entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. Metropolitan’s State Water Contract accounts for nearly one-half of the total entitlement for State Water Project water contracted for by all Contractors.

DWR and other State Water Project contractors, including Metropolitan, have executed an amendment to extend their State water supply contracts from 2035 to 2085 and to make certain changes related to the financial management of the State Water Project in the future. See “METROPOLITAN’S WATER SUPPLY–State Water Project – State Water Contract” in this Appendix A.

Metropolitan’s payment obligation for the State Water Project for the fiscal year ended June 30, 2024 was estimated to be \$707.7 million, which amount reflects prior year’s credits of \$63.5 million. For the fiscal year ended June 30, 2024, Metropolitan’s estimated payment obligations under the State Water Contract were approximately 35.8 percent of Metropolitan’s total annual expenses. A portion of Metropolitan’s annual property tax levy is for payment of State Water Contract obligations, as described above under “METROPOLITAN REVENUES–Revenue Allocation Policy and Tax Revenues” in this Appendix A. Any deficiency between tax levy receipts and Metropolitan’s State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt Resolutions. See Note 11(a) to Metropolitan’s audited financial statements in Appendix B for an estimate of Metropolitan’s payment obligations under the State Water Contract. See also “–Power Sources and Costs; Related Long-Term Commitments” for a description of current and future costs for electric power required to operate State Water Project pumping systems and a description of litigation involving the federal relicensing of the Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville.

Metropolitan capitalizes its share of the State Water Project capital costs as participation rights in State Water Project facilities as such costs are billed by DWR. Unamortized participation rights essentially represent a prepayment for future water deliveries through the State Water Project system. Metropolitan's share of system operating and maintenance costs are annually expensed.

DWR and various subsets of the State Water Project contractors have entered into amendments to the State water supply contracts related to the financing of certain State Water Project facilities. The amendments establish procedures to provide for the payment of construction costs financed by DWR bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs (including coverage on the allocable bonds) relating to the financed project. If any affected Contractor defaults on payment under certain of such amendments, the shortfall may be collected from the non-defaulting affected Contractors, subject to certain limitations.

These amendments represent additional long-term obligations of Metropolitan, as described below.

***Devil Canyon-Castaic Contract.*** On June 23, 1972, Metropolitan and five other Southern California public agencies entered into a contract (the "Devil Canyon-Castaic Contract") with DWR for the financing and construction of the Devil Canyon and Castaic power recovery facilities, located on the aqueduct system of the State Water Project. Under this contract, DWR agreed to build the Devil Canyon and Castaic facilities, using the proceeds of revenue bonds issued by DWR under the State Central Valley Project Act. DWR also agreed to use and apply the power made available by the construction and operation of such facilities to deliver water to Metropolitan and the other contracting agencies. Metropolitan, in turn, agreed to pay to DWR 88 percent of the debt service on the revenue bonds issued by DWR. The bonds matured and were fully retired on July 1, 2022. Additionally, Metropolitan agreed to pay 78.5 percent of the ongoing operation and maintenance expenses of the Devil Canyon facilities and 96 percent of the operation and maintenance expenses of the Castaic facilities.

***Off-Aqueduct Power Facilities.*** In addition to system "on-aqueduct" power facilities costs, DWR has, either on its own or by joint venture, financed certain off-aqueduct power facilities. The power generated is utilized by the system for water transportation and other State Water Project purposes. Power generated in excess of system needs is marketed to various utilities and the CAISO. Metropolitan is entitled to a proportionate share of the revenues resulting from sales of excess power. By virtue of a 1982 amendment to the State Water Contract and the other water supply contracts, Metropolitan and the other water Contractors are responsible for paying the capital and operating costs of the off-aqueduct power facilities regardless of the amount of power generated.

***East Branch Enlargement Amendment.*** In 1986, Metropolitan's State Water Contract and the water supply contracts of certain other State Water Project contractors were amended for the purpose, among others, of financing the enlargement of the East Branch of the California Aqueduct. Under the amendment, enlargement of the East Branch can be initiated either at Metropolitan's request or by DWR finding that enlargement is needed to meet demands. In March 2022, DWR prepared a draft report for East Branch Enlargement cost reallocation methods. The report describes the methods used to determine the East Branch Enlargement cost allocation with the distinction between enlargement and improvement categories and the associated cost recovery methodology. Discussions among Metropolitan, the other State Water Project contractors on the East Branch, and DWR on any timetable and plan for future East Branch enlargement actions have been deferred.

The amendment establishes a separate subcategory of the Transportation Charge under the State water supply contracts for the East Branch Enlargement and provides for the payment of costs associated with financing and operating the East Branch Enlargement. Under the amendment, the annual financing costs for such facilities financed by bonds issued by DWR are allocated among the participating State Water Project contractors based upon the delivery capacity increase allocable to each participating contractor.

Such costs include, but are not limited to, debt service, including coverage requirements, deposits to reserves, and certain operation and maintenance expenses, less any credits, interest earnings or other moneys received by DWR in connection with this facility.

If any participating Contractor defaults on payment of its allocable charges under the amendment, among other things, the non-defaulting participating Contractors may assume responsibility for such charges and receive delivery capability that would otherwise be available to the defaulting participating Contractor in proportion to the non-defaulting Contractor's participation in the East Branch Enlargement. If participating Contractors fail to cure the default, Metropolitan will, in exchange for the delivery capability that would otherwise be available to the defaulting participating Contractor, assume responsibility for the capital charges of the defaulting participating Contractor.

***Water System Revenue Bond Amendment.*** In 1987, Metropolitan's State Water Contract and other water supply contracts were amended for the purpose of financing State Water Project facilities through revenue bonds. This amendment establishes a separate subcategory of the Delta Water Charge and the Transportation Charge under the State water supply contracts for projects financed with DWR water system revenue bonds. This subcategory of charge provides the revenues required to pay the annual financing costs of the bonds and consists of two elements. The first element is an annual charge for repayment of capital costs of certain revenue bond financed water system facilities under the existing water supply contract procedures. The second element is a water system revenue bond surcharge to pay the difference between the total annual charges under the first element and the annual financing costs, including coverage and reserves, of DWR's water system revenue bonds.

If any Contractor defaults on payment of its allocable charges under this amendment, DWR is required to allocate a portion of the default to each of the non-defaulting Contractors, subject to certain limitations, including a provision that no non-defaulting Contractor may be charged more than 125 percent of the amount of its annual payment in the absence of any such default. Under certain circumstances, the non-defaulting Contractors would be entitled to receive an allocation of the water supply of the defaulting Contractor.

The following table sets forth Metropolitan's projected costs of State Water Project water based upon DWR's Appendix B to Bulletin 132-22 (an annual report (for this purpose, the 2022 report) produced by DWR setting forth data and computations used by the State in determining State Water Project contractors' Statements of Charges), Metropolitan's share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project (see "METROPOLITAN'S WATER SUPPLY—State Water Project—Bay-Delta Proceedings Affecting State Water Project—*Bay-Delta Planning Activities*" and "—*Delta Conveyance*" in this Appendix A), and power costs forecasted by Metropolitan.

The projections for fiscal years 2024-25 through 2028-29 reflect Metropolitan's biennial budget for fiscal years 2024-25 and 2025-26, which includes a ten-year financial forecast, and are on a cash basis. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. The projections reflect certain assumptions concerning future events and circumstances which may not occur or materialize. Actual costs may vary from these projections if such events and circumstances do not occur as expected or materialize, and such variances may be material.

**PROJECTED COSTS OF METROPOLITAN  
FOR STATE WATER CONTRACT AND DELTA CONVEYANCE  
(Dollars in Millions)**

<b>Year Ending June 30</b>	<b>Capital Costs<sup>(1)</sup></b>	<b>Minimum OMP&amp;R<sup>(1)</sup></b>	<b>Power Costs<sup>(2)</sup></b>	<b>Refunds &amp; Credits<sup>(1)</sup></b>	<b>Delta Conveyance<sup>(3)</sup></b>	<b>Total<sup>(4)</sup></b>
2025	\$ 188	\$ 331	\$ 245	\$ (75)	\$ 12	\$ 701
2026	\$ 193	\$ 345	\$ 242	\$ (76)	\$ —	\$ 704
2027	\$ 200	\$ 365	\$ 240	\$ (58)	\$ —	\$ 747
2028	\$ 210	\$ 387	\$ 239	\$ (59)	\$ —	\$ 777
2029	\$ 228	\$ 406	\$ 237	\$ (57)	\$ —	\$ 813

*Source: Metropolitan.*

- (1) Capital Costs, Minimum Operations, Maintenance, Power and Replacement (“OMP&R”) and Refunds and Credits projections are based on DWR’s Appendix B to Bulletin 132-23.
- (2) Power costs are forecasted by Metropolitan based on a State Water Project allocation of 49 percent in calendar year 2025, 48 percent in calendar year 2026, 47 percent in calendar year 2027, 46 percent in calendar year 2028, and 44 percent in calendar year 2029. Availability of State Water Project supplies vary, and deliveries may include transfers and storage. All deliveries are based upon availability, as determined by hydrology, water quality and wildlife conditions. See “METROPOLITAN’S WATER SUPPLY–State Water Project” and “–Endangered Species Act and Other Environmental Considerations Relating to Water Supply” in this Appendix A.
- (3) Based on Metropolitan’s share of the forecasted planning costs for a single tunnel project. Does not include any capital costs associated with any future proposed Bay-Delta conveyance project.
- (4) Totals may not add due to rounding.

### **Power Sources and Costs; Related Long-Term Commitments**

Current and future costs for electric power required for operating the pumping systems of the CRA and the State Water Project are a substantial part of Metropolitan’s overall expenses. Metropolitan’s power costs include various ongoing fixed annual obligations under its contracts with the U.S. Department of Energy Western Area Power Administration and the Bureau of Reclamation for power from the Hoover Power Plant and Parker Power Plant, respectively. Under the terms of the Hoover Power Plant and Parker Power Plant contracts, Metropolitan purchases energy to pump water through the CRA. Expenses for electric power for the CRA for the fiscal years 2022-23 and 2023-24 were approximately \$161.9 million and \$42.8 million, respectively. Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. Expenses for electric power and transmission service for the State Water Project for fiscal years 2022-23 and 2023-24 were approximately \$96.2 million and \$234.1 million, respectively. Electricity markets are subject to volatility and Metropolitan is unable to give any assurance with respect to the magnitude of future power costs.

**Colorado River Aqueduct.** Approximately 50 percent of the annual power requirements for pumping at full capacity (1.25 million acre-feet of Colorado River water) in Metropolitan’s CRA are secured through long-term contracts for energy generated from federal facilities located on the Colorado River (Hoover Power Plant and Parker Power Plant). Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. These contracts provide Metropolitan with reliable and economical power resources to pump Colorado River water to Metropolitan’s service area.

As provided for under the Hoover Power Allocation Act of 2011 (H.R. 470), Metropolitan has executed a 50-year agreement with the Western Area Power Administration for the continued purchase of

electric energy generated at the Hoover Power Plant through September 2067, succeeding Metropolitan's prior Hoover contract that expired on September 30, 2017.

Depending on pumping conditions, Metropolitan can require additional energy in excess of the base resources available to Metropolitan from the Hoover Power Plant and Parker Power Plant. The remaining up to approximately 50 percent of annual pumping power requirements for full capacity pumping on the CRA is obtained through energy purchases from municipal and investor-owned utilities, third party suppliers, or the CAISO markets. Metropolitan is a member of the Western Systems Power Pool ("WSPP") and utilizes its industry standard form contract to make wholesale power purchases at market cost. The current drought conditions have reduced the water level of Lake Mead and led to declining generation output from Hoover Dam, a condition that is expected to remain for the next several years. This, combined with continued high pumping demand on the CRA, will likely lead to increased reliance on supplemental energy purchases from the WSPP or CAISO markets and continued higher than normal energy costs for the CRA.

Gross diversions of water from Lake Havasu for fiscal years 2022-23 and 2023-24 were approximately 956,382 acre-feet and 707,364 acre-feet, respectively, including Metropolitan's basic apportionment of Colorado River water and supplies from water transfer and storage programs. In fiscal years 2022-23 and 2023-24, Metropolitan purchased approximately 962,595 megawatt-hours and 486,201 megawatt-hours, respectively, of additional energy.

Metropolitan has agreements with the Arizona Electric Power Cooperative ("AEP") to provide transmission and energy purchasing services to support CRA power operations. The term of these agreements extends to December 31, 2035. AEP's subsidiary, ACES, provides energy scheduling services for Metropolitan's share of Hoover and Parker generation and CRA pumping load.

**State Water Project.** The State Water Project's power requirements are met from a diverse mix of resources, including State-owned hydroelectric generating facilities and short-term contracts entered into by DWR. These resources represent approximately 46 percent of the State Water Project's estimated power requirements for 2024. The remainder of the State Water Project power needs is met by purchases from the CAISO.

DWR is seeking renewal of the license issued by FERC for the State Water Project's Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville. A Settlement Agreement containing recommended conditions for the new license was submitted to FERC in March 2006. That agreement was signed by over 50 stakeholders, including Metropolitan and other State Water Project contractors. With only a few minor modifications, FERC staff recommended that the Settlement Agreement be adopted as the condition for the new license. DWR issued a final EIR for the relicensing project on July 22, 2008.

Butte County and Plumas County filed separate lawsuits against DWR challenging the adequacy of the final EIR. This lawsuit also named all of the signatories to the Settlement Agreement, including Metropolitan, as "real parties in interest," since they could be adversely affected by this litigation. On April 7, 2023, the Court of Appeal ruled that the EIR complied with CEQA. On June 28, 2023, the California Supreme Court denied petitioner's request to review. The Court of Appeal's decision is therefore final and the litigation is complete.

Regulatory permits and authorizations are also required before the new license can take effect. In December 2016, NMFS issued a biological opinion setting forth the terms and conditions under which the relicensing project must operate in order to avoid adverse impacts to threatened and endangered species. This was the last major regulatory requirement prior to FERC issuing a new license. Following the 2017 Oroville Dam spillway incident, Butte County, the City of Oroville, and others requested that FERC not issue a new license until an Independent Forensic Team ("IFT") delivered their final report to FERC and



FERC has had adequate time to review the report. The Final IFT report was delivered on January 5, 2018. DWR submitted a plan to address the findings of the report to FERC on March 12, 2018. See “METROPOLITAN’S WATER SUPPLY–State Water Project –2017 Oroville Dam Spillway Incident” in this Appendix A Metropolitan anticipates that FERC will issue the new license; however, the timeframe for FERC approval is not currently known. However, FERC has issued one-year renewals of the existing license since its initial expiration date on January 31, 2007 and is expected to issue successive one-year renewals until a new license is obtained.

DWR receives transmission service from the CAISO. The transmission service providers participating in the CAISO may seek increased transmission rates, subject to the approval of FERC. DWR has the right to contest any such proposed increase. DWR may also be subject to increases in the cost of transmission service as new electric grid facilities are constructed.

Numerous legislative bills and Executive Orders have been enacted over the years addressing California’s GHG emissions that ultimately affect energy prices. The California Global Warming Solutions Act of 2006 (AB 32, Núñez), required California to reduce its GHG emissions to 1990 levels by 2020. SB 32 (2016, Pavley) extended AB 32 by requiring the State to reduce GHG emissions to 40 percent below 1990 levels by 2030. In 2018, Governor Brown signed SB 100 (de León) and Executive Order B-55-18, establishing the policy of the State that eligible renewable energy resources and zero-carbon resources supply 100 percent clean energy to all California end-use customers and State agencies by December 31, 2045. SB 100 also increased the 2030 Renewables Portfolio Standard (“RPS”) requirement for retail electric utilities from 50 percent to 60 percent. Metropolitan and DWR are not subject to the RPS requirements. However, as a State agency, DWR is subject to the Executive Order. DWR has an existing climate action plan in order to achieve carbon neutrality by 2045. SB 1020 (2022, Laird) accelerated the date by which State agencies, including DWR, must procure 100 percent of electricity from eligible renewable energy resources and zero-carbon resources from December 31, 2045 to December 31, 2035, and would mandate certain criteria and process requirements that would apply to DWR in connection with its procurement of renewable and zero-carbon resources for the State Water Project.

On October 9, 2019, Governor Newsom signed SB 49 into law. SB 49 requires Natural Resources, in collaboration with the California Energy Commission and DWR, to assess by January 1, 2022 the opportunities and constraints for potential operational and structural upgrades to the State Water Project to aid California in achieving its climate and energy goals, and to provide associated recommendations consistent with California’s energy goals. DWR submitted its draft SB 49 report to the Governor’s office for review in April 2022.

### **Defined Benefit Pension Plan and Other Post-Employment Benefits**

Metropolitan is a member of the California Public Employees’ Retirement System (“PERS”), a multiple-employer pension system that provides a contributory defined-benefit pension for substantially all Metropolitan employees. PERS provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. PERS is a contributory plan deriving funds from employee contributions as well as from employer contributions and earnings from investments. A menu of benefit provisions is established by State statutes within the Public Employees’ Retirement Law. Metropolitan selects optional benefit provisions from the benefit menu by contract with PERS.

Metropolitan makes contributions to PERS based on actuarially determined employer contribution rates. The actuarial methods and assumptions used are those adopted by the PERS Board of Administration (“PERS Board”). Employees hired prior to January 1, 2013 are required to contribute 7.00 percent of their earnings (excluding overtime pay) to PERS. Pursuant to the current memoranda of understanding, Metropolitan contributes the requisite 7.00 percent contribution for all employees represented by the

Management and Professional Employees Association, the Association of Confidential Employees, Supervisors and Professional Personnel Association and AFSCME Local 1902 and who were hired prior to January 1, 2012. Employees in all four bargaining units who were hired on or after January 1, 2012, pay the full 7.00 percent contribution to PERS for the first five years of employment. After the employee completes five years of employment, Metropolitan contributes the requisite 7.00 percent contribution. Metropolitan also contributes the entire 7.00 percent on behalf of unrepresented employees. Employees hired on or after January 1, 2013 and who are “new” PERS members as defined by the Public Employees’ Pension Reform Act of 2013 pay a member contribution of 8.00 percent in fiscal year 2023-24. In addition, Metropolitan is required to contribute the actuarially determined remaining amounts necessary to fund the benefits for its members.

The contribution requirements of the plan members are established by State statute and the employer contribution rate is established and may be amended by PERS. The fiscal year contributions were/are based on the following actuarial reports and discount rates:

<b>Fiscal Year</b>	<b>Actuarial Valuation</b>	<b>Discount Rate</b>
2020-21	June 30, 2018	7.00%
2021-22	June 30, 2019	7.00%
2022-23	June 30, 2020	7.00%
2023-24	June 30, 2021	6.80%
2024-25	June 30, 2022	6.80%

The most recent actuarial valuation reports of PERS, as well as other information concerning benefits and other matters, are available on the PERS website at <https://www.calpers.ca.gov/page/employers/actuarial-resources/public-agency-actuarial-valuation-reports>. Such information is not incorporated by reference herein. Metropolitan cannot guarantee the accuracy of such information. Actuarial valuations are “forward-looking” information that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions, one or more of which may not materialize or be changed in the future. Actuarial valuations will change with the future experience of the pension plans.

In July 2021, PERS’ Funding Risk Mitigation Policy triggered an automatic discount rate reduction from 7.00 percent to 6.80 percent due to the double-digit investment return for fiscal year 2021 to offset the cost of reducing the expected volatility of future investment returns. In November 2021, the PERS Board voted to retain the 6.80 percent discount rate, which increased Metropolitan’s contribution levels beginning fiscal year 2023-24.

Metropolitan was required to contribute 34.39 percent and 35.74 percent of annual projected payroll for fiscal years 2021-22 and 2022-23, respectively. Metropolitan’s actual contribution for fiscal years 2021-22 and 2022-23 were \$81.5 million or 33.79 percent of annual covered payroll and \$88.2 million or 35.31 percent of annual covered payroll, respectively. The fiscal years 2021-22 and 2022-23 actual contribution included \$11.0 million or 4.56 percent and \$10.6 million or 4.24 percent of annual covered payroll, respectively, for Metropolitan’s pick-up of the employees’ 7.00 percent share. For fiscal years 2023-24 and 2024-25, Metropolitan is required to contribute 33.98 percent and 37.52 percent of annual projected payroll, respectively, in addition to member contributions paid by Metropolitan.

Metropolitan’s required contributions to PERS fluctuate each year and include a normal cost component and a component equal to an amortized amount of the unfunded liability. Many assumptions are

used to estimate the ultimate liability of pensions and the contributions that will be required to meet those obligations. The PERS Board has adjusted and may in the future further adjust certain assumptions used in the PERS actuarial valuations, which may increase Metropolitan's required contributions to PERS in future years. Accordingly, Metropolitan cannot provide any assurances that its required contributions to PERS in future years will not significantly increase (or otherwise vary) from any past or current projected levels of contributions.

The PERS Board adopted a new amortization policy effective with the June 30, 2019 actuarial valuation. The new policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed using a level dollar amount. In addition, the new policy removes the five-year ramp-up and ramp-down on unfunded accrued liability bases attributable to assumption changes and non-investment gains/losses. The new policy removes the five-year ramp-down on investment gains/losses. These changes apply only to new unfunded accrued liability bases established on or after June 30, 2019.

On November 17, 2021, the PERS Board adopted new actuarial assumptions based on the November 2021 CalPERS Experience Study and Review of Actuarial Assumptions. This study reviewed the retirement rates, termination rates, mortality rates, rate of salary increases, and inflation assumption for public agencies. The PERS Board also changed the strategic asset allocation, capital market assumptions, and economic assumptions all of which support the new 6.80 percent discount rate. In addition, the PERS Board reduced the inflation assumption from 2.50 percent to 2.30 percent. These changes were incorporated in the June 30, 2021 valuation and will impact Metropolitan's required contribution for fiscal year 2023-24.

The following table shows the funding progress of Metropolitan's pension plan.

<b>Valuation Date</b>	<b>Accrued Liability (\$ in billions)</b>	<b>Market Value of Assets (\$ in billions)</b>	<b>Unfunded Accrued Liability (\$ in billions)</b>	<b>Funded Ratio</b>
6/30/22 <sup>(1)</sup>	\$2.875	\$2.015	\$(0.859)	70.1%
6/30/21	\$2.752	\$2.228	\$(0.524)	81.0%
6/30/20	\$2.625	\$1.848	\$(0.777)	70.4%
6/30/19	\$2.534	\$1.810	\$(0.724)	71.4%
6/30/18	\$2.433	\$1.744	\$(0.689)	71.7%

*Source: California Public Employees' Retirement System*

<sup>(1)</sup> Most recent actuarial valuation available.

The market value of assets reflected above is based upon the most recent actuarial valuation as of June 30, 2022. The actuarial valuation as of June 30, 2023 has not yet been released. The June 30, 2022 valuation report will be used to establish the contribution requirements for fiscal year 2024-25. Increased volatility has been experienced in the financial markets in recent years. Significant losses in market value or failure to achieve projected investment returns could substantially increase unfunded pension liabilities and future pension costs.

The following tables show the changes in Net Pension Liability and related ratios of Metropolitan's pension plan.

(Dollars in thousands)	06/30/23	6/30/22	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$ 2,807,458	\$ 2,669,675	\$ 137,783
<b>Plan Fiduciary Net Position</b>	2,016,832	2,229,075	(212,243)
<b>Plan Net Pension Liability</b>	\$ 790,626	\$ 440,600	\$ 350,026
Plan fiduciary net positions as a % of the total pension liability	71.84%	83.50%	
Covered payroll	\$ 241,288	\$ 235,294	
Plan net pension liability as a % of covered payroll	327.67%	187.26%	

(Dollars in thousands)	06/30/22	6/30/21	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$ 2,669,675	\$ 2,578,818	\$ 90,857
<b>Plan Fiduciary Net Position</b>	2,229,075	1,854,231	374,844
<b>Plan Net Pension Liability</b>	\$ 440,600	\$ 724,587	\$ (283,987)
Plan fiduciary net positions as a % of the total pension liability	83.50%	71.90%	
Covered payroll	\$ 235,294	\$ 225,707	
Plan net pension liability as a % of covered payroll	187.26%	321.03%	

Source: GASB 68 Accounting Report for the respective measurement date prepared for Metropolitan by the California Public Employees' Retirement System.

The Net Pension Liability for Metropolitan's Miscellaneous Plan for the fiscal years ended June 30, 2022 and 2023 were measured as of June 30, 2021 and June 30, 2022, respectively, and the Total Pension Liability used to calculate the Net Pension Liability was determined by an annual actuarial valuation as of June 30, 2020 and June 30, 2021, respectively.

For more information on the plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED MARCH 31, 2024 AND 2023 (UNAUDITED)."

Metropolitan currently provides post-employment medical insurance to retirees and pays the post-employment medical insurance premiums to PERS. On January 1, 2012, Metropolitan implemented a longer vesting schedule for retiree medical benefits, which applies to all new employees hired on or after January 1, 2012. Payments for this benefit were \$23.9 million in fiscal year 2021-22, \$14.9 million in fiscal year 2022-23 and \$15.3 million in fiscal year 2023-24. Employees are not required to contribute to the plan.

Under Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, Metropolitan is required to account for and report the outstanding obligations and commitments related to such benefits, commonly referred to as other post-employment benefits (“OPEB”), on an accrual basis.

The actuarial valuations dated June 30, 2021 and June 30, 2023, were released in June of 2020 and April of 2024, respectively. The 2021 valuation indicated that the Actuarially Determined Contribution (“ADC”) in fiscal years 2022-23 and 2023-24 were \$14.9 million and \$15.3 million, respectively, and the 2023 valuation indicated that the ADC will be \$23.0 million and \$23.7 million in fiscal years 2024-25 and 2025-26, respectively. The ADC consists of two parts: (1) the normal cost, which represents the annual cost attributable to service earned in a given year and (2) the layered amortization of Unfunded Actuarial Liability as a level percentage of payroll.

The actuarial assumptions included the following:

	<b>June 30, 2023 Valuation</b>	<b>June 30, 2021 Valuation</b>
Actuarial Cost Method	Entry Age, level percentage of payroll	Entry age, level percentage of payroll
Amortization Method/Period	Level percentage of payroll over 23 year closed period (13 years remaining on measurement date 6/30/23)	Level percentage of payroll over 23 year closed period (15 years remaining on measurement date 6/30/20)
Asset Valuation Method	Investment gains/losses spread over 5 year rolling period with corridor of 80% and 120% of market value	Investment gains/losses spread over 5 year rolling period with corridor of 80% and 120% of fair value
Investment Rate of Return	6.75%	6.75%
Inflation	2.80%	3.00%
Mortality, Disability, Termination, Retirement	CalPERS 2000-2019 Experience Study	CalPERS 2000-2019 Experience Study
Health Care Cost Trends	Pre-Medicare – 12.72% for 2023, grading down to 4.14% for 2076 and later. Medicare –8.45% for 2022, grading down to 4.14% for 2076 and later	Pre-Medicare - 6.8% for 2023, grading down to 3.83% for 2076 and later. Medicare –5.4% for 2022, grading down to 3.83% for 2076 and later
Mortality Improvement	Mortality projected fully generational with Scale MP-2021	Mortality projected fully generational with Scale MP-2021

As of June 30, 2023, the date of the most recent OPEB actuarial valuation report, the unfunded actuarial liability was estimated to be \$122.1 million and projected to be \$125.0 million at June 30, 2024.

In September 2013, Metropolitan’s Board established an irrevocable OPEB trust fund with the California Employers’ Retiree Benefit Trust Fund. The market value of assets in the trust as of June 30, 2023 was \$345.8 million. As part of its biennial budget process, the Board approved the full funding of the ADC for fiscal years 2022-23 and 2023-24.

Increased volatility in the financial markets has been experienced in recent years. Declines in the market value of the OPEB trust fund or failure to achieve projected investment returns could negatively affect the funding status of the trust fund and increase ADCs in the future.

The following tables show the changes in Net OPEB Liability and related ratios of Metropolitan's OPEB plan.

(Dollars in thousands)	06/30/23	6/30/22	Increase/ (Decrease)
<b>Total OPEB Liability</b>	\$ 443,189	\$ 429,603	\$ 13,586
<b>Plan Fiduciary Net Position</b>	328,536	377,321	(48,785)
<b>Plan Net OPEB Liability</b>	\$ 114,653	\$ 52,282	\$ 62,371
Plan fiduciary net positions as a % of the total OPEB liability	74.13%	87.83%	
Covered payroll	\$ 241,288	\$ 235,294	
Plan net OPEB liability as a % of covered payroll	47.52%	22.22%	

(Dollars in thousands)	06/30/22	6/30/21	Increase/ (Decrease)
<b>Total OPEB Liability</b>	\$ 429,603	\$ 452,293	\$ (22,690)
<b>Plan Fiduciary Net Position</b>	377,321	287,562	89,759
<b>Plan Net OPEB Liability</b>	\$ 52,282	\$ 164,731	\$ (112,449)
Plan fiduciary net positions as a % of the total OPEB liability	87.83%	63.58%	
Covered payroll	\$ 235,294	\$ 225,707	
Plan net OPEB liability as a % of covered payroll	22.22%	72.98%	

*Source: GASB Statement No. 74/75 Report for the respective fiscal year prepared for Metropolitan by its actuary for the Retiree Healthcare Plan.*

The Net OPEB Liability for the years ended June 30, 2022 and 2023 were measured as of June 30, 2021 and June 30, 2022, respectively, and the Total OPEB Liability used to calculate the Net OPEB Liability as of such dates were determined by an annual actuarial valuation as of June 30, 2021.

For more information on the OPEB plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED MARCH 31, 2024 AND 2023 (UNAUDITED)."

## **HISTORICAL AND PROJECTED REVENUES AND EXPENSES**

The “Historical and Projected Revenues and Expenses” table below for fiscal years 2021-22 through 2028-29, provides a summary of revenues and expenses of Metropolitan prepared on a cash basis. This is consistent with Metropolitan’s current budgetary reporting method. Under cash basis accounting, water sales revenues are recorded when received (two months after billed) and expenses when paid (approximately one month after invoiced). The table does not reflect the accrual basis of accounting, which is used to prepare Metropolitan’s annual audited financial statements. Under accrual accounting, revenues are recorded when earned and expenses are recorded at the time the liabilities are incurred, regardless of the timing of related cash flows.

The information for fiscal year 2023-24 in the table below is based upon preliminary results. The financial projections for fiscal years 2025-26 through 2028-29 in the table below reflect the biennial budget for fiscal years 2024-25 and 2025-26 as well as a ten-year financial forecast provided therein on a cash basis. The financial projections include Metropolitan’s share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project and certain costs associated with PWSC. See “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities” and “– Delta Conveyance” and “REGIONAL WATER RESOURCES–Local Water Supplies – Recycled Water-Metropolitan Pure Water Southern California Program” in this Appendix A.

The projections are based on assumptions concerning future events and circumstances that may impact revenues and expenses and represent management’s best estimates of results at this time. See the footnotes to the table below entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for relevant assumptions, including projected water transactions and the average annual increase in the effective water rate, and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for a discussion of potential impacts. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the projection period will vary from the projections and the variations may be material. The budget and projection information, and all other forward-looking statements in this Appendix A, are based on current expectations and are not intended as representations of facts or guarantees of future results.

The presentation below is consistent with Metropolitan’s current budgetary reporting method. Metropolitan will continue to calculate compliance with its rate covenants, limitations on additional bonds and other financial covenants in the Resolutions in accordance with their terms.

The presentation below differs from that previously presented in certain of Metropolitan’s prior offering documents and continuing disclosure annual report filings with respect to the actual and expected use of certain funds on hand and the application of Reserve Transfers as offsets to operating and maintenance expenses and as Additional Revenues, respectively. Metropolitan now consistently applies these funds as set forth in the table below, which impacted the bond and fixed-charge coverage calculation in fiscal year 2021-22 through fiscal year 2024-25. O&M, CRA Power and Water Transfer Costs were updated to reflect the set-aside of \$12.8 million in fiscal year 2020-21, and the use of \$26.5 million in fiscal year 2021-22 from the Exchange Agreement Set-Aside Fund to offset the \$50.5 million payment to SDCWA in connection with the litigation challenging Metropolitan’s rates. See “METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A. Lastly, a Reserve Transfer of \$153 million in fiscal year 2022-23, and an expected Reserve Transfer of \$229 million in 2023-24 are reflected in the table below.

Metropolitan’s resource planning projections are developed using a comprehensive analytical process that incorporates demographic growth projections from recognized regional planning entities,



historical and projected data acquired through coordination with local agencies, and the use of generally accepted empirical and analytical methodologies. Due to the unpredictability of future hydrologic conditions, Metropolitan's projected supplemental wholesale water transactions may vary considerably. Metropolitan's Water Resource Management provided projections of the volume of annual water transactions for the biennial budget for fiscal years 2024-25 and 2025-26 and its ten-year financial forecast. Based on those projections and water sales in recent years, Metropolitan incorporated more conservative assumptions for water transactions in its biennial budget for fiscal years 2024-25 and 2025-26 and its ten-year financial forecast. The water transactions projections used to determine water rates and charges assume a transition from recent hydrologic conditions to average year hydrology. Actual water transactions are likely to vary from projections. As shown in the chart entitled "Historical Water Transactions" below, water transactions can vary significantly from average and demonstrates the degree to which Metropolitan's commitments to meet supplemental demands can impact water transactions. In years when actual transactions exceed projections, the revenues from water transactions during the fiscal year will exceed budget, potentially resulting in an increase in financial reserves. In years when actual transactions are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenses below budgeted levels, reducing funding of capital projects from revenues, and drawing on reserves. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. See also "—Preliminary Fiscal Year 2023-24 Financial Results." Metropolitan considers actual transactions, revenues and expenses, and financial reserve balances in setting rates for future fiscal years.

As described above, the information for fiscal year 2023-24 in the table below is based upon preliminary results. Financial projections for fiscal years 2025-26 through 2028-29 reflect the biennial budget for fiscal years 2024-25 and 2025-26 and ten-year financial forecast provided therein on a cash basis. This includes the issuance of \$3,380 million of bonds for fiscal years 2024-25 through 2028-29 to finance a portion of the costs of the CIP including, for planning purposes, certain projected costs of PWSC if a project is approved. The projections also assume the issuance of an additional \$48 million of bonds during the same period to finance other capital expenditures of Metropolitan relating to conservation and supply programs. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" and "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.

Water transactions with member agencies were 1.65 million acre-feet in fiscal year 2021-22, and 1.39 million acre-feet for fiscal year 2022-23, and are estimated to be 1.17 million acre-feet in fiscal year 2023-24. Water transactions are projected to 1.34 million acre-feet for fiscal year 2024-25, 1.34 million acre-feet for fiscal year 2025-26, 1.34 million acre-feet for fiscal year 2026-27, 1.35 million acre-feet for fiscal year 2027-28 and 1.35 million acre-feet for fiscal year 2028-29. Rates and charges will increase by 8.5 percent for calendar year 2025, and will increase by 8.5 percent for calendar year 2026. Rates and charges are projected to increase by 11.5 percent for calendar year 2027, 11.5 percent for calendar year 2028, and 5.0 percent for calendar year 2029. Actual rates and charges to be effective in calendar year 2027 and thereafter are subject to adoption by Metropolitan's Board.

The biennial budget for fiscal years 2024-25 and 2025-26 also assumes additional arrangements enabled by Metropolitan's record high storage reserves anticipated to generate revenues of \$60 million per year.

Financial projections for fiscal years 2024-25 through 2028-29 reflect a greater portion of Metropolitan's State Water Contract obligations being paid from property taxes. *[if new tax rate established in August add the following:]* As assumed by the biennial budget for fiscal years 2024-25 and 2025-26, the Board increased the *ad valorem* tax rate to 0.0070 percent of full assessed valuation beginning in fiscal year 2024-25.]

The projections were prepared by Metropolitan and have not been reviewed by independent certified public accountants or any entity other than Metropolitan. Dollar amounts are rounded.

**HISTORICAL AND PROJECTED REVENUES AND EXPENSES<sup>(a)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

	Actual			Projected				
	2022 <sup>(o)</sup>	2023	2024	2025	2026	2027	2028	2029
	Actual	Actual	Preliminary	Adopted Budget	Adopted Budget	10-Yr. Forecast	10-Yr. Forecast	10-Yr. Forecast
Water Revenues <sup>(b)</sup>	\$1,523	\$1,323	\$1,167	\$1,400	\$1,511	\$1,659	\$1,862	\$2,018
Other Charge Revenues <sup>(c)</sup>	171	182	196	214	230	242	281	335
Total Operating Revenues	1,693	1,505	1,364	1,613	1,741	1,901	2,143	2,353
O&M, CRA Power and Water Transfer Costs <sup>(d)</sup>	(770)	(864)	(760)	(883)	(920)	(1,006)	(1,061)	(1,110)
Total SWC OMP&R and Power Costs <sup>(e)</sup>	(374)	(412)	(543)	(386)	(372)	(407)	(428)	(455)
Total Operation and Maintenance	(1,144)	(1,275)	(1,303)	(1,269)	(1,292)	(1,413)	(1,489)	(1,565)
Net Operating Revenues	\$ 549	\$ 229	\$ 61	\$ 344	\$ 449	\$ 487	\$ 653	\$ 788
Additional Revenue Sources								
Miscellaneous Revenue <sup>(f)</sup>	23	24	21	158	159	52	48	48
Reserve Transfers <sup>(g)</sup>	—	153	229	—	—	—	—	—
Sales of Hydroelectric Power <sup>(h)</sup>	9	6	13	21	18	15	13	12
Interest on Investments <sup>(i)</sup>	10	21	42	50	45	42	43	46
Total Additional Revenues	42	204	305	229	222	109	104	107
Adjusted Net Operating Revenues <sup>(j)</sup>	\$591	\$434	\$366	\$573	\$671	\$596	\$757	\$895
Senior Obligations	(178)	(172)	(197)	(200)	(198)	(234)	(280)	(418)
Subordinate Obligations	(97)	(121)	(125)	(135)	(151)	(134)	(138)	(56)
Senior and Subordinate Obligations <sup>(k)</sup>	(275)	(293)	(322)	(335)	(349)	(368)	(418)	(474)
Funds Available from Operations	\$ 316	\$ 141	\$ 44	\$ 238	\$ 322	\$ 228	\$ 340	\$ 421
Debt Service Coverage (DSC) on all Senior Bonds	3.32	2.52	1.86	2.87	3.40	2.55	2.71	2.14
DSC on all Senior and Subordinate Bonds <sup>(l)</sup>	2.15	1.48	1.14	1.71	1.92	1.62	1.81	1.89
Operating Equipment Expense	(4)	(7)	\$ (9)	\$ (10)	\$ (10)	\$ (11)	\$ (11)	\$ (12)
Pay-As-You Go Construction	(135)	(135)	(35)	(175)	(175)	(175)	(250)	(275)
Pay-As-You Go Funded from Replacement & Refurbishment Fund Reserves	1	2	—	—	—	—	—	—
Total SWC Capital Costs Paid from Current Year Operations	—	—	—	—	—	—	—	—
Remaining Funds Available from Operations	\$ 177	\$ —	\$ —	\$ 53	\$ 137	\$ 42	\$ 78	\$ 133
Fixed Charge Coverage <sup>(m)</sup>	2.15	1.48	1.14	1.71	1.92	1.62	1.81	1.89
Property Taxes <sup>(n)</sup>	\$ 160	\$ 198	\$ 202	\$ 317	\$ 334	\$ 342	\$ 351	\$ 359
General Obligation Bonds Debt Service Paid from Property Taxes	(8)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
SWC Capital Costs Paid from Property Taxes	(140)	(133)	(122)	(113)	(117)	(142)	(151)	(170)
SWC O&M Costs Paid from Property Taxes	(12)	(62)	(78)	(202)	(215)	(198)	(197)	(187)

Source: Metropolitan.

(Footnotes to table are on next pages)

(Footnotes to table on prior page)

- (a) Unaudited. Totals may not add due to rounding. Prepared on a cash basis. Information for fiscal year 2023-24 is based on preliminary results. Projections for fiscal year 2024-25 through fiscal year 2028-29 are based on assumptions and estimates used in the biennial budget for fiscal years 2024-25 and 2025-26 and ten-year financial forecast provided therein and reflect the projected issuance of additional bonds. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.
- (b) Water Revenues include revenues from water sales, exchanges, and wheeling. During the fiscal years ended June 30, 2022 and 2023, annual water transactions with member agencies (in acre-feet) were 1.65 million and 1.39 million, respectively, and, for fiscal year ended June 30, 2024, are estimated to be 1.17 million. See the table entitled “Summary of Water Transactions and Revenues” under “METROPOLITAN REVENUES–Water Revenues” in this Appendix A. The water transactions projections (in acre-feet) are 1.34 million acre-feet for 2024-25, 1.34 million acre-feet for fiscal year 2025-26, 1.34 million acre-feet for fiscal years 2026-27, 1.35 million acre-feet for 2027-28, and 1.35 million acre-feet for fiscal years 2028-29. Projections reflect adopted overall rate and charge increase of 8.5 percent for each of the calendar years 2025 and 2026. Rates and charges are projected to increase 11.5 percent for calendar year 2027, 11.5 percent for calendar year 2028, and 5.0 percent for calendar year 2029, subject to adoption by Metropolitan’s Board. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.
- (c) Includes revenues from water standby, readiness-to-serve, and capacity charges. The term Operating Revenues excludes *ad valorem* taxes. See “METROPOLITAN REVENUES–Other Charges” in this Appendix A.
- (d) Water Transfer Costs and PWSC planning costs (described under “REGIONAL WATER RESOURCES–Local Water Supplies – *Recycled Water-Metropolitan Pure Water Southern California Program*” in this Appendix A) are included in operation and maintenance expenses for purposes of calculating the debt service coverage on all Obligations. Operation and maintenance expenses also include \$24.0 million in fiscal year 2021-22 in connection with the SDCWA litigation challenging Metropolitan’s rates (\$50.5 million is the total paid in fiscal year 2021-2022, with the balance paid from the Exchange Agreement Set-Aside Fund). See METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A. O&M, CRA Power and Water Transfer Costs are net of grant funds to be applied to fund planning costs of PWSC (see “REGIONAL WATER RESOURCES–Local Water Supplies – Recycled Water-Metropolitan Pure Water Southern California Program”) and California WaterFix refund monies held and applied to offset Delta Conveyance costs (\$4.5 million in fiscal year 2022-23 and \$30 million in fiscal year 2023-24). Also net of conservation and supply programs expenses expected to be paid from bond proceeds. See footnote (k) below.
- (e) Includes on- and off-aqueduct power and operation, maintenance, power and replacement costs payable under the State Water Contract and Delta Conveyance planning costs. See “METROPOLITAN EXPENSES–State Water Contract Obligations” in this Appendix A. See also “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – *Bay-Delta Planning Activities*” and “– *Delta Conveyance*” in this Appendix A. SWC OMP&R costs are net of (offset by) amounts paid from property taxes as detailed in the table above. See footnote (n) below.
- (f) May include lease and rental net proceeds, net proceeds from sale of surplus property, reimbursements and PWSC contributions. Includes \$60 million in revenues per year for fiscal years 2024-25 and 2025-26 anticipated to be generated from additional arrangements enabled by Metropolitan’s record high storage reserves.
- (g) Reflects transfers from the Water Stewardship Fund, the Water Treatment Surcharge Stabilization Fund, and the Water Rate Stabilization Fund of \$153 million in fiscal year 2022-23, and estimated transfers from the Water Rate Stabilization Fund and General Fund of \$229 million in fiscal year 2023-24.
- (h) Includes CRA power sales.
- (i) Does not include interest applicable to Bond Construction Funds, the Excess Earnings Funds, other trust funds and the Deferred Compensation Trust Fund. Includes net gain or loss on investments.
- (j) Adjusted Net Operating Revenues is the sum of all available revenues that the revenue bond resolutions specify may be considered by Metropolitan in setting rates and issuing additional Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations.

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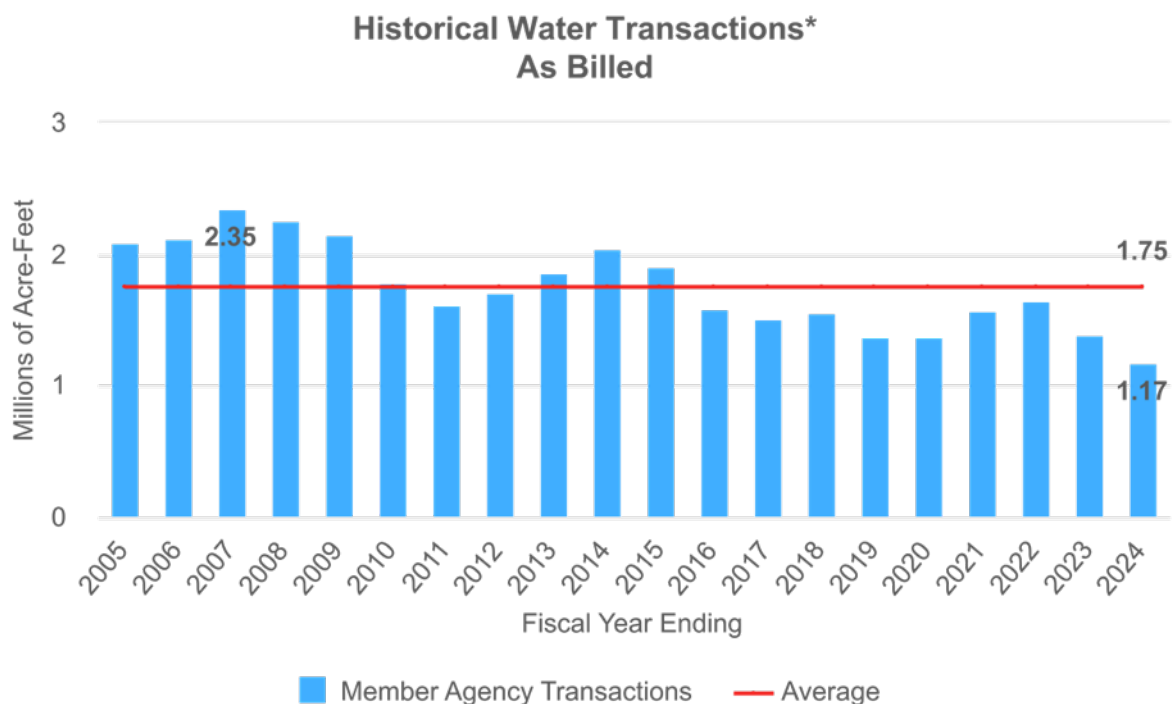
- (k) Includes debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds, Subordinate Parity Obligations, and additional Revenue Bonds (projected). Assumes bond issuances of approximately \$130 million in fiscal year 2024-25, approximately \$150 million in fiscal year 2025-26, approximately \$900 million in fiscal year 2026-27, approximately \$950 million in fiscal year 2027-28, and approximately \$1,250 million in fiscal year 2028-29. Also assumes the issuance of approximately \$215 million of bonds for other capital expenditures relating to conservation and supply programs in calendar year 2024, and \$29 million and \$19 million of bonds for other capital expenditures relating to conservation in fiscal years 2024-25 and 2025-26, respectively. See “CAPITAL INVESTMENT PLAN–Capital Investment Plan Financing” in this Appendix A. See also “METROPOLITAN WATER SUPPLY–Water Transfer, Storage and Exchange Programs –State Water Project Agreements and Programs – *Antelope Valley-East Kern High Desert Water Bank Program*” in this Appendix A.
- (l) Adjusted Net Operating Revenues, divided by the sum of debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations and additional Revenue Bonds (projected). See “METROPOLITAN EXPENSES–Outstanding Senior Revenue Bonds and Senior Parity Obligations” and “–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations” in this Appendix A.
- (m) Adjusted Net Operating Revenues, divided by the sum of State Water Contract capital costs paid from current year operations and debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, and additional Revenue Bonds (projected).
- (n) Assumes the *ad valorem* tax rate will be increased by the Board to 0.0070 percent of full assessed valuation beginning in fiscal year 2024-25.
- (o) Information for fiscal year 2021-22 is presented on a cash basis in this table, consistent with Metropolitan’s current accounting method for budgetary purposes. Metropolitan’s accounting method changed from modified accrual basis to cash basis beginning with fiscal year 2022-23. Historical information through fiscal year 2021-22 in the table entitled “Summary of Revenues by Source” under the caption “METROPOLITAN REVENUES – Summary of Revenues by Source” and in the table entitled “Summary of Expenses” under the caption “METROPOLITAN EXPENSES – General” in this Appendix A reflect the modified accrual basis of accounting previously used by Metropolitan for budgetary purposes.

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## MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES

### Water Transactions Projections

The water transactions with member agencies in the table above for fiscal year 2021-22 were 1.65 million acre-feet, 1.39 million acre-feet for fiscal year 2022-23, and are estimated to be 1.17 million acre-feet for fiscal year 2023-24. The water transaction forecast is 1.34 million acre-feet for fiscal year 2024-25, 1.34 million acre-feet for fiscal year 2025-26, 1.34 million acre-feet for fiscal year 2026-27, 1.35 million acre-feet for 2027-28, and 1.35 million acre-feet for fiscal year 2028-29, consistent with the biennial budget and ten-year financial forecast. For purposes of comparison, Metropolitan's highest level of water transactions during the past 20 fiscal years was approximately 2.35 million acre-feet in fiscal year 2006-07 and the lowest was 1.17 million acre-feet in fiscal year 2023-24. The chart below shows the volume of water transactions with member agencies over the last 20 fiscal years.



\* Water transactions include sales, exchanges, and wheeling with member agencies. Fiscal Year 2023-24 information based on preliminary results.

### Water Revenues

Metropolitan projects revenues from water transactions will be about 75 percent of its total revenues after implementation of the adopted biennial budget for fiscal years 2024-25 and 2025-26. In adopting the budget and rates and charges for each fiscal year, Metropolitan's Board reviews the anticipated revenue requirements and projected water transactions to determine the rates necessary to produce the required revenues to be derived from water transactions during the fiscal year. Metropolitan sets rates and charges estimated to provide operating revenues sufficient, with other sources of funds, to provide for payment of its expenses. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

Metropolitan's Board regularly adopts annual increases in water rates. See "METROPOLITAN REVENUES—Rate Structure" and "—Classes of Water Service" in this Appendix A. On April 9, 2024, the Board adopted average increases in rates and charges of 8.5 percent, which will become effective on each of January 1, 2025 and January 1, 2026. Rates and charges are projected to increase 11.5 percent for calendar year 2027, 11.5 percent for calendar year 2028, and 5.0 percent for calendar year 2029. Actual rates and charges to be effective in calendar year 2027 and thereafter are subject to adoption by Metropolitan's Board.

### **Preliminary Fiscal Year 2023-24 Financial Results**

Based on preliminary results for fiscal year 2023-24, estimated Water Revenues for fiscal year 2023-24 were \$1,167 million, approximately \$371 million lower than budget projections. This reduction in projected water revenues is primarily due to the impact of recent wet weather on demand for supplies by member agencies.

Operation and maintenance expenses in fiscal year 2023-24 are estimated to be \$1,303 million, which represents approximately 66 percent of total estimated costs for fiscal year 2023-24. These expenditures include the costs of labor, electrical power, materials and supplies of both Metropolitan and its contractual share of the State Water Project. Metropolitan's operation and maintenance expenses are estimated to be \$84 million lower than budget in fiscal year 2023-24. Comparatively, operations and maintenance expenditures in fiscal year 2022-23 were \$1,275 million, which represents approximately 66.9 percent of total costs. Overall, estimated expenditures for the twelve months ending June 30, 2024 are estimated to be \$1,975 million, which is under budget by \$114 million.

Metropolitan maintains cash reserves as a tool to manage the fluctuations in revenues and/or increases in expenses. Water revenues vary based on Metropolitan's water transactions, which are primarily driven by demand for Metropolitan's water supplies. Expenses may vary on a host of factors, including but not limited to construction costs, chemical costs for treatment, power costs, hydroelectric power production, variable rate debt costs, among other potential types of costs Metropolitan incurs. Metropolitan's unrestricted reserves provide the flexibility to increase rates on a scheduled basis as opposed to when additional revenues are needed intermittently. Metropolitan determined that it was appropriate to use a portion of its unrestricted reserves and other available funds in fiscal year 2023-24 to pay for permitted expenditures as a result of the rapid change in hydrology that were projected to reduce demand for Metropolitan supplies, and hence projected water revenues. Results for fiscal year 2023-24 reflect the use of approximately \$231 million of unrestricted reserves related to operating and maintenance.

Fiscal year 2023-24 senior revenue bond debt service coverage (on a cash basis) is estimated to be 1.86x. Fiscal year 2023-24 aggregate revenue bond debt service coverage (on a cash basis) is estimated to be 1.14x and the fixed charge coverage is estimated to be 1.14x. Fiscal year 2023-24 capital expenditures, estimated at \$380 million, are being partially funded by the proceeds of bonds issued for fiscal year 2022-23 for such purpose, a portion of Metropolitan's short-term senior lien notes issued under its Short-Term Revolving Credit Facility and the remainder from pay-as-you-go funding. Metropolitan's unrestricted reserves are estimated to be approximately \$323 million on a cash basis at June 30, 2024. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A.

Financial projections for fiscal years 2024-25 through 2028-29 are reflected in the biennial budget for fiscal years 2024-25 and 2025-26 and ten-year financial forecast provided therein. The fiscal year 2024-25 and 2025-26 biennial budget and rates set the stage for predictable and reasonable rate increases over the ten-year planning period, with overall rate increases of 8.5 percent for calendar year 2025 and 8.5 percent for calendar year 2026. The biennial budget for fiscal years 2024-25 and 2025-26 and ten-year financial forecast includes rate increases of 11.5 percent for calendar year 2027, 11.5 percent for calendar year 2028 and 5.0 percent for calendar year 2029. Actual rates and charges to be effective in calendar year

2027 and thereafter are subject to adoption by Metropolitan's Board as part of the biennial budget process, at which point the ten-year forecast will be updated as well. Increases in rates and charges reflect the impact of reduced water transactions projections, increasing operations and maintenance costs, and increasing State Water Project costs, when compared to prior fiscal years.

Metropolitan's financial results during the fiscal years 2023-24 through 2028-29 may be impacted by current and subsequent developments relating to the effects of changing hydrological conditions (including drought and extreme wet weather), as well as other unforeseen events.

See also the "Management's Discussion and Analysis" contained in APPENDIX B- "THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE NINE MONTHS ENDED MARCH 31, 2024 AND 2023 (UNAUDITED)."



Board Distribution Draft, ~~03/27/24~~[08/09/24](#)

## APPENDIX A

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### The Metropolitan Water District of Southern California

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## INTRODUCTION

*This Appendix A provides general information regarding The Metropolitan Water District of Southern California (“Metropolitan”), including information regarding Metropolitan’s operations and finances. Certain statements included or incorporated by reference in this Appendix A constitute “forward-looking statements.” Such statements are generally identifiable by the terminology used such as “plan,” “project,” “expect,” “estimate,” “budget” or other similar words. Such statements are based on facts and assumptions set forth in Metropolitan’s current planning documents including, without limitation, its most recent biennial budget. The achievement of results or other expectations contained in such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results may differ from Metropolitan’s forecasts. Metropolitan is not obligated to issue any updates or revisions to the forward-looking statements in any event.*

*Metropolitan maintains a website that may include information on programs or projects described in this Appendix A; however, none of the information on Metropolitan’s website is incorporated by reference [herein](#) or [is](#) intended to assist investors in making an investment decision or to provide any additional information with respect to the information included in this Appendix A. The information presented on Metropolitan’s website is not part of the Official Statement and should not be relied upon in making investment decisions.*

### Formation and Purpose

Metropolitan is a metropolitan water district created in 1928 under the authority of the Metropolitan Water District Act (California Statutes 1927, Chapter 429, as reenacted in 1969 as Chapter 209, as amended (the “Act”). The Act authorizes Metropolitan to: levy property taxes within its service area; establish water rates; impose charges for water standby and service availability; incur general obligation bonded indebtedness and issue revenue bonds, notes and short-term revenue certificates; execute contracts; and exercise the power of eminent domain for the purpose of acquiring property. In addition, Metropolitan’s Board of Directors (the “Board”) is authorized to establish terms and conditions under which additional areas may be annexed to Metropolitan’s service area.

Metropolitan’s primary purpose is to provide a supplemental supply of water for domestic and municipal uses at wholesale rates to its member agencies. If additional water is available, such water may be sold for other beneficial uses. As a water wholesaler, Metropolitan has no retail customers.

The mission of Metropolitan, as promulgated by the Board, is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

Metropolitan’s rates and charges for water transactions and availability are set by its Board and are not subject to regulation or approval by the California Public Utilities Commission or any other state or federal agency. Metropolitan imports water from two principal sources: northern California via the Edmund G. Brown California Aqueduct (the “California Aqueduct”) of the State Water Project owned by the State of California (the “State” or “California”) and the Colorado River via the Colorado River Aqueduct (“CRA”) owned by Metropolitan. See “METROPOLITAN’S WATER SUPPLY” in this Appendix A.

## Member Agencies

Metropolitan is comprised of 26 member agencies, all of which are public entities, including 14 cities, 11 municipal water districts, and one county water authority, which collectively serve the residents and businesses of more than 300 cities and unincorporated communities. Member agencies request water from Metropolitan at various delivery points within Metropolitan's system and pay for such water at uniform rates established by the Board for each class of water service. Metropolitan's water is a supplemental supply for its member agencies, most of whom have local supplies and other sources of water. See "METROPOLITAN REVENUES–Principal Customers" in this Appendix A for a listing of the ten member agencies representing the highest level of water transactions and revenues of Metropolitan during the fiscal year ended June 30, ~~2023~~2024. No member is required to purchase water from Metropolitan, but all member agencies are required to pay readiness-to-serve charges whether or not they purchase water from Metropolitan. See "METROPOLITAN REVENUES–Rate Structure," "–Member Agency Purchase Orders" and "–Other Charges" in this Appendix A. Local supplies include water produced by local agencies from various sources including but not limited to groundwater, surface water, locally-owned imported supplies, recycled water, and seawater desalination (see "REGIONAL WATER RESOURCES" in this Appendix A). Metropolitan's member agencies may develop additional sources of water and Metropolitan provides support for several programs to develop these local resources. See also "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

The following table lists the 26 member agencies of Metropolitan.

Municipal Water Districts		Cities		County Water Authority
Calleguas	Las Virgenes	Anaheim	Los Angeles	San Diego <sup>(1)</sup>
Central Basin	Orange County	Beverly Hills	Pasadena	
Eastern	Three Valleys	Burbank	San Fernando	
Foothill	West Basin	Compton	San Marino	
Inland Empire Utilities Agency		Fullerton	Santa Ana	
Upper San Gabriel Valley		Glendale	Santa Monica	
Western of Riverside County		Long Beach	Torrance	

<sup>(1)</sup> The San Diego County Water Authority, Metropolitan's largest customer based on water transactions for fiscal year ~~2022-23~~2023-24, is a plaintiff in litigation challenging certain rates adopted by the Board and asserting other claims against Metropolitan. See "METROPOLITAN REVENUES–Litigation Challenging Rate Structure" in this Appendix A.

## Service Area

Metropolitan's service area comprises approximately 5,200 square miles and includes all or portions of the six counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura. When Metropolitan began delivering water in 1941, its service area consisted of approximately 625 square miles. Its service area has increased by 4,575 square miles since that time. The expansion was primarily the result of annexation of the service areas of additional member agencies.

Metropolitan estimates that approximately 18.6 million people lived in Metropolitan's service area (as of July 2023), based on official estimates from the California Department of Finance and on population distribution estimates from the Southern California Association of Governments ("SCAG") and the San Diego Association of Governments ("SANDAG"). The economy of Metropolitan's service area is exceptionally diverse. In ~~2022~~2023, the economy of the six counties which contain Metropolitan's service area had a gross domestic product larger than all but eleven nations of the world. Metropolitan has historically provided between 40 and 60 percent of the water used annually within its service area. For additional economic and demographic information concerning the six county area containing

Metropolitan's service area, see Appendix E--"SELECTED DEMOGRAPHIC AND ECONOMIC INFORMATION FOR METROPOLITAN'S SERVICE AREA."

The climate in Metropolitan's service area ranges from moderate temperatures throughout the year in the coastal areas to hot and dry summers in the inland areas. Since 2000, annual rainfall has ranged from approximately 4 to 23 inches along the coastal area, 6 to 42 inches in foothill areas, and 5 to 22 inches in inland areas. See also "METROPOLITAN'S WATER SUPPLY--General Overview," "Water Conditions in Recent Years," "Current Water Conditions, and "Climate Action Planning and Other Environmental, Social and Governance Initiatives," and "~~Drought~~CONSERVATION AND WATER SHORTAGE MEASURES--Drought Response Actions."

## GOVERNANCE AND MANAGEMENT

### Board of Directors

Metropolitan is governed by a 38-member Board of Directors, made up of representatives from all of Metropolitan's 26 member agencies. Each member agency is entitled to have at least one representative on the Board, plus an additional representative for each full five percent of the total assessed valuation of property in Metropolitan's service area that is within the member agency. Changes in relative assessed valuation do not terminate any director's term. In 2019, California Assembly Bill 1220 (Garcia) amended the Act to provide that "A member public agency shall not have fewer than the number of representatives the member public agency had as of January 1, 2019." Accordingly, the Board may, from time to time, have more than 38 directors.

The Board includes business, professional, and civic leaders. Directors are appointed by member agencies in accordance with those agencies' processes and the Act. They serve on the Board without compensation from Metropolitan. Voting is based on assessed valuation, with each member agency being entitled to cast one vote for each \$10 million or major fractional part of \$10 million of assessed valuation of property within the member agency, as shown by the assessment records of the county in which the member agency is located. The Board administers its policies through the Metropolitan Water District Administrative Code (the "Administrative Code"), which was adopted by the Board in 1977. The Administrative Code is periodically amended to reflect new policies or changes to existing policies that occur from time to time.

### Management

Metropolitan's day-to-day management is under the direction of its General Manager, who serves at the pleasure of the Board, as do Metropolitan's General Counsel, General Auditor, and Ethics Officer. Following are biographical summaries of Metropolitan's principal executive officers.

*Adel Hagekhalil, General Manager* – Mr. Hagekhalil was appointed as General Manager in June 2021. Before joining Metropolitan, Mr. Hagekhalil was appointed in 2018 by Los Angeles Mayor Eric Garcetti to serve as the executive director and general manager of the City of Los Angeles' Bureau of Street Services. His responsibilities included oversight of the management, maintenance and improvement of the city's network of streets, sidewalks, trees and bikeways. Mr. Hagekhalil also focused on climate change adaptation and multi-benefit integrated active transportation corridors. Previously, he served nearly 10 years as assistant general manager of the Los Angeles' Bureau of Sanitation, overseeing the city's wastewater collection system, stormwater and watershed protection program, water quality compliance, advance planning and facilities. He also helped develop the city's 2040 One Water LA Plan, a regional watershed approach to integrate water supply, reuse, conservation, stormwater management and wastewater facilities planning. Mr. Hagekhalil is a member of the American Public Works Association as well as the Water Environment Federation ("WEF"), which recognized him in 2019 as a



WEF Fellow for his contribution to enhancing and forwarding the water industry. He also served for more than a decade as a board member of the National Association of Clean Water Agencies, including a term as president. Mr. Hagekhalil is a registered civil engineer and national board-certified environmental engineer. He earned his bachelor's and master's degrees in civil engineering from the University of Houston, Texas.

On June 13, 2024, at a special meeting of the Board, the Board placed Mr. Hagekhalil on administrative leave from the position of General Manager, for up to 90 days, to investigate various allegations. Mr. Deven Upadhyay, Metropolitan's Executive Officer and Assistant General Manager of Water Resources and Engineering, was appointed by the Board to serve as Interim General Manager while such investigation is being undertaken.

Deven Upadhyay, Interim General Manager/Executive Officer and Assistant General Manager, Water Resources and Engineering – Mr. Upadhyay was appointed as Interim General Manager on June 13, 2024. Prior to such appointment, Mr. Upadhyay was serving as Metropolitan's Executive Officer and Assistant General Manager of Water Resources and Engineering. In such role, he focused primarily on key Metropolitan strategies and innovative planning efforts for the Colorado River and the State Water Project. He was responsible for managing the engineering services and water resources management groups, and the Colorado River and Bay Delta programs. Prior to that position, Mr. Upadhyay was formerly Metropolitan's Chief Operating Officer from November 2017. He has over 25 years of experience in the water industry. He joined Metropolitan in 1995, beginning as a Resource Specialist and then left Metropolitan in 2005 to work at the Municipal Water District of Orange County. In 2008, he returned to Metropolitan as a Budget and Financial Planning Section Manager and became a Water Resource Management Group Manager in 2010. Mr. Upadhyay has a Bachelor of Arts degree in economics from the California State University, Fullerton and a master's degree in public administration from the University of La Verne.

*Marcia Scully, General Counsel* – Ms. Scully was appointed as Metropolitan's General Counsel in March 2012. She previously served as Metropolitan's Interim General Counsel from March 2011 to March 2012. Ms. Scully joined Metropolitan in 1995, after a decade of private law practice, providing legal representation to Metropolitan on construction, employment, Colorado River and significant litigation matters. From 1981 to 1985 she was assistant city attorney for the City of Inglewood. Ms. Scully served as president of the University of Michigan's Alumnae Club of Los Angeles and is a recipient of the 1996 State Bar of California, District 7 President's Pro Bono Service Award and the Southern California Association of Non-Profit Housing Advocate of the Year Award. She is also a member of the League of Women Voters for Whittier and was appointed for two terms on the City of Whittier's Planning Commission, three years of which were served as chair. Ms. Scully earned a bachelor's degree in liberal arts from the University of Michigan, a master's degree in urban planning from Wayne State University and her law degree from Loyola Law School.

*Scott Suzuki, General Auditor* – Mr. Suzuki assumed the position of General Auditor in February 2023. As general auditor, Mr. Suzuki will independently review internal controls, financial records and reports, develop a flexible annual audit plan, ensure that assets and resources are properly accounted for and safeguarded against waste, loss or misuse, and administer Metropolitan's contract for audit services with an independent public accounting firm. Prior to joining Metropolitan, Mr. Suzuki served the County of Orange for almost 21 years in various auditing and accounting roles, concluding as assistant director of internal audit. He also held auditor positions at Home-Base, Deloitte, and the California State University system. Mr. Suzuki holds a Bachelor of Arts degree in business economics from the University of California, Los Angeles. He holds a certified public accountant (CPA) license and certified internal auditor (CIA), certified information systems auditor (CISA), and certified fraud examiner (CFE) designations.

*Abel Salinas, Ethics Officer* – Mr. Salinas was appointed as Metropolitan’s Ethics Officer in July 2019. He is responsible for leading an independent oversight department, which includes ~~ethics-related~~ethics-related policymaking, education, advice, compliance, and investigations. Prior to joining Metropolitan, Mr. Salinas worked as a Special Agent in Charge at the U.S. Department of Labor-Office of Inspector General. Mr. Salinas holds a bachelor’s degree in criminal justice from Pan American University and a master’s degree in policy management from Georgetown University.

~~*Deven Upadhyay, Executive Officer and Assistant General Manager, Water Resources and Engineering*~~ – Mr. Upadhyay ~~focuses~~ primarily on key Metropolitan strategies and innovative planning efforts for the Colorado River and the State Water Project. He ~~is~~ responsible for managing the engineering services and water ~~resource~~ management groups, and the Colorado River and Bay Delta programs. Prior to ~~his current~~ position, Mr. Upadhyay was formerly Metropolitan’s Chief Operating Officer from November 2017. He has over 25 years of experience in the water industry. He joined Metropolitan in 1995, beginning as a Resource Specialist and then left Metropolitan in 2005 to work at the Municipal Water District of Orange County. In 2008, he returned to Metropolitan as a Budget and Financial Planning Section Manager and became a Water Resource Management Group Manager in 2010. Mr. Upadhyay has a Bachelor of Arts degree in economics from the California State University, Fullerton and a master’s degree in public administration from the University of La Verne.

*Katano Kasaine, Assistant General Manager/Chief Financial Officer* – Ms. Kasaine is responsible for directing Metropolitan’s financial activities, including accounting and financial reporting, debt issuance and management, financial planning and strategy, managing Metropolitan’s investment portfolio, budget administration, financial analysis, financial systems management, and developing rates and charges. In addition, she is responsible for human resources, the diversity, equity and inclusion office, administrative services, risk management, and business continuity activities. Before joining Metropolitan in August 2019, Ms. Kasaine worked at the City of Oakland for 25 years, holding various leadership positions, notably as the city’s Finance Director/Treasurer. She holds a bachelor’s degree in business administration from Dominican University in San Rafael, California and a master’s degree in public health from Loma Linda University.

*John Bednarski, Interim Assistant General Manager of Water Resources and Technical Services* – On June 25, 2024, Mr. Upadhyay named Mr. Bednarski to serve as the Interim Assistant General Manager of Water Resources and Technical Services during Mr. Upadhyay’s tenure as Interim General Manager. In this role, Mr. Bednarski oversees the activities of the engineering services group, the water resources management group, the Bay-Delta initiatives group, and the office of safety, security, and protection. Mr. Bednarski joined Metropolitan in 1991 after a decade at the City of Los Angeles Department of Water and Power. A majority of Mr. Bednarski’s career at Metropolitan has been in the area of managing the design and construction of large infrastructure projects and programs, including the Inland Feeder Program and the Pure Water Southern California Program. Prior to his current interim assignment, Mr. Bednarski was the Chief Engineer at Metropolitan for five and a half years. In this role, he was responsible for overseeing the planning, design and construction of Metropolitan’s capital infrastructure, as well as the dam safety initiatives program. Mr. Bednarski has a bachelor’s degree in chemistry from Claremont McKenna College and masters’ degrees in environmental engineering and public administration from the University of Southern California. Mr. Bednarski is a licensed professional civil engineer in the State of California.

*Shane Chapman, Assistant General Manager, Operations* – Mr. Chapman is responsible for the strategic direction and management of Metropolitan’s operations. His primary responsibilities include managing water system operations, information technology and cybersecurity. Prior to his current position, Mr. Chapman previously was Metropolitan’s Chief Administrative Officer from January 2018 until September 2022. He joined Metropolitan as a Resource Specialist in 1991, progressing to the level of Program Manager in 2001. He became the Revenue, Rates and Budget Manager in 2003 and Assistant

Group Manager in Water System Operations in 2006. Mr. Chapman previously served as General Manager of the Upper San Gabriel Valley Municipal Water District for seven years. Mr. Chapman has a Bachelor of Arts degree in economics from Claremont McKenna College and a master's degree in public administration from the University of Southern California.

*Dee Zinke, Assistant General Manager, External Affairs* – Ms. Zinke has been responsible for Metropolitan's communications, public outreach, education, member services, and legislative matters since January 2016. She joined Metropolitan in 2009 as Manager of the Legislative Services Section. Before coming to Metropolitan, Ms. Zinke was the Manager of Governmental and Legislative Affairs at the Calleguas Municipal Water District. Prior to her public service, she worked in the private sector as the Executive Officer and Senior Legislative Advocate for the Building Industry Association of Greater Los Angeles and Ventura Counties and as Director of Communications for E-Systems, a defense contractor specializing in communication, surveillance and navigation systems, based in Washington, D.C. Ms. Zinke holds a Bachelor of Arts degree in communication and psychology from Virginia Polytechnic Institute and State University.

## Employee Relations

~~**General.** The total number of budgeted regular full-time Metropolitan employees for fiscal year 2023-24 is 1,929. Seventeen additional positions were subsequently authorized by the Board to support Metropolitan's work on a regional recycled water program, now referred to as Pure Water Southern California. See "REGIONAL WATER RESOURCES Local Water Supplies Recycled Water Metropolitan Pure Water Southern California Program" in this Appendix A. With these 17 additions, the total number of regular full-time Metropolitan employee positions is 1,946. As of March 2024, 1,798 employees included in the fiscal year 2024-25 budget is 1,965. As of July 1, 2024, 1,819 positions were filled. Of the filled positions, 1,232 were represented by AFSCME Local 1902, 949 by the Supervisors Association, 307 by the Management and Professional Employees Association and 128 by the Association of Confidential Employees. The remaining 401 employees are unrepresented. The four bargaining units represent 98 percent of Metropolitan's current employees. The Memorandum of Understanding ("MOU") with each of AFSCME Local 1902, the Management and Professional Employees Association, the Association of Confidential Employees, and the Supervisors Association extends through December 31, 2026. The MOUs with the Management and Professional Employees Association and the Supervisors Association has also been extended through December 31, 2026. The MOU with the Association of Confidential Employees extends through December 31, 2024.~~

~~**State Audit of Workplace Concerns.** The acting California State Auditor ("State Auditor") conducted an audit of Metropolitan's personnel and hiring practices after Metropolitan was the subject of allegations of discrimination and harassment in the workplace. The State Auditor reviewed Metropolitan's handling of equal employment opportunity ("EEO") complaints from 2004 to 2021, as well as hiring practices, the independence and authority of Metropolitan's Ethics office, safety program, and maintenance of workforce housing at Metropolitan's desert facilities.~~

~~The State Auditor issued its audit report on April 21, 2022. The audit report identified a number of deficiencies in Metropolitan's personnel and hiring practices. The findings of the audit report included that: (i) Metropolitan's EEO policy and procedures did not align with best practices in certain key areas and did not ensure timely investigation of and response to EEO complaints; (ii) Metropolitan's hiring processes did not include appropriate safeguards to consistently ensure or demonstrate that its hiring decisions were equitable and reasonable and sufficiently protected applicants from potential discrimination; (iii) Metropolitan had not taken adequate actions to ensure its Ethics office is able to independently conduct its duties; and (iv) Metropolitan had not instituted adequate procedures to timely~~

~~respond to employee workforce housing maintenance issues, and Metropolitan's implementation of a comprehensive, long-term solution to address employee workforce housing has been slow.~~

~~The State audit report included several recommendations to address its key findings. Metropolitan accepted and implemented all the recommendations identified in the State audit by the April 2023 deadline. In addition, Metropolitan is implementing certain policies and procedures recommended by a Workplace Climate Assessment that Metropolitan commissioned from an outside law firm and received in 2021. Among other things, Metropolitan hired its first Chief Equal Employment Opportunity Officer in March 2022 to help implement a suite of changes that will be designed to build and reaffirm a workplace culture of inclusion, respect, safety and accountability. Metropolitan also created a Diversity, Equity, and Inclusion Office and hired its first Chief Diversity, Equity and Inclusion Officer in May 2022. The Diversity, Equity and Inclusion Office has established programs to support Metropolitan's workforce.~~

## **Risk Management**

Metropolitan is exposed to various risks of loss related to, among other things, the design and construction of facilities, and the treatment and delivery of water. With the assistance of third-party claims administrators, Metropolitan is self-insured for property losses, liability, and workers' compensation. Metropolitan self-insures the first \$25 million per liability occurrence, with commercial general liability coverage of \$75 million in excess of the self-insured retention. The \$25 million self-insured retention is maintained as a separate restricted reserve. Metropolitan is also self-insured for loss or damage to its property, with the \$25 million self-insured retention also being accessible for emergency repairs and Metropolitan property losses. In addition, Metropolitan obtains other excess and specialty insurance coverages such as directors' and officers' liability, fiduciary liability, [cyber](#), and aircraft hull and liability coverage.

Metropolitan self-insures the first \$5 million for workers' compensation with statutory excess coverage. The self-insurance retentions and reserve levels currently maintained by Metropolitan may be modified by the Board at its sole discretion.

## **Cybersecurity**

Metropolitan has adopted and maintains an active Cybersecurity Program ("CSP") that includes policies reviewed by Metropolitan's Office of Enterprise Cybersecurity, Audit department and independent third-party auditors and consultants. Metropolitan has appointed an Information Security Officer who is responsible for overseeing the annual review of the CSP and its alignment with Metropolitan's Strategic Plan. Metropolitan's policies and procedures on information governance, risk management, and compliance are consistent with best practices outlined by the Cybersecurity and Infrastructure Security Agency (CISA) Shields Up initiative and are consistent with the requirements prescribed by the America's Water Infrastructure Act (AWIA) for risk assessment and emergency response. Metropolitan's Cybersecurity Team is responsible for identifying cybersecurity risks to Metropolitan, preventing, investigating, and responding to any cybersecurity incidents, and providing guidance and education on the implementation of new technologies at Metropolitan. All persons or entities authorized to use Metropolitan's computer resources are required to participate in Metropolitan's Cybersecurity Awareness Training, which is conducted annually. See also "RISK FACTORS – Cybersecurity; Other Safety and Security Risks" in the front part of this Official Statement.

## **Business Continuity**

Metropolitan maintains a Business Continuity Program that aligns with industry best practices to ensure that plans are in place across the District to mitigate, respond to and recover from disruptive

events that may impact normal operations. In accordance with its Operating Policy A-06, Emergency Management and Business Continuity, Metropolitan's plans ensure that resiliency strategies are in place to continue critical operations in the event of impacts to information technology systems, facilities and infrastructure, staffing levels, key vendors and resources. Using a continuous improvement model, Business Continuity Plans are reviewed, updated and exercised on a regular basis.

## METROPOLITAN'S WATER SUPPLY

### General Overview

Metropolitan's principal sources of water supplies are the State Water Project and the Colorado River. See "State Water Project" and "Colorado River Aqueduct." Metropolitan receives water delivered from the State Water Project under provisions of a State water supply contract, including contracted supplies, use of carryover storage in the San Luis Reservoir, and surplus supplies. Metropolitan holds rights to a basic apportionment of Colorado River water and has priority rights to an additional amount depending on the availability of surplus supplies. Water management programs supplement these Colorado River supplies. To secure additional supplies, Metropolitan also has groundwater banking partnerships and water transfer and storage arrangements within and outside its service area. Metropolitan's principal water supply sources, and other supply arrangements and water management programs are more fully described in this Appendix A.

Metropolitan's water supply contract with the State (as amended, the "State Water Contract") provides for up to 1,911,500 acre-feet contracted amount of State Water Project supplies annually as set forth in "Table A" of Metropolitan's State Water Contract ("Table A State Water Project water" as further described under "State Water Project – State Water Contract"). The amount of State Water Project water available for allocation under the State Water Contract each year is determined by the California Department of Water Resources ("DWR") based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Over the ten-year period 2014 through 2023, Metropolitan's State Water Project allocation ranged from five percent to 100 percent of contracted amounts, averaging approximately 41 percent, which is equal to roughly 784,000 ~~acre-feet~~acre-feet annually. (An ~~acre-foot~~acre-foot is the amount of water that will cover one acre to a depth of one foot and equals approximately 325,851 gallons, which represents the needs of three average families in and around the home for one year within Metropolitan's service area.)

From calendar year 2014 through 2023, the amount of water delivered to Metropolitan's service area via the State Water Project infrastructure, including water from allocated supplies, human health and safety supplies, carryover, flexible storage from Castaic Lake and Lake Perris, water transfer, groundwater banking and exchange programs delivered through the California Aqueduct varied from a low of 457,000 acre-feet in calendar year 2022 to a high of 1,374,000 acre-feet in 2017. See also "Water Conditions in Recent Years" and "Current Water Conditions."

Metropolitan's rights to Colorado River water include a fourth priority right to 550,000 acre-feet of Colorado River water annually (its basic apportionment) and a fifth priority right to an additional 662,000 acre-feet annually (when surplus is available, which availability has been limited since 2003). Metropolitan has additional available Colorado River supplies, totaling up to 526,000 acre-feet per year, under water supply programs, transfer, exchanges, and certain conservation and storage agreements. Over the ten-year period 2014 through 2023, Metropolitan's net diversions of Colorado River water have averaged approximately 917,020 acre-feet annually, with annual volumes dependent primarily on programs to augment supplies, including transfers of conserved water from agriculture.



Stored water is a critical component of Metropolitan's annual water supply and year-to-year operations. Metropolitan's storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan's service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre feet. Storage capacity provides the water system with year-to-year water supply carry-over capability and a mechanism to assist Metropolitan in providing consistent water supply reliability notwithstanding fluctuations in available supply. Metropolitan's storage as of January 1, 2024 was estimated to be ~~4.15~~4.18 million acre-feet. See "–Storage Capacity and Water in Storage."

The water supply for Metropolitan's service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to Metropolitan's member agencies. The demand for supplemental water supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. From calendar years 2014 through 2023, Metropolitan's water transactions (including water sales, exchanges and wheeling) with member agencies have averaged approximately 1.56 million acre-feet annually.

Metropolitan faces a variety of long-term challenges in providing adequate, reliable and high-quality supplemental water supplies for Southern California. These challenges include, among others: (1) population changes within the service area; (2) increased competition for low-cost water supplies; (3) variable weather conditions, including extended drought periods; (4) increased environmental regulations; and (5) climate change. Metropolitan's resources and strategies for meeting these long-term challenges are set forth in its Integrated Water Resources Plan, as updated from time to time. See "–Integrated Water Resources Plan and Climate Adaptation Master Plan for Water." In addition, Metropolitan manages water supplies in response to the prevailing hydrologic conditions by implementing its Water Surplus and Drought Management ("WSDM") Plan, and in times of prolonged or severe shortages, the Water Supply Allocation Plan (the "Water Supply Allocation Plan"). See "CONSERVATION AND WATER SHORTAGE MEASURES–Water Surplus and Drought Management Plan" and "–Water Supply Allocation Plan" in this Appendix A. The Water Supply Allocation Plan provides for the equitable distribution of available limited water supplies region-wide in case of extreme water shortages within Metropolitan's service area. Implementation of the Water Supply Allocation Plan for fiscal year ~~2023-24~~2024-25 is not expected. See also "–Current Water Conditions."

Hydrologic conditions can have a significant impact on Metropolitan's imported water supply sources. California's climate is such that most of the annual precipitation occurs during late fall and winter. For Metropolitan's State Water Project supplies, precipitation in the form of rain in the Feather River watershed helps replenish storage levels in Lake Oroville, a key State Water Project facility, during fall and winter. Precipitation in the form of snow in California's Northern Sierra provides the additional storage for the subsequent runoff from the spring snowmelt that helps satisfy regulatory requirements in the San Francisco Bay/Sacramento-San Joaquin River Delta ("Bay-Delta") bolstering water supply reliability in the same year. See "–State Water Project – Bay-Delta Proceedings Affecting State Water Project." The source of Metropolitan's Colorado River supplies is primarily the watersheds of the Upper Colorado River Basin in the states of Colorado, Utah, and Wyoming. See "–Colorado River Aqueduct." Although precipitation in the Upper Colorado River Basin is primarily observed in the winter and spring, summer storms are common and can affect water supply conditions.

Uncertainties from potential future temperature and precipitation changes in a climate driven by increased concentrations of atmospheric carbon dioxide and other greenhouse gases ("GHGs") also present challenges. Areas of concern to California water planners identified by researchers include: reduction in Sierra Nevada and Colorado Basin snowpack; increased intensity and frequency of extreme weather events; shifting runoff patterns to earlier in the year when reservoir storage is more constrained due to flood protection; saltwater intrusion to groundwater supplies; and rising sea levels resulting in increased risk of damage from storms, high-tide events, and the erosion of levees and potential cutbacks

of deliveries of imported water. While the range of potential impacts from climate change remain subject to ~~further study-and-debate~~, climate change is among the uncertainties that Metropolitan seeks to address through its planning processes. See “–Integrated Water Resources Plan and Climate Adaptation Master Plan for Water” and “–Climate Action Planning and Other Environmental, Social and Governance Initiatives.”

### Water Conditions in Recent Years

A Water Year begins on October 1 and ends on the following September 30. Water Years 2020 through 2022 represented a record dry period in California’s statewide precipitation. In calendar years 2021 and 2022, DWR’s allocation to State Water Project contractors was five percent of contracted amounts, or 95,575 acre-feet for Metropolitan per year, and it was the first time in the history of the State Water Project with two consecutive years at five percent of contracted amounts. In addition to its allocation of State Water Project contracted amounts, in 2022, due to the historically dry conditions, Metropolitan received delivery from DWR of an additional approximately 134,000 acre-feet of human health and safety supplies under a provision of the State water supply contract. This additional supply was returned to DWR by Metropolitan in calendar year 2023. See “CONSERVATION AND WATER SHORTAGE MEASURES –Drought Response Actions.”

Water Year 2023 (October 1, 2022 through September 30, 2023) also started as a dry year but a series of atmospheric rivers occurred in California during the winter of 2023, bringing extreme precipitation and a massive amount of snowfall. On April 20, 2023, DWR established the final State Water Project allocation for calendar year 2023 at 100 percent of contracted amounts, or 1,911,500 acre-feet for Metropolitan. This made calendar year 2023 the first time since 2006 that DWR was able to allocate the full contracted amounts of the State Water Project. Such extreme hydrology following a severe multi-year drought may become more common in the future in California due to the effects of climate change.

The amount of water delivered to Metropolitan’s service area from its available State Water Project supplies can be constrained by local conditions, preventive maintenance or emergency outages of physical facilities, operational considerations due to water quality, and the State Water Project allocation. In calendar year 2023, Metropolitan took delivery into its service area of 1.06 million acre-feet of supplies via the State Water Project infrastructure, excluding supplies taken on behalf of Desert Water Agency (“DWA”) and Coachella Valley Water District (“CVWD”) pursuant to a set of agreements between and/or among Metropolitan, DWA and CVWD (see “–State Water Project and Colorado River Aqueduct Arrangements – Metropolitan/CVWD/Desert Water Agency Amended and Restated Agreement for the Exchange and Advance Delivery of Water”). After the sequence of atmospheric rivers that occurred during the winter of 2023, in March 2023, DWR made available interruptible supplies in addition to the then-applicable allocation of 75 percent of contracted amounts. Metropolitan took delivery of approximately 134,000 acre-feet of those interruptible supplies and used them to start refilling Diamond Valley Lake (approximately 32,000 acre-feet included in the deliveries to Metropolitan’s service area) and start replenishment of the Castaic Lake and Lake Perris flexible storage accounts. With the increased State Water Project allocation to 100 percent, Metropolitan was also able to repay the 134,000 acre-feet of human health and safety water provided by DWR in 2022 (described above), further replenish the Castaic Lake and Lake Perris flexible accounts and add maximum contractual storage in San Luis Reservoir as Article 56c carryover. See “–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Metropolitan Article 56 Carryover*.” Metropolitan further stored approximately 55,000 acre-feet in the groundwater banks in the San Joaquin valley. The volume able to be stored in the groundwater banks was somewhat limited by the historic flooding in the San Joaquin valley that hindered the groundwater banks’ operations. In addition, of Metropolitan’s available State Water Project supplies, approximately 8,000 acre-feet could not be delivered to one of Metropolitan’s member agencies for groundwater replenishment due to local conditions and



approximately 19,000 acre-feet could not be delivered in the East Branch of the California Aqueduct due to DWR outages in late 2023. These 27,000 acre-feet of undelivered volumes were approved by DWR for delivery in 2024 and are included in Metropolitan's State Water Project carryover storage. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage."

### Current Water Conditions

After a slow start to Water Year 2024 with below-average hydrologic conditions, a series of atmospheric rivers in January and early February brought much-needed precipitation to the northern Sierra. The State Water Project allocation for calendar year 2024 started at ten percent of contracted amounts on December 1, 2023, but ~~has~~was subsequently ~~been~~increased to 30 (through three increases) to 40 percent as of ~~March 22~~April 23, 2024, or ~~573,450~~764,600 acre-feet for Metropolitan. This allocation takes into account snow survey measurements and data through ~~March~~June 1 ~~and may be revised if hydrologic conditions change, 2024.~~

As of ~~March 18~~August 8, 2024, northern Sierra precipitation was ~~115~~90 percent of the 30-year average for the time of year, while the snowpack ~~was at 113~~peaked on April 1, 2024 at 123 percent of the 30-year April 1st peak average ~~(April 1st is typically considered the peak of the snowpack, after which it starts to melt). As of March 12,~~ As of June 11, 2024, the median water year unimpaired runoff forecast for the Sacramento River was ~~16.9~~17.4 million acre-feet or ~~96~~99 percent of the 30-year average. As of ~~March 17~~August 7, 2024, Lake Oroville, a key State Water Project facility, was at ~~3.01~~2.65 million acre-feet ~~or 126 percent of the historical average for the date, while,~~ while the State Water Project share of San Luis Reservoir was at 520,224113,734 acre-feet for the State Water Project or ~~49~~39 percent of ~~the State Water Project's~~ capacity in the shared San Luis Reservoir. Environmental and regulatory constraints are limiting DWR's ability to export water from the Delta, ~~even when releases are being made from Lake Oroville for flood control.~~ See "–State Water Project – Bay-Delta Proceedings Affecting State Water Project" and "–Endangered Species Act and Other Environmental Considerations Relating to Water Supply."

As of ~~March 18~~August 8, 2024, the Upper Colorado River Basin ~~snowpack measured 103~~precipitation was 98 percent of the 30-year median for the time of year, while ~~as of March 18 the snowpack peaked on April 3, 2024 at 115 percent of the 30-year April 1st peak median. As of August 1,~~ 2024, the median water year runoff forecast into Lake Powell was ~~80~~83 percent of the 30-year ~~median average.~~ Despite normal conditions at such point in time, the Colorado River Basin is still experiencing an extended drought. On ~~March 18~~August 4, 2024, the total system storage in the Colorado River Basin was ~~42~~44 percent of capacity or ~~24.8~~25.85 million acre-feet. See "–Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines." As of ~~March 19~~August 6, 2024, Metropolitan estimates approximately ~~843,000~~910,100 acre-feet of Colorado River water in calendar year 2024, which includes approximately 277,700 acre-feet pursuant to the Exchange Agreement (defined below) between Metropolitan and San Diego County Water Authority ("SDCWA"), to be available to Metropolitan. Additional Colorado River supply tends to be available from higher priority water users as the year progresses. Based on recent higher priority water use, Metropolitan expects final Colorado River supplies to be approximately ~~960,000~~930,000 acre-feet.

Metropolitan's storage as of January 1, 2024, was estimated to be ~~4.15~~4.18 million acre-feet. This is the highest beginning-of-year total water storage in Metropolitan's history. See "–Storage Capacity and Water in Storage." As of ~~March 26~~August 7, 2024, Metropolitan's projected ~~supply/demand gap for amount of surplus supply to manage in~~ calendar year 2024 ~~is~~was approximately ~~30,000~~315,000 acre-feet based upon its demand estimate of ~~1.45~~1.36 million acre-feet, and its supply estimate of ~~1.42~~1.68 million acre-feet.

## Integrated Water Resources Plan and Climate Adaptation Master Plan for Water

**Overview and Background.** The Integrated Water Resources Plan (the “IRP”) is Metropolitan’s principal water resources planning document. Metropolitan, its member agencies, sub-agencies and groundwater basin managers developed Metropolitan’s first IRP as a long-term planning guideline for resources and capital investments over a 25-year planning cycle. The purpose of the IRP was the development of a portfolio of preferred resources to meet the water supply reliability and water quality needs for the region in a cost-effective and environmentally sound manner. The first IRP was adopted by the Board in January 1996 to cover a planning cycle through 2020. An IRP update has been subsequently undertaken approximately every five years (*i.e.*, in 2004, 2010 and 2015). In February 2020, Metropolitan initiated a new process for the development of the 2020 IRP, which will guide a 25-year planning cycle through 2045. The development of the 2020 IRP utilizing this new process is ongoing, and was intended to include two phases: (i) a Regional Needs Assessment (which was completed in April 2022), and (ii) a Phase 2 One Water Implementation Phase. This intended second phase subsequently became the development process for the Climate Adaption Master Plan for Water (“CAMP4W”) process, which is currently in progress. The Regional Needs Assessment and CAMP4W are described below. See “–2020 IRP Regional Needs Assessment” and “–Climate Adaptation Master Plan for Water.”

**2020 IRP Regional Needs Assessment.** Metropolitan’s new process for the 2020 IRP builds upon Metropolitan’s adaptive management strategy by utilizing a scenario planning approach. Under this approach, Metropolitan anticipates ranges for how much water Southern California can expect from its imported and local supplies, as well as regional water demands, across four plausible scenarios through 2045.

The initial development of the 2020 IRP utilizing this approach was completed in April 2022, with the adoption by the Board of the 2020 IRP Regional Needs Assessment. The Regional Needs Assessment analyzed potential gaps between the expected supplies and the forecasted demands in Southern California across the four IRP scenarios characterized by divergent outcomes of imported supply stability and water demands on Metropolitan.

The Regional Needs Assessment outcomes can be summarized through a set of findings grounded in the scenario reliability analysis. The findings fall within five key focus areas:

- SWP Dependent Areas – addressing identified vulnerabilities in the portion of Metropolitan’s service area dependent upon State Water Project deliveries (the “SWP Dependent Areas”);
- Storage – storage capacity, put/take capabilities, and accessibility as critical considerations in reliability and reducing the need for new core supply development;
- Retail Demand/Demand Management – managing variability in demand through appropriate regional measures and efficient water use;
- Metropolitan Imported Supplies – maintaining existing imported supply reliability and addressing risks to existing imported supplies from various drivers of uncertainty; and
- Local Supply – maintaining existing and developing new local supplies as a critical element of managing demands on Metropolitan.

The Regional Needs Assessment presents key technical findings and examines the effectiveness of generalized portfolio categories. The Regional Needs Assessment also frames and guides the establishment of more specific targets to maintain reliability over the planning period and informs

Metropolitan's Board on resource investment decisions as well as the establishment of a plan to fund them. In light of the future uncertainties inherent in long-term resource planning, including uncertainties about climate change and regulatory requirements, as well as Southern California's population and economy, this scenario planning approach better prepares the region for a wider range of potential outcomes by identifying solutions and policies across a variety of possible future conditions. This strategy is designed to enable Metropolitan and its member agencies to manage future challenges and changes in California's water conditions and to balance investments with water reliability benefits.

The Board's adoption of the 2020 IRP Regional Needs Assessment allows the analysis and findings to serve as a foundation for the CAMP4W process, which is described below.

***Climate Adaptation Master Plan for Water.*** The current phase of water resource planning expands the intended 2020 IRP implementation into a more comprehensive CAMP4W. CAMP4W will integrate water resource, climate resilience and financial planning into a cohesive strategy and approach. Metropolitan incorporates the results and findings of the ~~Regionals~~Regional Needs Assessment into a collaborative process to identify integrated regional solutions. The intent of CAMP4W is to translate the high-level portfolio analysis from the 2020 IRP Regional Needs Assessment into guidance for specific policies, programs, and projects to address the findings and mitigate the potential shortages. Comprehensive, adaptive management strategy and evaluation criteria will be developed to guide these specific actions. Criteria are being developed through a climate lens with the goal of ensuring that climate resilience and water supply reliability are the primary focus areas. The adaptive management strategy will also establish a process for monitoring key reliability indicators to support decision-making.

Information and materials relating to Metropolitan's 2020 IRP Regional Needs Assessment and ongoing development of its CAMP4W are available at: <https://www.mwdh2o.com/how-we-plan/integrated-resource-plan/>. The materials and other information set forth on Metropolitan's website are not incorporated into this Appendix A and should not be construed to be a part of this Appendix A by virtue of the foregoing reference to such materials and website.

Specific projects identified by Metropolitan in connection with the implementation of the 2020 IRP and CAMP4W are subject to Board consideration and approval, as well as environmental and regulatory documentation and compliance.

### **Climate Action Planning and Other Environmental, Social and Governance Initiatives**

***General; Background.*** Metropolitan has long supported sustainability efforts, dating back to its founding in 1928, when planners and engineers designed the CRA to deliver water primarily by gravity across 242 miles of California desert to the State's south coastal plain. Metropolitan recognized the need for a reliable supply of power by investing in the construction of Hoover Dam and Parker Dam. Together, these dams produce clean, carbon-free energy that have historically supplied more than half of the energy needed to power the CRA pumps. See "METROPOLITAN EXPENSES—Power Sources and Costs; Related Long-Term Commitments – *Colorado River Aqueduct*" in this Appendix A.

In the decades that followed, Metropolitan has continued to make investments in clean energy and energy-efficient design to reduce GHG emissions, as well as climate adaptation investments to bolster water supply availability, particularly during times of drought. In addition, Metropolitan has partnered with the scientific community, including academic research institutions and the private sector, to test and ultimately implement advanced technologies that monitor and enhance Metropolitan's water supplies. Metropolitan's efforts to date in this area have focused not only on the goal of achieving broad environmental sustainability and efficiency objectives but also environmental risk mitigation.

Metropolitan has adopted several planning documents that address the core issues of environmental sustainability, improving climate resiliency of operations, and advancing the goal of carbon neutrality. These documents include the Climate Action Plan (discussed below), the Energy Sustainability Plan, Metropolitan's Capital Investment Plan, and its IRP and CAMP4W discussed above. Metropolitan coordinates its ongoing sustainability efforts through its Chief Sustainability, Resilience, and Innovation Officer ("SRI Officer").

Information and materials related to Metropolitan's planning actions associated with climate change are available at: <https://www.mwdh2o.com/planning-for-tomorrow/addressing-climate-change/>. The materials and other information set forth on Metropolitan's website are not incorporated into this Appendix A and should not be construed to be a part of this Appendix A by virtue of the foregoing reference to such materials and website.

***Climate Change Adaptation.*** Climate change is expected to increase average temperatures across the western United States. In the Colorado River Basin, that is expected to result in decreased runoff and lower flows as less snow is coupled with increased evapotranspiration from trees and plants. In the Sierra Nevada, precipitation is anticipated to increasingly fall as rain in a few large storms, rather than as snow. Sierra snowpack, a critical storage tool in California's water management as it holds water high in the mountains until peak summer demand, has been projected to decrease by up to 65 percent by the end of the century. In the local Southern California region, climate change threatens groundwater basins with saltwater intrusion and less natural replenishment. These factors are expected to reduce the reliability of Metropolitan's imported water supply for Southern California.

Metropolitan has long recognized the threat to its water supply posed by these long-term impacts and has been addressing climate change for 25 years through its IRP. Pursuant to its IRP, Metropolitan has invested in local supplies, developed new storage, and increased the flexibility of its water system facilities to be able to take delivery of water from diverse sources when available. Below are a few examples:

- Metropolitan has increased the water storage capacity of its dams and reservoirs by more than 13-fold since 1990 and has built the Inland Feeder, a large conveyance pipeline that allows for the movement of water into that storage. See "METROPOLITAN'S WATER DELIVERY SYSTEM" in this Appendix A. With In years when snowpack dwindling is low, these investments provide a valuable opportunity to capture water in wet years and save it for dry ones.
- Metropolitan has increased the operational flexibility of its water delivery system through infrastructure improvements, such as the Inland Feeder, which provides the ability to capture and store high allocations of State Water Project supplies when available, and agreements to deliver Colorado River water supplies when State supplies are in drought, and vice versa. See "Water Transfer, Storage and Exchange Programs."
- Metropolitan has invested approximately \$910 million in conservation programs, which have helped decrease potable per capita water consumption over time in Metropolitan's service area from 209 gallons per person per day in 1990 to 126 gallons per person per day in 2022 – a 40 percent reduction. Metropolitan plans to continue to expand these efforts into the future. See "CONSERVATION AND WATER STORAGE MEASURES" in this Appendix A.
- Metropolitan's Local Resources Program accelerates the development of local water supply reliability projects by incentivizing agencies within Metropolitan's service area to construct recycled water, groundwater recovery and seawater desalination projects. Since 1982, Metropolitan has invested approximately \$542 million in recycled water projects and \$199

million in groundwater recovery projects. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

- Metropolitan has partnered with other utilities and organizations across the nation to understand both the effects of climate change and potential opportunities to build resilience. These collaborators include the Water Utility Climate Alliance, a collaboration of large water providers working on climate issues affecting the country’s water agencies, and the California Resilience Challenge, a collaboration of businesses, utilities, and non-profit organizations developing climate adaptation planning projects.

***Climate Action Plan.*** In May 2022, Metropolitan adopted a Climate Action Plan, a comprehensive planning document that outlines Metropolitan’s strategy for reducing GHG emissions associated with Metropolitan’s future construction, operation, and maintenance activities. The Climate Action Plan includes an analysis of Metropolitan’s historical GHG emissions, a forecast of future GHG emissions, sets a GHG reduction target for reducing emissions consistent with applicable state policies, and identifies a suite of specific GHG reduction actions that Metropolitan can implement to achieve its adopted targets. The Climate Action Plan establishes a GHG emissions reduction goal of 40 percent by 2030 and carbon neutrality by 2045. The Climate Action Plan includes nine strategies that target the reduction of direct emissions from natural gas and fuel combustion by supporting the transition to a zero emissions vehicle fleet and reduction of natural gas combustion; reducing indirect emissions associated with electricity consumption through improved energy efficiency and utilizing low-carbon and carbon-free electricity; and implementing GHG reduction measures that incentivize sustainable employee commutes and increase waste diversion; increasing water conservation and local water supply; and investigating and implementing carbon capture and carbon sequestration opportunities on Metropolitan-owned lands.

Metropolitan’s Climate Action Plan includes an implementation strategy, annual GHG inventories, a public-facing tracking and monitoring tool to ensure progress towards meeting its goal, and five-year updates to capture new and emerging technologies for GHG emissions reductions. The strategies included in the Climate Action Plan provide the co-benefits of improved infrastructure reliability, greater energy resiliency, and expected reduced costs associated with energy procurement and maintenance.

***Energy Sustainability.*** Metropolitan meets its energy demands through its investments in hydroelectric and solar power and the purchase of more than 2,000 GWh of electricity annually from the regional power grid. In November 2020, Metropolitan developed an Energy Sustainability Plan. The Energy Sustainability Plan includes a framework of sustainable actions focused on energy cost containment, reliability, affordability, conservation and adaptation, including reconfiguring certain existing power plants and variable-speed pump drives at pumping stations, and assessing the integration of islanded operations for microgrid purposes. Metropolitan invests in renewable energy resources, including buying and generating hydroelectric power to help meet much of its electricity needs. Currently, over three-quarters of Metropolitan’s pumping and water treatment energy needs are met through renewable/sustainable energy resources. In addition to using power generated at Parker and Hoover Dams, Metropolitan has built 15 in-stream hydroelectric plants throughout its distribution system with a total capacity of about 130 megawatts. Metropolitan has also installed 3.5 megawatts of photovoltaic solar power at its facilities and is implementing a project to add battery energy storage at three of its water treatment plants to store green energy when power rates are low and discharge that energy when rates are higher. The completion of construction of the project to add battery storage at the three treatment plants is expected to occur by the end of 2026.

***Diversity, Equity and Inclusion and Governance.*** In its dedication to improving workplace culture for all employees, in October 2021, Metropolitan’s Board adopted a statement pledging its



support of diversity, equity and inclusion initiatives. The Statement of Commitment is the result of a collaborative discussion among the 38-member board and provides guidance so that staff can develop, implement and maintain policies and practices to support diversity, equity and inclusion. In May 2022, Metropolitan hired its first Chief Diversity, Equity and Inclusion officer to help plan, develop, and implement strategies and initiatives designed to ensure that Metropolitan is a diverse and inclusive organization. See ~~“GOVERNANCE AND MANAGEMENT Management” and “Employee Relations” in this Appendix A.~~

## State Water Project

### Background and Current Supply

One of Metropolitan’s two major sources of water is the State Water Project, which is owned by the State, and managed and operated by DWR. The State Water Project is the largest state-built, multipurpose, user-financed water project in the country. It was designed and built primarily to deliver water, but also provides flood control, generates power for pumping, is used for recreation, and enhances habitat for fish and wildlife. The State Water Project provides irrigation water to 750,000 acres of farmland, mostly in the San Joaquin Valley, and provides municipal and industrial water to approximately 27 million of California’s estimated ~~39.2~~39.1 million residents, including the population within the service area of Metropolitan.

The State Water Project’s watershed encompasses the mountains and waterways around the Feather River, the principal tributary of the Sacramento River, in the Sacramento Valley of Northern California. Through the State Water Project, Feather River water stored in and released from Oroville Dam (located about 70 miles north of Sacramento, east of the city of Oroville, California) and unregulated flows diverted directly from the Bay-Delta are transported south through the Central Valley of California, over the Tehachapi Mountains and into Southern California, via the California Aqueduct, to three delivery points near the northern and eastern boundaries of Metropolitan’s service area. The total length of the California Aqueduct is approximately 444 miles. See “METROPOLITAN’S WATER DELIVERY SYSTEM–Primary Facilities and Method of Delivery –*State Water Project*” in this Appendix A.

From calendar year 2014 through 2023, the amount of water delivered to Metropolitan’s service area via the State Water Project infrastructure, including water from allocated supplies, human health and safety supplies, carryover, flexible storage from Castaic Lake and Lake Perris, water transfer, groundwater banking and exchange programs delivered through the California Aqueduct varied from a low of 457,000 acre-feet in calendar year 2022 to a high of 1,374,000 acre-feet in 2017.

As more fully described under “– State Water Contract – General Terms of the Contract,” under the terms of ~~the each~~ State ~~Water~~water supply contract, DWR provides the initial allocation estimate of State Water Project water for the following calendar year by each December 1. Based upon updated runoff forecast and environmental, regulatory and operational constraints, DWR’s total water supply availability projections are refined during the calendar year and allocations to the State Water Project contractors are adjusted accordingly. On December 1, 2023, DWR announced an initial calendar year 2024 allocation of ten percent of contracted amounts, based on DWR’s assessment of reservoir storage and an assumption of dry conditions. On February 21, 2024, DWR increased the State Water Project annual allocation to 15 percent of State Water Project contractors’ requested Table A amounts. DWR ~~again subsequently~~ increased the allocation ~~estimate~~ on March 22, 2024 to 30 percent of State Water Project contractors’ requested Table A amounts, and again increased the State Water Project annual allocation on April 23, 2024 to 40 percent of State Water Project contractors’ requested Table A amounts. Further changes to the 2024 allocation may occur and are dependent on the developing hydrologic conditions. In addition, Metropolitan began 2024 with approximately 227,000 acre-feet of

State Water Project carryover supplies from calendar year 2023. See “–Water Transfer, Storage and Exchange Programs” and “–Storage Capacity and Water in Storage.” See also “–Water Conditions in Recent Years” and “–Current Water Conditions.”

### **State Water Contract**

***General Terms of the Contract.*** In 1960, Metropolitan signed a water supply contract (as amended, the “State Water Contract”) with DWR to receive water from the State Water Project. Metropolitan is one of 29 agencies and districts that have long-term contracts for water service from DWR (known collectively as the “State Water Project contractors” and sometimes referred to herein as “Contractors”). Metropolitan is the largest of the State Water Project contractors in terms of the number of people it serves (approximately 19 million), the share of State Water Project water that it has contracted to receive (approximately 46 percent), and the percentage of total annual payments made to DWR by agencies with State water supply contracts (approximately 50 percent for calendar year 2024). Metropolitan received its first delivery of State Water Project water in 1972.

Pursuant to the terms of the State water supply contracts, all ~~water-supply~~water supply related expenditures for capital and operations, maintenance, power, and replacement costs associated with the State Water Project facilities are paid for by the State Water Project contractors as components of their annual payment obligations to DWR. In exchange, Contractors have the right to participate in the system, with an entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them. Each year DWR estimates the total State Water Project water available for delivery to the State Water Project contractors and allocates the available project water among the State Water Project contractors in accordance with the State Water Project supply contracts.

Under its State Water Contract, Metropolitan has a contractual right to its proportionate share of the State Water Project water that DWR determines annually is available for allocation to the Contractors. This determination is made by DWR each year based on existing supplies in storage, forecasted hydrology, and other factors, including water quality and environmental flow obligations and other operational considerations. Available State Water Project water is then allocated to the Contractors in proportion to the amounts set forth in “Table A” of their respective State water supply contract (sometimes referred to herein as Table A State Water Project water); provided, that in accordance with the terms of the State water supply contracts, the State may allocate on some other basis if such action is required to meet minimum demands of contractors for domestic supply, fire protection, or sanitation during the year. Pursuant to Table A of its State Water Contract, Metropolitan is entitled to approximately 46 percent of the total annual allocation made available to State Water Project contractors each year. Metropolitan’s State Water Contract, under a 100 percent allocation, provides Metropolitan 1,911,500 acre-feet of water. The 100 percent allocation is referred to as the contracted amount. See also “–Current Water Conditions” for information regarding Metropolitan’s allocation of State Water Project water for 2024.

The term of Metropolitan’s State Water Contract currently extends to December 31, 2085, or until all DWR bonds issued to finance construction of ~~project~~State Water Project facilities are repaid, whichever is longer. Upon expiration of the State Water Contract term, Metropolitan has the option to continue service under substantially the same terms and conditions. See also “–Amendment of Contract Term.”

***Project Improvement Amendments.*** Metropolitan’s State Water Contract has been amended a number of times since its original execution and delivery. Several of the amendments, entered into by DWR and various subsets of State Water Project contractors, relate to the financing and construction of a variety of State Water Project facilities and improvements and impose certain cost responsibility therefor



on the affected Contractors, including Metropolitan. For a description of Metropolitan's financial obligations under its State Water Contract, including with respect to such amendments, see "METROPOLITAN EXPENSES–State Water Contract Obligations" in this Appendix A.

***Water Management Amendments.*** Metropolitan and other State Water Project contractors have undertaken negotiations with DWR to amend their State water supply contracts to clarify the criteria applicable to certain water management tools including single and multi-year water transfers and exchanges. The water management provisions amendment allows for greater flexibility for transfers and exchanges among the State Water Project contractors. Specifically, the amendment confirms existing practices for exchanges, allows more flexibility for non-permanent water transfers, and allows for the transfer and exchange of certain portions of Article 56 carryover water (see "–Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – *Metropolitan Article 56 Carryover*"). DWR certified a final EIR for the water management amendments in August 2020. In September 2020, North Coast Rivers Alliance, California Water Impact Network and others separately filed two lawsuits challenging DWR's final EIR and approval of the State water supply contract water management provisions amendment under the California Environmental Quality Act ("CEQA"). North Coast Rivers Alliance also alleges violations of the Delta Reform Act, and public trust doctrine, and seeks declaratory and injunctive relief. The cases were deemed related and assigned to the same judge. DWR filed notice of certification of the administrative record and filed answers in both cases on December 20, 2022. Any adverse impact of this litigation and rulings on Metropolitan's State Water Project supplies cannot be determined at this time. Despite the pending litigation, enough of the State Water Project contractors approved and executed the amendment as required by DWR for it to be deemed fully executed. The amendments went into effect on February 28, 2021. The State Water Contractors association, made up of 27 State Water Project contractors, has intervened in the two related cases to protect the interests of the Contractors.

***Amendment of Contract Term.*** In 2014, DWR and the State Water Project contractors reached an Agreement in Principle (the "Agreement in Principle") on an amendment to extend their State water supply contracts to December 31, 2085 and to make certain other changes related to financial management of the State Water Project. The Agreement in Principle served as the "proposed project" for purposes of the environmental review required under CEQA, which such review was completed in December 2018. Following DWR's approval of the proposed project, three separate lawsuits were filed: one by DWR seeking to validate the contract extension amendment, and two by environmental groups and other entities challenging DWR's approval of the amendment and the adequacy of the underlying environmental review. These cases were deemed related by the court and assigned to a single judge. After a three-day trial in January 2022, the court issued a final statement of decision on March 9, 2022, in which it ruled that the amendments were valid and rejected all other challenges and claims. On January 5, 2024, the Third District Court of Appeal affirmed the decision. Appellants have filed petitions for review by the California Supreme Court. Any potential adverse impact of the appeals on Metropolitan's State Water Project supplies cannot be determined at this time. As of May 1, 2023, 27 of the 29 State Water Project contractors, including Metropolitan, had executed the amendment, exceeding the DWR established thresholds needed for the amendment to become effective. These Contractors also executed waivers allowing the amendment to be implemented notwithstanding the pending litigation. As a result, the contract extension amendment became effective on January 1, 2023 and the term of the water supply contracts of the State Water Project contractors executing the amendment was extended to December 31, 2085. While an adverse outcome in the pending appeal could potentially affect the ongoing validity and future implementation of the amendment, Metropolitan considers the risk to be low given the favorable outcome at trial and the Court of Appeal.

***Amendments for Allocation of Conveyance Costs.*** Metropolitan and other State Water Project contractors embarked on a third public process to further negotiate proposed amendments to their State water supply contracts related to cost allocation for a potential Delta Conveyance project. Pursuant to the

terms of a prior settlement, negotiations for this State Water Project contract amendment were completed in public. In March 2021, DWR and the State Water Project contractors concluded public negotiations and reached an Agreement in Principle (the “Delta Conveyance AIP”) that will be the basis for amendment of the State water supply contracts. The future contract amendment contemplated by the Delta Conveyance AIP would provide a mechanism that would allow for the costs related to any Delta Conveyance project to be allocated and collected by DWR. The Delta Conveyance AIP also provides for the allocation of benefits for any Delta Conveyance project in proportion to each State Water Project contractor’s participation. DWR will maintain a table reflecting decisions made by public agency governing boards regarding that agency’s participation. Contract language for the proposed amendments is under development. See “–*Bay-Delta Planning Activities*” and “–*Delta Conveyance*” under “Bay-Delta Proceedings Affecting State Water Project” below.

### **Coordinated Operations with Central Valley Project**

DWR operates the State Water Project in coordination with the federal Central Valley Project, which is operated by the Bureau of Reclamation. Since 1986, the coordinated operations have been undertaken pursuant to a Coordinated Operations Agreement for the Central Valley Project and State Water Project (the “COA”). The COA defines how the State and federal water projects share water quality and environmental flow obligations imposed by regulatory agencies. The agreement calls for periodic review to determine whether updates are needed in light of changed conditions. After completing a joint review process, DWR and the Bureau of Reclamation agreed to amend the COA to reflect water quality regulations, biological opinions and hydrology updated since the 1986 agreement was signed. On December 13, 2018, DWR and the Bureau of Reclamation executed an Addendum to the COA (the “COA Addendum”). The COA Addendum provides for DWR’s adjustment of State Water Project operations to modify pumping operations, as well as project storage withdrawals to meet in-basin uses, pursuant to revised calculations based on Water Year types. The COA Addendum will shift responsibilities for meeting obligations between the Central Valley Project and the State Water Project, resulting in a shift of approximately 120,000 acre-feet in long-term average annual exports from the State Water Project to the Central Valley Project.

In executing the COA Addendum, DWR found the agreement to be exempt from environmental review under CEQA as an ongoing project and that the adjustments in operations are within the original scope of the project. On January 16, 2019, commercial fishing groups and an American Indian tribe (“petitioners”) filed a lawsuit against DWR alleging that entering the COA Addendum violated CEQA, the Delta Reform Act, and the public trust doctrine. Westlands Water District (“Westlands”) and North Delta Water Agency have been granted approval to intervene in the lawsuit. The petitioners are still in the process of preparing the administrative record. The effect of this lawsuit on the COA Addendum and State Water Project operations cannot be determined at this time.

### **2017 Oroville Dam Spillway Incident**

Oroville Dam, the earthfill embankment dam on the Feather River which impounds Lake Oroville, is operated by DWR as a facility of the State Water Project. On February 7, 2017, the main flood control spillway at Oroville Dam, a gated and concrete lined facility, experienced significant damage as DWR released water to manage higher inflows driven by continued precipitation in the Feather River basin. The damaged main spillway impaired DWR’s ability to manage lake levels causing water to flow over the emergency spillway structure, an ungated, 1,730-foot-long concrete barrier located adjacent to the main flood control spillway structure. Use of the emergency spillway structure resulted in erosion that threatened the stability of the emergency spillway structure. This concern prompted the Butte County Sheriff to issue an evacuation order for approximately 200,000 people living in Oroville and the surrounding communities.

On November 1, 2018, DWR completed reconstruction of the main spillway to its original design capacity of approximately 270,000 cubic feet per second (“cfs”), a capacity almost twice its highest historical outflow. Work on the emergency spillway was substantially completed in April 2019. Mitigation measures such as slope revegetation were completed in 2021. DWR has estimated the total costs of the recovery and restoration project prior to any federal or other reimbursement to be approximately \$1.2 billion. As of January 2024, DWR had received or expected to receive reimbursement of a total of approximately \$617 million of these costs under the Public Assistance Program of the Federal Emergency Management Agency (“FEMA”). Remaining costs of about \$567 million were charged to the State Water Project contractors under the State water supply contracts, of which Metropolitan’s share totaled about \$259 million. DWR financed these remaining costs with DWR bonds.

Various lawsuits were filed against DWR asserting claims for property damage, economic losses, environmental impacts and civil penalties related to this incident. Neither Metropolitan nor any other State Water Project contractor was named as a defendant in any of these lawsuits. These cases, which were coordinated in Sacramento Superior Court (Case No. JCCP 4974), have now been resolved, either through decisions in favor of DWR or settlements with terms favorable to DWR. Cumulative payments for all claims related to the Oroville Dam spillway incident totaled less than \$40 million.

~~The most significant lawsuit was one filed by the Butte County District Attorney (“DA”), which sought up to \$51 billion in civil penalties. This lawsuit asserted a single claim under California Fish and Game Code section 5650, *et seq.*, which makes it unlawful to deposit or place certain substances into the waters of the State, including lime, slag and “any substance or material deleterious to fish, plant life, mammals, or bird life.” Among other things, the statute provides for the assessment of civil penalties of up to \$25,000 a day and \$10 per pound of material deposited in violation of its strictures. On September 3, 2020, DWR filed a motion for summary judgment in the Butte County DA case. On December 18, 2020, the court granted the motion, ruling that DWR is not subject to the penalty provisions of the California Fish and Game Code sections at issue. Accordingly, the matter was dismissed and judgment was entered on January 11, 2021. On October 5, 2023, the Third District Court of Appeal affirmed the trial court’s dismissal. Finally, on December 20, the California Supreme Court denied a petition for review filed by the Butte County District Attorney. As a result, the Court of Appeal’s decision is final. Cumulative payments for all claims related to the Oroville Dam spillway incident totaled less than \$40 million.~~

The State water supply contracts provide that Metropolitan and the other State Water Project contractors are not liable for any claim of damage of any nature arising out of or connected to the control, carriage, handling, use, disposal or distribution of State Water Project water prior to the point where it reaches their turnouts. However, DWR has asserted that regardless of legal liability all costs of the State Water Project system must be borne by State Water Project contractors. Thus, DWR indicated its intent to bill the State Water Project contractors for any expenditures related to litigation (cost of litigation, settlements, damages awards/verdicts) arising from the Oroville Dam spillway incident and costs incurred by DWR to date have been reflected in DWR charges. Metropolitan has established that all charges related to this litigation are being paid under protest, and it has an existing tolling agreement with DWR to preserve its legal right to seek recovery of these charges and/or dispute any future charges that DWR may seek to assess related to such litigation.

### **Bay-Delta Proceedings Affecting State Water Project**

**General.** In addition to being a source of water for diversion into the State Water Project, the Bay-Delta is the source of water for local agricultural, municipal, and industrial needs. The Bay-Delta also supports significant resident and anadromous fish and wildlife resources, as well as recreational uses of water. Both the State Water Project’s upstream reservoir operations and its Bay-Delta diversions can

at times affect these other uses of Bay-Delta water directly, or indirectly, through impacts on Bay-Delta water quality. A variety of proceedings and other activities are ongoing with the participation of various State and federal agencies, as well as California's environmental, urban and agricultural communities, in an effort to develop long-term, collectively negotiated solutions to the environmental and water management issues concerning the Bay-Delta. Metropolitan actively participates in these proceedings. Metropolitan cannot predict the outcome of any of the litigation or regulatory processes described below but believes that a materially adverse impact on the operation of State Water Project pumps could negatively impact Metropolitan's State Water Project deliveries and/or Metropolitan's water reserves.

***SWRCB Regulatory Activities and Decisions.*** The State Water Resources Control Board (the "SWRCB") is the agency responsible for setting water quality standards and administering water rights throughout California. The SWRCB exercises its regulatory authority over the Bay-Delta by means of public proceedings leading to regulations and decisions that can affect the availability of water to Metropolitan and other users of State Water Project water. These include the Water Quality Control Plan ("WQCP") for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary, which establishes the water quality objectives and proposed flow regime of the estuary, and water rights decisions, which assign responsibility for implementing the objectives of the WQCP to users throughout the system by adjusting their respective water rights permits.

Since 2000, SWRCB's Water Rights Decision 1641 ("D-1641") has governed the State Water Project's ability to export water from the Bay-Delta for delivery to Metropolitan and other agencies receiving water from the State Water Project. D-1641 allocated responsibility to water rights holders for meeting flow requirements and salinity and other water quality objectives established earlier by the WQCP.

The WQCP gets reviewed periodically and new standards and allocations of responsibility can be imposed on the State Water Project as a result. The SWRCB's current review and update of the WQCP is being undertaken in phased proceedings. In December 2018, the SWRCB completed Phase 1 of the WQCP proceedings, adopting the plan amendments and environmental documents to support new flow standards for the Lower San Joaquin River tributaries and revised southern Delta salinity objectives. The Phase 1 plan amendments include certain "unimpaired flow" requirements on the three San Joaquin River tributaries. The term unimpaired flow is used to describe a theoretically available water supply assuming existing river channel conditions in the absence of storage and stream diversions. It is theoretical and it does not represent such conditions as they have occurred historically. Various stakeholders filed suit against the SWRCB challenging these Phase 1 plan amendments. [In March 2024, the Sacramento Superior Court upheld the Phase 1 plan amendments, denying the challengers' claims. The decision is subject to appeal.](#)

Plan amendments being considered as part of Phase 2 of the WQCP proceedings are focused on the Sacramento River and its tributaries, Delta eastside tributaries, Delta outflows, and interior Delta flows. The SWRCB has also encouraged all stakeholders to work together to reach one or more Voluntary Agreements for consideration by the SWRCB that could implement the proposed amendments to the WQCP through a variety of tools, including non-flow habitat restoration for sensitive salmon and smelt species, while seeking to protect water supply reliability. Metropolitan is participating in the Phase 2 proceedings and Voluntary Agreement negotiations. On March 29, 2022, Metropolitan's General Manager signed a Memorandum of Understanding Advancing a Term Sheet for the Voluntary Agreements to Update and Implement the Bay-Delta Water Quality Control Plan, and Other Related Actions (the "VA MOU"). Other parties include the California Natural Resources Agency ("Natural Resources"), the California Environmental Protection Agency, the California Department of Fish and Wildlife ("CDFW"), the Bureau of Reclamation, DWR, the State Water Contractors association and additional agricultural and municipal water users. Under the VA MOU, the parties "seek to take a comprehensive approach to integrate flow and non-flow measures, including habitat restoration, subject



to ongoing adaptive management based on a science program” as described in an attached term sheet. The proposed approach under the VA MOU provides for implementation over eight years with a potential extension to up to 15 years. To be implemented any Voluntary Agreement package of agreed upon flow and non-flow measures would need to be reviewed by the SWRCB and formally considered and adopted as part of a comprehensive update to the WQCP.

In September 2023, the staff for the SWRCB released a Draft Staff Report/Substitute Environmental Document (the “Draft Staff Report”) for the WQCP Phase 2 updates for the Sacramento River watershed, Delta eastside tributaries, interior Delta, and Delta. The Draft Staff Report analyzes several alternatives for WQCP updates, including the proposed Healthy Rivers and Landscapes (HRL) proposal (previously referred to as “Voluntary Agreements”), several variations of unimpaired hydrograph outflow objectives, several modular alternatives that would limit State Water Project and Central Valley Project operations, and several narrative objectives. As described in the Draft Staff Report, the SWRCB could adopt more than one alternative, providing for layered implementation. The Draft Staff Report’s Proposed Action includes a flow objective of 55 percent of the unimpaired hydrograph. The Draft Staff Report’s Proposed Action flow objective is predicted to result in an annual average reduction of 446,000 acre-feet for southern California municipal supplies, which provides an estimate of the potential water cost for Metropolitan. The public comment period for the Draft Staff Report closed on January 19, 2024. Metropolitan provided comments individually and through the State Water Contractors association. The SWRCB staff will consider public comments and finalize the Staff Report ~~later in 2024~~in the first quarter of calendar year 2025. The eventual consideration by the SWRCB of adoption of Phase 2 updates to the WQCP is expected to occur in ~~December 2024~~the second quarter of calendar year 2025 or later.

***Bay-Delta Planning Activities.*** In 2000, several State and federal agencies released the CALFED Bay-Delta Programmatic Record of Decision and Environmental Impact Report/Environmental Impact Statement (“EIR/EIS”) that outlined and disclosed the environmental impacts of a 30-year plan to improve the Bay-Delta’s ecosystem, water supply reliability, water quality, and levee stability. CALFED is the consortium of State and federal agencies with management and regulatory responsibilities in the San Francisco Bay/ Sacramento-San Joaquin Delta Estuary. The CALFED Record of Decision remains in effect and many of the State, federal, and local projects begun under CALFED continue.

In 2006, multiple State and federal resource agencies, water agencies, and other stakeholder groups entered into a planning agreement for the Bay-Delta Conservation Plan (“BDCP”). The BDCP was originally conceived as a comprehensive conservation strategy for the Bay-Delta designed to restore and protect ecosystem health, water supply, and water quality within a stable regulatory framework to be implemented over a 50-year time frame with corresponding long-term permit authorizations from fish and wildlife regulatory agencies. The BDCP includes both alternatives for new water conveyance infrastructure and extensive habitat restoration in the Bay-Delta.

The existing State Water Project Delta water conveyance system needs to be improved and modernized to address operational constraints on pumping in the south Delta as well as risks to water supplies and water quality from climate change, earthquakes, and flooding. Operational constraints are largely due to biological opinions and incidental take permits to which the State Water Project is subject that substantially limit the way DWR operates the State Water Project.

In 2015, the State and federal lead agencies proposed an alternative implementation strategy and new alternatives to the BDCP to provide for the protection of water supplies conveyed through the Bay-Delta and the restoration of the ecosystem of the Bay-Delta, termed “California WaterFix” and “California EcoRestore,” respectively. Planned water conveyance improvements, California WaterFix (a proposed project that was subsequently withdrawn and reconfigured as an alternative ~~delta~~Delta conveyance project as described under “*Delta Conveyance*” below), would have been implemented by

DWR and the Bureau of Reclamation as a stand-alone project with the required habitat restoration limited to that directly related to construction mitigation. Ecosystem improvements and habitat restoration more generally, California EcoRestore, would be undertaken under a more phased approach.

**California EcoRestore.** As part of California EcoRestore, which was initiated in 2015, the State is pursuing more than 30,000 acres of Delta habitat restoration. As of the end of the first five-year period of 2015 through December 2020, California EcoRestore was on track to restore 3,500 acres of non-tidal wetland and projected to restore 14,000 acres of tidal and subtidal habitat, 18,580 acres of floodplain, and 1,650 acres of riparian and upland habitat, exceeding initial estimates. Over such period, California EcoRestore represented an investment of approximately \$500 million for implementation and planning costs. This includes certain amounts being paid by the State Water Project contractors, including Metropolitan, for the costs of habitat restoration required to mitigate State and federal water project impacts pursuant to the biological opinions. Work on several California EcoRestore projects is ongoing. The overall estimated cost to complete the current list of 32 California EcoRestore projects is \$750 to \$950 million, with approximately half expected to be paid from the State Water Project by State Water Project contractors and half from other funding sources. See also “–Endangered Species Act and Other Environmental Considerations Relating to Water Supply – Endangered Species Act Considerations – State Water Project.”

**Delta Conveyance.** On April 29, 2019, Governor Newsom issued an executive order directing identified State agencies to develop a comprehensive statewide strategy to build a climate-resilient water system, directing the State agencies to inventory and assess the current planning for modernizing conveyance through the Bay-Delta with a new single tunnel project (rather than the previously contemplated two-tunnel California WaterFix). Consistent with the Governor’s direction, in January 2020, DWR commenced a formal environmental review process under CEQA for a proposed single tunnel Delta Conveyance Project. On July 27, 2022, DWR released the Delta Conveyance [Project Draft EIR](#) for public and agency comment under CEQA. DWR certified its Final EIR on December 8, 2023 and approved the ~~single tunnel Delta Conveyance Project on~~ [Bethany Reservoir Alignment alternative on](#) December 21, 2023. The approved conveyance facilities include intake structures on the Sacramento River, with a total capacity of 6,000 cfs, and a single tunnel to convey water to a new pumping facility in the south Delta that would lift water into the existing Bethany Reservoir, part of the California Aqueduct. Additional permitting processes, including federal and State Endangered Species Act (“ESA”) permits, the SWRCB Change in Point of Diversion petition and the Delta Stewardship Council Delta Plan Consistency certification, are expected to continue ~~into 2027. Nine~~ [through at least the end of 2026. Ten](#) lawsuits have been filed by various organizations, including Tulare Lake Basin Water Storage District, Sierra Club, City of Stockton, County of San Joaquin, County of Butte, Sacramento Area Sewer District, County of Sacramento, San Francisco Baykeeper, ~~and~~ South [Delta Water Agency](#) and North [Delta Water Agency](#), challenging the adequacy of DWR’s Final EIR under CEQA, ~~and several other environmental laws. Motions for preliminary injunctive relief seeking to halt pre-construction geotechnical work to characterize subsurface soil and groundwater conditions were granted in five of the cases on June 21, 2024 enjoining such geotechnical work until DWR completes the certification procedure required under the Delta Reform Act. DWR has filed a motion to modify the injunction to allow some geotechnical work to continue or, the alternative, to temporarily stay the injunction pending a decision on the merits in DWR’s appeal. A hearing on the matter has been scheduled for August 23, 2024.~~

On August 20, 2020, the U.S. Army Corps of Engineers (“Army Corps”), the lead agency for the Delta Conveyance Project under the National Environmental Policy Act (“NEPA”), issued a notice of intent of the development of the EIS for the Delta Conveyance Project. On December 16, 2022, the Army Corps released the Draft EIS for public and agency comment under NEPA. The comment period closed

on March 16, 2023. Certification of the Final EIS by the Army Corps is not expected before the ~~middle~~end of 2024.

Metropolitan's Board has previously authorized Metropolitan's participation in two joint powers agencies relating to a Bay-Delta conveyance project (originally formed in connection with California WaterFix): the Delta Conveyance Design and Construction Authority (the "DCA"), formed by the participating water agencies to actively participate with DWR in the design and construction of the conveyance project in coordination with DWR and under the control and supervision of DWR; and the Delta Conveyance Finance Authority (the "Financing JPA"), formed by the participating water agencies to facilitate financing for the conveyance project. The DCA is providing engineering and design activities to support ~~the~~ DWR's planning and environmental analysis for the potential new Delta Conveyance Project.

In August 2020, the DCA released preliminary cost information for the proposed Delta Conveyance Project based on an early cost assessment prepared by the DCA. The DCA's early assessment ~~is~~was based on preliminary engineering, not a full conceptual engineering report, and includes project costs for construction, management, oversight, mitigation, planning, soft costs, and contingencies. Based on these assumptions, the DCA's early project cost assessment estimate was approximately \$15.9 billion in 2020 ~~non-discounted~~un-discounted dollars, which includes a 44 percent overall contingency applied to the preliminary construction costs. In May 2024, the DCA released an updated cost estimate for the Bethany Reservoir Alignment configuration of the Delta Conveyance Project as approved by DWR. The updated total project cost estimate includes construction and other program costs (including, among other things, planning, design, construction management, land acquisition, environmental mitigation and costs of a community benefit program), as well as certain contingency and risk treatment costs to address uncertainty at the conceptual stage of project development. The updated total project cost estimate considers items such as labor, materials, equipment, level of effort, and other relevant cost items for a defined scope of work as described in the Delta Conveyance Project Final EIR certified by DWR in December 2023 and the supporting engineering project report prepared by the DCA. The updated total project cost estimate prepared by the DCA is primarily intended to support project financial and economic analysis and to provide guidance for further project development. If constructed, actual project costs would depend on actual labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. Based on these assumptions, the DCA's updated total cost estimate is approximately \$20.1 billion in 2023 un-discounted dollars, which includes a 30 percent overall contingency applied to the construction cost estimate, and a contingency between 15 percent and 30 percent added to each element of other program costs. The DCA is also evaluating potential design modifications and construction innovations to enhance cost efficiency and feasibility.

Approximately \$340.7 million of investment was estimated to be needed over four years (2021 through 2024) to fund planning and pre-construction costs for the proposed Delta Conveyance Project. At its December 8, 2020 Board meeting, Metropolitan's Board authorized the General Manager to execute a funding agreement with DWR and commit funding for a Metropolitan participation level of 47.2 percent of such costs of preliminary design, environmental planning and other pre-construction activities to assist in the environmental process for the proposed Delta Conveyance Project. Metropolitan's 47.2 percent share represents an estimated funding commitment of \$160.8 million over the four years 2021 through 2024. Eighteen other State Water Project contractors also have approved funding a share of the planning and pre-construction costs. Like prior agreements for BDCP and California WaterFix, the funding agreement provides that funds would be reimbursed to Metropolitan if the project is approved and when the first bonds, if any, for the project are issued. In connection with approving the funding agreement, at its December 2020 Board meeting, the Board also authorized the General Manager to execute an amendment to the DCA joint exercise of powers agreement. The amendment ~~was developed to address,~~



[which was effective December 31, 2020, addressed](#) changes in the anticipated participation structure for the proposed Delta Conveyance Project from that contemplated for California WaterFix.

Metropolitan's December 8, 2020 action to approve the funding of planning and pre-construction costs does not commit Metropolitan to participate in the Delta Conveyance Project. Any additional funding for planning and pre-construction costs would require Board approval, a vote on which is expected to be considered in 2024 or later. Any final decision to commit to the ~~project~~[Delta Conveyance Project](#) and incur final design and construction costs would require further Board approval, a vote on which is not expected to occur until after key permits are obtained, likely in 2025 or later.

On August 6, 2020, DWR adopted certain resolutions to authorize the issuance of bonds to finance costs of the Delta Conveyance Project environmental review, planning, design and, if and when such a project is approved, the costs of acquisition and construction thereof. The same day, it filed a complaint in Sacramento County Superior Court seeking to validate its authority to issue the bonds. Fourteen answers were filed in the validation action. In May 2023, a bench trial was conducted by the court in connection with the validation action. On January 16, 2024, the Sacramento County Superior Court denied DWR's request for a validation order, finding that DWR exceeded its statutorily delegated authority when it adopted the bond resolutions to authorize the issuance of its bonds to finance the Delta Conveyance Project. On February 14, 2024, Metropolitan and four other supporting public water agencies filed a Notice of Appeal in California's Court of Appeal, Third Appellate District, of the Sacramento County Superior Court's ruling denying DWR's request for an order validating bond resolutions to finance the Delta Conveyance Project. DWR filed a Notice of Appeal on February 16, 2024. [Eight cross appeals were filed by March 2024. In April 2024, DWR filed a motion to dismiss the cross appeals as untimely. In May 2024, DWR's motion to dismiss the cross appeals was denied without prejudice to renewing the motion in the merits briefing. The parties filed a merits briefing schedule.](#)

Additional lawsuits could be filed in the future with respect to the ~~proposed new Bay Delta conveyance project~~[Delta Conveyance Project](#) and may impact the anticipated timing and costs ~~of any proposed single tunnel Delta Conveyance Project. A cost estimate for the proposed single tunnel Delta Conveyance Project is expected to be released by DWR later in 2024.~~

## Colorado River Aqueduct

### Background

The Colorado River was Metropolitan's original source of water after Metropolitan's establishment in 1928. Metropolitan has a legal entitlement to receive water from the Colorado River under a permanent service contract with the Secretary of the Interior. Water from the Colorado River and its tributaries is also available to other users in California, as well as users in the states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming (collectively, the "Colorado River Basin States"), resulting in both competition and the need for cooperation among these holders of Colorado River entitlements. In addition, under a 1944 treaty, Mexico has the right to delivery of 1.5 million acre-feet of Colorado River water annually except as provided under shortage conditions described in Treaty Minute 323. The United States and Mexico agreed to conditions for reduced deliveries of Colorado River water to Mexico in Treaty Minute 323, adopted in 2017. Treaty Minute 323 established the rules under which Mexico agreed to take shortages and create reservoir storage in Lake Mead. Those conditions are in parity with the requirements placed on the Lower Basin States (defined below) in the Lower Basin Drought Contingency Plan (described under "– Colorado River Operations: Surplus and Storage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead*"). Mexico can also schedule delivery of an additional 200,000 acre-feet of Colorado

River water per year if water is available in excess of the requirements in the United States and the 1.5 million acre-feet allotted to Mexico.

Construction of the CRA, which is owned and operated by Metropolitan, was undertaken by Metropolitan to provide for the transportation of its Colorado River water entitlement to its service area. The CRA originates at Lake Havasu on the Colorado River and extends approximately 242 miles through a series of pump stations and reservoirs to its terminus at Lake Mathews in Riverside County. Up to 1.25 million acre-feet of water per year may be conveyed through the CRA to Metropolitan's member agencies, subject to the availability of Colorado River water for delivery to Metropolitan as described below. Metropolitan first delivered CRA water to its member agencies in 1941.

### **Colorado River Water Apportionment and Seven-Party Agreement**

Pursuant to the federal Boulder Canyon Project Act of 1928, California is apportioned the use of 4.4 million acre-feet of water from the Colorado River each year plus one-half of any surplus that may be available for use collectively in the Lower Basin States of Arizona, California and Nevada. Under an agreement entered into in 1931 among the California entities that expected to receive a portion of California's apportionment of Colorado River water (the "1931 Seven-Party Agreement") and which has formed the basis for the distribution of Colorado River water made available to California, Metropolitan holds the fourth priority right to 550,000 acre-feet per year. This is the last priority within California's basic apportionment. In addition, Metropolitan holds the fifth priority right to 662,000 acre-feet of water, which is in excess of California's basic apportionment. Until 2003, Metropolitan had been able to take full advantage of its fifth priority right as a result of the availability of surplus water and water apportioned to Arizona and Nevada that was not needed by those states. However, during the 1990s Arizona and Nevada increased their use of water from the Colorado River, and by 2002 no unused apportionment was available for California. As a result, California has limited its annual use to 4.4 million acre-feet since 2003, not including supplies made available under water supply programs such as Intentionally Created Surplus ("ICS") and certain conservation and storage agreements. In addition, a severe drought in the Colorado River Basin from 2000-2004 reduced storage in system reservoirs, ending the availability of surplus deliveries to Metropolitan. Prior to 2003, Metropolitan could divert over 1.25 million ~~acre-feet~~acre-feet in any year. Since 2003, Metropolitan's net diversions of Colorado River water have ranged from a low of 537,607 ~~acre-feet~~acre-feet in 2019 to a high of approximately 1,179,000 ~~acre-feet~~acre-feet in 2015. Average annual net diversions over the ten-year period 2014 through 2023 were 917,020 acre-feet, with annual volumes dependent primarily on programs to augment supplies, including transfers of conserved water from agriculture and water made available to Metropolitan pursuant to the Exchange Agreement, in exchange for which Metropolitan delivers a like amount to SDCWA from any Metropolitan supply. See "— Quantification Settlement Agreement", "— Metropolitan and San Diego County Water Authority Exchange Agreement", and "— Colorado River Operations: Surplus and Shortage Guidelines." See also "—Current Water Conditions" and "—Water Transfer, Storage and Exchange Programs – Colorado River Aqueduct Agreements and Programs." In 2023, ~~based upon preliminary estimates,~~ Metropolitan's total available Colorado River supply was just over 1.1 million acre-feet. A portion of the available supply was stored in Metropolitan's Lake Mead ICS supplies. See also "—Storage Capacity and Water in Storage."

The following table sets forth the existing priorities of the California users of Colorado River water established under the 1931 Seven-Party Agreement.

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**PRIORITIES UNDER THE CALIFORNIA 1931 SEVEN-PARTY AGREEMENT<sup>(1)</sup>**

Priority	Description	Acre-Feet Annually
1	Palo Verde Irrigation District gross area of 104,500 acres of land in the Palo Verde Valley	3,850,000
2	Yuma Project in California not exceeding a gross area of 25,000 acres in California	
3(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys <sup>(2)</sup> to be served by All-American Canal	
3(b)	Palo Verde Irrigation District – 16,000 acres of land on the Lower Palo Verde Mesa	
4	Metropolitan Water District of Southern California for use on the coastal plain	550,000
	<b>SUBTOTAL</b>	4,400,000
5(a)	Metropolitan Water District of Southern California for use on the coastal plain	550,000
5(b)	Metropolitan Water District of Southern California for use on the coastal plain <sup>(3)</sup>	112,000
6(a)	Imperial Irrigation District and other lands in Imperial and Coachella Valleys to be served by the All-American Canal	300,000
6(b)	Palo Verde Irrigation District – 16,000 acres of land on the Lower Palo Verde Mesa	
	<b>TOTAL</b>	5,362,000
7	Agricultural use in the Colorado River Basin in California	Remaining surplus

Source: Metropolitan.

- (1) Agreement dated August 18, 1931, among Palo Verde Irrigation District, Imperial Irrigation District, Coachella Valley County Water District, Metropolitan, the City of Los Angeles, the City of San Diego and the County of San Diego. These priorities were memorialized in the agencies' respective water delivery contracts with the Secretary of the Interior.
- (2) The Coachella Valley Water District serves Coachella Valley.
- (3) In 1946, the City of San Diego, the San Diego County Water Authority, Metropolitan and the Secretary of the Interior entered into a contract that merged and added the City and County of San Diego's rights to storage and delivery of Colorado River water to the rights of Metropolitan.

**Quantification Settlement Agreement**

The Quantification Settlement Agreement ("QSA"), which was executed by the Coachella Valley Water District ("CVWD"), Imperial Irrigation District ("IID"), and Metropolitan in October 2003, together with various QSA-related agreements including those in which SDCWA is a party, established Colorado River water use limits for IID and CVWD, and provided for specific acquisitions of conserved water and water supply arrangements. The QSA and related agreements provide a framework for

Metropolitan to enter into other cooperative Colorado River supply programs and set aside several disputes among California's Colorado River water agencies.

Specific programs under the QSA and related agreements include lining portions of the All-American and Coachella Canals, which were completed in 2009 and conserve over 98,000 acre-feet annually. Metropolitan receives this water and delivers over 77,000 acre-feet of exchange water annually to SDCWA, and provides 16,000 acre-feet of water annually by exchange to the United States for use by the La Jolla, Pala, Pauma, Rincon, and San Pasqual Bands of Mission Indians, the San Luis Rey River Indian Water Authority, the City of Escondido, and the Vista Irrigation District. Water became available for exchange with the United States following a May 17, 2017 notice from the Federal Energy Regulatory Commission ("FERC") satisfying the last requirement of Section 104 of the San Luis Rey Indian Water Rights Settlement Act (Title I of Public Law 100-675, as amended). The QSA and related agreements also authorized the transfer of conserved water annually by IID to SDCWA (up to a maximum amount in 2021 of 205,000 acre-feet, then stabilizing to 200,000 acre-feet per year). Metropolitan receives this water and delivers an equal amount of exchange water annually to SDCWA. See description under "– Metropolitan and San Diego County Water Authority Exchange Agreement" below; see also "METROPOLITAN REVENUES–Principal Customers" in this Appendix A. Also included under the QSA related agreements is a delivery and exchange agreement between Metropolitan and CVWD that provides for Metropolitan, when requested, to deliver annually up to 35,000 acre-feet of Metropolitan's State Water Project contractual water to CVWD by exchange with Metropolitan's available Colorado River supplies.

#### **Metropolitan and San Diego County Water Authority Exchange Agreement**

No facilities exist to deliver conserved water acquired by SDCWA from IID and water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals. See "–Quantification Settlement Agreement." Accordingly, in 2003, Metropolitan and SDCWA entered into an exchange agreement (the "Exchange Agreement"), pursuant to which SDCWA makes available to Metropolitan at its intake at Lake Havasu on the Colorado River the conserved Colorado River water SDCWA receives under the QSA related agreements. Metropolitan delivers an equal volume of water from its own sources of supply through its delivery system to SDCWA. The Exchange Agreement limits the amount of water that Metropolitan delivers to 277,700 acre-feet per year, except that an additional 5,000 acre-feet was exchanged in 2021 and an additional 2,500 acre-feet was exchanged in 2022. In consideration for the exchange of the conserved water made available to Metropolitan by SDCWA with the exchange water delivered by Metropolitan, SDCWA pays the agreement price. The price payable by SDCWA is calculated using the charges set by Metropolitan's Board from time to time to be paid by its member agencies for the conveyance of water through Metropolitan's facilities. See "METROPOLITAN REVENUES–Litigation Challenging Rate Structure" in this Appendix A for a description of Metropolitan's charges for the conveyance of water through Metropolitan's facilities and litigation in which SDCWA is challenging such charges. The term of the Exchange Agreement, as it relates to conserved water transferred by IID to SDCWA, extends through 2047, and as it relates to water allocated to SDCWA that has been conserved as a result of the lining of the All-American and Coachella Canals, extends through 2112; subject, in each case, to the right of SDCWA, upon a minimum of five years' advance written notice to Metropolitan, to permanently reduce the aggregate quantity of conserved water made available to Metropolitan under the Exchange Agreement to the extent SDCWA decides continually and regularly to transport such conserved water to SDCWA through alternative facilities (which do not presently exist). In 2023, the preliminary estimate of water delivered to Metropolitan by SDCWA for exchange was approximately 227,700 acre-feet, consisting of 150,000 acre-feet of IID conservation plus 77,700 acre-feet of conserved water from the Coachella Canal and All-American Canal lining projects. The volume from IID conservation exchanged under the agreement in 2023 was less than the stabilized volume of 200,000 acre-feet described above because 50,000 acre-feet were left in Lake Mead as a part of 2023 system conservation agreements among the Bureau of Reclamation, Metropolitan,

SDCWA, and IID under the Bureau of Reclamation's Lower Colorado River Basin System Conservation and Efficiency Program.

### **Colorado River Operations: Surplus and Shortage Guidelines**

**General.** The Secretary of the Interior is vested with the responsibility of managing the mainstream waters of the lower Colorado River pursuant to federal law. Each year, the Secretary of the Interior is required to declare the Colorado River water supply availability conditions for the Lower Basin States in terms of "normal," "surplus" or "shortage" and has adopted operations criteria in the form of guidelines to determine the availability of surplus or potential shortage allocations among the Lower Basin States and reservoir operations for such conditions.

**Interim Surplus Guidelines.** In January 2001, the Secretary of the Interior adopted guidelines (the "Interim Surplus Guidelines"), initially for use through 2016, in determining the availability and quantity of surplus Colorado River water available for use in California, Arizona and Nevada. The Interim Surplus Guidelines were amended in 2007 and now extend through 2026. The purpose of the Interim Surplus Guidelines was to provide mainstream users of Colorado River water, particularly those in California and Nevada who had been utilizing surplus flows, a greater degree of predictability with respect to the availability and quantity of surplus water. Under the Interim Surplus Guidelines, Metropolitan initially expected to divert up to 1.25 million acre-feet of Colorado River water annually under foreseeable runoff and reservoir storage scenarios from 2004 through 2016. However, as described above, an extended drought in the Colorado River Basin reduced these initial expectations, and Metropolitan has not received any surplus water since 2002 and does not expect to receive any surplus water in the foreseeable future.

**Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.** In May 2005, the Secretary of the Interior directed the Bureau of Reclamation to develop additional strategies for improving coordinated management of the reservoirs of the Colorado River system. In November 2007, the Bureau of Reclamation issued a Final EIS regarding new federal guidelines concerning the operation of the Colorado River system reservoirs, particularly during drought and low reservoir conditions. These guidelines provide water release criteria from Lake Powell and water storage and water release criteria from Lake Mead during shortage and surplus conditions in the Lower Basin, provide a mechanism for the storage and delivery of conserved system and non-system water in Lake Mead, and extend the Interim Surplus Guidelines through 2026 (as noted above). The Secretary of the Interior issued the final guidelines through a Record of Decision signed in December 2007. The Record of Decision and accompanying agreement among the Colorado River Basin States protect reservoir levels by reducing deliveries during low inflow periods, encouraging agencies to develop conservation programs and allowing the Colorado River Basin States to develop and store new water supplies. The Colorado River Basin Project Act of 1968 insulates California from shortages in all but the most extreme hydrologic conditions. Consistent with these legal protections, under the guidelines, Arizona and Nevada are first subject to the initial annual shortages identified by the Secretary in a shared amount of up to 500,000 acre-feet.

The guidelines also created the ICS program, which allows water contractors in the Lower Basin States to store conserved water in Lake Mead. Under this program, ICS water (water that has been conserved through an extraordinary conservation measure, such as land fallowing) is eligible for storage in Lake Mead by Metropolitan. ICS can be created through 2026 and delivered through 2036. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "Storage Capacity and Water in Storage." Under the guidelines and the subsequent Colorado River Drought Contingency Plan Authorization Act, California can create and deliver up to 400,000 acre-feet of extraordinary conservation ICS ("EC ICS") annually and accumulate up to 1.5 million acre-feet of EC ICS in Lake Mead. In December 2007, California contractors for Colorado River water executed the California



Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus (the “California ICS Agreement”), which established terms and conditions for the creation, accumulation, and delivery of EC ICS by California contractors receiving Colorado River water. Under the California ICS Agreement, the State’s EC ICS creation, accumulation, and delivery limits provided to California under the 2007 interim shortage guidelines are apportioned between IID and Metropolitan. No other California contractors were permitted to create or accumulate ICS. Under the terms of the agreement, IID is allowed to store up to 25,000 acre-feet per year of EC ICS in Lake Mead with a cumulative limit of 50,000 acre-feet, in addition to any acquired Binational ICS water (water that has been conserved through conservation projects in Mexico). Metropolitan is permitted to use the remaining available ICS creation, delivery, and accumulation limits provided to California.

The Secretary of the Interior delivers the stored ICS water to Metropolitan in accordance with the terms of December 13, 2007, January 6, 2010, and November 20, 2012 Delivery Agreements between the United States and Metropolitan. As of January 1, 2024, Metropolitan had an estimated 1,544,000 acre-feet in its ICS accounts. These ICS accounts include water conserved by fallowing in the Palo Verde Valley, projects implemented with IID in its service area, groundwater desalination, the Warren H. Brock Reservoir Project, and international agreements that converted water conserved by Mexico to the United States.

***Colorado River Drought Contingency Plans.*** Since the 2007 Lower Basin shortage guidelines were issued for the coordinated operations of Lake Powell and Lake Mead, the Colorado River has continued to experience drought conditions. The seven Colorado River Basin States, the U.S. Department of the Interior (“Department of the Interior”) through the Bureau of Reclamation, and water users in the Colorado River Basin, including Metropolitan, began developing Drought Contingency Plans (“DCPs”) to reduce the risk of Lake Powell and Lake Mead declining below critical elevations through 2026.

In April 2019, the President of the United States signed the Colorado River Drought Contingency Plan Authorization Act (referenced above), directing the Secretary of the Interior to sign and implement four DCP agreements related to the Upper and Lower Basin DCPs without delay. The agreements were executed and the Upper and Lower Basin DCPs became effective on May 20, 2019. The Lower Basin Drought Contingency Plan Agreement requires California, Arizona and Nevada to store defined volumes of water in Lake Mead at specified lake levels. California would begin making contributions if Lake Mead’s elevation is projected to be 1,045 feet above sea level or below on January 1. Depending on the lake’s elevation, California’s contributions would range from 200,000 to 350,000 acre-feet a year (“DCP Contributions”). Pursuant to intrastate implementation agreements and a settlement agreement with IID, Metropolitan will be responsible for 90 percent of California’s DCP Contributions under the Lower Basin DCP. CVWD will be responsible for 7 percent of California’s required DCP Contributions. While IID is not a party to the DCP, if Metropolitan is required to make a DCP contribution, IID will assist Metropolitan in making DCP contributions by contributing the lesser of either: (a) three percent of California’s DCP contribution or (b) the amount of water IID has stored with Metropolitan. The terms of the settlement agreement with IID referenced above and the mechanism by which IID will contribute to California’s DCP Contributions is described in more detail under “–Water Transfer, Storage and Exchange Programs –Colorado River Aqueduct Agreements and Programs – *California ICS Agreement Intrastate Storage Provisions*” in this Appendix A. No DCP contribution is required by California in 2024.

Implementation of the Lower Basin DCP enhances Metropolitan’s ability to store water in Lake Mead and ensures that water in storage can be delivered later. The Lower Basin DCP increases the total volume of water that California may store in Lake Mead by 200,000 acre-feet, for a total of 1.7 million acre-feet, which Metropolitan will have the right to use. However, under the September 12, 2019 DCP Contributions and ICS Accumulation Limits Sharing Agreement, California agreed to make up to 50,000 acre-feet of its accumulation space available to Arizona through 2026. Arizona has used this

accumulation space, therefore making the effective increase in the volume of water California may store 1.65 million acre-feet. Both EC ICS and Binational ICS count towards the total volume of water that California may store in Lake Mead. Water stored as ICS will be available for delivery as long as Lake Mead's elevation remains above 1,025 feet. Previously, that water would likely have become inaccessible below a Lake Mead elevation of 1,075 feet. DCP Contributions may be made through conversion of existing ICS, including at times when Lake Mead's elevation falls below 1,025 feet, allowing Metropolitan to deliver the full amount of its basic apportionment and available water under its CRA water transfer and exchange programs even in years when a DCP Contribution is required. DCP Contributions made through conversion of existing ICS become DCP ICS. DCP Contributions may also be made by leaving water in Lake Mead that there was a legal right to have delivered. This type of DCP Contribution becomes system water and may not be recovered. Rules are set for delivery of DCP ICS through 2026 and between 2027-2057. The Lower Basin DCP will be effective through 2026, however, the SEIS (which is described under “*Ongoing Activities Relating to Colorado River Operations*” below) could alter provisions of the DCP.

***Lake Mead 500+ Plan.*** In December 2021, Metropolitan, the Department of the Interior, the Arizona Department of Water Resources, the Central Arizona Project, and the Southern Nevada Water Authority (“SNWA”) executed a memorandum of understanding for an agreement to invest up to \$200 million in projects over the two years 2022 and 2023 to keep Lake Mead from dropping to critically low levels. The agreement, known as the “500+ Plan,” aimed to add 500,000 acre-feet of additional water to Lake Mead in both 2022 and 2023 by facilitating actions to conserve water across the Lower Colorado River Basin through voluntary measures such as creation of system conservation, creation of ICS and decreases in planned ICS releases. The additional water, enough water to serve about 1.5 million households per year, would add about 16 feet total to the reservoir's level. Under the memorandum of understanding, the Arizona Department of Water Resources committed to provide up to \$40 million to the initiative over two years, with Metropolitan, the Central Arizona Project and SNWA each agreeing to contribute up to \$20 million. The federal government planned to match those commitments, providing an additional \$100 million. As of the end of calendar year 2022, over 500,000 acre-feet of additional water was added to Lake Mead. Metropolitan's financial contribution through the end of calendar year 2022 totaled approximately \$4 million. In 2023, existing conservation projects for the Lower Colorado River Basin were terminated to allow the programs to enroll in [the Bureau of Reclamation's](#) Lower Colorado River Basin System Conservation and Efficiency Program as part of the Inflation Reduction Act of 2022 (the “IRA”), which included funds (described below) to assist in addressing the Lower Colorado River drought conditions. California Lower Colorado River Basin contract and entitlement holders continue to pursue a goal of conserving 400,000 acre-feet annually ~~in 2023~~ through 2026. See also “*Endangered Species Act and Other Environmental Considerations Relating to Water Supply – Endangered Species Act Considerations - Colorado River.*”

***Lower Colorado River Basin System Conservation and Efficiency Program.*** The United States Congress appropriated \$4 billion for drought mitigation in the IRA. Using funds made available through the IRA, the Bureau of Reclamation established the Lower Colorado River Basin System Conservation and Efficiency Program as part of a commitment made by the U.S. Department of the Interior on August 16, 2022 to take actions designed to address the unprecedented drought in the Lower Colorado River Basin. The program is in the process of selecting projects for funding proposed by Colorado River water delivery contract or entitlement holders for system conservation and efficiencies in the Lower Colorado River Basin that also lead to additional conservation and bridge the immediate conservation need while moving toward improved system efficiency and more durable long-term solutions. Metropolitan submitted several proposals for funding system conservation in both the short- and long-term.

In the short-term, Metropolitan has executed contracts with the Bureau of Reclamation pursuant to which the Bureau of Reclamation, rather than Metropolitan, will pay for conserved water from Metropolitan's PVID Land Management, Crop Rotation and Water Supply Program from August 1,



2023 to July 31, 2026, and from the Quechan Forbearance Program for calendar years 2023 through 2025. Water generated from these programs and these time periods will benefit Lake Mead as system water rather than accrue to Metropolitan. Later in 2024, Metropolitan also anticipates executing an additional contract with [the Bureau of Reclamation](#) where [the Bureau of Reclamation](#) will pay for conserved water from Metropolitan's Bard Seasonal Fallowing Program for calendar years 2024 through 2026 and water generated from that program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan.

In the long-term, Metropolitan has submitted a proposal for the creation of system water through adoption of new conservation and local supply programs, or enhancements of existing programs. Negotiations on long-term system conservation are still on-going.

***Ongoing Activities Relating to Colorado River Operations.*** Before the DCP and 2007 Lower Basin shortage guidelines terminate in 2026, the U.S. Department of the Interior through the Bureau of Reclamation, the seven Colorado River Basin States, and water users in the Colorado River Basin, including Metropolitan, are expected to develop new shortage guidelines for the management and operation of the Colorado River.

In a process separate from the post-2026 guidelines development process, in November 2022, the Bureau of Reclamation initiated an expedited process to modify the 2007 interim guidelines for Colorado River operations in 2023, 2024, and possibly through 2026 to address the potential for continued low-runoff conditions and water shortages in the Colorado River Basin. In April 2023, the Bureau of Reclamation released a draft Supplemental Environmental Impact Statement ("SEIS") for public comment to modify the 2007 interim guidelines for proposed changes to operations starting in 2024 and to inform potential operations in 2025 and 2026 that would include reduced releases from Glen Canyon Dam and increased lower basin shortages. On May 22, 2023, representatives of the States of Arizona, California, and Nevada (the "Lower Basin States") sent a letter to the Bureau of Reclamation outlining the terms of a consensus proposal to conserve an additional volume of at least three million acre-feet of Colorado River water in the lower basin by the end of calendar year 2026, with at least 1.5 million acre-feet of that additional total being conserved by the end of calendar year 2024 (the "Lower Basin Plan"). This conservation would be in addition to existing shortage apportionments and DCP contribution obligations under the current 2007 interim guidelines, Lower Basin DCP, and Treaty Minute 323. On May 22, 2023, the Department of the Interior announced that it was temporarily withdrawing the draft SEIS so that it could fully analyze the effects of the proposal submitted by the Lower Basin States. In October 2023, the Bureau of Reclamation released a revised draft SEIS, which was published in the Federal Register on October 27, 2023. The revised draft SEIS analyzed two alternatives in detail: a "No Action Alternative" and the Lower Basin Plan proposal as the "Proposed Action" alternative. The revised draft SEIS also reflected the improved hydrology in the Colorado River Basin since the original draft SEIS analysis. In light of these improved conditions, the probability of Lake Powell and Lake Mead falling below critical elevation levels during the 2024 through 2026 timeframe that any adopted modifications of the 2007 interim guidelines would be operable has been reduced. On March 5, 2024, the Bureau of Reclamation released its Final SEIS selecting the Lower Basin Plan as the "Preferred Alternative" for Colorado River operations through 2025. The Bureau of Reclamation ~~is expected to issue~~ [issued](#) a Record of Decision to modify the 2007 interim guidelines consistent with the Lower Basin Plan ~~by~~ [in](#) May 2024. The modified guidelines will also be used to set operating conditions in 2026.

Under the Lower Basin Plan, California is anticipated to conserve at least 1.6 million acre-feet of the additional three million acre-feet by the end of 2026. It is expected that up to 2.3 million acre-feet of the conservation will be made through projects submitted to, and if awarded, implemented under the Bureau of Reclamation's Lower Colorado River Basin System Conservation and Efficiency Program and funded through the IRA (as referenced above under "Lake Mead 500+ Plan"), with the remainder achieved through other compensated and uncompensated conservation. Uncompensated conservation

commitments may be met with the use of newly created EC ICS. Any ICS designated as meeting the new conservation goal cannot be delivered, transferred or assigned through December 31, 2026. See also “–Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.”

On October 11, 2023, the Bureau of Reclamation also submitted a request for initiation of formal consultation to the U.S. Fish and Wildlife Service (“USFWS”) for short-term additional reduction in Colorado River flows and activities provided under the Lower Colorado River Multi-Species Conservation Program beginning in water accounting year 2023 and ending with the issuance of a new biological opinion to cover new or revised post-2026 Colorado River operating guidelines. This new biological opinion would provide the additional ESA coverage for flow reductions anticipated in the SEIS Proposed Action alternative. See also “–Endangered Species Act and Other Environmental Considerations Relating to Water Supply – Endangered Species Act Considerations - Colorado River.”

On June 16, 2023, the Department of the Interior formally initiated the process for the development of new post-2026 operating guidelines to replace the 2007 interim shortage guidelines and coordinated management strategies and published a Notice of Intent in the Federal Register to prepare the EIS related to such post-2026 guidelines and to solicit comments and hold public scoping meetings on their development. The public scoping period closed on August 15, 2023. The Bureau of Reclamation is currently developing alternatives for evaluation in the EIS. On March 6, 2024, the Upper Basin states of Wyoming, Colorado, New Mexico and Utah submitted a proposal for evaluation by the Bureau of Reclamation in the EIS (the “Upper Division States Alternative”). The Upper Division States Alternative proposed water supply reductions would be made on the Lower Basin States based on the combined volume in Lake Mead and Lake Powell, with reductions to be determined using actual water conditions in October, rather than predictions in August as currently employed under the 2007 interim shortage guidelines. The Upper Division States Alternative also ~~include~~includes rules for Glen Canyon Dam releases. The Lower ~~Division~~Basin States (California, Arizona, and Nevada) submitted a joint proposal for evaluation on March 6, 2024. The proposal submitted by the Lower Basin States for evaluation by the Bureau of Reclamation (the “Lower Basin Alternative”) includes new higher reductions in water supply across a wider range of system conditions than those implemented in the 2007 interim guidelines, including reductions for California. Under this proposal, reductions to water users in the Lower Basin would be determined based on the total live storage in seven reservoirs in the Colorado River Basin (referred to as total system contents), including Lakes Powell, Mead, Mohave, Havasu as well as Flaming Gorge, Blue Mesa, and Navajo Reservoirs. Reductions for Lower Basin water users are proposed to phase-in starting when the collective volume at these reservoirs ~~was~~is less than 69 percent of water that can be withdrawn. Reductions for Lower Basin water users are proposed to reach a static level of 1.5 million acre-feet when the collective volume at these reservoirs ~~was~~is less than 58 percent and California’s proposed share of this 1.5 million acre-foot reduction ~~was~~is 440,000 acre-feet. Further reductions are assumed when the collective volume at these reservoirs is less than 38 percent, however, the proposal did not include details for how those additional reductions would be shared at a state level. The Lower Basin Alternative also includes rules for Glen Canyon Dam releases.

The impacts to California and Metropolitan of the current alternatives proposed for consideration by the Bureau of Reclamation in the development of the post-2026 operating guidelines are still unknown and subject to analysis by the Bureau of Reclamation, the selection of a Preferred Alternative, and continued negotiations. The draft Environmental Impact Statement (“DEIS”) is expected to be published in December 2024. As of January 1, 2024, Metropolitan’s storage in Lake Mead was estimated to be approximately 1.54 million acre-feet. This storage is expected to provide flexibility to Metropolitan in meeting potential additional water reductions that may occur under new post-2026 operating guidelines. See “–Storage Capacity and Water in Storage.”

***Related Litigation–Navajo Nation Suit.*** In 2003, the Navajo Nation filed litigation against the Department of the Interior, specifically the Bureau of Reclamation and the Bureau of Indian Affairs, alleging that the Bureau of Reclamation has failed to determine the extent and quantity of the water rights of the Navajo Nation in the Colorado River and that the Bureau of Indian Affairs has failed to otherwise protect the interests of the Navajo Nation. The complaint challenged the adequacy of the environmental review for the Interim Surplus Guidelines (described under “–Colorado River Operations: Surplus and Shortage Guidelines – *Interim Surplus Guidelines*”) and sought to prohibit the Department of the Interior from allocating any “surplus” water until such time as a determination of the rights of the Navajo Nation is completed. Metropolitan and other California water agencies filed motions to intervene in this action. In October 2004, the court granted the motions to intervene and stayed the litigation to allow negotiations among the Navajo Nation, federal defendants, Central Arizona Water Conservation District, State of Arizona and Arizona Department of Water Resources. After years of negotiations, a tentative settlement was proposed in 2012 that would have provided the Navajo Nation with specified rights to water from the Little Colorado River and groundwater basins under the reservation, along with federal funding for the development of water supply systems on the tribe’s reservation. The proposed agreement was rejected by tribal councils for both the Navajo and the Hopi, who were seeking to intervene. In June 2013, the Navajo Nation amended its complaint and added a legal challenge to the Lower Basin Shortage Guidelines adopted by the Secretary of the Interior in 2007 that allow Metropolitan and other Colorado River water users to store water in Lake Mead (described under “– Colorado River Operations: Surplus and Shortage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead*”). Metropolitan has used these new guidelines to store over 1,000,000 acre-feet of water in Lake Mead, a portion of which has been delivered, and the remainder of which may be delivered at Metropolitan’s request in future years.

Following years of procedural challenges and appeals, on June 22, 2023, the U.S. Supreme Court issued its ruling in the *Department of Interior v. Navajo Nation* and *State of Arizona v. Navajo Nation* consolidated cases. The Court held that the 1868 treaty establishing the Navajo Reservation reserved necessary water to accomplish the purpose of the Navajo Reservation, but did not require the United States to take affirmative steps to secure the water for the Navajo Nation. As a result the Lower Basin Shortage Guidelines remain in effect and unchanged.

## **Endangered Species Act and Other Environmental Considerations Relating to Water Supply**

### **Endangered Species Act Considerations - State Water Project**

**General.** DWR has altered the operations of the State Water Project to accommodate species of fish listed as threatened or endangered under the federal ESA and/or California ESA.

The federal ESA requires that before any federal agency authorizes, funds, or carries out an action that may affect a listed species or designated critical habitat, it must consult with the appropriate federal fishery agency (either the National Marine Fisheries Service (“NMFS”) or the USFWS depending on the species) to determine whether the action would jeopardize the continued existence of any threatened or endangered species, or adversely modify habitat critical to the species’ needs. The result of the consultation is known as a “biological opinion.” In a biological opinion, a federal fishery agency determines whether the action would cause jeopardy to a threatened or endangered species or adverse modification to critical habitat; and if jeopardy or adverse modification is found, recommends reasonable and prudent alternatives that would allow the action to proceed without causing jeopardy or adverse modification. If no jeopardy or adverse modification is found, the fish agency issues a “no jeopardy opinion.” The biological opinion also includes an “incidental take statement.” The incidental take statement allows the action to go forward even though it will result in some level of “take,” including harming or killing some members of the species, incidental to the agency action, provided that the agency action does not jeopardize the continued existence of any threatened or endangered species and complies

with reasonable mitigation and minimization measures recommended by the federal fishery agency or as incorporated into the project description.

The California ESA generally requires an incidental take permit or consistency determination for any action that may cause take of a State-listed species of fish or wildlife. To issue an incidental take permit or consistency determination, CDFW must determine that the impacts of the authorized take will be minimized and fully mitigated and will not cause jeopardy.

***Federal ESA–Biological Opinions.*** On August 2, 2016, DWR and the Bureau of Reclamation requested that USFWS and NMFS reinitiate federal ESA consultation on the coordinated operations of the State Water Project and the federal Central Valley Project to update them with the latest best available science and lessons learned operating under the prior 2008 and 2009 biological opinions. In January 2019, the Bureau of Reclamation submitted the initial biological assessment to USFWS and NMFS. The biological assessment contains a description of the Bureau of Reclamation’s and DWR’s proposed long-term coordinated operations plan (the “2019 Long-Term Operations Plan”). On October 22, 2019, USFWS and NMFS issued new federal biological opinions (the “2019 biological opinions”) that provide incidental take coverage for the 2019 Long-Term Operations Plan. On February 18, 2020, the Bureau of Reclamation signed a Record of Decision, pursuant to NEPA, completing its environmental review and adopting the 2019 Long-Term Operations Plan.

The 2019 Long-Term Operations Plan incorporates and updates many of the requirements contained in the previous 2008 and 2009 biological opinions. It also includes over \$1 billion over a ten-year period in costs for conservation, monitoring and new science, some of which is in the form of commitments carried forward from the previous biological opinions. Those costs are shared by the State Water Project and the federal Central Valley Project. The prior 2008 and 2009 biological opinions resulted in an estimated reduction in State Water Project deliveries of 0.3 million acre-feet during critically dry years to 1.3 million acre-feet in above normal Water Years as compared to the previous baseline. The 2019 Long-Term Operations Plan and 2019 biological opinions were originally expected to increase State Water Project deliveries by an annual average of 200,000 acre-feet as compared to the previous biological opinions, although this possible increase in supply was never realized due to State permit requirements.

On January 20, 2021, President Biden issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (the “President’s Executive Order on Public Health and the Environment”) directing all executive departments and agencies to immediately review, and, as appropriate and consistent with applicable law, take action to address the promulgation of federal regulations and other actions during the prior four years for consistency with the new administration’s policies. Among numerous actions identified for review, the U.S. Department of Commerce and the Department of the Interior heads reviewed the 2019 biological opinions. On September 30, 2021, the Bureau of Reclamation Regional Director for Interior Region 10 sent a letter to the USFWS and NMFS re-initiating consultation on the long-term operations of the state and federal water projects. The consultation process requires the Bureau of Reclamation and DWR to develop a biological assessment describing the proposed operating criteria and perform an effects analysis. NMFS and USFWS are required to review the biological assessment and determine whether the proposed operating criteria would cause jeopardy or adverse modification of critical habitat. On February 28, 2022, the Notice of Intent was published in the Federal Register officially starting the federal ESA and NEPA process. On July 26, 2024, the Bureau of Reclamation released a public Draft EIS for the long-term operation of the Central Valley Project and the State Water Project. The Draft EIS considers four alternatives and two sub-alternatives, as well as a no-action alternative for the operation of the Central Valley Project and the State Water Project, and addresses the review of the 2019 biological opinions



required by the President's Executive Order on Public Health and the Environment. The Bureau of Reclamation is taking public comment on the Draft EIS through September 9, 2024.

**Federal ESA–Litigation.** On December 2, 2019, a group of non-governmental organizations, including commercial fishing groups and the Natural Resources Defense Council (the “NGOs”), sued USFWS and NMFS, alleging the 2019 biological opinions were arbitrary and capricious, later amending the lawsuit to include claims under the federal ESA and NEPA related to decisions made by the Bureau of Reclamation. On February 20, 2020, Natural Resources, the California Environmental Protection Agency, and the California Attorney General (collectively, the “State Petitioners”) sued the federal agencies, making similar allegations. The State Water Contractors association intervened in both cases to defend the 2019 biological opinions. After a series of State motions for injunctive relief in 2020 and 2021, the State and federal governments agreed on an interim operations plan (“IOP”) in 2022 and 2023 to address drought conditions and to better align Central Valley Project operations with the State Water Project, as it is operated under its California ESA incidental take permit. After extensive briefing, the court ultimately approved the IOP as a consent decree in 2022 and 2023, and a decision is pending in regard to the 2024 IOP. As part of the IOP orders, the court has stayed the litigation in anticipation of a new biological opinions by the end of 2024. Metropolitan is unable to predict the outcome of any litigation or any potential effect on Metropolitan’s State Water Project water supplies.

**California ESA–DWR Permit Litigation.** As described above, operations of the State Water Project require both federal ESA and California ESA authorizations. DWR described and analyzed its proposed State Water Project long-term operations plan for purposes of obtaining a new California ESA permit in its November 2019 Draft EIR under CEQA. Its 2019 Draft EIR proposed essentially the same operations plan as for the federal 2019 biological opinions, with the addition of operations for the State-only listed species, Longfin smelt. In December 2019, DWR submitted its application for an incidental take permit under the California ESA to CDFW, with a modified State operation plan that added new outflow and environmental commitments. On March 27, 2020, DWR released its final EIR and Notice of Determination, describing and adopting a State operation plan with additional operational restrictions and additional conservation commitments. On March 31, 2020, CDFW issued an incidental take permit for the State Water Project that included further operational restrictions and outflow. As issued, the incidental take permit reduces State Water Project deliveries by more than 200,000 acre-feet on an average annual basis as compared to the 2019 biological opinions and includes \$218 million over a ten-year period in environmental commitments for the State Water Project.

On April 28, 2020, Metropolitan and the Mojave Water Agency (“Mojave”) jointly sued CDFW, DWR and Natural Resources, alleging that the new California ESA permit and final EIR violate CEQA and the California ESA. Metropolitan and Mojave also allege that DWR breached the State Water Contract and the implied covenant of good faith and fair dealing by, among other things, accepting an incidental take permit containing mitigation requirements in excess of that required by law. Subsequently, two State Water Project contractors and a Metropolitan member agency joined with Metropolitan and Mojave in a first amended complaint. Various other water agencies, including the State Water Contractors association, also filed CEQA and CESA actions, or subsequently joined in a first amended complaint in which the individual water contractors allege causes of action for breach of contract and the implied covenant of good faith and fair dealing. In addition, another State Water Project contractor, the San Bernardino Valley Municipal Water District (“SBVMWD”), filed a complaint alleging violations of CEQA and CESA, as well as breach of contract and the implied covenant of good faith and fair dealing, unconstitutional takings, and anticipatory repudiation of contract. Several federal Central Valley Project water contractors also filed a CEQA challenge. Four other lawsuits have been filed by certain commercial fishing groups and an American Indian tribe, several environmental groups, and two in-Delta water agencies challenging the final EIR as inadequate under CEQA and alleging

violations of the Delta Reform Act, public trust doctrine and, in one of the cases, certain water right statutes.

All eight cases have been coordinated in Sacramento County Superior Court. On May 7, 2021 the coordination trial judge ordered the CEQA and CESA causes of action as well as certain other administrative record-based claims alleged by petitioners in several other cases bifurcated from the State Water Project contractors' respective contractual and unconstitutional takings causes of action, with the CEQA and CESA causes of action to be tried first. The administrative records were certified in the fall of 2023. The parties are currently meeting and conferring on a merits briefing schedule for the CEQA and CESA claims. Metropolitan is unable to assess at this time the likely outcome of litigation relating to the California ESA permit, including any future litigation or any future claims that may be filed, or any potential effect on Metropolitan's State Water Project water supplies.

### **Endangered Species Act Considerations - Colorado River**

Federal and state environmental laws protecting fish species and other wildlife species have the potential to affect Colorado River operations. A number of species that are on either "endangered" or "threatened" lists under the federal and state ESAs are present in the area of the Lower Colorado River, including among others, the bonytail chub, razorback sucker, southwestern willow flycatcher, and Yuma clapper rail. To address this issue, a broad-based state/federal/tribal/private regional partnership that includes water, hydroelectric power and federal and state wildlife management agencies in Arizona, California, and Nevada have developed a multi-species conservation program for the main stem of the Lower Colorado River (the Lower Colorado River Multi-Species Conservation Program or "MSCP"). The MSCP provides Metropolitan federal and state ESA compliance for any incidental take of protected species resulting from current and future water and power operations of its Colorado River facilities and to minimize any uncertainty from additional listings of endangered species. The MSCP also covers operations of federal dams and power plants on the river that deliver water and hydroelectric power for use by Metropolitan and other agencies. The MSCP covers 27 species and habitat in the Lower Colorado River from Lake Mead to the Mexican border for a term of 50 years (commencing in 2005). Over the 50-year term of the program, the total cost to Metropolitan is estimated to be about \$88.5 million (in 2003 dollars), with annual costs ranging between \$0.8 million and \$4.7 million (in 2003 dollars).

On December 7, 2023, the USFWS issued a biological opinion to the Bureau of Reclamation that provided additional incidental take due to reductions in Colorado River flows in excess of flow-related covered actions and activities provided under the Lower Colorado River Multi-Species Conservation Program, beginning October 1, 2023 and ending with the issuance of a future biological opinion to cover new or revised post-2026 Colorado River operating guidelines. The consultation for this biological opinion was initiated due to the anticipated reduction in flow between Hoover Dam and the Imperial Dam due to the proposed 500+ Plan conservation activities described under "–Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines – Lake Mead 500+ Plan." This biological opinion is currently being utilized by the Bureau of Reclamation as part of the MSCP.

### **Invasive Species - Mussel Control Programs**

Zebra and quagga mussels are established in many regions of the United States. Mussels can reproduce quickly and, if left unmanaged, can reduce flows by clogging intakes and raw water conveyance systems, alter or destroy fish habitats, and affect lakes and beaches. Mussel management activities may require changes in water delivery protocols to reduce risks of spreading mussel populations and increase operation and maintenance costs.

In January 2007, quagga mussels were discovered in Lake Mead. All pipelines and facilities that transport raw Colorado River water are considered to be infested with quagga mussels. Metropolitan has

a quagga mussel control plan, approved by the CDFW to address the presence of mussels in the CRA system and limit further spread of mussels. Year-round monitoring for mussel larvae is conducted at various locations in the CRA system and at select non-infested areas of Metropolitan's system and some locations in the State Water Project. Shutdown inspections have demonstrated that control activities effectively limit mussel infestation in the CRA ~~and prevent the further spread of mussels to other bodies of water and water systems~~. Metropolitan's costs for controlling quagga mussels in the CRA system have been approximately \$5 million per year.

An established quagga mussel population is located within ten miles of the State Water Project. A few adult mussels were also detected in the West Branch of the State Water Project in 2016 and 2021. Since 2023, veligers (larval stage of quagga mussels) have been repeatedly detected in water leaving Castaic Lake and more adult mussels were found in Pyramid Lake and Castaic Lake. ~~While~~ Although the number of adult mussels and veligers detected so far is relatively low, ~~these~~ the number of veligers has been slowly increasing. These recent monitoring results indicate that a reproducing population of quagga mussels is established in the West Branch of the State Water Project. ~~However,~~ but the eventual extent of infestation and magnitude of impacts cannot be easily predicted at this early stage. However, Metropolitan is investigating potential control measures for water leaving Castaic Lake.

In July 2024, Colorado Parks and Wildlife announced that zebra mussel larvae were detected in the Colorado River upstream of Lake Powell. The potential impact of this first appearance of zebra mussels in a region of the Colorado River that does not currently have quagga mussels is not currently known.

## **Water Transfer, Storage and Exchange Programs**

### **General**

To supplement its State Water Project and Colorado River water supplies, Metropolitan has developed and actively manages a portfolio of water supply programs, including water transfers, storage, and exchange agreements. Supplies are conveyed through the California Aqueduct, utilizing Metropolitan's rights under its State Water Contract to use the portion of the State Water Project conveyance system necessary to deliver water to it, or through available CRA capacity. Consistent with its long-term planning efforts, Metropolitan continues to pursue voluntary water transfer and exchange programs with State, federal, public and private water districts, and individuals to help mitigate supply/demand imbalances and provide additional dry-year supply sources. A summary description of Metropolitan's supply programs is set forth below. In addition to the arrangements described below, Metropolitan is entitled to storage and access to stored water in connection with various storage programs and facilities. See "Colorado River Aqueduct" above, as well as the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "Storage Capacity and Water in Storage" below.

### **State Water Project Agreements and Programs**

In addition to the basic State Water Project contract provisions, Metropolitan has other contract rights that accrue to the overall value of the State Water Project. Because each Contractor is paying for physical facilities, they also have the right to use the facilities to move water supplies associated with agreements, water transfers and water exchanges. Metropolitan has entered into agreements and exchanges with third parties that provide additional water supplies.

Existing and potential water transfers and exchanges are an important element for improving the water supply reliability within Metropolitan's service area and accomplishing the reliability goal set by Metropolitan's Board. Under voluntary water transfers and exchanges with agricultural users,



agricultural communities may periodically sell or conserve a portion of their agricultural water supply to make it available to support the State's urban areas. The portfolio of supplemental supplies that Metropolitan has developed to be conveyed through the California Aqueduct extend from north of the Bay-Delta to Southern California. Certain of these arrangements are described below.

***Castaic Lake and Lake Perris.*** Metropolitan has contractual rights to withdraw up to 65,000 acre-feet of water in Lake Perris (East Branch terminal reservoir) and 153,940 acre-feet of water in Castaic Lake (West Branch terminal reservoir), in addition to the annual "Table A" allocation. Any water used must be returned to the State Water Project within five years or it is deducted from allocated amounts in the sixth year. Metropolitan's storage balance as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Metropolitan Article 56 Carryover.*** Metropolitan has the right to store in San Luis Reservoir, its allocated contract amount for delivery in subsequent years. Metropolitan can store between 100,000 and 200,000 acre-feet per year, depending on the final "Table A" allocation. Metropolitan's storage balance as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Yuba River Accord.*** Metropolitan entered into an agreement with DWR in December 2007 to purchase a portion of the water released by the Yuba County Water Agency ("YCWA"). YCWA was involved in a SWRCB proceeding in which it was required to increase Yuba River fishery flows. Within the framework of agreements known as the Yuba River Accord, DWR entered into an agreement for the long-term purchase of water from YCWA. The agreement permits YCWA to transfer additional supplies at its discretion. Metropolitan, other State Water Project contractors, and the San Luis & Delta-Mendota Water Authority entered into separate agreements with DWR for the purchase of portions of the water made available. Metropolitan's agreement allows Metropolitan to purchase, in dry years through 2025, available water supplies which have ranged from approximately 8,135 acre-feet to 67,068 acre-feet per year.

Metropolitan has also developed other groundwater storage and exchange programs, certain of which are described below. See "METROPOLITAN'S WATER DELIVERY SYSTEM–Water Quality and Treatment" in this Appendix A for information regarding certain water quality regulations and developments that impact or may impact some of Metropolitan's groundwater storage programs.

***Arvin-Edison/Metropolitan Water Management Program.*** In December 1997, Metropolitan entered into an agreement with the Arvin-Edison Water Storage District ("Arvin-Edison"), an irrigation agency located southeast of Bakersfield, California. Under the program, Arvin-Edison stores water on behalf of Metropolitan. In January 2008, Metropolitan and Arvin-Edison amended the agreement to enhance the program's capabilities and to increase the delivery of water to the California Aqueduct. To facilitate the program, new wells, spreading basins and a return conveyance facility connecting Arvin-Edison's existing facilities to the California Aqueduct have been constructed. The agreement also provides Metropolitan priority use of Arvin-Edison's facilities to convey high-quality water available on the east side of the San Joaquin Valley to the California Aqueduct. Up to 350,000 acre-feet of Metropolitan's water may be stored, and Arvin-Edison is obligated to return up to 75,000 acre-feet of stored water in any year to Metropolitan, upon request. The agreement will terminate in 2035 unless extended. Metropolitan's estimated storage account balance under the Arvin-Edison/Metropolitan Water Management Program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below. As a result of detecting 1,2,3-trichloropropane ("TCP") in Arvin-Edison wells above the maximum contaminant level ("MCL") in 2018, Metropolitan has suspended the return of groundwater from the program until the water quality concerns can be further evaluated and managed. Instead, Metropolitan has requested that

Arvin-Edison provide only surface water that can satisfy DWR's standards for direct pump-back into the California Aqueduct, or alternative methods satisfactory to Metropolitan, in order to meet both the DWR pump-in requirements and Metropolitan's request for the return of water. In 2021 and 2022, Metropolitan recovered in aggregate 23,130 acre-feet from Arvin-Edison by exchanges with surface water. In 2023, Metropolitan recovered 19,000 acre-feet from surface water supplies. Staff are exploring opportunities for exchanges in 2024 but the estimated recovery of surface water supplies has yet to be determined.

In October 2021, Arvin-Edison sued The Dow Chemical Company, Shell Oil Company, and others regarding TCP in Arvin-Edison's groundwater. According to Arvin-Edison's complaint, the defendants are the manufacturers and distributors of the TCP that caused the contamination of Arvin-Edison's groundwater supplies. Arvin-Edison alleges that the widespread presence of TCP at concentrations above the MCL in its wells has caused certain of its water banking partners (including Metropolitan) to reduce and/or suspend their water banking and management programs. Based upon a mitigation feasibility study dated November 4, 2021 prepared for Arvin-Edison, Arvin-Edison estimates that treatment would cost approximately \$465 million, which includes capital costs and the present worth of operation and maintenance treatment costs over a 50-year period. ~~Arvin-Edison participated in mediations on March 30, 2023 and January 18, 2024, but no settlement has been reached~~The litigation is ongoing. If Arvin-Edison prevails in its litigation, a monetary recovery, if any, would be available to offset costs associated with treatment facilities to remediate the groundwater contamination.

***Semitropic/Metropolitan Groundwater Storage and Exchange Program.*** In 1994, Metropolitan entered into an agreement with the Semitropic Water Storage District ("Semitropic"), located adjacent to the California Aqueduct north of Bakersfield, to store water in the groundwater basin underlying land within Semitropic. The minimum annual yield available to Metropolitan from the program is 38,200 acre-feet of water, and the maximum annual yield is 239,700 acre-feet of water depending on the available unused capacity and the State Water Project allocation. The agreement extends to November 2035. Metropolitan's estimated storage account balance under the Semitropic program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "Storage Capacity and Water in Storage" below. TCP has been detected in the groundwater supplies within Semitropic; however, detection levels at the turn-in locations for the Semitropic program have remained below the MCL and, to date, the return of groundwater to Metropolitan under the program has not been impacted.

In October 2021, Semitropic, as well as its several affiliated improvement districts (collectively referred to in this paragraph as "Semitropic"), sued The Dow Chemical Company, Shell Oil Company, and others regarding TCP in Semitropic's groundwater. According to Semitropic's complaint, the defendants are the manufacturers and distributors of the TCP that caused the contamination of Semitropic's groundwater supplies. ~~Metropolitan's PMQ deposition was taken on February 10, 2023, and mediation was scheduled for the end of May 2023. The parties are working with the mediator to schedule the next mediation for March or April 2024~~The litigation is ongoing. If Semitropic prevails in its litigation, a monetary recovery, if any, would be available to offset costs associated with any needed treatment facilities to remediate the groundwater contamination.

***Kern Delta Storage Program.*** Metropolitan entered into an agreement with Kern Delta Water District ("Kern Delta") in May 2003, for a groundwater banking and exchange transfer program to allow Metropolitan to store up to 250,000 acre-feet of State Water Contract water in wet years and to permit Metropolitan, at Metropolitan's option, a return of up to 50,000 acre-feet of water annually during hydrologic and regulatory droughts. The agreement extends through 2028. Metropolitan's estimated storage account balance under this program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "Storage Capacity and Water in Storage" below.

***Mojave Storage Program.*** Metropolitan entered into a groundwater banking and exchange transfer agreement with Mojave in October 2003. The agreement allows for Metropolitan to store water in an exchange account for later return. The agreement allows Metropolitan to annually withdraw Mojave State Water Project contractual amounts, after accounting for local needs. Under a 100 percent allocation, the State Water Contract provides Mojave 89,800 acre-feet of water. This agreement was amended in 2011 to allow for the cumulative storage of up to 390,000 acre-feet. The term of this agreement extends through 2035. Metropolitan's estimated storage account balance under this program as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern Storage and Exchange Program.*** In 2016, Metropolitan entered into an agreement with the Antelope Valley-East Kern Water Agency ("AVEK"), the third largest State Water Project contractor, to both exchange supplies and store water in the Antelope Valley groundwater basin. Under the exchange, AVEK would provide at least 30,000 acre-feet over ten years of its unused Table A State Water Project water to Metropolitan. For every two acre-feet provided to Metropolitan as part of the exchange, AVEK would receive back one acre-foot in the future. For the one acre-foot that is retained by Metropolitan, Metropolitan would pay AVEK under a set price schedule based on the State Water Project allocation at the time. Under this agreement, AVEK also provides Metropolitan up to 30,000 acre-feet of storage. Metropolitan's estimated storage account balance under this program as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below.

***Antelope Valley-East Kern High Desert Water Bank Program.*** In 2019, Metropolitan entered into an agreement with AVEK for a groundwater banking program referred to as the High Desert Water Bank Program. The original estimated cost of construction of the facilities to be funded by Metropolitan to implement the program was \$131 million, but the estimated cost ~~has~~<sup>subsequently</sup> increased to \$211 million due to inflation, finalization of the off-site power distribution design, and revisions to the design. In September 2023, Metropolitan's Board authorized \$80 million for the additional costs. Water quality testing of the deeper recovery wells installed in 2021 revealed that arsenic levels in all four wells were above the federal and State MCL of 10 micrograms per liter ("µg/L"), ranging from 11 to 19 µg/L. Arsenic naturally occurs in the Antelope Valley groundwater basin, with levels detected throughout the basin but such levels are generally higher in the deeper aquifer. Based on the current water quality data, recovered water from the High Desert Water Bank Program requires treatment before delivery to the California Aqueduct. Metropolitan is working with AVEK to complete additional groundwater modeling and analysis to understand arsenic's behavior in the basin, identify other constituents of concern, and optimize the design of the remaining recovery wells and treatment system. Staff will return to the Board ~~in Fall 2024~~ to request authorization for additional costs related to the recommended treatment system ~~in Fall 2024~~. Following completion of construction, which is expected by the end of 2027, Metropolitan would have the right to store up to 70,000 acre-feet per year of its unused Table A State Water Project water or other supplies in the Antelope Valley groundwater basin for later return. The maximum storage capacity for Metropolitan supplies would be 280,000 acre-feet. At Metropolitan's direction, up to 70,000 acre-feet of stored water annually would be available for return by direct pump back into the East Branch of the California Aqueduct. In 2023, a portion of the recharge facilities ~~were~~<sup>was</sup> completed and Metropolitan began storing water in September. Metropolitan's estimated storage account balance under this program as of January 1, 2024, is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below. Upon full completion of construction (expected by the end of 2027), this program would provide additional flexibility to store and recover water for emergency or water supply needs through 2057.

***San Gabriel Valley Municipal Water District and Other Exchange Programs.*** In 2013, Metropolitan entered into an agreement with the San Gabriel Valley Municipal Water District ("SGVMWD"). Under this agreement, Metropolitan delivers treated water to a SGVMWD subagency in

exchange for twice as much untreated water in the groundwater basin. Metropolitan's member agencies can then use the groundwater supplies to meet their needs. Metropolitan can exchange and purchase at least 5,000 acre-feet per year. This program has the potential to increase Metropolitan's reliability by providing 115,000 acre-feet through 2035.

***Irvine Ranch Water District Strand Ranch Banking Program.*** In 2011, Metropolitan entered into an agreement with the Municipal Water District of Orange County ("MWDOC") and the Irvine Ranch Water District ("IRWD") to authorize the delivery of State Water Project supplies from IRWD's Strand and Stockdale Ranches into Metropolitan's service area. IRWD facilitates Metropolitan entering into unbalanced exchanges with other State Water Project contractors. A portion of the water is returned to the partnering State Water Project contractor with the remaining balance delivered to Metropolitan's service area. MWDOC/IRWD takes delivery of the water through Metropolitan's distribution system and pays the Metropolitan full-service water rate. Metropolitan can call on stored supplies; in return, Metropolitan is obliged to return an equal amount of water to MWDOC in future years for IRWD's benefit. This agreement extends to November 2035 and enhances regional reliability by providing Metropolitan with access to additional supplies.

***San Bernardino Valley Municipal Water District Exchange Program.*** In 2020, Metropolitan signed a coordinated operating and surplus water agreement with SBVMWD. In 2021, in accordance with the terms of such agreement, Metropolitan's Board authorized an agreement with SBVMWD that provides a framework which allows for the exchange of both local and State Water Project supplies. The exchanges are equal if they occur within the same calendar year and up to two-to-one if water is returned in a subsequent calendar year. The agreement, which extends through 2031, provides for improved coordination to respond to outages and emergencies of either party.

***San Diego County Water Authority Semitropic Agreement.*** In 2021, Metropolitan's Board approved an agreement with SDCWA for the purchase by Metropolitan of 4,200 acre-feet and a lease of 5,000 acre-feet of return capacity from SDCWA's Semitropic Program for 2022. See "*Semitropic/Metropolitan Groundwater Storage and Exchange Program.*" Similarly, in 2023, Metropolitan and SDCWA executed an agreement for Metropolitan to purchase 4,200 acre-feet and lease of 4,381 acre-feet of delivery capacity from SDCWA's Semitropic Program. The agreement provided for improved regional reliability and also allows for the exchange of previously stored water with Metropolitan in the future.

***Sites Reservoir Storage Project.*** The Sites Reservoir is a proposed reservoir project of approximately 1.5 million acre-feet to be located in Colusa County, that is being developed by the Sites Project Authority, a joint [exercise of](#) powers [agency authority](#). The water stored in the proposed project would be diverted from the Sacramento River. As currently proposed, the Sites Reservoir would have dedicated water storage and yield that would be used for fishery enhancement, water quality, and other environmental purposes. The proposed project could also provide an additional water supply that could be used for dry-year benefits. Metropolitan is a member of the Sites Reservoir Committee, a group of 22 agencies that are participating in certain planning activities in connection with the proposed development of the project, including project permitting and proposed reservoir operations. The Sites Project Authority Board, with [a](#) recommendation from the Sites Reservoir Committee, approved the Final EIR and approved the Sites Reservoir project on November 17, 2023. In April 2022, Metropolitan's Board approved \$20 million in funding for Metropolitan's continued participation in such planning activities through the end of 2024. Metropolitan's agreement to participate in the funding of this phase of project development does not commit Metropolitan to participate in the Sites Reservoir project in the future.

***Other Ongoing Activities.*** Metropolitan has been negotiating, and will continue to pursue, water purchase, storage and exchange programs with other agencies in the Sacramento and San Joaquin Valleys. These programs involve the storage of both State Water Project supplies and water purchased



from other sources to enhance Metropolitan's dry-year supplies and the exchange of normal year supplies to enhance Metropolitan's water reliability and water quality, in view of dry conditions and potential impacts from the ESA considerations discussed above under the heading "–Endangered Species Act and Other Environmental Considerations Relating to Water Supply– Endangered Species Act Considerations – State Water Project." In January 2023, the Board authorized the General Manager to secure additional one-year transfer supplies from various water districts and private water purveyors throughout the State at a maximum cost of up to \$100 million. Under this authority, Metropolitan executed an agreement with SDCWA to purchase water and lease delivery capacity from SDCWA's Semitropic Storage Program, as described above under "–*San Diego County Water Authority Semitropic Agreement.*" In February 2024, the Board authorized the General Manager to secure additional one-year transfer supplies from various water districts and private water purveyors throughout the State at a maximum cost of up to \$50 million.

### **Colorado River Aqueduct Agreements and Programs**

Metropolitan has taken steps to augment its share of Colorado River water through agreements with other agencies that have rights to use such water, including through cooperative programs with other water agencies to conserve and develop supplies and through programs to exchange water with other agencies. These supplies are conveyed through the CRA. Metropolitan determines the delivery schedule of these supplies throughout the year based on changes in the availability of State Water Project and Colorado River water. Under certain of these programs, water may be delivered to Metropolitan's service area in the year made available or in a subsequent year as ICS water from Lake Mead storage. See "–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – *Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.*"

***IID/Metropolitan Conservation Agreement.*** Under a 1988 water conservation agreement, as amended in 2003 and 2007 (the "1988 Conservation Agreement") between Metropolitan and IID, Metropolitan provided funding for IID to construct and operate a number of conservation projects that have conserved up to 109,460 acre-feet of water per year that has been provided to Metropolitan. As amended, the agreement's initial term has been extended to at least 2041 or 270 days after the termination of the QSA. Under a 2014 letter agreement, starting in 2016, 105,000 acre-feet of conserved water ~~is~~<sup>are</sup> made available by IID to Metropolitan each year. Under the QSA and related agreements, Metropolitan, at the request of CVWD, forgoes up to 20,000 acre-feet of this water each year for diversion by CVWD from the Coachella Canal. In each of 2018 and 2019, CVWD's requests were for 0 acre-feet, leaving 105,000 acre-feet in 2018 and 2019 for Metropolitan. In December 2019, Metropolitan signed a revised agreement with CVWD in which CVWD will limit its annual request of water from this program to 15,000 acre-feet through 2026. See "–Colorado River Aqueduct –Quantification Settlement Agreement."

***Palo Verde Land Management, Crop Rotation and Water Supply Program.*** In August 2004, Metropolitan and Palo Verde Irrigation District ("PVID") signed the program agreement for a Land Management, Crop Rotation and Water Supply Program. Under this program, participating landowners in the PVID service area are compensated for reducing water use by not irrigating a portion of their land. This program provides up to 133,000 acre-feet of water to be available to Metropolitan in certain years. The term of the program is 35 years. Following began on January 1, 2005. The following table shows annual volumes of water saved and made available to Metropolitan during the 10 calendar years 2014 through 2023 under the Land Management, Crop Rotation and Water Supply Program with PVID:

**WATER AVAILABLE FROM PVID LAND MANAGEMENT,  
CROP ROTATION AND WATER SUPPLY PROGRAM**

Calendar Year	Volume (acre-feet)
2014	43,000
2015	94,500
2016	125,400
2017	111,800
2018	95,800
2019	44,500
2020	43,900
2021	42,305
2022	29,736
2023	20,000 (est)

*Source: Metropolitan.*

This program is being funded by the federal government for the period from August 1, 2023 to July 31, 2026 pursuant to the Lower Colorado River Basin System Conservation and Efficiency Program established by the Bureau of Reclamation. Water generated from the program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Colorado River Basin System Conservation and Efficiency Program.”

**Bard Water District Seasonal Fallowing Program.** In 2019, Metropolitan entered into agreements with Bard Water District (“Bard”) and farmers within the Bard Unit, to provide incentives for land fallowing under the Bard Seasonal Fallowing Program. The program reduces water consumption in Bard and that helps augment Metropolitan’s Colorado River supplies. It incentivizes farmers to fallow their land for four months in exchange for a fixed payment per irrigable acre (initially, \$452), escalated annually. Metropolitan estimates water savings of approximately 2.0 acre-feet per fallowed acre. Bard diverts Colorado River water for crop irrigation grown year-round in the warm dry climate. Farmers typically grow high-value crops in the winter (vegetable crops) followed by a lower-value, water-intensive, field crop (such as Bermuda and Sudan grass, small grains, field grains, or cotton) in the spring and summer. Participating farmers will reduce their water consumption through land fallowing of up to 3,000 acres in aggregate annually between April and July. In calendar year 2024, ~~Metropolitan will provide an~~the incentive payment ~~of~~is \$530.61 per irrigable acre fallowed. The program is currently scheduled to end on December 31, 2026. For calendar years 2024 through 2026, this program is being funded by the federal government pursuant to the Lower Colorado River Basin System Conservation and Efficiency Program established by the Bureau of Reclamation. Water generated from the program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Colorado River Basin System Conservation and Efficiency Program.”

**Quechan Forbearance Program.** In 2005, Metropolitan entered into a settlement agreement in Arizona v. California with the Quechan Indian Tribe (the “Quechan Tribe”) and other parties. The Quechan Tribe uses Colorado River water on the Fort Yuma Indian Reservation. In addition to the amount of water decreed for the benefit of the Reservation in the 1964 Arizona v. California decree, under the 2005 settlement agreement, the Quechan Tribe is entitled to (a) 20,000 acre-feet of diversions from the Colorado River or (b) the amount necessary to supply the consumptive use required for

irrigation of a specified number of acres, and for the satisfaction of related uses, whichever is less. Of the additional diversions, 13,000 acre-feet became available to the Quechan Tribe in 2006. An additional 7,000 acre-feet will become available to the Quechan Tribe in 2035. Metropolitan agreed to provide annual incentive payments to the Quechan Tribe if the tribe forbore diversion of the additional water, thereby allowing Metropolitan to divert it. The value of these payments was \$125 per acre-foot in 2006 and is escalated at 2.5 percent per year. In 2024, the payment is \$190.20 per acre-foot. For calendar years 2023 through 2025, this program is being funded by the federal government pursuant to the Lower Colorado River Basin System Conservation and Efficiency Program established by the Bureau of Reclamation. Water generated from the program during that time period will benefit Lake Mead as system water rather than accrue to Metropolitan. See “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Colorado River Basin System Conservation and Efficiency Program.”

***Quechan Tribe of the Fort Yuma Indian Reservation Seasonal Fallowing Pilot Program.*** In December 2021, Metropolitan entered into a two-year agreement with the Quechan Tribe to launch the voluntary Quechan Seasonal Fallowing Pilot Program (the “Pilot Program”) for fallowing in 2022 and 2023. In December 2023, Metropolitan and the Quechan Tribe amended the agreement to extend the Pilot Program for an additional three years through 2026. Under the Pilot Program, Metropolitan provides incentives to farmers on Quechan tribal land for land fallowing that reduces water consumption to help augment Metropolitan’s Colorado River supplies. Desert agriculture realizes a market advantage in the winter for high-value vegetables such as lettuce and broccoli. In the hot summer, farmers typically grow lower-value, water-intensive commodities such as grains and grasses. Farmers participating in the Pilot Program agree to decrease their water consumption through land fallowing of up to 1,600 acres annually during April through July. In calendar year 2022, 118.3 acres were fallowed and in calendar year 2023, 148 acres were fallowed. Metropolitan provided \$472.40 and \$503.29 per irrigable acre fallowed, respectively. The payment is escalated annually. Metropolitan estimates water savings between 1.5 and 2.0 acre-feet per irrigable acre fallowed, with actual savings to be determined throughout the Pilot Program.

***Lake Mead Storage Program.*** As described under “–Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,” Metropolitan has entered into agreements to set forth the guidelines under which ICS water is developed and stored in and delivered from Lake Mead. The amount of water stored in Lake Mead must be created through extraordinary conservation, system efficiency, tributary, imported, or binational conservation methods. Metropolitan has participated in projects to create ICS as described below:

Drop 2 (Warren H. Brock) Reservoir. In 2008, Metropolitan, CAWCD and SNWA provided funding for the Bureau of Reclamation’s construction of an 8,000 acre-foot off-stream regulating reservoir near Drop 2 of the All-American Canal in Imperial County (officially named the Warren H. Brock Reservoir). Construction was completed in October 2010. The Warren H. Brock Reservoir conserves about 70,000 acre-feet of water per year by capturing and storing water that would otherwise be lost from the system. In return for its funding, Metropolitan received 100,000 acre-feet of water that was stored in Lake Mead for its future use and has the ability to receive up to 25,000 acre-feet of water in any single year. Besides the additional water supply, the addition of the Warren H. Brock ~~reservoir~~Reservoir adds to the flexibility of Colorado River operations by storing underutilized Colorado River water orders caused by unexpected canal outages, changes in weather conditions, and high tributary runoff into the Colorado River. As of January 1, 2024, Metropolitan had taken delivery of 35,000 acre-feet of this water and had 65,000 acre-feet remaining in storage.

International Water Treaty Minutes 319 and 323. In November 2012, as part of the implementation of Treaty Minute 319, Metropolitan executed agreements in support of a program to



augment Metropolitan's Colorado River supply between 2013 through 2017 through an international pilot project in Mexico. Metropolitan's total share of costs was \$5 million for 47,500 acre-feet of project supplies. In December 2013, Metropolitan and IID executed an agreement under which IID paid half of Metropolitan's program costs, or \$2.5 million, in return for half of the project supplies, or 23,750 acre-feet. As such, 23,750 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account in 2017. See "*Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead.*" In September 2017, as part of the implementation of Treaty Minute 323, Metropolitan agreed to fund additional water conservation projects in Mexico that will yield approximately 27,275 acre-feet of additional supply for Metropolitan by 2026 at a cost of approximately \$3.75 million. In 2020, Metropolitan made the first payment related to Treaty Minute 323 of \$1.25 million, and 9,092 acre-feet of Intentionally Created Mexican Allocation was converted to Binational ICS and credited to Metropolitan's binational ICS water account. In October 2023, the next payment of \$1.25 million was made, however the crediting of 9,092 acre-feet of Binational ICS was delayed until 2026 to preserve ICS accumulation space. The final payment of \$1.25 million is expected to be made in 2026 and an additional 9,091 acre-feet of Intentionally Created Mexican Allocation will be converted to Binational ICS and credited to Metropolitan's binational ICS water account.

***Storage and Interstate Release Agreement with Nevada.*** In May 2002, SNWA and Metropolitan entered into an Agreement Relating to Implementation of Interim Colorado River Surplus Guidelines, in which SNWA and Metropolitan agreed to the allocation of unused apportionment as provided in the Interim Surplus Guidelines and on the priority of SNWA for interstate banking of water in Arizona. SNWA and Metropolitan entered into a storage and interstate release agreement on October 21, 2004. Under this agreement, SNWA can request that Metropolitan store unused Nevada apportionment in California. The amount of water stored through 2014 under this agreement was approximately 205,000 acre-feet. In October 2015, SNWA and Metropolitan executed an additional amendment to the agreement under which Metropolitan paid SNWA approximately \$44.4 million and SNWA stored an additional 150,000 acre-feet with Metropolitan during 2015. Of that amount, 125,000 acre-feet have been added to SNWA's storage account with Metropolitan, increasing the total amount of water stored to approximately 330,000 acre-feet. In subsequent years, SNWA may request recovery of the stored water. When SNWA requests the return of any of the stored 125,000 acre-feet, SNWA will reimburse Metropolitan for an equivalent proportion of the \$44.4 million plus inflation based on the amount of water returned. SNWA has not yet requested the return of any of the water stored with Metropolitan and it is not expected that SNWA will request a return of any of the stored water before 2026.

***California ICS Agreement Intrastate Storage Provisions.*** As described under "*Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead,*" in 2007, IID, Metropolitan and other Colorado River contractors in California executed the California ICS Agreement, which divided California's ICS storage space in Lake Mead between Metropolitan and IID. It also allowed IID to store up to 50,000 acre-feet of conserved water in Metropolitan's system. In 2015, the California ICS Agreement was amended to allow IID to store additional amounts of water in Metropolitan's system during 2015 through 2017. Under the 2015 amendment, IID was permitted to store up to 100,000 acre-feet per year of conserved water within Metropolitan's system with a cumulative limit of 200,000 acre-feet, for the three-year term. When requested by IID, Metropolitan has agreed to return to IID the lesser of either 50,000 acre-feet per year, or in a year in which Metropolitan's member agencies are under a shortage allocation, 50 percent of the cumulative amount of water IID has stored with Metropolitan under the 2015 amendment. IID currently has 154,000 acre-feet of water stored with Metropolitan pursuant to the terms of the California ICS Agreement and its amendment.

In 2018, IID had reached the limit on the amount of water it was able to store in Metropolitan's system under the California ICS Agreement and entered into discussions with Metropolitan to further amend the agreement, but no such agreement was reached. On December 4, 2020, IID filed a complaint against Metropolitan alleging that Metropolitan breached the California ICS Agreement, breached the implied covenant of good faith and fair dealing, and that Metropolitan converted IID's intentionally created surplus for its own use. IID's complaint sought the imposition of a constructive trust over 87,594 acre-feet of water in Lake Mead that was received by Metropolitan in 2018.

In October 2021, Metropolitan and IID agreed to settle the dispute, and on December 6, 2021, the lawsuit was dismissed with prejudice. Under the terms of the settlement agreement, Metropolitan will, after applying storage losses, retain approximately 40 percent of the disputed 87,594 acre-feet that Metropolitan received in 2018 and will have stored the remaining approximately 60 percent for IID to be returned to IID in 2026. If Metropolitan does not have sufficient ICS to make a DCP contribution in 2026, Metropolitan may use the remaining stored water to do so. From 2021 through 2026, IID may store up to an additional 25,000 acre-feet per year (with an accumulation limit of an additional 50,000 acre-feet) of conserved water in Metropolitan's Lake Mead ICS account. While IID will still not be a party to the DCP, if Metropolitan is required to make a DCP contribution, IID will assist Metropolitan in making DCP contributions by contributing the lesser of either: (a) three percent of California's DCP contribution; or (b) the amount of water IID has stored with Metropolitan. Between 2021 and 2022, IID ~~has had~~ stored and accumulated 34,528 acre-feet of conserved water in Metropolitan's Lake Mead ICS account. ~~Although a final determination has not yet been made, IID may did not elect to fill its remaining accumulation limit store any additional water~~ in Metropolitan's Lake Mead ICS account for 2023.

### **State Water Project and Colorado River Aqueduct Arrangements**

***Metropolitan/CVWD/Desert Water Agency Amended and Restated Agreement for the Exchange and Advance Delivery of Water.*** Metropolitan has agreements with CVWD and the Desert Water Agency ("DWA") under which Metropolitan exchanges its Colorado River water for the agencies' State Water Project contractual water and other State Water Project water acquisitions on an annual basis. Because CVWD and DWA do not have a physical connection to the State Water Project, Metropolitan takes delivery of CVWD's and DWA's State Water Project supplies and delivers a like amount of Colorado River water to the agencies. In accordance with these agreements, Metropolitan may deliver Colorado River water in advance of receiving State Water Project supplies to these agencies for storage in the Upper Coachella Valley groundwater basin. In years when it is necessary to augment available supplies to meet local demands, Metropolitan may meet the exchange delivery obligation through drawdowns of the advance delivery account, in lieu of delivering Colorado River water in that year. Metropolitan's estimated storage account under the CVWD/DWA program as of January 1, 2024 is shown in the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "–Storage Capacity and Water in Storage" below. In addition to the storage benefits of the CVWD/DWA program, Metropolitan receives water quality benefits with increased deliveries of lower salinity water from the State Water Project in lieu of delivering higher saline Colorado River water. In December 2019, the exchange agreements were amended to provide more flexibility and operational certainty for the parties involved. Additionally, under the amended agreements, CVWD and DWA pay a portion of Metropolitan's water storage management costs in wet years, up to a combined total of \$4 million per year.

***Operational Shift Cost Offset Program.*** In 2021, Metropolitan's Board approved the Operational Shift Cost Offset Program ("OSCOF") to help Metropolitan maximize resources available from Colorado River and State Water Project storage in calendar years 2021 and 2022. In October 2022, Metropolitan's Board extended the OSCOF through the end of calendar year 2023. Metropolitan worked with member agencies that have service connections to both State Water Project supplies and Colorado River water to shift their points of delivery to meet demands wherever possible to preserve State Water

Project storage during the recent drought. Although member agencies can make some shifts in delivery locations, these shifts may result in additional operational costs. Under the OSCOP, Metropolitan offset costs member agencies accrued due to shifting deliveries at Metropolitan's request. In calendar year 2023, Metropolitan offset incurred costs of up to \$359 per acre-foot for shifts made at Metropolitan's request. This allowed Metropolitan to fully utilize its diverse portfolio and increased reliability for the entire region by improving the availability of State Water Project storage reserves to supplement supplies during dry years.

### **Storage Capacity and Water in Storage**

Metropolitan's storage capacity, which includes reservoirs, conjunctive use and other groundwater storage programs within Metropolitan's service area and groundwater and surface storage accounts delivered through the State Water Project or CRA, is approximately 6.0 million acre-feet. In 2023, approximately 750,000 acre-feet of total stored water in Metropolitan's reservoirs and other storage resources was emergency storage. Metropolitan's emergency storage is a regional planning objective established periodically to prevent severe water shortages for the region in the event of supply interruptions from catastrophic earthquakes or similar events (see "METROPOLITAN'S WATER DELIVERY SYSTEM—Seismic Considerations and Emergency Response Measures" in this Appendix A). The current emergency storage objective of 750,000 acre-feet is based on an outage duration of 6 to 12 months, retail water demand reduction of 25 to 35 percent based on achievable conservation actions, and aggregated loss of 10 to 20 percent of local production. Retail demand calculations for purposes of the emergency storage objective were based on a 2015 IRP forecast of demand for the year 2018 under average conditions. Metropolitan replenishes its storage accounts when available imported supplies exceed demands. Metropolitan's ability to replenish water storage, both in the local groundwater basins and in surface storage and banking programs, has been limited by Bay-Delta pumping restrictions under the biological opinions issued for listed species. See "—Endangered Species Act and Other Environmental Considerations Relating to Water Supply—Endangered Species Act Considerations—State Water Project—*Federal ESA-Biological Opinions.*" Effective storage management is dependent on having sufficient years of excess supplies to store water so that it can be used during times of shortage. See "CONSERVATION AND WATER SHORTAGE MEASURES—Water Supply Allocation Plan" in this Appendix A. Metropolitan's storage as of January 1, 2024 was estimated to be ~~4.15~~4.18 million acre-feet. This is the highest beginning-of-year total water storage in Metropolitan's history. The following table shows three years of Metropolitan's water in storage as of January 1, including emergency storage.

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**METROPOLITAN'S WATER STORAGE CAPACITY AND WATER IN STORAGE<sup>(1)</sup>**  
(in Acre-Feet)

<b>Water Storage Resource</b>	<b>Storage Capacity</b>	<b>Water in Storage January 1, 2024</b>	<b>Water in Storage January 1, 2023</b>	<b>Water in Storage January 1, 2022</b>
<b><u>Colorado River Aqueduct</u></b>				
DWA/CVWD Advance Delivery Account	800,000	205,000	281,000	293,000
Lake Mead ICS <sup>(2)</sup>	<u>1,657,000</u>	<u>1,544,000<sup>(10)</sup></u>	<u>1,140,000<sup>(10)</sup></u>	<u>1,251,500<sup>(10)</sup></u>
<b>Subtotal</b>	<b>2,457,000</b>	<b>1,749,000</b>	<b>1,421,000</b>	<b>1,544,500</b>
<b><u>State Water Project</u></b>				
Arvin-Edison Storage Program <sup>(3)</sup>	350,000	100,000	119,000	136,000
Semitropic Storage Program	350,000	190,000	158,000	218,000
Kern Delta Storage Program	250,000	<del>114,000</del> <u>141,000</u>	137,000	149,000
Mojave Storage Program	330,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>	19,000 <sup>(6)</sup>
AVEK Storage Program	30,000	27,000	27,000	27,000
AVEK High Desert Water Bank	112,000 <sup>(11)</sup>	11,000	N/A	N/A
Castaic Lake and Lake Perris <sup>(4)</sup>	219,000	219,000	3,000	49,000
State Water Project Carryover <sup>(5)</sup>	350,000 <sup>(7)</sup>	325,000	31,000	38,000
Emergency Storage	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>	<u>381,000</u>
<b>Subtotal</b>	<b>2,372,000</b>	<del>4,386,000</del> <u>1,413,000</u>	<b>875,000</b>	<b>1,017,000</b>
<b><u>Within Metropolitan's Service Area</u></b>				
Diamond Valley Lake	810,000	753,000	494,000	600,000
Lake Mathews	182,000	168,000	155,000	140,000
Lake Skinner	<u>44,000</u>	<u>39,000</u>	<u>39,000</u>	<u>39,000</u>
<b>Subtotal<sup>(8)</sup></b>	<b>1,036,000</b>	<b>960,000</b>	<b>688,000</b>	<b>779,000</b>
<b><u>Member Agency Storage Programs</u></b>				
Conjunctive Use	<u>210,000</u>	<u>56,000</u>	<u>10,000</u>	<u>16,000</u>
<b>Total</b>	<b>6,075,000</b>	<del>4,151,000</del> <u>4,178,000</u>	<b>2,994,000</b>	<b>3,356,500</b>

Source: Metropolitan.

- (1) Water storage capacity and water in storage are measured based on engineering estimates and are subject to change.
- (2) See "Colorado River Aqueduct – Colorado River Operations: Surplus and Shortage Guidelines – Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead" and "Colorado River Drought Contingency Plans" for additional information regarding the Lake Mead ICS program and use of ICS water.
- (3) Metropolitan has suspended the return of groundwater from the Arvin-Edison storage program. Stored supplies can still be recovered via surface water exchange. See "Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – Arvin-Edison/Metropolitan Water Management Program." See also "METROPOLITAN'S WATER DELIVERY SYSTEM–Water Quality and Treatment" in this Appendix A.
- (4) Flexible storage allocated to Metropolitan under its State Water Contract. Withdrawals must be returned within five years.
- (5) Includes Article 56 Carryover of Metropolitan, Coachella Valley Water District, and Desert Water Agency, prior-year carryover, non-project carryover, and carryover of curtailed deliveries pursuant to Article 14(b) and Article 12(e) of Metropolitan's State Water Contract. See "Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – Metropolitan Article 56 Carryover."
- (6) The Mojave storage agreement was amended in 2011 to allow for cumulative storage of up to 390,000 acre-feet. Since January 1, 2011, Metropolitan has stored 60,000 acre-feet, resulting in a remaining balance of storage capacity of 330,000 acre-feet. 41,000 acre-feet of the 60,000 acre-feet stored have been returned, leaving a remaining balance in storage of 19,000 acre-feet. See "Water Transfer, Storage and Exchange Programs – State Water Project Agreements and Programs – Mojave Storage Program."
- (7) A capacity of 350,000 acre-feet is estimated to be the practical operational limit for carryover storage considering Metropolitan's capacity to take delivery of carryover supplies before San Luis Reservoir fills.
- (8) Includes 369,000 acre-feet of emergency storage in Metropolitan's reservoirs in 2022, 2023, and 2024.
- (9) Represents Metropolitan's historical highest level of water in storage.

- (10) This amount does not include water Metropolitan ~~stored~~stores for IID in Lake Mead ~~an ICS sub account~~.
- (11) Currently constructed storage capacity. The storage capacity at completion of construction is anticipated to be 280,000 acre-feet. See “- Water Transfer, Storage and Exchange Programs ~~—~~ State Water Project Agreements and Programs – *Antelope Valley-East Kern High Desert Water Bank Program.*”

## CONSERVATION AND WATER SHORTAGE MEASURES

### General

The central objective of Metropolitan's water conservation program is to help ensure adequate, reliable and affordable water supplies for Southern California by actively promoting efficient water use. The importance of conservation to the region has increased in recent years because of occurring drought conditions in the State Water Project watershed and court-ordered restrictions on Bay-Delta pumping, as described under "METROPOLITAN'S WATER SUPPLY-State Water Project –Bay-Delta Proceedings Affecting State Water Project" and "–Endangered Species Act and Other Environmental Considerations Relating to Water Supply –Endangered Species Act Considerations-State Water Project – *Federal ESA-Biological Opinions*" in this Appendix A. Ongoing drought conditions in the Colorado River have further emphasized the need for additional conservation efforts. See "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct –Colorado River Operations: Surplus and Shortage Guidelines" in this Appendix A. Conservation reduces the need to import water to deliver to member agencies through Metropolitan's system. Water conservation is an integral component of Metropolitan's IRP, WSDM Plan, and Water Supply Allocation Plan.

Metropolitan's conservation program has largely been developed to assist its member agencies in meeting the conservation goals established by the 2015 IRP Update. See "METROPOLITAN'S WATER SUPPLY-Integrated Water Resources Plan and Climate Adaptation Master Plan for Water" in this Appendix A. All users of Metropolitan's system benefit from the reduced infrastructure costs and system capacity made available by investments in demand management programs like the Conservation Credits Program. Under the terms of Metropolitan's Conservation Credits Program, Metropolitan administers regional conservation programs and co-funds member agency conservation programs designed to achieve greater water use efficiency in residential, commercial, industrial, institutional and landscape uses. Spending by Metropolitan and its member agencies on active conservation incentives, including rebates for water-saving plumbing fixtures, appliances and equipment totaled about \$57 million in fiscal year ~~2022-23~~2022-23. During fiscal year 2022-2023, water savings achieved through new and prior-year conservation investments under Metropolitan's Conservation Credits Program were approximately 207,000 acre-feet.

Metropolitan has worked proactively with its member agencies to conserve water supplies in its service area, and significantly expanded its water conservation and outreach programs and increased funding for conservation incentive programs. Historically, revenues collected by Metropolitan's Water Stewardship Rate and available grant funds funded conservation incentives, local resource development incentives, and other water demand management programs. Until December 31, 2020, the Water Stewardship Rate was charged on every acre-foot of water conveyed by Metropolitan, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "METROPOLITAN REVENUES-Water Rates" and "–Litigation Challenging Rate Structure" in this Appendix A) in calendar years 2018, 2019, and 2020. Beginning with calendar year 2021, the Water Stewardship Rate has no longer been incorporated into Metropolitan's rates and charges. See "METROPOLITAN REVENUES-Rate Structure – *Water Stewardship Rate*" in this Appendix A.

In addition to ongoing conservation, Metropolitan has developed a WSDM Plan, which splits resource actions into two major categories: Surplus Actions and Shortage Actions. See "–Water Surplus and Drought Management Plan." Conservation and water efficiency programs are part of Metropolitan's resource management strategy which makes up these surplus and shortage actions.

The Water Supply Allocation Plan allocates Metropolitan's water supplies among its member agencies, based on the principles contained in the WSDM Plan, to reduce water use and drawdowns from water storage reserves. See "–Water Supply Allocation Plan." Metropolitan's member agencies and retail



water suppliers in Metropolitan's service area also can implement water conservation and allocation programs, and some of the retail suppliers in Metropolitan's service area have initiated conservation measures.

State legislation has provided an additional catalyst for conservation by member agencies and retail suppliers. Legislation approved in November 2009 set a statewide conservation target for urban per capita potable water use of 20 percent reductions (from a baseline per capita use determined utilizing one of four State-approved methodologies) by 2020 (with credits for existing conservation) at the retail level. Legislation approved in 2018 (Assembly Bill 1668 and Senate Bill 606) directed the SWRCB to adopt water use efficiency standards for all residential water use and outdoor commercial, industrial, and institutional water use and also performance measures for indoor commercial, industrial, and institutional water use. Pursuant to such directive, on July 3, 2024, the SWRCB ~~has proposed~~adopted a new regulation, termed "Making Conservation a California Way of Life," which ~~would~~will require urban retail water suppliers to calculate a water use objective annually, beginning January 1, 2025, based on the characteristics of the supplier's service area, and beginning January 1, 2027, demonstrate compliance with its ~~objective~~objectives, implement established performance standards, and submit annual progress reports.

Metropolitan's water transactions projections incorporate an estimate of conservation savings that will reduce retail demands. Current projections include an estimate of additional water use efficiency savings resulting from Metropolitan's 2015 IRP Update goals that included the reduction of overall regional per capita water use by 20 percent by 2020 from a baseline of average per capita water use from 1996-2005 in Metropolitan's service area. As of calendar year 2020, per capita water use in Metropolitan's service area had reached the 20 percent reduction by 2020 target.

### **Water Surplus and Drought Management Plan**

In addition to the long-term planning guidelines and strategy provided by its IRP, Metropolitan has developed its WSDM Plan for the on-going management of its resources and water supplies in response to hydrologic conditions. The WSDM Plan, which was adopted by Metropolitan's Board in April 1999, evolved from Metropolitan's experiences during the droughts of 1976-77 and 1987-92. The WSDM Plan is a planning document that Metropolitan uses to guide inter-year and intra-year storage operations, and splits resource actions into two major categories: surplus actions and shortage actions. The surplus actions emphasize storage of surplus water inside the region, followed by storage of surplus water outside the region. The shortage actions emphasize critical storage programs and facilities and conservation programs that make up part of Metropolitan's response to shortages. Implementation of the plan is directed by a WSDM team, made up of Metropolitan staff, that meets regularly throughout the year and more frequently between November and April as hydrologic conditions develop. The WSDM team develops and recommends storage actions to senior management on a regular basis and provides updates to the Board on hydrological conditions, storage levels and planned storage actions through detailed reports.

### **Water Supply Allocation Plan**

In times of prolonged or severe water shortages, Metropolitan manages its water supplies through the implementation of its Water Supply Allocation Plan. The Water Supply Allocation Plan was originally approved by Metropolitan's Board in February 2008, and has been implemented three times since its adoption, including most recently in April 2015. The Water Supply Allocation Plan provides a formula for equitable distribution of available water supplies in case of extreme water shortages within Metropolitan's service area and if needed is typically approved in April with implementation beginning in July. In December 2014, the Board approved certain adjustments to the formula for calculating member agency supply allocations during subsequent periods of implementation of the Water Supply



Allocation Plan. Although the Act gives each of Metropolitan's member agencies a preferential entitlement to purchase a portion of the water served by Metropolitan (see "METROPOLITAN REVENUES-Preferential Rights" in this Appendix A), historically, these rights have not been used in allocating Metropolitan's water. Metropolitan's member agencies and retail water suppliers in Metropolitan's service area also may implement water conservation and allocation programs within their respective service territories in times of shortage. See also "Drought Response Actions" below. Based upon current hydrology and Metropolitan's available storage balances, the Water Supply Allocation Plan has not been implemented for fiscal year ~~2023-24~~2024-25.

### Drought Response Actions

The most recent drought in California ~~occurred in~~lasted from 2020 through 2022. The Water Years 2020 through 2022 combined ranked as the three driest years in California's statewide precipitation record. Beginning in April 2021, Governor Newsom issued a series of drought emergency proclamations affecting various counties throughout the State, culminating in an October 19, 2021, proclamation declaring a drought state of emergency to be in effect statewide and directing local water suppliers to implement water shortage contingency plans at a level appropriate to local conditions. On March 28, 2022, Governor Newsom issued an executive order directing the SWRCB to consider adopting regulations by May 25, 2022, to require urban water suppliers with water shortage contingency plans to implement, at a minimum, shortage response actions for a shortage level of up to 20 percent (a "Level 2" shortage). On May 24, 2022, in response to the executive order, the SWRCB adopted an emergency water conservation regulation. The adopted regulation temporarily banned irrigating turf with potable water at commercial, industrial, and institutional properties, such as grass in front of or next to large industrial or commercial buildings. The ban did not include watering turf used for recreation or other community purposes, water used at residences or water to maintain trees. The regulation also required all urban water suppliers to implement conservation actions under Level 2 of their water shortage contingency plans.

From early 2021, in response to dry conditions, Metropolitan implemented certain operational measures and programs to minimize State Water Project deliveries, such as delivering Diamond Valley Lake water for the first time to the Henry J. Mills Treatment Plant, and expanding the delivery of Colorado River water. These measures were made possible by Metropolitan's continued investment in facility upgrades and improvements. Metropolitan also paid for several member agencies to shift from service connections that utilize State Water Project supplies to service connections that use Colorado River water to conserve State Water Project supplies.

Following the Governor's October 2021 proclamation of a statewide drought emergency, on November 9, 2021, Metropolitan's Board of Directors declared a drought emergency and called on its member agencies in the portion of Metropolitan's service area that can only receive Metropolitan's supplies through the State Water Project system (referred to herein as the SWP Dependent Area) to use increased conservation measures or other means to reduce their use of those supplies. To assist in these conservation efforts, Metropolitan's Board also approved a series of measures to expand various rebate and water-efficiency programs. On April 26, 2022, Metropolitan's Board approved the framework of an Emergency Water Conservation Program for the SWP Dependent Area to further reduce demand on State Water Project supplies. In 2022, due to historically dry conditions, DWR exercised a provision of the State water supply ~~contract~~contracts that allowed DWR to provide State Water Project water to certain State Water Project contractors, that was in addition to the contracted amounts, to meet minimum demands for domestic supply, fire protection or sanitation. The human health and safety supplies received were required to be returned within five calendar years of the calendar year of delivery, with certain mandatory returns to be made in years when State Water Project allocations were 40 percent of contracted amounts or greater. Under this provision, Metropolitan requested and received from DWR delivery of an additional 133,842 acre-feet of certain human health and safety supplies to the SWP

Dependent Area. In addition to the human health and safety supplies and mandatory water use reductions for the SWP Dependent Area agencies, Metropolitan met the water demands in its service area in calendar year 2022 using a combination of CRA deliveries, storage reserves and supplemental water transfers and purchases. In 2022, approximately 28,000 acre-feet of water transfers were secured.

Metropolitan has planned and prepared for dry conditions by investing in vital infrastructure to increase its storage capacity and enhance operational flexibility. The Emergency Water Conservation Program was intended as a short-term policy in response to the severe drought conditions that existed and infrastructure constraints that severely limited the delivery of State Water Project supplies. Metropolitan has committed to providing equitable reliability to the SWP Dependent Area by increasing access to existing supplies and storage, and development of new supplies and storage. Metropolitan was awarded \$50 million in reimbursement grant funding from the State of California in the State's fiscal year ~~2022-23~~ 2022-23 budget for a set of drought emergency mitigation projects to move locally stored water into the SWP Dependent Area.

Due to improved hydrologic conditions and an increased State Water Project allocation for 2023, the Board voted to rescind the Emergency Water Conservation Program on March 14, 2023. On March 24, 2023, the Governor announced that several of the Statewide water conservation measures previously imposed would be eased. All of the 133,842 acre-feet of health and safety supplies received by Metropolitan in 2022 were returned by the end of June 2023. Metropolitan continues to encourage responsible and efficient water use.

Actions taken in response to the 2020-2022 drought by the State, Metropolitan's Board and Metropolitan's member agencies, as well as the subsequent extreme precipitation in 2023 and a wet winter in 2024, have contributed to reduced water demands in Metropolitan's service area. Such significant variances in hydrology may become more common in the future due to the effects of climate change. Metropolitan's financial reserve policy provides funds to manage through periods of reduced sales. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. In years when actual sales are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenditures below budgeted levels, reducing funding of capital projects from revenues, and drawing on reserves. See also "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

## REGIONAL WATER RESOURCES

### General

The water supply for Metropolitan's service area is provided in part by Metropolitan and in part by non-Metropolitan sources available to members. Non-Metropolitan sources include water imported by the City of Los Angeles (the "City") from the Owens Valley/Mono Basin east of the Sierra Nevada through the City's Los Angeles Aqueduct to serve customers of the City. See "— Los Angeles Aqueduct." The balance of water within the region is produced locally, from sources that include groundwater and surface water production, recycled water and recovery of contaminated or degraded groundwater, and seawater desalination. Programs to develop these local resources include projects funded by Metropolitan's Local Resources Program (the "LRP"), as well as local agency funded programs. See "—Local Water Supplies."

Based on a ten-year average from calendar years 2013 through 2022 (the most recent full year information available), non-Metropolitan sources met about 54 percent of the region's water needs. These non-Metropolitan sources of supply fluctuate in response to variations in rainfall. During prolonged periods of below-normal rainfall, local water supplies decrease. Conversely, prolonged periods of above-normal rainfall increase local supplies. Sources of groundwater basin replenishment include

local precipitation, runoff from the coastal ranges, and artificial recharge with imported water supplies. In addition to runoff, recycled water provides an increasingly important source of replenishment water for the region.

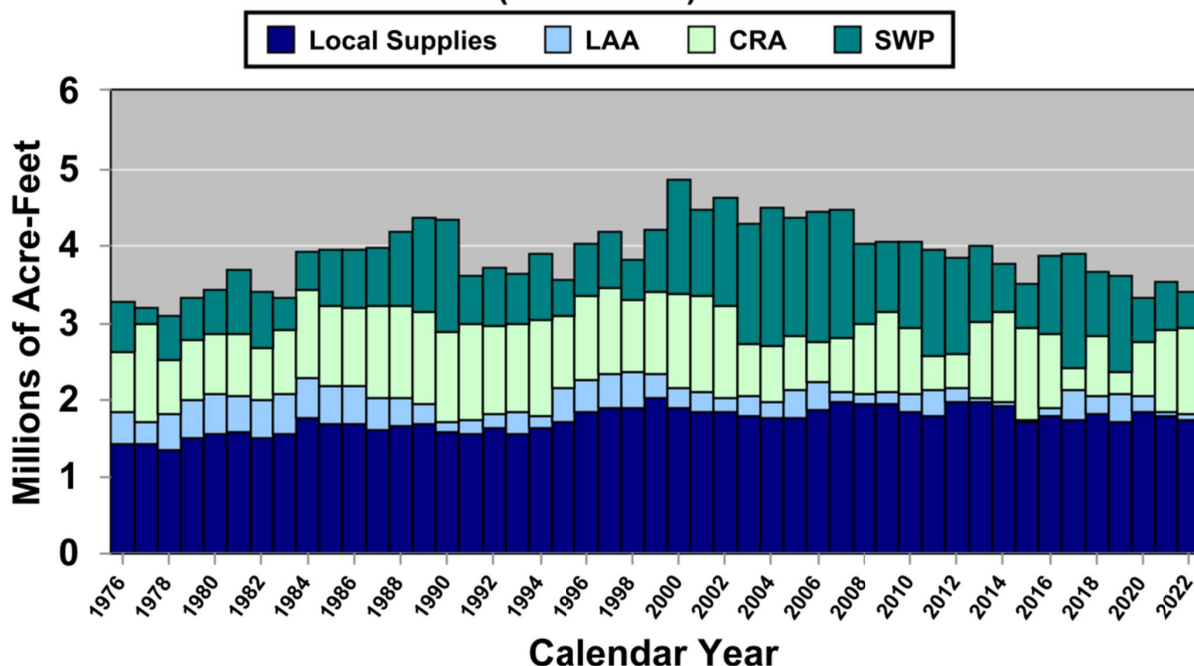
Metropolitan's member agencies are not required to purchase or use any of the water available from Metropolitan. Some agencies depend on Metropolitan to supply nearly all of their water needs, regardless of the weather. Other agencies, with local surface reservoirs or aqueducts that capture rain or snowfall, rely on Metropolitan more in dry years than in years with heavy rainfall, while others, with ample groundwater supplies, purchase Metropolitan water only to supplement local supplies and to recharge groundwater basins. Consumer demand and locally supplied water vary from year to year, resulting in variability in the volume of Metropolitan's water transactions.

In recent years, supplies and demands have been affected by drought, water use restrictions, economic conditions, weather conditions and environmental laws, regulations and judicial decisions, as described in this Appendix A under "METROPOLITAN'S WATER SUPPLY." The demand for supplemental supplies provided by Metropolitan is dependent on water use at the retail consumer level and the amount of locally supplied and conserved water. See "CONSERVATION AND WATER SHORTAGE MEASURES" in this Appendix A and "Local Water Supplies" below.

Future reliance on Metropolitan supplies will depend on, among other things, current and future local projects that may be developed and the amount of water that may be derived from sources other than Metropolitan. For information on Metropolitan's water revenues, see "METROPOLITAN REVENUES" and "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

The following graph shows a summary of the regional sources of water supply for calendar years 1976 to 2022 (the most recent full year information available). In the graph below, LAA refers to the Los Angeles Aqueduct. See "Los Angeles Aqueduct." The graph below includes updated local supply numbers that include Santa Ana River baseflow below Prado Dam, which was ~~previously~~ not included from 1980 through 2009.

### Sources of Water Supply in the Metropolitan Service Area (1976-2022)



Source: Metropolitan.

The major sources of water available to some or all of Metropolitan's member agencies in addition to supplies provided by Metropolitan are described below.

#### Los Angeles Aqueduct

The City of Los Angeles, through its Department of Water and Power ("LADWP"), operates its Los Angeles Aqueduct system to import water from the Owens Valley and the Mono Basin on the eastern slopes of the Sierra Nevada in eastern California. Water imported by the City on the Los Angeles Aqueduct system comes primarily from surface water rights of the City in eastern Sierra Nevada watersheds along various streams, creeks and rivers in the Mono Basin, Long Valley and Owens Valley, and groundwater resources in the Owens Valley from the City's ownership of approximately 330,000 acres of land and associated water rights. This water supply of the City, which serves LADWP's customers, currently meets about five percent of the region's water needs based on a ten-year average from calendar years 2013 through 2022 (the most recent full year information available).

Surface runoff (snowmelt) is subject to substantial annual variability, which influences the amount of water delivered by the Los Angeles Aqueduct. In addition, the City is subject to several environmental commitments in the Mono Basin and Owens Valley which impact the availability of water to the City for import on the Los Angeles Aqueduct. These include: (i) the SWRCB's Mono Lake Basin Water Rights Decision 1631, which limits the City's water exports from the Mono Basin based on Mono Lake's surface elevation; and (ii) the City's legal obligations under a long-term groundwater management plan relating to the City's groundwater resources in the Owens Valley.

Los Angeles Aqueduct water deliveries to the City vary from one year to the next. Since calendar year 2013, Los Angeles Aqueduct water deliveries to the City have varied from as little as 33,000 acre-feet in calendar year 2015 to as much as 380,000 acre-feet of water in calendar year 2017. Average water deliveries to the City from the Los Angeles Aqueduct were approximately 186,000 acre-feet per calendar year between calendar years 2018 and 2022 (meeting approximately 37 percent of the City's annual water needs). However, during calendar year 2022, water deliveries to the City from the Los Angeles Aqueduct were approximately 71,000 acre-feet (meeting approximately 15 percent of the City's water need for calendar year 2022). Consequently, the amount of water purchased by the City from Metropolitan also varies with the fluctuations of Los Angeles Aqueduct supply. During the past five calendar years 2018 through 2022, the City's water purchases from Metropolitan (billed water transactions) ranged from a low of 103,000 [acre-feet](#) in calendar year 2019 to a high of 368,000 [acre-feet](#) in calendar year 2021.

### Local Water Supplies

Local water supplies are made up of groundwater, groundwater recovery, surface runoff, recycled water, and seawater desalination. Metropolitan supports local resources development through its LRP, which provides financial incentives of up to \$340 per acre-foot of water production (based on actual project unit costs that exceed Metropolitan's water rates) from local water recycling, groundwater recovery, and seawater desalination projects. LRP agreement terms are for 25 years and terminate automatically if construction does not commence within two full fiscal years of agreement execution or if water deliveries are not realized within four full fiscal years of agreement execution. Metropolitan utilizes conjunctive use of groundwater to encourage storage in groundwater basins. Member agencies and other local agencies have also independently funded and developed additional local supplies, including groundwater clean-up, recycled water and desalination of brackish or high salt content water. See also "METROPOLITAN'S WATER DELIVERY SYSTEM–Water Quality and Treatment" in this Appendix A for information regarding certain water quality regulations and developments that impact or may impact certain local groundwater supplies.

Metropolitan's water transaction projections are based in part on projections of locally-supplied water. Projections of future local supplies are based on estimated yields of projects that are currently producing water or are under construction at the time a water transaction projection is made. Estimated yields of projects currently producing water are calculated based on the projects' previous four-year production average. Estimated yields of projects that are under construction at the time a water transaction projection is made are based on data provided by the member agencies. See "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES–Water Transactions Projections" and "METROPOLITAN'S WATER SUPPLY–Integrated Water Resources Plan and Climate Adaptation Plan for Water" in this Appendix A.

**Groundwater.** Local groundwater basins are the region's largest source of local supply. Since 2013, approximately 1.14 million acre-feet per year, about one-third of the annual water demands for approximately 19 million residents of Metropolitan's service area, are met through local groundwater production. Local groundwater basins are supported by recycled water and imported water used for replenishing basins and for creating seawater barriers that protect coastal aquifers from seawater intrusion.

**Member Agency Storage Programs.** Metropolitan has developed a number of local programs to work with its member agencies to increase storage in groundwater basins. Metropolitan has encouraged storage through its cyclic and conjunctive use storage programs. These programs allow Metropolitan to deliver water into a groundwater basin in advance of agency demands. Metropolitan has drawn on



dry-year supply from nine contractual conjunctive use storage programs to address shortages from the State Water Project and the CRA.

Cyclic storage agreements allow pre-delivery of imported water for recharge into groundwater basins in excess of an agency's planned and budgeted deliveries making best use of available capacity in conveyance pipelines, use of storm channels for delivery to spreading basins, and use of spreading basins. This water is then purchased at a later time when the agency has a need for groundwater replenishment deliveries.

Conjunctive use agreements provide for storage of imported water that can be called for use by Metropolitan during dry, drought, or emergency conditions. During a dry period, Metropolitan has the option to call water stored in the groundwater basins pursuant to its contractual conjunctive use agreements. At the time of the call, the member agency pays Metropolitan the prevailing rate for that water. Nine conjunctive use projects provide about 210,000 acre-feet of groundwater storage and have a combined extraction capacity of about 70,000 acre-feet per year. See the table entitled "Metropolitan's Water Storage Capacity and Water in Storage" under "METROPOLITAN'S WATER SUPPLY—Storage Capacity and Water in Storage" in this Appendix A.

**Reverse Cyclic Program.** In 2022, Metropolitan's Board authorized the General Manager to enter into reverse-cyclic agreements with participating member agencies to preserve the availability of Metropolitan's State Water Project supplies. Metropolitan's General Manager initiated deferrals under the Reverse-Cyclic Program ("RCP") when the General Manager determined that the supply conditions warranted deferring the use of State Water Project supplies due to the risk of shortage of these supplies. Metropolitan executed agreements with Calleguas Municipal Water District, Three Valleys Municipal Water District, and Upper San Gabriel Valley Municipal Water District in 2022. Under these agreements and at Metropolitan's request, participating member agencies agreed to defer Metropolitan deliveries of 25,000 acre-feet of water (in aggregate) purchased in calendar year 2022 to allow Metropolitan to preserve its State Water Project supplies. Metropolitan billed participating member agencies the 2022 full-service rate and applicable treatment charge. In doing so, the participating member agencies avoid paying the projected higher service rate that would be in place when Metropolitan makes the deferred delivery. Metropolitan will deliver water to the participating member agencies no later than December 2027, which is five full calendar years from the date of purchase. This program was not reauthorized for 2023 nor 2024.

**Recovered Groundwater.** Contamination of groundwater supplies is a growing threat to local groundwater production. Metropolitan has been supporting increased groundwater production and improved regional supply reliability by offering financial incentives to agencies for the production and treatment of degraded groundwater since 1989 through the LRP. Metropolitan has executed LRP agreements with local agencies to provide financial incentives to 28 projects that recover contaminated groundwater with total contract yields of about 125,000 acre-feet per year. Total groundwater recovery use under executed agreements with Metropolitan was estimated to be approximately 53,700 acre-feet in calendar year 2022. Additionally, 81,000 acre-feet of recovered groundwater was produced by local agencies through other independently funded and developed sources in 2022.

**Surface Runoff.** Local surface water resources consist of runoff captured in storage reservoirs and diversions from streams. Since 2013, [member](#) agencies have used an average of 76,000 acre-feet per calendar year of local surface water. Local surface water supplies are heavily influenced by year to year local weather conditions, varying from a high during such period of 124,000 acre-feet in calendar year 2020 to a low of 37,500 acre-feet in calendar year 2016.

Stormwater is another local water supply and is surface runoff that is captured and contained on-site as opposed to captured in storage reservoirs or diverted from streams. In 2020, Metropolitan

launched two pilot programs to better understand the costs and benefits of stormwater capture, yield, and use. One program examines opportunities to capture stormwater for direct use and the other explores stormwater capture for groundwater recharge. The programs accepted applications through December 31, 2021. Together, Metropolitan committed up to \$12.5 million under these programs. The projects funded under these programs are in either the design, construction, or monitoring phase. The pilot programs are expected to last at least five years, including the construction and monitoring phases. The data collected during the pilot programs will assist Metropolitan in evaluating the water supply benefits of stormwater capture and provide guidance for future funding strategies.

***Recycled Water-Local Agency Projects.*** Metropolitan has supported recycled water use to offset water demands and improve regional supply reliability by offering financial incentives to agencies for production and sales of recycled water since 1982 through the LRP. Since the inception of the LRP, Metropolitan has executed agreements with local agencies to provide financial incentives to 88 recycled water projects with total expected contract yields of about 357,000 acre-feet per year. During fiscal year ~~2022-23~~2022-23, Metropolitan provided incentives for approximately 56,500 acre-feet of recycled water under these agreements. Additionally, 422,000 acre-feet of recycled water (including wastewater discharged to the Santa Ana River that percolates into downstream groundwater basins) was produced in fiscal year ~~2022-23~~2022-23 by local agencies through other independently funded and developed sources. Total recycled water use under executed agreements with Metropolitan currently in place is estimated to be approximately 54,000 acre-feet in calendar year 2024.

Metropolitan also supports recycled water conversions for property owners through the On-Site Retrofit Program. The On-Site Retrofit Program provides a financial incentive of \$195 per acre-foot of estimated offset water for ten years to property owners who convert an imported water demand to a recycled water system. ~~In January 2022, Metropolitan's Board authorized staff to increase the incentive term from five to ten years (\$195/acre foot for 10 years) in recognition of the long lifespan of recycled water infrastructure.~~ As of March 1, 2024, the On-Site Retrofit Program has provided \$13.17 million to 499 projects that offset approximately 14,010 acre-feet per year of imported water supplies.

***Recycled Water-Metropolitan Pure Water Southern California Program.*** Since 2010, Metropolitan has been evaluating the potential and feasibility of implementing a regional recycled water program, now referred to as Pure Water Southern California ("PWSC"). Chronic drought conditions have resulted in significant reductions in local surface supplies and groundwater production and have increased the need for recharge supplies to groundwater and surface water reservoirs to improve their sustainable yields and operating integrity. In 2015, Metropolitan executed an agreement with the Los Angeles County Sanitation Districts ("LACSD") to implement a demonstration project and to establish a framework of terms and conditions of PWSC. The objectives of PWSC are to enable the potential reuse of up to 150 million gallons per day ("mgd") of cleaned wastewater effluent from LACSD's A.K. Warren Facility (formerly the Joint Water Pollution Control Plant ). Purified water from a new advanced treatment plant could be delivered through pipelines to the region's groundwater basins, industrial facilities, and two of Metropolitan's water treatment plants.

Construction of a 0.5-mgd advanced water treatment demonstration plant was approved in 2017 and was completed in September 2019. Testing and operation of the plant began in October 2019 to confirm treatment costs and provide the basis for regulatory approval of the proposed treatment process. The tertiary membrane bioreactor ("MBR") first testing phase was completed in 2021 and has been followed by secondary MBR testing which was completed in 2023. The testing will form the basis for the design, operation, and optimization of the advanced treatment plant and will help inform Metropolitan's Board decision whether to move forward with, the potential full-scale program. If approved, design and construction of PWSC would be expected to take approximately eight years and occur in two phases. Phase 1, which, if completed, would be expected to have a capacity of approximately 115 ~~million gallons~~



~~per day (“mgd”);~~ and Phase 2, which if completed, would be expected to increase capacity by approximately 35 mgd, for a total of treatment plant capacity of 150 mgd.

If implemented, PWSC as proposed would have the flexibility to produce purified water suitable for Direct Potable Reuse (“DPR”) through raw water augmentation at two of Metropolitan’s treatment plants (Weymouth and Diemer). The SWRCB Division of Drinking Water (“DDW”) has proposed new regulations for DPR in California that would allow recycled water to be used directly in the potable water system without first passing through an environmental buffer, such as groundwater or a lake, prior to using it as potable water. ~~If the regulations are adopted~~ On December 19, 2023, the SWRCB approved a resolution to adopt the final DPR regulations. The regulations were subsequently approved by California’s Office of Administrative Law on August 6, 2024, and will be effective on October 1, 2024. With these new regulations in place, a greater percentage of water produced by PWSC ~~will~~would be available for the potable water ~~systems~~system.

On November 10, 2020, Metropolitan’s Board voted to begin environmental planning work on PWSC. The Notice of Preparation was published in September 2022 with scoping meetings held in October 2022. The draft EIR is scheduled for completion in the ~~fourth~~first quarter of ~~2024~~2025, with an action requesting ~~board~~Board approval anticipated ~~in the fall/winter of 2025.~~ to occur at the end of 2025 or the beginning of 2026. The biennial budget for fiscal years 2024-25 and 2025-26 includes \$9 million for planning costs of PWSC as part of the operations and maintenance budget.

Metropolitan has also been active in pursuing partnerships with other agencies. In November 2020, Metropolitan and LACSD executed an amendment to the existing collaboration agreement to contribute up to approximately \$4.4 million for the environmental planning phase costs. In December 2020, Metropolitan and SNWA executed a funding agreement under which SNWA will contribute up to \$6 million for the environmental planning costs for PWSC. In the event either SNWA or Metropolitan decides not to proceed or participate in PWSC in the future, SNWA’s financial contribution to PWSC’s environmental planning would be returned by Metropolitan. In 2021, Metropolitan signed an agreement with the Arizona Parties (Central Arizona Project and Arizona DWR) for a \$6 million financial contribution similar to the SNWA agreement. Overall, Metropolitan has received ten letters of interest in the project from 15 different agencies.

In addition, Metropolitan received \$80 million in grant funding for PWSC from the State of California in the State’s fiscal year ~~2022-23~~2022-23 budget. Work performed under this funding will continue into 2026. In May 2024, the Bureau of Reclamation announced they intend to grant Metropolitan \$99 million to advance the PWSC planning and design efforts. Funding provided from the federal government through this grant can only provide 25 percent of the costs, thus requiring 75 percent in non-federal matching funds. Metropolitan is working to identify various sources of matching funds that will help utilize this grant funding.

~~Environmental planning phase work for PWSC began in fiscal year 2020-21 and is expected to continue through fiscal year 2025-26. The proposed biennial budget for fiscal years 2024-25 and 2025-26 includes \$9 million for planning costs of PWSC as part of the operations and maintenance budget.~~

If approved, the total costs of design and construction of PWSC are currently estimated to be approximately \$6.4 billion (in 2023 dollars). If ultimately undertaken, the amount of the costs of design and construction of PWSC costs that may be incurred by Metropolitan would be dependent on, among other things, the ultimate design and timing of any approved project, the availability and receipt of potential grant funding sources, and the level of contributions from potential PWSC partners that may participate in any such approved project. The amount of any partner carried costs has not been determined at this time.

Metropolitan's Board has not approved PWSC and the costs of design and construction are not included in Metropolitan's Capital Investment Plan ("CIP"). However, for planning purposes, Metropolitan has made certain assumptions about the potential capital costs that may be incurred by Metropolitan over the ten-year financial forecast provided in its ~~proposed~~-biennial budget for fiscal ~~year-~~2024-25 ~~years 2024-25~~ and ~~2025-26~~2025-26, including with respect to projected future debt financing for a portion of PWSC costs, certain assumptions regarding the potential amounts of and sources of funding for PWSC that may be available from grants and contributions by potential partners. Metropolitan's financial projections for fiscal years ~~2024-25~~2024-25 through 2028-29 assume that if PWSC is approved and implemented a portion of the capital costs incurred by Metropolitan in connection with any approved project would be financed with proceeds of revenue bonds to be issued by Metropolitan during the five-year projection period. See "CAPITAL INVESTMENT PLAN" for additional information regarding the capital expenditures Metropolitan has assumed may be incurred with respect to PWSC (if approved) in addition to its projected CIP expenditures for fiscal years ~~2023-24~~2024-25 through 2028-29. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A for additional information regarding the future debt financing Metropolitan has assumed may be incurred with respect to PWSC (if approved).

***Seawater Desalination.*** Metropolitan supports seawater desalination as a part of the region's supply portfolio as well as a mechanism to increase regional supply resiliency under different climate change and population growth scenarios.

In 2007, the Board approved Metropolitan's role as a regional facilitator for seawater desalination. This includes supporting local projects during permitting and providing technical assistance when requested. Metropolitan's regional facilitation includes active participation in organizations advocating for desalination and salinity management, including CalDesal and the Southern California Salinity Coalition within California, and the Multi-State Salinity Coalition nationally. Metropolitan also participates in the National Alliance for Water Innovation ("NAWI"). NAWI is a Department of Energy-led, \$100 million research effort focused on accelerating the commercialization of early-stage desalination technologies. New technologies developed by NAWI could reduce cost and environmental barriers to seawater desalination in California.

In October 2014, seawater desalination projects became eligible for funding under Metropolitan's LRP. There is currently one local seawater desalination project in the permitting stage that could receive LRP incentives. South Coast Water District ("South Coast") is proposing a 5-mgd Doheny Ocean Desalination project (the "Doheny Project") in south Orange County. South Coast has obtained key State permits for the Doheny Project and is expected to award a contract to a progressive design build consultant in 2024. The 50-mgd Huntington Beach Seawater Desalination is no longer under development after failing to obtain a coastal development permit. LRP applications for potential projects would be considered by Metropolitan's Board after they are permitted, free of litigation, and authorized to proceed by their developing agencies.

In 2015, Poseidon Resources LLC ("Poseidon") began operating the 56,000 acre-foot per year (50-mgd) Carlsbad Desalination Project and associated pipeline. SDCWA has a purchase agreement with Poseidon for a minimum of 48,000 acre-feet per year with an option to purchase an additional 8,000 acre-feet per year.

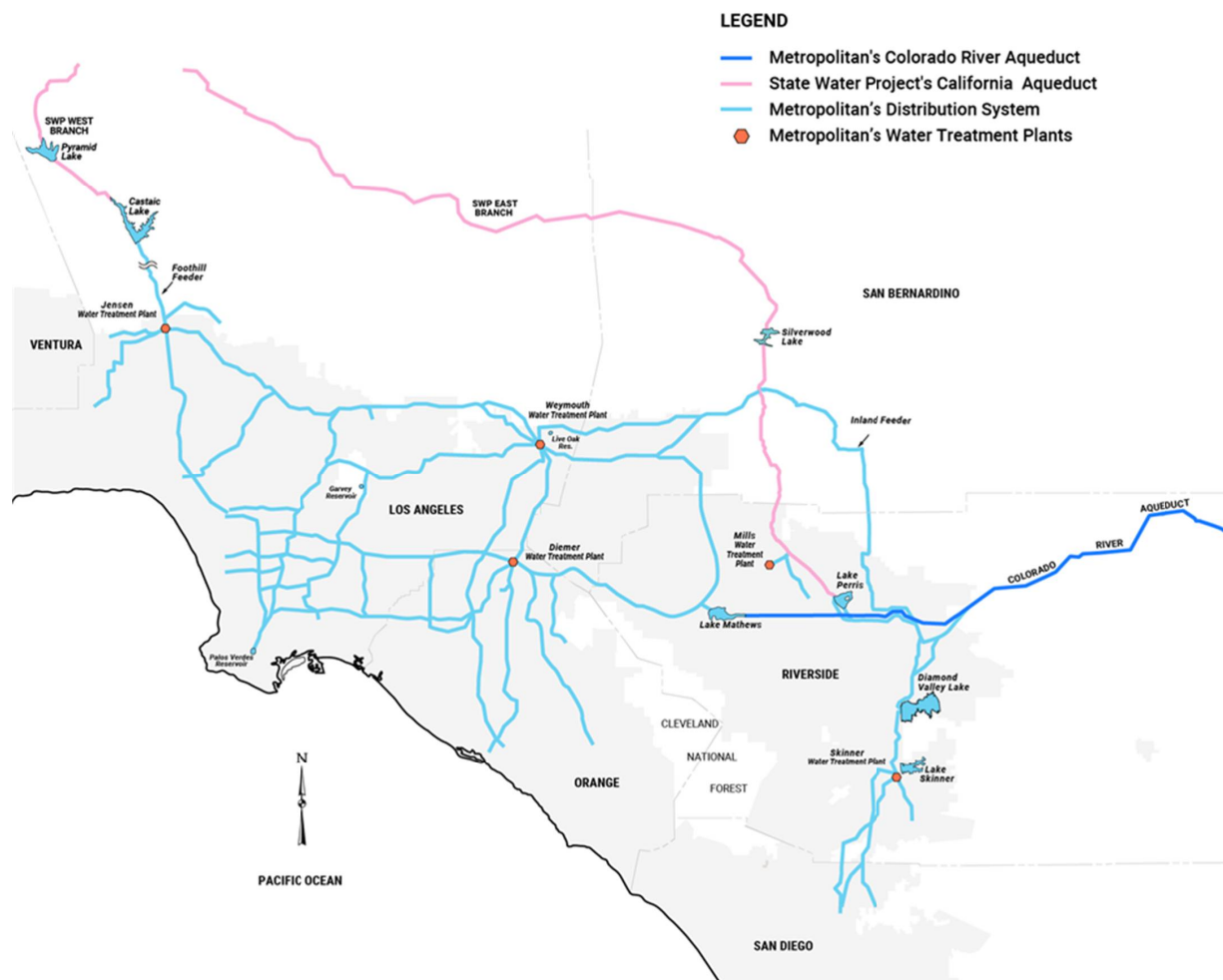
## METROPOLITAN'S WATER DELIVERY SYSTEM

### Primary Facilities and Method of Delivery

Metropolitan's water delivery system is made up of three basic components: the Colorado River Aqueduct (CRA), the California Aqueduct of the State Water Project, and Metropolitan's water distribution system. Metropolitan's delivery system is integrated and designed to meet the differing needs of its member agencies. Metropolitan seeks redundancy in its delivery system to assure reliability in the event of an outage. Improvements are designed to increase the flexibility of the system. Since local sources of water are generally used to their maximum each year, growth in the demand for water is partially met by Metropolitan. The operation of Metropolitan's water system is being made more reliable through the rehabilitation of key facilities as needed, improved preventive maintenance programs and the upgrading of Metropolitan's operational control systems. See "CAPITAL INVESTMENT PLAN" in this Appendix A.

The graphic that follows depicts Metropolitan's water delivery system, which is further described below.

## METROPOLITAN'S WATER DELIVERY SYSTEM



Source: Metropolitan.

**Colorado River Aqueduct.** Work on the CRA commenced in 1933 and water deliveries started in 1941. Additional facilities were completed by 1961 to meet additional requirements of Metropolitan's member agencies. The CRA is 242 miles long, starting at the Lake Havasu intake and ending at the Lake Mathews terminal reservoir. Metropolitan owns all the components of the CRA, which include five pumping plants, 64 miles of canal, 92 miles of tunnels, 55 miles of concrete conduits, four reservoirs, and 144 underground siphons totaling 29 miles in length. The pumping plants lift the water approximately 1,617 feet over several mountain ranges to Metropolitan's service area. See "METROPOLITAN'S WATER SUPPLY-Colorado River Aqueduct" in this Appendix A.

**State Water Project.** The initial portions of the State Water Project serving Metropolitan were completed in 1973. The State Water Project, managed and operated by DWR, is one of the largest water supply projects undertaken in the history of water development. The State Water Project facilities dedicated to water delivery consist of a complex system of dams, reservoirs, power plants, pumping plants, canals and aqueducts to deliver water. Water from rainfall and snowmelt runoff is captured and stored in State Water Project conservation facilities and then delivered through State Water Project transportation facilities to water agencies and districts located throughout the Upper Feather River, Bay Area, Central Valley, Central Coast, and Southern California. Metropolitan receives water from the State Water Project through the main stem of the aqueduct system, the California Aqueduct, which is 444 miles long and includes 381 miles of canals and siphons, 49 miles of pipelines or tunnels and 13 miles of channels and reservoirs.

As described herein, Metropolitan is the largest (in terms of number of people it serves, share of State Water Project water it has contracted to receive, and percentage of total annual payments made to DWR therefor) of 29 agencies and districts that have entered into contracts with DWR to receive water from the State Water Project. Contractors pay all costs of the facilities in exchange for participation rights in the system. Thus, Contractors also have the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. See "METROPOLITAN'S WATER SUPPLY-State Water Project" in this Appendix A.

**Distribution System.** Metropolitan's distribution system is a complex network of facilities which routes water from the CRA and State Water Project to Metropolitan's member agencies. The water distribution system includes components that were built beginning in the 1930s and through the present. Metropolitan owns all of these components, including nine reservoirs, five regional treatment plants, over 800 miles of transmission pipelines, feeders and canals, and 15 hydroelectric plants with an aggregate capacity of 130 megawatts.

In 2022, Metropolitan committed to equivalent water supply reliability for all member agencies. Based on performance during the 2020-2022 drought, improvements to the distribution system are planned or underway to achieve this commitment.

**Diamond Valley Lake.** Diamond Valley Lake, a man-made reservoir, built, owned and operated by Metropolitan, is located southwest of the city of Hemet, California. Excavation at the project site began in May 1995. Diamond Valley Lake was completed in March 2000, at a total cost of \$2 billion, and was in full operation in December 2001. It covers approximately 4,410 acres and has capacity to hold approximately 810,000 acre-feet or 265 billion gallons of water. Imported water is delivered to Diamond Valley Lake during surplus periods. The reservoir provides more reliable delivery of imported water from the State Water Project during summer months, droughts and emergencies. In addition, Diamond Valley Lake can provide more than one-third of Southern California's water needs from storage for approximately six months after a major emergency (assuming that there has been no impairment of Metropolitan's internal distribution network). See the table entitled "Metropolitan's Water Storage

Capacity and Water in Storage” under “METROPOLITAN’S WATER SUPPLY–Storage Capacity and Water in Storage” in this Appendix A for the amount of water in storage at Diamond Valley Lake.

***Inland Feeder.*** Metropolitan’s Inland Feeder is a 44-mile-long conveyance system that connects the State Water Project to Diamond Valley Lake and the CRA. Construction of the Inland Feeder was completed in September 2009 at a total cost of \$1.14 billion. The Inland Feeder provides greater flexibility in managing Metropolitan’s major water supplies and allows additional 1,000 cfs from the East Branch of the California Aqueduct to be moved into Metropolitan’s service area, primarily into Diamond Valley Lake for storage.

***Operations Control Center.*** Metropolitan’s water conveyance and distribution system operations are coordinated from the Eagle Rock Operations Control Center (the “OCC”) centrally located in Los Angeles County. The OCC plans, balances and schedules daily water and power operations to meet member agencies’ demands, taking into consideration the operational limits of the entire system.

### **Water Quality and Treatment**

***General.*** Metropolitan filters and disinfects water at five water treatment plants: the F.E. Weymouth Treatment Plant in La Verne, the Joseph Jensen Treatment Plant in Granada Hills, the Henry J. Mills Treatment Plant in Riverside, the Robert B. Diemer Treatment Plant in Yorba Linda, and the Robert A. Skinner Treatment Plant in Winchester. In recent years, the plants typically treat between 0.8 billion and 1.0 billion gallons of water per day and have a maximum capacity of approximately 2.4 billion gallons per day. Approximately 50 percent of Metropolitan’s water deliveries are treated water.

Metropolitan is operating in compliance with current State and federal drinking water regulations and permit requirements.

Federal and state regulatory agencies routinely identify potential contaminants and establish new water quality standards. Metropolitan continually monitors new water quality laws and regulations and frequently comments on new legislative proposals and regulatory rules. New water quality standards could affect the availability of water and impose significant compliance costs on Metropolitan. The federal Safe Drinking Water Act (“SDWA”) establishes drinking water quality standards, monitoring, and public notification and enforcement requirements for public water systems. To achieve these objectives, the U.S. Environmental Protection Agency (the “USEPA”), as the lead regulatory authority, promulgates national drinking water regulations and develops the mechanism for individual states to assume primary enforcement responsibilities. The SWRCB DDW has primary responsibility for the regulation of public water systems in the State. Drinking water delivered to customers must comply with statutory and regulatory water quality standards designed to protect public health and safety. Metropolitan operates its five water treatment plants under a domestic water supply permit issued by DDW, which is amended, as necessary, such as when significant facility modifications occur. Metropolitan operates and maintains water storage, treatment and conveyance facilities, implements watershed management and protection activities, performs inspections, monitors drinking water quality, and submits monthly and annual compliance reports. In addition, public water system discharges to state and federal waters are regulated under general National Pollutant Discharge Elimination System (“NPDES”) permits. These NPDES permits, which the SWRCB issued to Metropolitan, contain numerical effluent limitations, monitoring, reporting, and notification requirements for water discharges from the facilities and pipelines of Metropolitan’s water supply and distribution system.

***Groundwater.*** As described herein, Metropolitan has established five groundwater storage programs with other water agencies that allow Metropolitan to store available supplies in the Central Valley for return later. These programs help manage supplies by putting into storage surplus water in years when it is available and converting that to dry year supplies to be returned when needed. These



programs can also provide emergency supplies. See “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs –State Water Project Agreements and Programs” and “–Storage Capacity and Water in Storage” in this Appendix A. Generally, water returned to Metropolitan under these groundwater storage programs (“return water”) may be made available in one of two ways: by direct pump back from a groundwater well to the California Aqueduct or, when available, by an exchange with a supply already in the aqueduct. Water quality issues can arise in water returned by direct pumping as a result of the presence of a water quality contaminant in the groundwater storage basin and due to the imposition of stricter water quality standards by federal or State regulation.

In 2017, the SWRCB adopted a regulation setting an MCL for TCP of five parts per trillion (“ppt”) based upon a running annual average. TCP is a manufactured chemical used as a cleaning and degreasing solvent and has been found at industrial and hazardous waste sites. It is also associated with pesticide products used in agricultural practices. TCP has been recognized by the State of California as a likely human carcinogen. In January 2018, the new regulation went into effect. Under the new regulation, drinking water agencies are required to perform quarterly monitoring of TCP. There have been no detections of this chemical in Metropolitan’s system. However, TCP has been detected above the MCL in groundwater wells of three of Metropolitan’s groundwater storage program partners through monitoring performed by these agencies. Levels detected in groundwater wells of Arvin-Edison are the highest and impact Metropolitan’s ability to put water into storage and take return water under that program. As noted under “METROPOLITAN’S WATER SUPPLY–Water Transfer, Storage and Exchange Programs –State Water Project Agreements and Programs – *Arvin-Edison/Metropolitan Water Management Program*” in this Appendix A, Metropolitan has suspended the return of groundwater by direct pump back into the State Water Project from this program until the water quality concerns can be further evaluated and managed. When surface water storage is available to Arvin-Edison, it may provide that water to Metropolitan in lieu of groundwater and deduct an equivalent amount from Metropolitan’s groundwater storage account. In 2023, Metropolitan took return of approximately 18,900 acre-feet via surface water exchanges under this arrangement. In 2024, Metropolitan is exploring opportunities to access stored water via surface water exchanges. However, the potential exchange amount to be available through surface water exchanges is significantly less than Metropolitan’s contractual capacity. The levels of TCP detected at Metropolitan’s other groundwater storage programs are much lower and impact fewer groundwater wells. Metropolitan is evaluating the effects of TCP on the return capability of those programs.

Possible remediation measures include, for example, return water with other surface water supplies, removal of wells from service, return water by exchange, or treatment. Additional capital and/or operation and maintenance costs could be incurred by Metropolitan in connection with remediation options, but the magnitude of such costs is not known at this time. To the extent return water under one or more groundwater storage programs could not be utilized due to groundwater quality, the available supply of stored water during extended drought or emergency periods would be reduced.

**Perchlorate.** Perchlorate is both a naturally occurring and man-made chemical used in the production of rocket fuel, missiles, fireworks, flares and explosives. It is also sometimes present in bleach and in some fertilizers. Groundwater in the Henderson, Nevada ([“Henderson”](#)) area has been contaminated with perchlorate as a result of two former chemical manufacturing facilities, and there are ongoing remediation programs to mitigate its release into the Las Vegas Wash and the downstream Colorado River. On July 21, 2020, the USEPA withdrew its 2011 determination to regulate perchlorate under the SDWA and issued a new determination that perchlorate does not meet the statutory criteria for regulation. Thus, there is currently no federal drinking water standard for perchlorate, which could potentially affect remediation efforts at two sites in the Henderson area (described below). The Natural Resources Defense Council challenged the USEPA’s action, and the U.S. Court of Appeals for the District of Columbia ruled in May 2023 that the USEPA must regulate perchlorate. In January 2024, the USEPA agreed to propose a maximum contaminant level goal (“MCLG”) and a national primary

drinking water regulation (“NPDWR”) for perchlorate by November 21, 2025, and to publish a final MCLG and NPDWR for perchlorate by May 21, 2027.

California is reviewing its MCL for perchlorate in light of a revised Public Health Goal (“PHG”) of 1 µg/L adopted in February 2015. PHGs are established by the California Office of Environmental Health Hazard Assessment (“OEHHA”) and used as the basis for the development of a State regulation setting an MCL. The SWRCB is required to set an MCL for a chemical as close to the PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health. DDW is conducting an in-depth risk management analysis to determine whether to revise the perchlorate MCL of 6 µg/L. The detection limit for purposes of reporting (“DLR”) for perchlorate was lowered to 2 µg/L in July 2021, and it was further reduced to 1 µg/L in January 2024. With a revised DLR, new occurrence data can be collected to support the development of a revised California MCL for perchlorate, if appropriate. If California’s MCL for perchlorate is revised to a level less than 6 µg/L, it will be important for the oversight agencies, the USEPA and the Nevada Division of Environmental Protection, to ensure that the perchlorate contamination originating at the two former chemical manufacturing facilities in Henderson, ~~Nevada~~ is remediated to a level that minimizes impacts to the Colorado River and that perchlorate concentrations at Metropolitan’s Whitsett Intake at Lake Havasu stay at levels below California’s MCL. Metropolitan was successful in 2023 in convincing the USEPA and the Nevada Division of Environmental Protection to require the Nevada Environmental Response Trust (“NERT,” which is responsible for cleaning up the former site of one of the chemical manufacturers in Henderson, ~~Nevada~~) to use California’s current MCL of 6 µg/L for perchlorate, California’s PHG for perchlorate of 1 µg/L, California’s current MCL of 50 µg/L for total chromium, and California’s proposed MCL of 10 µg/L for hexavalent chromium as to-be-considered criteria (“TBCs”) for remedial action objectives. The designation of these regulatory levels as TBCs requires the NERT to explicitly consider these values throughout the upcoming feasibility study and to follow all applicable guidance related to doing so. The feasibility study is the mechanism for the development, screening, and detailed evaluation of alternative remedial actions. Metropolitan will continue to monitor the cleanup of the two former chemical manufacturing facilities in Henderson, ~~Nevada~~ and to monitor and participate in federal and state rulemaking proceedings.

**PFAS.** Per- and poly-fluoroalkyl substances (“PFAS”) are substances widely used in consumer and industrial products such as fabrics, carpets, firefighting foams, food packaging, and nonstick cookware and are known for their nonstick, waterproof, and heat and stain resistant properties. Perfluorooctane sulfonate (“PFOS”) and perfluorooctanoic acid (“PFOA”) are the two most common synthetic organic chemicals in the group of compounds referred to as PFAS. In August 2019, DDW lowered the notification levels (“NLs”) for PFOS from 13 ppt to 6.5 ppt and for PFOA from 14 ppt to 5.1 ppt. NLs are non-regulatory, precautionary health-based measures for concentrations of chemicals in drinking water that warrant notification and further monitoring and assessment. If a chemical concentration is greater than its NL in drinking water that is provided to consumers, DDW recommends that the utility inform its customers and consumers about the presence of the chemical, and about health concerns associated with exposure to it. In February 2020, DDW lowered the response levels (“RLs”) for PFOA and PFOS from 70 ppt for individual or combined concentrations to 10 ppt for PFOA and 40 ppt for PFOS. An RL is set higher than an NL and represents a chemical concentration level at which DDW recommends a water system consider taking a water source out of service or providing treatment if that option is available to them. Legislation that took effect on January 1, 2020 (California Assembly Bill 756) requires that water systems that receive a monitoring order from the SWRCB and detect levels of PFAS that exceed their respective RL must either take a drinking water source out of use or provide specified public notification if they continue to supply water above the RL. In March 2021, DDW issued an NL of 0.5 parts per billion (“ppb”) and an RL of 5 ppb for perfluorobutane sulfonic acid (“PFBS”), another PFAS chemical. In ~~July 2021, OEHHA proposed PHGs for PFOA at 0.007 ppt and PFOS at 1 ppt, the next step in the process of establishing MCLs in drinking water. In July 2023, OEHHA released, for a second public comment period, proposed draft PHGs for PFOA at 0.007 ppt and PFOS at 1 ppt. In~~



October 2022, the SWRCB issued an NL of 3 ppt and an RL of 20 ppt for perfluorohexane sulfonic acid (“PFHxS”). Also in October 2022, the SWRCB issued a general order requiring select public water systems to monitor for PFAS. In April 2024, OEHHH adopted PHGs for PFOA at 0.007 ppt and PFOS at 1 ppt, a further step in the process of establishing MCLs in drinking water.

~~There are currently no federal regulations on the level of PFAS allowed in treated drinking water.~~ The USEPA established non-enforceable and non-regulatory health advisories in 2016 for PFOA and PFOS at single or combined concentrations of 70 ppt in treated drinking water. These advisories indicate the level of drinking water contamination below which adverse health effects are not expected to occur. On January 19, 2021, the USEPA announced that it is considering whether to designate PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA”) and/or hazardous waste under the Resource Conservation and Recovery Act (“RCRA”). On February 22, 2021, the USEPA announced its proposed revisions to the Fifth Unregulated Contaminant Monitoring Rule (“UCMR 5”) for public water systems which includes monitoring for 29 PFAS in drinking water. On March 3, 2021, the USEPA published its final regulatory determination to regulate PFOA and PFOS in drinking water. ~~Following such determination, the USEPA had 24 months to propose MCLGs and MCLs for PFOA and PFOS. On March 14, 2023~~ On April 10, 2024, the USEPA announced proposed final regulations for six PFAS, including establishing the first national drinking water standards for six PFAS. The regulations will be effective 60 days after they are published in the Federal Register and set limits for five individual PFAS: PFOA, PFOS, perfluorononanoic acid (“PFNA”), hexafluoropropylene oxide dimer acid (commonly known as “GenX chemicals”), PFHxS, and PFBS. The USEPA is proposing and PFHxS. In addition, the regulations set a hazard index MCL for any two or more of four PFAS as a mixture: PFNA, PFHxS, GenX chemicals, and PFBS. Under the regulations, the USEPA has set: (1) legally enforceable MCLs of 4 ppt for PFOA and PFOS; (2) non-enforceable health-based MCLGs for PFOA and PFOS at 0; and (3) a MCL and MCLG of 10 ppt for PFNA, PFHxS and GenX chemicals; and (4) a hazard index of 1.0 as MCLs and MCLGs for any mixture containing two or more of the four PFAS: PFNA, PFHxS, PFBS, and/or GenX chemicals, and any mixture containing one or more of these four PFAS PFBS. The hazard index is a tool used to evaluate health risks from simultaneous exposure to mixtures of certain multiple chemicals. To determine the hazard index for these four PFAS, water systems would monitor and compare the amount of each of the four PFAS in drinking water to its associated Health Based Water Concentration (“HBWC”), which is the level below which no health effects are expected for that PFAS. Water systems would add the comparison values value for each PFAS (expressed as a fraction) contained within the mixture. If the sum value is greater than 1.0, it would be an exceedance of the proposed hazard index MCL for PFNA, PFHxS, GenX chemicals, PFNA, and PFBS. The proposed adopted rule would require public water systems to monitor for these the regulated PFAS, notify the public if monitoring detects such PFAS at levels that exceed the proposed regulatory standards, and reduce the levels of such PFAS in drinking water if they exceed the proposed standards. The USEPA requested public comment on the proposed regulation, and the public comment period on the proposed regulation closed on May 30, 2023, 60 days after the date of publication in the Federal Register. The proposed PFAS regulation does not require any action until it is finalized. The USEPA has until September 2024 to finalize the MCLs for these six PFAS. Regulated public water systems will have three years to complete their initial monitoring for these PFAS and must include information about the results of their monitoring in their annual water quality reports to customers. Public water systems that detect PFAS above the new standards will have five years to implement solutions to reduce the PFAS to meet the standards.

On October 18, 2021, the USEPA published a “PFAS Strategic Roadmap: EPA’s Commitments to Action, 2021-2024” (PFAS Roadmap). The document outlines four main drinking water actions that the USEPA intends to complete from 2021 to 2024: (1) conduct nationwide monitoring for PFAS in drinking water as part of the UCMR 5 process; (2) establish national primary drinking water regulations for PFOA and PFOS by Fall 2023; (3) publish health advisories for GenX chemicals and PFBS by Spring 2022; and (4) publish updates to PFAS analytical methods to monitor drinking water by Fall 2024. On

December 27, 2021, the USEPA published the final UCMR 5 for public water systems which includes monitoring for 29 PFAS in drinking water. UCMR 5 requires pre-sampling preparations in 2022, sample collection from 2023-2025, and reporting of final results through 2026. On June 15, 2022, the USEPA established new interim, updated drinking water health advisories for PFOA and PFOS to replace the health advisories established in 2016. The non-enforceable and non-regulatory interim, updated lifetime health advisories for PFOA and PFOS in drinking water are established at concentrations of 0.004 ppt and 0.02 ppt, respectively. In its announcement, the USEPA noted that such concentrations are below the ability to detect under current detection methods. On June 15, 2022, the USEPA also established final health advisories for GenX and PFBS of 10 ppt and 2,000 ppt, respectively. On September 6, 2022, the USEPA issued a proposed rule designating PFOA and PFOS as hazardous substances under CERCLA. On April 13, 2023, EPA requested public input on whether to designate: (i) seven additional PFAS (PFBS, PFHxS, PFNA, GenX, PFBA, PFHxA, and perfluorodecanoic acid (“PFDA”), (ii) precursors to these seven PFAS and to PFOA and PFOS, and (iii) groups or categories of PFAS, as hazardous substances under CERCLA. Metropolitan provided comments on these proposals and urged USEPA to further evaluate the potentially significant impacts of the proposed CERCLA designation on water and wastewater utilities. On February 8, 2024, the USEPA issued two proposed rules: (1) listing 9 PFAS (PFOA, PFOS, PFBS, HFPO-DA or GenX, PFNA, PFHxS, PFDA, PFHxA, and PFBA) as hazardous constituents under the RCRA; and (2) amending RCRA’s definition of “hazardous waste” to clarify the USEPA’s authority to address releases of all substances that meet the definition of hazardous waste under RCRA. These two proposed rules may be the first step in the USEPA possibly naming these PFAS as RCRA hazardous waste. Listing any PFAS as hazardous waste under RCRA would result in the automatic designation of that PFAS as a hazardous substance under CERCLA. Metropolitan will continue to monitor and participate in federal and state rulemaking proceedings.

PFOA and PFBS have not been detected in Metropolitan’s imported or treated water supplies. In 2019, 2020, 2021, and 2022, Metropolitan detected in its supplies low levels of PFHxA, which is not acutely toxic or carcinogenic and is not currently regulated in California or at the federal level. In 2021, Metropolitan detected for the first time in its supplies low levels of perfluorobutanoic acid (“PFBA”), perfluoropentanoic acid (“PFPeA”), and PFOS. Low levels of PFBA and PFPeA were again detected in Metropolitan’s supplies in 2022. Metropolitan has not identified any specific sources of these PFAS that have reached its water supplies, and the concentrations detected to date are well below the State’s required reporting values.

Although Metropolitan has not identified any specific sources of these PFAS in its supplies, PFHxA is a common PFAS believed to be an impurity that is inadvertently produced during the manufacture of other PFAS. It is also a breakdown product from lubricants, coatings on food packaging, and household products. PFOS is widely used in surface treatments of carpets, textiles, leather, paper, and cardboard, as a surfactant in extinguishing foams, as a mist suppressant in chrome plating, and as a surfactant in the mining and oil industries. PFBA is a breakdown product of other PFAS that are used in stain-resistant fabrics, paper food packaging, and carpets; it is also used for manufacturing photographic film. It has been used as a substitute for longer chain perfluoroalkyl carboxylic acids in consumer products. PFPeA is a breakdown product of stain- and grease-proof coatings on food packaging, couches, and carpets. PFOA and PFOS have also been detected in groundwater wells in the region, including those of certain member agencies. Metropolitan may experience increased demands for its imported water to help offset the potential loss of any affected local supplies.

More than ~~5,600~~7,000 cases regarding PFAS in aqueous film-forming foams (“AFFF”) have been filed in the AFFF Multi-District Litigation (“MDL”) Master Docket No. 2:18-mn-2873-RMG (the “AFFF MDL”) since 2018. On June 2, 2023, E.I. Du Pont de Nemours and Company (n/k/a EIDP, Inc.), DuPont de Nemours Inc., The Chemours Company, The Chemours Company FC, LLC, and Corteva, Inc. (collectively, “DuPont”) announced a proposed settlement with all eligible public water systems (“PWSs”) in which DuPont agreed to pay \$1.185 billion (the “DuPont Settlement”). On June 22, 2023,

the 3M Company (“3M”) announced a proposed settlement with eligible PWSs in which, starting in July 2024, 3M would pay PWSs between \$10.5 billion and \$12.5 billion (“3M Settlement”), which would be the largest contaminated drinking water settlement in U.S. history. On April 12, 2024, Tyco Fire Products LP (“Tyco”) announced a proposed class action settlement with all eligible PWSs where it agreed to pay \$750 million (“Tyco Settlement”). The class of PWSs in the Tyco Settlement includes any PWS that has detected PFAS in its drinking water sources as of May 15, 2024. On May 21, 2024, BASF Corporation agreed to pay \$316.5 million to all eligible PWSs as part of a proposed class action settlement (“BASF Settlement”). The class of PWSs in the BASF Settlement is the same as the class of PWSs in the Tyco Settlement. The terms of the Tyco and BASF Settlements are substantially similar to those in the 3M and DuPont Settlements. All eligible PWSs will be automatically included in the settlements and bound by the settlements’ very broad release provisions unless they “opt out” by the deadlines applicable to the respective settlements. The funds in ~~both each~~ settlement ~~proposals~~proposal would then be allocated among all eligible PWSs that do not “opt out” and who submit claims to the funds. ~~It is estimated the~~The settlement ~~class~~classes in each of these settlements could include ~~over 12,000 PWSs. The methodology for the allocation of settlement funds among claimants has not yet been established.~~thousands of PWSs.

In order to preserve its rights to pursue independent legal action for potential future claims, on November 14, 2023, Metropolitan’s Board voted to opt out of both the DuPont and 3M Settlements. Metropolitan submitted its opt-out requests by the deadlines, ~~has and~~ confirmed its ~~request to opt out of the 3M Settlement has been accepted, and is in the process of confirming its request~~requests to opt out of the DuPont ~~Settlement was and~~ 3M Settlements have been accepted. However, Metropolitan continues to evaluate the potential impact of one of the parties’ guidance documents regarding the settlements which the judge approved and which indicates that even if a wholesaler opts out of the settlements, if its retail customer is a settlement class member, the broad releases would extend to the wholesaler as to the water it provided to the settlement class member except to the extent the wholesaler shows it had the obligation for and bore unreimbursed PFAS-treatment costs for that water independent of the retail customer. The judge granted final approval of the DuPont Settlement on February 8, 2024, ~~but has not yet granted final.~~ Final approval of the 3M Settlement ~~was granted on March 29, 2024.~~ On June 11, 2024, the judge granted preliminary approval of the Tyco Settlement, and on July 3, 2024, granted preliminary approval of the BASF Settlement. The last day to opt out of the Tyco Settlement is September 23, 2024, and the last day to opt out of the BASF Settlement is October 15, 2024. The final fairness hearing on the Tyco Settlement and the BASF Settlement is scheduled for November 1, 2024.

## Seismic Considerations and Emergency Response Measures

**General.** Metropolitan's system overlays a region of high seismicity. The conveyance and distribution systems traverse numerous faults capable of generating large magnitude earthquakes and some of Metropolitan’s treatment plants, pressure control facilities, and other structures have the potential of experiencing high levels of earthquake-induced shaking. To mitigate this risk, Metropolitan routinely assesses the seismic hazards and potential risks to its facilities. It makes strategic investments through projects to limit overall system damage, improve post-earthquake recovery time, and reduce the impacts felt by the population and businesses. Metropolitan's strategy utilizes a defense-in-depth approach to prepare for and respond to the event adequately. Metropolitan's defense-in-depth approach includes the following priorities: (1) provide a diversified water supply portfolio, increase system flexibility, and maintain adequate levels of emergency storage to be able to withstand the potential disruption of imported supplies; (2) prevent damage to water delivery infrastructure in probable seismic events and limit damage in extreme events through the systematic review and upgrade of facilities for which deficiencies are identified; and (3) minimize the duration of water delivery interruptions through a dedicated emergency response and recovery organization, including in-house design, construction, and fabrication capability.

As part of its goal to increase the diversification of the local water portfolio, Metropolitan has provided monetary assistance to member agencies to develop new local water supplies. Increased and improved diversification of local supplies also improves the region's reliability in the event of a significant seismic event. In addition, Metropolitan is evaluating the feasibility of implementing a regional recycled water program referred to as PWSC. See "REGIONAL WATER RESOURCES–Local Water Supplies –*Recycled Water-Metropolitan Pure Water Southern California Program*" in this Appendix A. If completed, it is expected that PWSC would provide up to 150 million gallons per day of advanced treated recycled water for groundwater replenishment. The program, if completed, could provide an additional reliable water source within Metropolitan's service area in the event of an interruption of imported supplies.

In 2000, Metropolitan completed Diamond Valley Lake, an 810,000-acre-foot capacity reservoir located on the coastal side of the San Andreas Fault. With the completion of Diamond Valley Lake, Metropolitan nearly doubled its available in-region surface storage and improved its ability to capture water from Northern California in wet years. Water from Diamond Valley Lake can supply four of Metropolitan's five water treatment plants. Planned system flexibility improvements currently in design and construction will make it possible to transport water from Diamond Valley Lake throughout Metropolitan's distribution system. Diamond Valley Lake, along with the other in-region reservoirs, are used to maintain a six-month emergency storage reserve outside of the operational storage in case of disruption of the imported water supplies. See "–Primary Facilities and Method of Delivery –*Diamond Valley Lake.*"

Metropolitan has developed a Seismic Upgrade Program to systematically evaluate its above-ground facilities for seismic risk and prioritize its upgrade effort. Structures undergo an initial rapid evaluation and, if a potential deficiency is identified, will then undergo a detailed structural evaluation to assess the required upgrades. Deficient facilities are upgraded to meet current seismic standards based on criticality to the water delivery system. Previous projects include seismic upgrades to the pump plant buildings for the CRA and upgrades to various facilities at Metropolitan's treatment plants, such as wash water tanks, filter basins, and administration buildings. For existing pipelines, seismic resilience will be incorporated as a component of pipeline rehabilitation projects. Metropolitan will evaluate each upgrade individually to balance risk, performance, and cost-effectiveness. Metropolitan is currently implementing a long-term program to replace or reline its prestressed concrete cylinder pipe with a welded steel pipe to extend its service life. Providing a steel liner insert will also improve the seismic performance of these pipelines. Another example of Metropolitan's continued effort to enhance the seismic resilience of its pipelines is the completion in early 2023 of a project to install earthquake-resistant ductile iron pipe at a location where the CRA crosses the Casa Loma Fault.

Metropolitan has an ongoing surveillance program that monitors the safety and structural performance of its dams and reservoirs permitted by DWR's Division of Safety of Dams. Operating personnel perform regular inspections that include monitoring and analyzing seepage flows and pressures. Engineers responsible for dam safety review the inspection data and monitor each dam's horizontal and vertical movements. Major on-site inspections are performed at least twice each year. Instruments that transmit seismic acceleration time histories for analysis are installed at critical sites when a dam is subjected to strong motion during an earthquake.

Metropolitan has developed an emergency plan that calls for specific response levels appropriate to an earthquake's magnitude and location. Included in this plan are various communication tools, as well as a structured plan of management that varies with the severity of the event. Pre-designated personnel follow detailed steps for field facility inspection and distribution system patrol. Approximately 200 employees are designated to respond immediately if seismic events exceed a certain magnitude. An Emergency Operations Center ("EOC") is maintained at the OCC. The OCC/EOC, specifically designed to be earthquake resistant, contains communication equipment, including a radio transmitter, microwave



capability, and a response line linking Metropolitan with its member agencies, and DWR. The OCC/EOC also has the capability of communicating with other utilities, County EOCs, and the State's Office of Emergency Services. Metropolitan also maintains in-house capability to address two major pipeline breaks simultaneously as part of its emergency response plan to restore operation shortly after a significant seismic event.

In conjunction with DWR and LADWP, Metropolitan has formed the Seismic Resilience Water Supply Task Force to collaborate on studies and mitigation measures aimed at improving the reliability of imported water supplies to Southern California. Specific task force goals include revisiting historical assumptions regarding potential aqueduct outages after a seismic event; establishing a common understanding about individual agency aqueduct vulnerability assessments, projected damage scenarios, and planning assumptions; and discussing ideas for improving the resiliency of Southern California's imported water supplies through multi-agency cooperation. The task force has established multi-year goals and will continue to meet on these issues and develop firm plans for mitigating seismic vulnerabilities.

Metropolitan's resiliency efforts include manufacturing, pipe fabrication, and coating capabilities in [its facilities in](#) La Verne, California. Investments to upgrade the La Verne shop facilities in order to enhance and expand Metropolitan's capacity to provide fabrication, manufacturing, and coating services for rehabilitation work, maintenance activities, and capital projects are ongoing, with currently approved projects anticipated to be completed in early 2025. Metropolitan can also provide manufacturing, coating, and fabrication services upon request through reimbursable agreements to member agencies and DWR. These agreements have enhanced timely and cost-effective emergency response capabilities. Materials to fabricate pipe and other appurtenant fittings are kept on site. In the event of earthquake damage, Metropolitan has taken measures to provide the capacity to design and fabricate pipe and manufacture fittings. Metropolitan is also staffed to perform emergency repairs.

DWR has in place a seismic assessment program that evaluates the State Water Project's vulnerability to seismic events and makes recommendations for improvements. The assessment is important because the California Aqueduct crosses many major faults. The State Water Project delivers water supplies from Northern California that must traverse the Bay-Delta through hundreds of miles of varying levels of engineered levees that are potentially susceptible to significant damage due to flood and seismic risk. In the event of a failure of the Bay-Delta levees, the quality of the Bay-Delta's water could be severely compromised as saltwater comes in from the San Francisco Bay. Metropolitan's supply of State Water Project water would be adversely impacted if pumps that move Bay-Delta water southward to the Central Valley and Southern California are shut down to contain the saltwater intrusion. Metropolitan estimates that stored water supplies, CRA supplies and local water resources that would be available in case of a levee breach or other interruption in State Water Project supplies would meet demands in Metropolitan's service area for approximately six months. See "METROPOLITAN'S WATER SUPPLY-Storage Capacity and Water in Storage" in this Appendix A.

Metropolitan, in cooperation with the other State Water Project contractors, developed recommendations to DWR for emergency preparedness measures to maintain continuity in export water supplies and water quality during seismic and other emergency events, [which recommendations have been implemented or implementation is in progress](#). These measures include improvements to emergency construction materials stockpiles in the Bay-Delta, improved emergency contracting capabilities, strategic levee improvements and other structural measures of importance to Bay-Delta water export interests, including development of an emergency freshwater pathway to export facilities in a severe earthquake.

## Wildfires Risk Management Response

Wildfires are an ever-present reality in Southern California. Metropolitan continues to actively prepare for wildfires by collaborating with partner agencies such as the California Department of Forestry and Fire Protection (Cal Fire), DWR, and counties to implement preparedness measures to protect watersheds. Examples of these efforts include removing brush from fire prone areas, as well as removing by-products of large fires such as ash, fire retardant, and other debris that could negatively affect water quality. Metropolitan also collaborates frequently with its member agencies and first-responders from other public agencies. This collaboration includes coordination with local fire departments during and after nearby wildfire events, as well as participating in joint training and exercises throughout the year. Additionally, Metropolitan has a five-year exercise plan that provides member agencies the opportunity to ~~exereiserun~~ exercises together before a disaster happens. Metropolitan tests its emergency communications processes through regular tests of emergency radio networks, satellite phones, mass-communication alerting systems, and online information sharing systems.

Metropolitan has also implemented measures to protect employees from the impacts of wildfires such as upgrading HVAC systems in control centers to improve the filtration of smoke and other pollutants, and sending emergency notifications to employees to warn them of unhealthy air quality due to nearby fires.

## Security Measures

Metropolitan's water and energy facilities are federally-determined critical infrastructure. Metropolitan deploys multiple layers of physical security and collaborates with federal and state partners to mitigate malevolent threats. It manages a physical security system consisting of electronic access controls, a surveillance and intrusion warning system, and a round-the-clock security watch center. Metropolitan maintains professional, in-house security specialists and retains a 200+ contract security guard force. It directs a capital improvement program to harden physical infrastructure. Metropolitan collaborates with key federal and ~~state~~State security partners, which entails on-site consultations, inter-agency mock exercises, real-time monitoring, and first response coordination. It follows the chain-of-custody protocols of the FERC and the North American Electric Reliability Corporation. Finally, Metropolitan complies with regulations authorized under the Bioterrorism Response Act of 2002, the Aviation and Transportation Security Act of 2001, and the America's Water Infrastructure Act of 2018.

## CAPITAL INVESTMENT PLAN

### General Description

Metropolitan's current Capital Investment Plan (the "Capital Investment Plan" or "CIP") describes Metropolitan's infrastructure and system reliability projects, either as new assets, upgrades to existing capital assets or refurbishment and replacements of existing facilities. The CIP is Metropolitan's planning document to ensure asset reliability, enhance operational efficiency and flexibility, and ensure compliance with water quality regulations.

Metropolitan's CIP is regularly reviewed and updated. Metropolitan's biennial budget process includes a review of the projected long-term capital needs and the development of a capital expenditure forecast for the next ten years, as well as the identification of the capital priorities of Metropolitan over the biennial budget term. The award of major contracts and professional services agreements ~~are~~is subject to approval by Metropolitan's Board. Pursuant to the Administrative Code, following the adoption of the biennial budget, a Board action is presented to (1) appropriate the total amount of

approved biennial CIP expenditures and (2) authorize the General Manager to initiate or proceed with work on capital projects identified in the CIP for such biennial period. The amount and timing of borrowings to fund capital expenditures will depend upon the status of construction activity and water demands within Metropolitan's service area, among other factors. From time to time, projects that have been undertaken are delayed, redesigned, or deferred by Metropolitan for various reasons, and no assurance can be given that a project in the CIP will be completed in accordance with its original schedule or that any project will be completed as currently planned. In addition, from time to time, when circumstances warrant, Metropolitan's Board may approve capital expenditures other than or in addition to those contemplated by the CIP at the time of the ~~then-current~~then-current biennial budget.

### Projection of Capital Investment Plan Expenditures

The table below sets forth the projected CIP expenditures by project type for the fiscal years ending June 30, ~~2024~~2025 through 2029, as reflected in the ~~latest CIP quarterly report for the current fiscal year and the proposed~~ biennial budget for fiscal years ~~2024-25~~2024-25 and ~~2025-26~~2025-26.

In addition to the projected CIP expenditures, a projection of estimated capital expenditures by Metropolitan for PWSC for the fiscal years ending June 30, ~~2024~~2025 through June 30, 2029 has been provided in the table below in the event PWSC is approved by Metropolitan's Board as a CIP project, as reflected in the ten-year expenditures projection provided in Metropolitan's ~~proposed~~ biennial budget for fiscal years ~~2024-25~~2024-25 and ~~2025-26~~2025-26. The PWSC program is not currently included in Metropolitan's CIP as a capital program. It is currently anticipated that Metropolitan's Board will consider whether to include PWSC in the CIP in fall or winter of 2025. For a description of PWSC, see "REGIONAL WATER RESOURCES – Local Water Supplies – Recycled Water-Metropolitan Pure Water Southern California Program" in this Appendix A.

Metropolitan's actual capital expenditures are subject to change as projects progress or are advanced. The biennial budget is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board. See "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

### CAPITAL INVESTMENT PLAN PROJECTION OF EXPENDITURES<sup>(1)</sup> (Fiscal Years Ending June 30 - Dollars in Thousands)

	<del>\$ 86,978</del>						
	<del>2024</del>	2025	2026	2027	2028	2029	Total
Infrastructure R&R	<del>\$ 263,987</del>	\$ 223,275	\$ 254,200	\$ 276,461	\$ 296,624	\$ 297,679	<del>\$1,612,226</del> <u>1,348,239</u>
Infrastructure Upgrade	<del>8,897</del>	6,799	5,076	8,100	1,861	9,163	<del>39,896</del> <u>30,99</u>
Regulatory Compliance	<del>0</del>	1,047	1,141	1,135	1	7,195	<del>10,519</del> <u>9</u>
Stewardship	<del>8,012</del>	19,633	13,108	16,299	36,917	16,028	<del>109,997</del> <u>101,985</u>
Supply Reliability	<del>21,354</del>	3,275	11,315	8,118	8	0	<del>44,070</del> <u>22,71</u>
System Flexibility	<del>48,781</del>	55,084	27,007	19,271	15,186	32,871	<del>198,200</del> <u>149,19</u>
Water Quality	<del>908</del>	2,887	12,633	8,075	361	2,060	<del>26,924</del> <u>26,01</u>
<b>CIP Total</b>	<del>\$ 351,939</del>	\$ 312,000	\$ 324,480	\$ 337,459	\$ 350,958	\$ 364,996	<del>\$2,041,832</del> <u>1,689,893</u>

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PWSC <sup>(2)</sup>	0	0	0	1,052,057	1,333,219	1,805,740	4,191,016
<b>Total CIP and PWSC<sup>(2)</sup></b>	<del>\$ 351,939</del>	\$ 312,000	\$ 324,480	\$ 1,389,516	\$ 1,684,177	\$ 2,170,736	<del>\$ 6,232,848</del> <u>880,909</u>

Source: Metropolitan.

- (1) ~~Fiscal year 2023-24 is based on current projections as of December 2023 and~~ Metropolitan's CIP expenditures for fiscal years 2024-25 through 2028-29 are based on the ten-year financial forecast provided in the proposed biennial budget for fiscal years 2024-25 and 2025-26.
- (2) PWSC is not a capital program in Metropolitan's CIP, but the projected capital expenditures based on the most recent cost estimates have been included for planning purposes. Approval by Metropolitan's Board is required to include PWSC in the CIP, which has not occurred. The projected capital expenditures for PWSC, if approved, as set forth in the table above reflect the total estimated capital costs expected to be incurred for the project in the specified years without any offset for potential grant funding sources or contributions from potential partners. Metropolitan's projections of future debt financing in the event PWSC is approved (as described under "Capital Investment Plan Financing" below) assume that a portion of the projected capital expenditures for PWSC (approximately \$325.3 million in fiscal year 2026-27, \$482.4 million in fiscal year 2027-28, and \$653.4 million in fiscal year 2028-29) will be funded from other sources, including grants and contributions from potential partners.

In developing the CIP, projects are reviewed, scored, and prioritized towards the objectives of ensuring the sustainable delivery of reliable, high-quality water, while meeting all regulatory requirements and maintaining affordability. Additional capital costs may arise in the future as a result of, among other things, federal and state water quality regulations, project changes and mitigation measures necessary to satisfy environmental and regulatory requirements, and additional facilities' needs. See "METROPOLITAN'S WATER DELIVERY SYSTEM—Water Quality and Treatment" in this Appendix A.

Construction projects included in the CIP are subject to ordinary construction risks and delays, including but not limited to: inclement weather or natural hazards affecting work and timeliness of completion; contractor claims or nonperformance; work stoppages or slowdowns; unanticipated project site conditions encountered during construction; errors or omissions in contract documents requiring change orders; and/or higher than anticipated construction bids or costs (including as a result of steeper inflationary increases), any of which could affect the costs and availability of, or delivery schedule for, equipment, components, materials, labor or subcontractors, and result in increased CIP costs. The majority of Metropolitan's construction projects exceeding \$5 million over the next five years will be covered by a project labor agreement between labor unions and construction contractors, which will reduce the risk of work stoppages or slowdowns. While the construction schedules for certain Metropolitan projects were initially delayed because of ~~continued~~ impacts due to COVID-19, ~~more recently~~, normal construction activities and schedules have ~~generally~~ resumed. However, some projects continue to be impacted by supply chain issues, particular electrical components such as transformers, switchgear, and other highly specialized equipment. Although not currently anticipated, additional delays in the future are possible. ~~See "GOVERNANCE AND MANAGEMENT COVID-19 Pandemic" in this Appendix A.~~

### Capital Investment Plan Financing

The CIP requires debt financing (see "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A) as well as pay-as-you-go funding. In connection with the biennial budget process and the development of the ten-year financial forecast provided therein, an internal funding objective is established for the funding of capital program expenditures from current revenues. An internal funding objective to fund ~~45~~ 56 percent and 54 percent of capital program expenditures from current revenues for fiscal years 2024-25 and 2025-26, respectively, was established in connection with the adoption of the biennial budget for fiscal years ~~2022-23 and 2023-24. This objective is updated every two years as a result of the periodic review and adoption of the capital budget by Metropolitan's Board.~~

~~The internal funding objective for the proposed biennial budget for fiscal years 2024-25 and 2025-26 is to fund 40 percent and 54 percent, respectively, of capital program expenditures from current revenues.~~ The remainder of capital program expenditures are expected to be funded through the issuance from time to time of water revenue bonds, which are payable from Net Operating Revenues. However, as in prior years, pay-as-you-go funding or debt financing may be reduced or increased by the Board at any time.

For planning purposes, Metropolitan has estimated the potential capital costs of PWSC that may be incurred by Metropolitan over the ten-year financial forecast provided in its ~~proposed~~ biennial budget for fiscal ~~year 2024-25~~ years 2024-25 and ~~2025-26~~ 2025-26 as set forth for ~~the~~ fiscal years 2026-27 through 2028-29 in the table above. In addition, Metropolitan's financial forecast includes assumptions with respect to future debt financing for a portion of the costs of PWSC, including assumptions regarding the potential amounts of and sources of funding for the PWSC that may be available from grants and contributions by potential partners.

Projections for fiscal years ~~2024-25~~ 2024-25 through 2028-29 assume approximately \$~~690~~ 640 million of the projected CIP expenditures (excluding any projected capital expenditures associated with PWSC) will be funded by revenue bonds over such period, which may include remaining proceeds from prior bond issuances. Projections for the same period with PWSC assume \$~~3,430~~ 3,380 million in additional water revenue bonds over such period to finance a portion of the CIP, and Metropolitan's estimated share of the projected capital costs of PWSC if it is approved as a capital project, taking into account Metropolitan's assumptions with respect to the amount of funding that may be available from grants and contributions from potential partners. These revenue bonds may be issued either as Senior Revenue Bonds under the Senior Debt Resolutions or as Subordinate Revenue Bonds under the Subordinate Debt Resolutions (each as defined under "METROPOLITAN EXPENSES—Limitations on Additional Revenue Bonds" in this Appendix A). The cost of these projected bond issues is reflected in the financial projections under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

### Major Projects of Metropolitan's Capital Investment Plan

**Colorado River Aqueduct Facilities.** As previously noted, deliveries through the CRA began in 1941. Through annual inspections and maintenance activities, the performance and reliability of the various components of the CRA are regularly evaluated. Projects under the CRA facilities program are designed to replace or refurbish facilities and components on the CRA system in order to reliably convey water from the Colorado River to Southern California. The current projected cost estimate for all prior and planned refurbishment or replacement projects under the CRA facilities program from fiscal year 1998-99 through fiscal year 2033-34 is \$~~1.03~~ 1.04 billion. Costs through ~~January~~ June 30, 2024 were \$~~483.5~~ 514.1 million. Budgeted aggregate capital expenditures for improvements on the CRA for fiscal years ~~2022-23~~ 2024-25 and ~~2023-24~~ 2025-26 are \$~~76.2~~ 85.8 million.

**Distribution System – Prestressed Concrete Cylinder Pipe.** Metropolitan's distribution system is comprised of approximately 830 miles of pipelines ranging in diameter from 30 inches to over 200 inches. (See "METROPOLITAN'S WATER DELIVERY SYSTEM" in this Appendix A.) There are 163 miles of the distribution system that ~~is~~ are made up of prestressed concrete cylinder pipe ("PCCP"). In response to PCCP failures experienced by several water agencies, Metropolitan initiated the PCCP Assessment Program in December 1996 to evaluate the condition of Metropolitan's PCCP lines and investigate inspection and refurbishment methods. As part of this program, Metropolitan made improvements to several sections of PCCP. Rather than continue to make spot repairs to the pipe segments, Metropolitan initiated a long-term capital program to rehabilitate approximately 100 miles of PCCP in five pipelines by relining with a welded steel liner. Significant projects over the next several years include relining of portions of Second Lower ~~and~~, Sepulveda Feeders and Allen McColloch Pipeline. Pipeline rehabilitation is prioritized based on the condition of the pipe segment and the

criticality of the pipeline. The estimated cost to reline all 100 miles of PCCP is approximately \$5.1 billion. Through ~~January~~June 30, 2024, approximately ~~12.7~~18.8 miles have been re-lined and it is expected to take over 30 years to complete the remainder of the pipelines. Costs through ~~January~~June 30, 2024 for all PCCP work (including the prior repairs) were ~~\$376.2~~423.4 million. Budgeted aggregate capital expenditures for PCCP rehabilitation for fiscal years ~~2022-23~~2024-25 and ~~2023-24~~2025-26 are ~~\$104.4~~66.5 million.

***Distribution System – Refurbishments and Improvements.*** In addition to the long-term program to rehabilitate Metropolitan’s PCCP lines, several other components of the distribution system, including dams and reservoirs, are being refurbished and/or improved. Significant projects over the next several years include retrofitting of the distribution system to improve resiliency against earthquake; rehabilitation of reservoirs, relining of pipelines; and refurbishment of pump stations, pressure control structures, hydroelectric plants, and service connections. The projected cost estimate for refurbishment or replacement projects, other than the PCCP relining, from fiscal year 2004-05 through fiscal year 2033-34 is \$1.4 billion. Costs through ~~January~~June 30, 2024 totaled approximately ~~\$562.6~~584.3 million. For fiscal years ~~2022-23~~2024-25 and ~~2023-24~~2025-26, budgeted aggregate capital expenditures for refurbishing and improvements on the distribution system, other than PCCP rehabilitation, are ~~\$114.0~~174.1 million.

***Drought Response and System Flexibility.*** In response to the recent historic statewide drought that ended in 2023, several drought response projects that address decreasing water supplies both in specific parts of Metropolitan’s service area and across the entire district have been added to the CIP. This is in addition to the ongoing projects to increase the system flexibility of Metropolitan’s water supply and delivery infrastructure to meet service demands. Metropolitan continues investigating capital improvements that mitigate drought impacts and more projects are expected to be developed in the coming years. Some of the projects commenced in the last two years. Significant projects in this category include Inland Feeder-Rialto Pipeline Intertie, Inland Feeder-Foothill Pump Station Intertie, Wadsworth Pumping Plant Bypass Pipeline, Badlands Tunnel Surge Protection Facility, Sepulveda Feeder Pump Stations, Sepulveda Feeder West Area Water Supply Reliability Pipeline Improvements, Sepulveda Canyon PCS to Venice PCS Valve Replacements and Perris Valley Pipeline Tunnels. The current projected cost estimate for the prior and planned drought response and system flexibility projects from fiscal year 2004-05 through fiscal year ~~2033-34~~2033-34 is ~~\$536.9~~496.8 million, with ~~\$246.5~~273.7 million spent through ~~January~~June 30, 2024 for improving system flexibility. Budgeted aggregate capital expenditures for drought response and system flexibility projects for fiscal years ~~2022-23~~2024-25 and ~~2023-24~~2025-26 are ~~\$75.0~~66.3 million.

~~***System Reliability.*** System Reliability projects are implemented at facilities throughout Metropolitan’s system to utilize new processes or technologies, to improve safety, or to increase overall reliability. Significant projects in this category include seismic strengthening of Metropolitan’s headquarters building, construction or improvement of operations support facilities, security system enhancements, control system upgrades, and information technology infrastructure projects. The total estimated cost for all prior and projected system reliability improvements under this program from fiscal year 2004-05 to fiscal year 2033-34 is approximately \$968.8 million, with \$375.2 million spent through January 2024. Budgeted aggregate capital expenditures for improvements on system reliability projects for fiscal years 2022-23 and 2023-24 are \$86.2 million.~~

**Water Treatment Plant Improvements.** The F. E. Weymouth Water Treatment Plant, which was placed into service in 1941, is Metropolitan's oldest water treatment facility. Four more water treatment plants were constructed throughout Metropolitan's service area with the Henry J. Mills Water Treatment Plant being the newest water treatment facility, which was placed into service in 1978. These plants treat water from the CRA and/or the State Water Project. These plants have been subsequently expanded since their original construction. Metropolitan has completed numerous upgrades and refurbishment/replacement projects to maintain the plants' reliability and improve efficiency. Significant projects over the next several years include refurbishment of settling basins and strengthening of inlet channels at the Weymouth plant, rehabilitation of filtration system at the Robert B. Diemer Water Treatment Plant, second stage of electrical upgrades at the Mills plant, ozonation system upgrade at the Joseph Jensen Water Treatment Plant, and chemical system rehabilitation at the Robert A. Skinner Plant. The cost estimate for all prior and projected improvements at all five plants, not including the ozone facilities and water treatment capacity expansions, from fiscal year 2004-05 through fiscal year 2033-34 is approximately \$1.7 billion, with \$1.2 billion spent through ~~January~~ June 30, 2024. Budgeted aggregate capital expenditures for improvements at all five plants for fiscal years ~~2022-23~~ 2024-25 and ~~2023-24~~ 2025-26 are \$~~42.1~~ 122.8 million.

## METROPOLITAN REVENUES

### General

Until water deliveries began in 1941, Metropolitan's activities were, by necessity, supported entirely through the collection of *ad valorem* property taxes. Since the mid-1980s, water revenues, which includes revenues from water sales, wheeling and exchanges, have provided approximately 80 percent of total revenues annually. Over that period, *ad valorem* property taxes have accounted for about 11 percent of total revenues, and in ~~the~~ fiscal year ~~2022-23~~ 2023-24, *ad valorem* property taxes accounted for approximately ~~10~~ 12 percent of total revenues. See "–Revenue Allocation Policy and Tax Revenues." The remaining revenues have been derived principally from the sale of hydroelectric power, interest on investments, and additional revenue sources (water standby charges and availability of service charges) beginning in 1992. *Ad valorem* taxes do not constitute a part of Operating Revenues and are not available to make payments with respect to the water revenue bonds issued by Metropolitan.

The basic rate for untreated water service for domestic and municipal uses is \$903 per acre-foot at the Tier 1 level, which became effective January 1, 2024. The basic rate for untreated water service for domestic and municipal uses will increase to \$912 per acre-foot effective January 1, 2025. See "–Rate Structure" and "–Water Rates." The *ad valorem* tax rate for Metropolitan purposes has gradually been reduced from a peak equivalent rate of 0.1250 percent of full assessed valuation in fiscal year 1945-46 to 0.0035 percent of full assessed valuation for fiscal year ~~2023-24~~. ~~The 2023-24. The biennial budget for fiscal years 2024-25 and 2025-26 assumes the Board will increase the ad valorem tax rate to 0.0070 percent of full assessed valuation beginning in fiscal year 2024-25. [if new tax rate established in August add the following:] As assumed by the biennial budget for fiscal years 2024-25 and 2025-26, in August 2024, the Board established the ad valorem tax rate for fiscal year 2024-25 to 0.0070 percent.]~~ The rates charged by Metropolitan represent the cost of Metropolitan's wholesale water service to its member agencies, and not the cost of water to the ultimate consumer. Metropolitan does not exercise control over the rates charged by its member agencies or their subagencies to their customers.

### Summary of Revenues by Source

The following table sets forth Metropolitan's sources of revenues for the five fiscal years ended June 30, ~~2023~~ 2024. Data for the ~~four~~ three fiscal years ended on or prior to June 30, 2022 is presented on a modified accrual basis, consistent with Metropolitan's budgetary reporting for such fiscal years. In fiscal year ~~2022-23~~ 2022-23, the basis for budgeting was changed, therefore data for the fiscal ~~year~~ years ended June 30, 2023 and 2024 is presented on a cash basis. ~~For comparative purposes, Metropolitan has~~

~~provided a summary of its revenues and expenditures for fiscal year 2021-22 on both a modified accrual basis and a cash basis under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.~~ All information is unaudited. Audited financial statements for the fiscal years ended June 30, 2023, and June 30, 2022, are included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE ~~SIX~~NINE MONTHS ENDED ~~DECEMBER~~MARCH 31, ~~2023~~2024 AND ~~2022~~2023 (UNAUDITED)."

**SUMMARY OF REVENUES BY SOURCE<sup>(1)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

		Modified Accrual			Cash	
	2019	2020	2021	2022	2023	2024 <sup>(6)</sup>
Water Revenues <sup>(2)</sup>	\$ <del>1,149</del>	\$ 1,188	\$ 1,405	\$ 1,515	\$ 1,323	\$ <u>1,167</u>
Taxes, Net <sup>(3)</sup>	<del>145</del>	147	161	147	136	<u>124</u>
Additional Revenue Sources <sup>(4)</sup>	<del>170</del>	165	165	172	184	<u>197</u>
Interest on Investments	<del>34</del>	20	10	7	21	<u>42</u>
Hydroelectric Power Sales	<del>18</del>	16	19	8	6	<u>13</u>
Other Revenues <sup>(5)</sup>	<del>22</del>	14	14	39	166	<u>99</u>
Total Revenues	\$ <del>1,538</del>	\$ 1,550	\$ 1,774	\$ 1,888	\$ 1,836	\$ <u>1,642</u>

Source: Metropolitan.

(1) Does not include any proceeds from the sale of bonded indebtedness.

(2) Water revenues include revenues from water sales, exchanges, and wheeling.

(3) *Ad valorem* taxes levied by Metropolitan are applied solely to the payment of outstanding general obligation bonds of Metropolitan and to State Water Contract obligations; taxes available to pay for SWC O&M costs are reflected as Other Revenue.

(4) Includes revenues derived from water standby charges, readiness-to-serve, and capacity charges.

(5) Includes miscellaneous revenues and Build America Bonds (BABs) subsidy payments of \$2.9 million in fiscal years ~~2018-19~~ 2019-20, and \$0 in fiscal year 2020-21 and thereafter. All of Metropolitan's then-outstanding BABs were retired as of July 1, 2020. Includes property taxes applied to SWC O&M Costs of \$21.0 million in fiscal year 2021-22 ~~and~~, \$62.4 million in fiscal year ~~2022-23~~ 2022-23, and \$77.6 million in fiscal year 2023-24. Fiscal year ~~2022-23~~ 2022-23 also includes \$80 million in grant funding from the State for PWSC.

(6) Fiscal year 2023-24 information is based on preliminary results.

### Revenue Allocation Policy and Tax Revenues

The Board determines the water revenue requirement for each fiscal year after first projecting the *ad valorem* tax levy for that year. The tax levy for any year is subject to limits imposed by the State Constitution, the Act and Board policy and to the requirement under the State Water Contract that in the



event that Metropolitan fails or is unable to raise sufficient funds by other means, Metropolitan must levy upon all property within its boundaries not exempt from taxation a tax or assessment sufficient to provide for all payments under the State Water Contract. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A. The Act limits Metropolitan’s tax levy to the amount needed to pay debt service on Metropolitan’s general obligation bonds and to satisfy a portion of Metropolitan’s State Water Contract obligations. However, Metropolitan has the authority to impose a greater tax levy if, following a public hearing, the Board finds that such revenue is essential to Metropolitan’s fiscal integrity. For each fiscal year since 2013-14, the Board has exercised that authority and voted to suspend the tax limit clause in the Act, maintaining the fiscal year 2012-13 *ad valorem* tax rate to pay for a greater portion of Metropolitan’s State Water Contract obligations. ~~Most~~More recently, in 2022, the Board exercised its authority under the Act to suspend the tax limit clause for each of fiscal years ~~2022-23 through 2025-26.~~2022-23 through 2025-26. The biennial budget for fiscal years 2024-25 and 2025-26 assumes the Board will increase the *ad valorem* tax rate beginning in fiscal year 2024-25. [if new tax rate established in August add the following:] As assumed by the biennial budget for fiscal years 2024-25 and 2025-26, in August 2024, the Board increased the *ad valorem* tax rate for fiscal year 2024-25.] Any deficiency between tax levy receipts and Metropolitan’s State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt Resolutions (defined in this Appendix A under “METROPOLITAN EXPENSES–Limitations on Additional Revenue Bonds”).

## Water Revenues

**General; Authority.** Water rates are established by the Board and are not subject to regulation or approval by the California Public Utilities Commission or by any other local, State, or federal agency. In accordance with the Act, water rates must be uniform for like classes of service. Metropolitan, a wholesaler, provides one type of service: full-service water service (treated or untreated). See “–Classes of Water Service.”

No member agency of Metropolitan is obligated to purchase water from Metropolitan. However, 21 of Metropolitan’s 26 member agencies have entered into 10-year voluntary water supply purchase orders (“Purchase Orders”) effective through December 31, 2024. See “–Member Agency Purchase Orders.” Consumer demand and locally supplied water vary from year to year, resulting in variability in water revenues. See “REGIONAL WATER RESOURCES” in this Appendix A. Metropolitan uses its financial reserves and budgetary tools to manage the financial impact of the variability in revenues due to fluctuations in annual water transactions. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

**Payment Procedure.** Water is delivered to the member agencies on demand and is metered at the point of delivery. Member agencies are billed monthly and a late charge of one percent of the delinquent payment is assessed for a payment that is delinquent for no more than five business days. A late charge of two percent of the amount of the delinquent payment is charged for a payment that is delinquent for more than five business days for each month or portion of a month that the payment remains delinquent. Metropolitan has the authority to suspend service to any member agency delinquent for more than 30 days. Delinquencies have been rare; in such instances late charges have been collected. No service has been suspended because of delinquencies.

**Water Revenues.** The following table sets forth water transactions (which ~~includes~~include water sales, exchanges, and wheeling) in acre-feet and water revenues (which ~~includes~~include revenues from water sales, exchanges, and wheeling) for the five fiscal years ended June 30, ~~2023~~2024. As reflected in the table below, estimated water revenues for the fiscal year ended June 30, ~~2023~~2024 aggregated ~~\$1,322.7~~1,167.4 million, of which ~~\$1,173.9~~990.3 million was generated from water sales and ~~\$148.8~~267.1 million was generated from exchanges and wheeling. Water revenues of Metropolitan for



the fiscal years ended June 30, 2023, and June 30, 2022, on an accrual basis, are shown in Metropolitan's audited financial statements included in Appendix B.

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**SUMMARY OF WATER TRANSACTIONS AND REVENUES**  
**Fiscal Years Ended June 30<sup>(1)</sup>**

<b>Fiscal Year</b>	<b>Water Transactions in Acre-Fee Member Agencies</b>	<b>Water Transactions in Acre-Feet Other</b>	<b>Water Transactions in Acre-Feet Total<sup>(2)</sup></b>	<b>Water Revenues<sup>(3)</sup> (in millions)</b>	<b>Dollars Per Acre-Foot</b>	<b>Average Dollars Per 1,000 Gallons</b>
<u>2019</u>	<u>1,374,644</u>	<u>43,680</u>	<u>1,418,324</u>	<u>1,148.7</u>	<u>810</u>	<u>2.49</u>
2020	1,367,819	51,337	1,419,156	1,188.0	837	2.57
2021	1,573,965	75,551	1,649,516	1,404.7	892	2.61
2022	1,645,805	36,027	1,681,833	1,515.1	921	2.76
2023	1,385,776	13,076	1,398,852	1,322.7	954	2.93
<u>2024</u>	<u>1,169,263</u>	<u>72,760</u>	<u>1,242,023</u>	<u>1,167.4</u>	<u>998</u>	<u>3.06</u>

Source: Metropolitan.

- (1) Information for the fiscal years ~~2018-19~~ 2019-20 through 2021-22 is presented on a modified accrual basis; information for fiscal ~~year 2022-23~~ years 2022-23 and 2023-24 is presented on a cash basis. Fiscal year 2023-24 information is based on preliminary results.
- (2) Water transactions include water sales, exchanges and wheeling with member agencies and third parties.
- (3) Water Revenues include revenues from water sales, exchanges, and wheeling. Water Revenues from wheeling and exchange transactions were \$~~102.2 million~~, \$140.1 million, \$167.0 million, \$165.0 million ~~and~~, \$148.8 million and \$267.1 million in the fiscal years ended June 30, ~~2019~~ 2020 through ~~2023~~ 2024, respectively.

**Principal Customers**

Total water transactions accrued for the fiscal year ended June 30, ~~2023~~ 2024, were ~~1.29~~ 1.19 million ~~acre-feet~~ acre-feet, generating \$~~1.24~~ 1.22 billion in water revenues for such period (based on preliminary results for fiscal year 2023-24). Metropolitan's ten largest water customers for the year ended June 30, ~~2023~~ 2024 are shown in the following table, on an accrual basis. SDCWA has filed litigation challenging Metropolitan's rates. See "–Litigation Challenging Rate Structure."

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**TEN LARGEST WATER CUSTOMERS**  
**Year Ended June 30, ~~2023~~ 2024**  
**Accrual Basis<sup>(1)</sup>**

<b>Agency</b>	<b>Water Revenues <sup>(2)</sup> (in Millions)</b>	<b>Percent of Total</b>	<b>Water Transactions in Acre Feet <sup>(3)</sup></b>	<b>Percent of Total</b>
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San Diego CWA	\$ <del>223.0</del> <u>206.8</u>	<del>18.1</del> <u>17.0</u> %	<del>335,495</del> <u>310,993</u>	<del>26.1</del> <u>25.9</u> %
City of Los Angeles	<del>207.5</del> <u>155.6</u>	<del>16.8</del> <u>12.8</u>	<del>219,454</del> <u>139,834</u>	<del>17.0</del> <u>11.8</u>
<del>West Basin MWD of Orange County</del>	<del>140.1</del> <u>115.5</u>	<del>11.3</del> <u>9.5</u>	<del>135,592</del> <u>99,738</u>	<del>10.5</del> <u>8.4</u>
<del>West Basin MWD of Orange County</del>	<del>111.3</del> <u>113.0</u>	<del>9.0</del> <u>9.3</u>	<del>94,870</del> <u>93,840</u>	<del>7.3</del> <u>7.9</u>
Eastern MWD	<del>84.4</del> <u>102.0</u>	<del>6.8</del> <u>8.4</u>	<del>86,783</del> <u>100,714</u>	<del>6.7</del> <u>8.5</u>
Calleguas MWD	<del>67.9</del> <u>85.0</u>	<del>5.5</del> <u>7.0</u>	<del>57,825</del> <u>69,328</u>	<del>4.5</del> <u>5.8</u>
Western MWD of Riverside County	<del>60.5</del> <u>67.0</u>	<del>4.9</del> <u>5.5</u>	<del>59,374</del> <u>63,268</u>	<del>4.6</del> <u>5.3</u>
<del>Three Valleys Upper San Gabriel Valley MWD</del>	<del>48.5</del> <u>58.1</u>	<del>3.9</del> <u>4.8</u>	<del>45,665</del> <u>45,460</u>	<del>3.5</del> <u>3.8</u>
<del>Upper San Gabriel Valley Three Valleys MWD</del>	<del>39.3</del> <u>48.5</u>	<del>3.2</del> <u>4.0</u>	<del>47,458</del> <u>67,398</u>	<del>3.7</del> <u>5.7</u>
<del>City of Anaheim Inland Empire Utility Agency</del>	<del>38.6</del> <u>33.5</u>	<del>3.1</del> <u>2.8</u>	<del>36,573</del> <u>38,416</u>	<del>2.8</del> <u>3.2</u>
<b>Total</b>	\$ <del>1,021.1</del> <u>985.0</u>	<del>81.1</del> <u>82.6</u> %	<del>1,119,089</del> <u>1,028,929</u>	86.5%
<b>Total Water Revenues <sup>(+2)</sup></b>	\$ <del>1,236.4</del> <u>1,216.1</u>	<b>Total Acre-Feet <sup>(+3)</sup></b>	<del>1,294,092</del> <u>1,190,069</u>	

Source: Metropolitan.

<sup>(1)</sup> All information in this table is presented on an accrual basis. Fiscal year 2023 24 information is based on preliminary results.

<sup>(2)</sup> ~~(+)~~ Water Revenues include revenues from water sales, exchanges, and wheeling.

<sup>(3)</sup> ~~(+)~~ Water Transactions include water sales, exchanges, and wheeling with member agencies.

~~(+)~~ All information in this table is presented on an accrual basis.

## Rate Structure

The following rates and charges are elements of Metropolitan's unbundled rate structure. See also "–Water Rates."

***Tier 1 and Tier 2 Water Supply Rates.*** The rate structure effective through calendar year 2024 recovers supply costs through a two-tiered price structure. The Tier 1 Supply Rate supports a regional approach through the uniform, postage stamp rate. The Tier 1 Supply Rate is calculated as the amount of the total supply revenue requirement that is not covered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. The Tier 2 Supply Rate is a volumetric rate that reflects Metropolitan's costs of Tier 1 and Metropolitan's cost of purchasing water transfers north of the Delta. The higher costs reflected in the Tier 2 Supply Rate ~~encourages~~encourage the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. Pursuant to Board direction in November 2021, all demand management costs comprise a portion of the costs of supply and are collected on the Tier 1 and Tier 2 ~~supply rates~~Supply Rates. Member agencies are charged the Tier 1 or Tier 2 ~~Water~~Supply Rate for water purchases, as described under "–Member Agency Purchase Orders" below. The Tier 2 ~~rate~~Supply Rate is not included in the ~~proposed~~ biennial budget for fiscal years ~~2024-25~~2024-25 and ~~2025-26~~2025-26 and ~~proposed~~ calendar year 2025 and 2026 adopted rates.

***System Access Rate.*** The System Access Rate recovers the cost of the conveyance, distribution, and storage of water on an average annual basis through a uniform, volumetric rate. The System Access Rate is charged for each acre-foot of water transported by Metropolitan, regardless of the ownership of the water being transported. The System Access Rate is charged for each acre-foot of water transported by Metropolitan to its member agencies and delivered as a full-service water transaction.

***System Power Rate.*** The System Power Rate recovers the cost of energy required to pump water to Southern California through the State Water Project and CRA. The cost of power is recovered through a uniform, volumetric rate. The System Power Rate is applied to all deliveries of Metropolitan water to member agencies.

***Treatment Surcharge.*** The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions. The Treatment Surcharge is charged for all treated water transactions.

***Water Stewardship Rate.*** Through December 31, 2020, a Water Stewardship Rate was charged on each acre-foot of water delivered by Metropolitan, except on SDCWA Exchange Agreement deliveries as explained below, and allocated to Metropolitan's transportation rates. The Water Stewardship Rate was designed to provide a dedicated source of funding for conservation and local resources development through a uniform, volumetric rate. ~~The Water Stewardship Rate was charged on each acre-foot of water delivered by Metropolitan through December 31, 2020, except on SDCWA Exchange Agreement deliveries as explained below, and allocated to Metropolitan's transportation rates.~~ All users (including member agencies and third-party wheelers) benefited from avoided system infrastructure costs through conservation and local resources development, and from the system capacity made available by investments in demand management programs like Metropolitan's Conservation Credits Program and LRP. Therefore, all users paid the Water Stewardship Rate, except on water delivered to SDCWA pursuant to the Exchange Agreement (see "–Water Rates" and "–Litigation Challenging Rate Structure" below) in calendar years 2018, 2019, and 2020. Beginning with calendar year 2021, the Water Stewardship Rate has no longer been incorporated into Metropolitan's rates and charges and therefore has not been collected on any water transactions after December 31, 2020. In November 2021, the Board directed staff to allocate all demand management costs as an element of

Metropolitan's supply costs. See also "CONSERVATION AND WATER SHORTAGE MEASURES-General" in this Appendix A.

In 2017, in *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* (see "Litigation Challenging Rate Structure" below), the Court of Appeal held that the administrative record before it for the rates in calendar years 2011 through 2014 did not support Metropolitan's Water Stewardship Rate full allocation to transportation rates, but the court did not address the allocation in subsequent years based on a different record. On April 10, 2018, the Board suspended the billing and collection of the Water Stewardship Rate on Exchange Agreement deliveries to SDCWA in calendar years 2018, 2019, and 2020, pending Metropolitan's completion of a cost allocation study of its demand management costs recovered through the Water Stewardship Rate. For calendar year 2018, the suspension was retroactive to January 1, 2018.

Having completed a demand management cost allocation process, on December 10, 2019, Metropolitan's Board directed staff to incorporate the use of the 2019-20 fiscal year-end balance of the Water Stewardship Fund to fund demand management costs in the proposed biennial budget for fiscal years 2020-21 and 2021-22 and to not incorporate the Water Stewardship Rate (or any other rates or charges to recover demand management costs), with the proposed rates and charges for calendar years 2021 and 2022, to allow the Board to consider demand management funding in relation to the 2020 IRP and to undergo a rate structure refinement process.

In 2021, in *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, the Court of Appeal clarified that its Water Stewardship Rate ruling applied to years after 2014 as well. In November 2021, the Board voted to allocate demand management costs to supply rate elements in calendar year 2023 forward. The 2021-22 fiscal year-end balance of the Water Stewardship Fund was applied to partially offset demand management expenditures in ~~the~~ fiscal year ~~2022-23~~2022-23.

~~**System Power Rate.** The System Power Rate recovers the cost of energy required to pump water to Southern California through the State Water Project and CRA. The cost of power is recovered through a uniform, volumetric rate. The System Power Rate is applied to all deliveries of Metropolitan water to member agencies.~~

~~**Treatment Surcharge.** The Treatment Surcharge recovers all of the costs of providing treatment capacity and operations through a uniform, volumetric rate per acre-foot of treated water transactions. The Treatment Surcharge is charged for all treated water transactions.~~

The amount of each of these rates since January 1, 2020, is shown in the table entitled "SUMMARY OF WATER RATES" under "Water Rates" below.

### **Member Agency Purchase Orders**

The rate structure effective through calendar year 2024 allows member agencies to choose to purchase water from Metropolitan by means of a Purchase Order. Purchase Orders are voluntary agreements that determine the amount of water that a member agency can purchase at the Tier 1 Supply Rate. Under the Purchase Orders, member agencies have the option to purchase a greater amount of water (based on past purchase levels) over the term of the Purchase Order. Such agreements allow member agencies to manage costs and provide Metropolitan with a measure of secure revenue.

In November 2014, Metropolitan's Board approved Purchase Orders effective January 1, 2015 through December 31, 2024 (the "Purchase Order Term"). Twenty-one of Metropolitan's 26 member

agencies have Purchase Orders, which commit the member agencies to purchase a minimum amount of supply from Metropolitan (the “Purchase Order Commitment”).

The key terms of the Purchase Orders include:

- A ten-year term, effective January 1, 2015 through December 31, 2024;
- A higher Tier 1 limit based on the Base Period Demand, determined by the member agency’s choice between (1) the Revised Base Firm Demand, which is the highest fiscal year purchases during the 13-year period of fiscal year 1989-90 through fiscal year 2001-02, or (2) the highest year purchases in the most recent 12-year period of fiscal year 2002-03 through 2013-14. The demand base is unique for each member agency, reflecting the use of Metropolitan’s system water over time;
- An overall Purchase Order Commitment by the member agency based on the demand base period chosen, times ten to reflect the ten-year Purchase Order Term. Those agencies choosing the more recent 12-year period may have a higher Tier 1 Maximum and commitment. The commitment is also unique for each member agency;
- The opportunity to reset the Base Period Demand using a five-year rolling average;
- Any obligation to pay the Tier 2 Supply Rate will be calculated over the ten-year period, consistent with the calculation of any Purchase Order Commitment obligation; and
- An appeal process for agencies with unmet purchase commitments that will allow each acre-foot of unmet commitment to be reduced by the amount of production from a local resource project that ~~commences~~commenced operation on or after January 1, 2014.

Member agencies that do not have Purchase Orders in effect are subject to Tier 2 Supply Rates for amounts exceeding 60 percent of their base amount (equal to the member agency’s highest fiscal year demand between 1989-90 and 2001-02) annually.

On November 14, 2023, staff presented to the Board the status of the current Purchase Order commitments, which will end on December 31, 2024. Staff proposed to not renew the Purchase Order commitments. As a result, the Tier 2 ~~rate~~Supply Rate is not included in the ~~proposed~~-biennial budget for fiscal year ~~2024-25~~2024-25 and fiscal year ~~2025-26~~2025-26 and ~~proposed~~-calendar years 2025 and 2026 adopted rates. Metropolitan will revisit Purchase Order commitments and structure as needed through the business model review during the CAMP4W planning process. See “METROPOLITAN’S WATER SUPPLY–Integrated Water Resources Plan and Climate Adaptation Master Plan for Water – *Climate Adaptation Master Plan for Water*.”

## Other Charges

The following paragraphs summarize the additional charges for the use of Metropolitan’s distribution system:

***Readiness-to-Serve Charge.*** The Readiness-to-Serve Charge (“RTS”) recovers the cost of the portion of the system that is available to provide emergency service and available capacity during outages and hydrologic variability. The RTS is a fixed charge that is allocated among the member agencies based on a ten-fiscal year rolling average of firm demands. Water transfers and exchanges, except SDCWA Exchange Agreement transactions, are included for purposes of calculating the ten-fiscal year rolling average. The Standby Charge, described below, will continue to be collected at the request of a member agency and applied as a direct offset to the member agency’s RTS obligation. The RTS (including RTS

charge amounts collected through the Standby Charge ~~described below~~) generated ~~\$133.0 million in fiscal year 2020-21, \$135.0 million in fiscal year 2021-22, and \$144.4 million in fiscal year 2022-23~~ \$160.4 million in fiscal year 2023-24. Based on the adopted rates and charges, the RTS (including RTS charge amounts expected to be collected through the Standby Charge described below) is projected to generate ~~\$161~~ \$174.0 million in fiscal year ~~2023-24~~ 2024-25, and \$184.5 million in fiscal year 2025-26.

**Water Standby Charges.** The Standby Charge is authorized by the State Legislature and has been levied by Metropolitan since fiscal year 1992-93. Metropolitan will continue to levy the Standby Charge only within the service areas of the member agencies that request that the Standby Charge be utilized to help fund a member agency's RTS obligation. See "– Readiness-to-Serve Charge" above. The Standby Charge for each acre or parcel of less than an acre will vary from member agency to member agency, reflecting current rates, which have not exceeded the rates set in fiscal year 1993-94, and range from \$5 to \$15 for each acre or parcel less than an acre within Metropolitan's service area, subject to specified exempt categories. Standby charges are assessments under the terms of Proposition 218, a State constitutional ballot initiative approved by the voters on November 5, 1996, but Metropolitan's current standby charges are exempt from Proposition 218's procedural requirements. See "–California Ballot Initiatives."

Twenty-two of Metropolitan's member agencies collect their RTS charges through Standby Charges. RTS charges, on a cash basis, collected by means of such Standby Charges were ~~\$41.9 million in fiscal year 2020-21, \$42.0 million in fiscal year 2021-22, and \$43.7 million in fiscal year 2022-23~~ \$43.3 million in fiscal year 2023-24.

**Capacity Charge.** The Capacity Charge recovers costs incurred to provide peak capacity within Metropolitan's distribution system. The Capacity Charge provides a price signal to encourage agencies to reduce peak demands on the distribution system and to shift demands that occur during the May 1 through September 30 period into the October 1 through April 30 period. This results in more efficient utilization of Metropolitan's existing infrastructure and deferring capacity expansion costs. Each member agency will pay the Capacity Charge per cfs based on a three-year trailing peak (maximum) day demand, measured in cfs. Each member agency's peak day is likely to occur on different days; therefore, this measure approximates peak week demands on Metropolitan. The Capacity Charge was \$12,200 per cfs effective as of January 1, 2022, \$10,600 per cfs effective as of January 1, 2023 and \$11,200 per cfs effective as of January 1, 2024. The Capacity Charge will be ~~\$10,800~~ \$13,000 per cfs effective as of January 1, 2025. The Capacity Charge generated ~~\$31.7 million in fiscal year 2020-21, \$37.0 million in fiscal year 2021-22, and \$37.8 million in fiscal year 2022-23~~ \$36.1 million in fiscal year 2023-24. Based on the adopted rates and charges, the Capacity Charge is projected to generate ~~\$35~~ \$39.8 million in fiscal year ~~2023-24~~ 2024-25, and \$45.9 million in fiscal year 2025-26.



## Classes of Water Service

Metropolitan, [as](#) a wholesaler, provides one type of service: full-service water service (treated or untreated). Metropolitan has one class of customers: its member agencies. On August 18, 2020, the Board ~~of Directors~~ repealed the Administrative Code sections that established the wheeling service it previously made available to its member agencies (short-term wheeling service under one year) and the pre-set wheeling rate for that wheeling service. As a result of the Board's action, short-term wheeling to member agencies is now determined on a case-by-case basis by contract, as has been done for wheeling service for member agencies lasting more than one year and wheeling for third parties. The level of rate unbundling in Metropolitan's rate structure provides transparency to show that rates and charges recover only those functions involved in the applicable service, and that no cross-subsidy of costs exists. Metropolitan's cost of service process and resulting unbundled rate structure ensures that its wholesale customers pay for only those services they elect to receive.

The applicable rate components and fixed charges for each class of water service are shown in the chart below.

### Current Services and Rate Components

Service	System Access	Rates & Charges That Apply					
		Water Stewardship <sup>(1)</sup>	System Power	Tier 1/ Tier 2 <sup>(2)</sup>	Readiness to Serve	Capacity Charge	Treatment Surcharge
Full Service Untreated	Yes	No	Yes	Yes	Yes	Yes	No
Full Service Treated	Yes	No	Yes	Yes	Yes	Yes	Yes

(1) As described under “–Rate Structure –Water Stewardship Rate,” the Water Stewardship Rate has not been collected on water transactions after December 31, 2020. In November 2021, the Board directed staff to allocate all demand management costs as an element of Metropolitan's supply costs.

(2) As described under “–Member Agency Purchase Orders,” the Tier 2 ~~rate~~[Supply Rate](#) is not included in the ~~proposed~~ biennial budget for fiscal years ~~2024-25~~[2024-25](#) and ~~2025-26~~[2025-26](#) and ~~proposed~~ calendar years 2025 and 2026 [adopted](#) rates. Metropolitan will revisit Purchase Order commitments and structure as needed through the business model review during the CAMP4W planning process.

Metropolitan offers five programs that encourage the member agencies to increase groundwater and emergency storage and for which certain Metropolitan charges are inapplicable.

(1) *Conjunctive Use Program.* The Conjunctive Use Program is operated through individual agreements with member and retail agencies for groundwater storage within Metropolitan's service area. Wet year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Metropolitan has the option to call water stored in the groundwater basins for the participating member agency pursuant to its contractual conjunctive use agreement. At the time of the call, the member agency pays the prevailing rate for that water, but the deliveries are excluded from the calculation of the Capacity Charge because Conjunctive Use Program deliveries are made at Metropolitan's discretion. Conjunctive use programs may also contain cost-sharing terms related to operational costs. See “REGIONAL WATER RESOURCES–Local Water Supplies” in this Appendix A.

(2) *Cyclic Program.* The Cyclic Program refers collectively to the existing Cyclic Program agreements and the Cyclic Cost-Offset Program approved in 2019. This Program is operated through individual agreements with member agencies for groundwater or surface water storage or pre-deliveries within Metropolitan's service area. Wet-year imported supplies are stored to enhance reliability during dry, drought, and emergency conditions. Deliveries to the cyclic accounts are at Metropolitan's discretion while member agencies have discretion on whether they want to accept the water. At the time the water is

delivered from the cyclic account, the prevailing full service rate applies, but deliveries are excluded from the calculation of the Capacity Charge because Cyclic Program deliveries are made at Metropolitan's discretion. Cyclic agreements may also contain a credit payable to the member agencies under terms approved by the Board in April 2019 and amended by the Board in August 2023 for the Cyclic Cost-Offset Program. See "REGIONAL WATER RESOURCES–Local Water Supplies" in this Appendix A.

(3) *Reverse-Cyclic Program.* The Reverse-Cyclic Program is operated through individual agreements with member agencies. These agreements allowed member agencies to purchase water in calendar year 2022 for delivery in a future wet year. Metropolitan will deliver the water within five years at its sole discretion. Under the Program, billing occurs before delivery is made at the full-service water rate, plus the treatment surcharge, if applicable, and the purchases are counted towards the member agency's Readiness-to-Serve Charge. However, deliveries are excluded from the calculation of the Capacity Charge because Reverse-Cycle Program deliveries are made at Metropolitan's discretion.

(4) *Emergency Storage Program.* The Emergency Storage Program is used for delivering water for emergency storage in surface water reservoirs and storage tanks. Emergency Storage Program purposes include initially filling a newly constructed reservoir or storage tank and replacing water used during an emergency. Because Metropolitan could interrupt delivery of this water, Emergency Storage Program Deliveries are excluded from the calculation of the RTS Charge, the Capacity Charge, and the Tier 1 maximum.

(5) *Operational Shift Cost Offset Program.* The OSCOP is operated through individual agreements with member agencies. Through these agreements, cost-offset credits are offered to member agencies to offset the estimated additional costs and risks incurred by an agency as a result of voluntary operational changes requested by Metropolitan for the purpose of maximizing Metropolitan's water resources. All water delivered under the OSCOP is billed at Metropolitan's applicable full-service rate. Credits are reported as supply program costs.

The applicable rate components and fixed charges applicable for each such program are shown in the following chart.

#### **Current Programs and Rate Components**

Program	Supply	Rates & Charges That Apply				
		System Access	System Power	Readiness to Serve	Capacity Charge	Tier 1 Maximum
Full Service	Yes	Yes	Yes	Yes	Yes	Yes
Conjunctive Use	Yes	Yes	Yes	Yes	No	Yes
Cyclic	Yes	Yes	Yes	Yes	No	Yes
Reverse-Cyclic	Yes	Yes	Yes	Yes	No	Yes
Emergency Storage	Yes	Yes	No	Yes	No	No <sup>(1)</sup>
Operational Shift Cost Offset	Yes	Yes	Yes	Yes	Yes	Yes

<sup>(1)</sup> Emergency Storage Program pays the Tier 1 Supply Rate; purchases under Emergency Storage program do not count towards a member agency's Tier 1 Maximum.

## Water Rates

The following table sets forth Metropolitan's water rates by category beginning January 1, 2020. See also "MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES—Water Revenues" in this Appendix A. In addition to the base rates for untreated water sold in the different classes of service, the columns labeled "Treated" include the surcharge that Metropolitan charges for water treated at its water treatment plants. See "—Rate Structure" and "—Classes of Water Service" for descriptions of current rates. See also "—Litigation Challenging Rate Structure" for a description of litigation challenging Metropolitan's water rates.

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### SUMMARY OF WATER RATES (Dollars Per Acre-Foot)

	SUPPLY RATE		SYSTEM ACCESS RATE		WATER STEWARDSHIP RATE <sup>(1)</sup>		SYSTEM POWER RATE		TREATMENT SURCHARGE	
	Tier 1	Tier 2 <sup>(4)</sup>								
January 1, 2020	\$ 208	\$ 295	\$	346	\$	65	\$	136	\$	323
January 1, 2021	\$ 243	\$ 285	\$	373	\$	—	\$	161	\$	327
January 1, 2022	\$ 243	\$ 285	\$	389	\$	—	\$	167	\$	344
January 1, 2023*	\$ 321	\$ 530	\$	368	\$	—	\$	166	\$	354
January 1, 2024*	\$ 332	\$ 531	\$	389	\$	—	\$	182	\$	353
	\$						\$		\$	
January 1, 2025**	<del>353</del> 290	\$ —	\$	463	\$	—	\$	<del>190</del> 159	\$	<del>459</del> 483
	\$		\$				\$		\$	
January 1, 2026**	<del>375</del> 313	\$ —	\$	<del>491</del> 492	\$	—	\$	<del>203</del> 179	\$	<del>518</del> 544

	FULL SERVICE TREATED <sup>(2)</sup>		FULL SERVICE UNTREATED <sup>(3)</sup>	
	Tier 1	Tier 2 <sup>(4)</sup>	Tier 1	Tier 2 <sup>(4)</sup>
January 1, 2020	\$ 1,078	\$ 1,165	\$ 755	\$ 842
January 1, 2021	\$ 1,104	\$ 1,146	\$ 777	\$ 819
January 1, 2022	\$ 1,143	\$ 1,185	\$ 799	\$ 841
January 1, 2023*	\$ 1,209	\$ 1,418	\$ 855	\$ 1,064
January 1, 2024*	\$ 1,256	\$ 1,455	\$ 903	\$ 1,102

	\$		\$	
January 1, 2025**	<del>1,465</del> 1,395	\$ —	<del>1,006</del>	\$ —
	\$		\$	
January 1, 2026**	<del>1,587</del> 1,528	\$ —	<del>1,069</del>	\$ —

Source: Metropolitan.

\* Rates effective January 1, 2023 and January 1, 2024 were adopted by Metropolitan's Board on April 12, 2022.

- \*\*** Rates effective January 1, 2025 and January 1, 2026 were ~~proposed to~~adopted by Metropolitan's Board on April ~~14~~9, 2024.
- (1) As described under “–Rate Structure –*Water Stewardship Rate*,” the Water Stewardship Rate has not been collected on water transactions after December 31, 2020. In November 2021, the Board directed staff to allocate all demand management costs to Metropolitan's supply elements.
  - (2) Full service treated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate, System Power Rate and Treatment Surcharge.
  - (3) Full service untreated water rates are the sum of the applicable Supply Rate, System Access Rate, Water Stewardship Rate and System Power Rate.
  - (4) As described under “–Member Agency Purchase Orders,” the Tier 2 rate is not included in the ~~proposed~~ biennial budget for fiscal years ~~2024-25~~2024-25 and ~~2025-26~~2025-26 and ~~proposed~~ calendar years 2025 and 2026 rates. Metropolitan will revisit Purchase Order commitments and structure as needed through the business model review during the CAMP4W planning process.

## Financial Reserve Policy

Metropolitan's reserve policy provides for a minimum reserve requirement and target amount of unrestricted reserves at June 30 of each year. The minimum reserve requirement at June 30 of each year is equal to the portion of fixed costs estimated to be recovered by water revenues for the 18 months beginning with the immediately succeeding July. Funds representing the minimum reserve requirement are held in the Revenue Remainder Fund. Any funds in excess of the minimum reserve requirement are held in the Water Rate Stabilization Fund. The target amount of unrestricted reserves is equal to the portion of the fixed costs estimated to be recovered by water revenues during the two years immediately following the 18-month period used to calculate the minimum reserve requirement. Funds in excess of the target amount are to be utilized for capital expenditures in lieu of the issuance of additional debt, or for the redemption, defeasance or purchase of outstanding bonds or commercial paper as determined by the Board. Provided that the fixed charge coverage ratio is at or above 1.2, amounts in the Water Rate Stabilization Fund may be expended for any lawful purpose of Metropolitan, as determined by the Board. See "CAPITAL INVESTMENT PLAN—Capital Investment Plan Financing" in this Appendix A.

At June 30, ~~2023~~2024, unrestricted reserves, which consist of the Water Rate Stabilization Fund and the Revenue Remainder Fund, ~~total~~are estimated to total \$~~554.2~~323 million on a cash basis. As of June 30, ~~2023~~2024, the minimum reserve requirement was \$~~254.5~~266.6 million, and the target reserve level was \$~~625.8~~665.9 million.

Metropolitan projects that its unrestricted reserves as of June 30, 2025 will be approximately \$340 million on a cash basis. This projection is based on the assumptions set forth in the table entitled "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.

Due to SDCWA's litigation challenging Metropolitan's rates and pursuant to the Exchange Agreement between Metropolitan and SDCWA, Metropolitan ~~is~~was required to set aside funds based on the quantities of exchange water ~~that~~provided by Metropolitan ~~provides~~ to SDCWA and the amount of charges disputed by SDCWA. In April 2016, Metropolitan transferred these funds from unrestricted financial reserves to a new designated fund, the Exchange Agreement Set-Aside Fund. In 2021, Metropolitan paid to SDCWA the final judgment contract damages amount in the 2010 and 2012 SDCWA v. Metropolitan cases for Water Stewardship Rate payments under the Exchange Agreement in 2011 through 2014, plus interest. Following the 2021 Court of Appeal opinion clarifying that its Water Stewardship Rate ruling applies to later years, Metropolitan paid to SDCWA Water Stewardship Rate payments from 2015 to 2017, plus pre-judgment interest. These payments ~~include~~included all amounts sought related to breach of the Exchange Agreement resulting from the inclusion of the Water Stewardship Rate in the contract price for Exchange Agreement transactions occurring from 2010 until the Water Stewardship Rate was no longer charged in the contract price for Exchange Agreement transactions, beginning in 2018. Accordingly, there are no amounts held in the Exchange Agreement Set-Aside Fund. See "—Litigation Challenging Rate Structure."

~~Metropolitan projects that its unrestricted reserves as of June 30, 2024 will be approximately \$327 million on a cash basis. This projection is based on the assumptions set forth in the table entitled "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" under "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A.~~

## California Ballot Initiatives

Proposition 218, a State ballot initiative known as the "Right to Vote on Taxes Act," was approved by the voters on November 5, 1996 adding Articles XIIC and XIID to the California Constitution. Article XIID provides substantive and procedural requirements on the imposition,

extension or increase of any “fee” or “charge” levied by a local government upon a parcel of real property or upon a person as an incident of property ownership. As a wholesaler, Metropolitan serves water to its member agencies, not to persons or properties as an incident of property ownership. Thus, water rates charged by Metropolitan to its member agencies are not property related fees and charges and therefore are exempt from the requirements of Article XIID. Fees for retail water service by Metropolitan’s member agencies or their agencies are subject to the requirements of Article XIID.

Article XIID also imposes certain procedures with respect to assessments. Under Article XIID, “standby charges” are considered “assessments” and must follow the procedures required for “assessments,” unless they were in existence on the effective date of Article XIID. Metropolitan has imposed its water standby charges since 1992 and therefore its current standby charges are exempt from the Article XIID procedures. Changes to Metropolitan’s current standby charges could require notice to property owners and approval by a majority of such owners returning mail-in ballots approving or rejecting any imposition or increase of such standby charge. Twenty-two of Metropolitan’s member agencies have elected to collect all or a portion of their readiness-to-serve charges through standby charges. See “–Other Charges – *Readiness-to-Serve Charge*” and “– *Water Standby Charges*” above. Even if Article XIID is construed to limit the ability of Metropolitan and its member agencies to impose or collect standby charges, the member agencies will continue to be obligated to pay the ~~readiness-to-serve~~Readiness-to-Serve charges.

Article XIIC makes all taxes either general or special taxes and imposes voting requirements for each kind of tax. It also extends the people’s initiative power to reduce or repeal previously authorized local taxes, assessments, fees and charges. This extension of the initiative power is not limited by the terms of Article XIIC to fees imposed after November 6, 1996, or to property-related fees and charges and, absent other authority could result in retroactive reduction in existing taxes, assessments or fees and charges.

Proposition 26, a State ballot initiative aimed at restricting regulatory fees and charges, was approved by a majority of California voters on November 2, 2010. Proposition 26 broadens the definition of “tax” in Article XIIC of the California Constitution to include: levies, charges and exactions imposed by local governments, except for charges imposed for benefits or privileges or for services or products granted to the payor (and not provided to those not charged) that do not exceed their reasonable cost; regulatory fees that do not exceed the cost of regulation and are allocated in a fair or reasonable manner; fees for the use of local governmental property; fines and penalties imposed for violations of law; real property development fees; and assessments and property-related fees imposed under Article XIID of the California Constitution. Special taxes imposed by local governments including special districts are subject to approval by two-thirds of the electorate. Proposition 26 applies to charges imposed or increased by local governments after the date of its approval. Metropolitan believes its water rates and charges are not taxes under Proposition 26. SDCWA’s lawsuit challenging the rates adopted by Metropolitan in April 2012 (part of which became effective January 1, 2013 and part of which became effective January 1, 2014) alleged that such rates violate Proposition 26. On June 21, 2017, the California Court of Appeal ruled that whether or not Proposition 26 applies to Metropolitan’s rates, the System Access Rate and System Power Rate challenged by SDCWA in such lawsuit comply with Proposition 26. SDCWA’s lawsuits challenging the rates adopted by Metropolitan in April 2014, April 2016, and April 2018 also alleged that such rates violate Proposition 26. On May 11, 2022, the San Francisco Superior Court ruled that Proposition 26 applies to Metropolitan’s rates and charges. See “–Litigation Challenging Rate Structure.” The trial court decision is subject to appeal. Under Proposition 26, the agency holds the burden of proof in a rate or charge challenge. Otherwise, due to the uncertainties of evolving case law and potential future judicial interpretations of Proposition 26, Metropolitan is unable to predict at this time the extent to which Proposition 26, if ultimately determined to apply to Metropolitan’s rates and charges, would impose stricter standards on Metropolitan’s setting of rates and charges.



Propositions 218 and 26 were adopted as measures that qualified for the ballot pursuant to the State's initiative process. Other initiative measures have been proposed from time to time, or could be proposed in the future, which if qualified for the ballot, could be adopted, or legislative measures could be approved by the Legislature, which may place limitations on the ability of Metropolitan or its member agencies to increase revenues or to increase appropriations in the future, or, if such measures are retroactive, affect previously adopted revenue increasing actions. Such measures may further affect Metropolitan's ability to collect taxes, assessments or fees and charges, which could have an adverse effect on Metropolitan's revenues.

~~A voter initiative, designated as Initiative 1935 and otherwise known as "The Taxpayer Protection and Government Accountability Act" ("Initiative 1935"), has been determined to be eligible for the State's November 5, 2024 statewide general election, and, unless withdrawn by its proponent prior to June 27, 2024, or removed pursuant to the emergency petition for writ of mandate filed by the Governor of California seeking such removal, will be certified as qualified for the ballot in such election. If it were to be approved by the voters in the election, Initiative 1935 would amend Article XIII C of the State Constitution to, among other things, provide that every levy, charge or exaction of any kind imposed by a local government after January 1, 2022 is either a tax or an exempt charge. Charges for government services provided directly to the payor would be "taxes" subject to voter approval unless the local government can prove by clear and convincing evidence that the charge is reasonable and does not exceed the "actual cost" of providing the service or product to the payor. "Actual cost" is defined in Initiative 1935 to mean "(i) the minimum amount necessary to reimburse the government for the cost of providing the service or product to the payor and (ii) where the amount charged is not used by the government for any purpose other than reimbursing that cost." Initiative 1935 further states that "[i]n computing "actual cost" the maximum amount that may be imposed is the actual cost less all other sources of revenue including, but not limited to taxes, other exempt charges, grants, and state or federal funds received to provide such service or product." Initiative 1935 would also amend Article XIII C to state that any tax or exempt charge adopted after January 1, 2022, but prior to the effective date of Initiative 1935, which was not adopted in compliance with the requirements of Initiative 1935 is void 12 months after the effective date of Initiative 1935, if adopted, unless the tax or exempt charge is reenacted in compliance with the provisions of Initiative 1935. Initiative 1935 would require an exempt charge to be imposed by ordinance of the local government's governing body.~~

~~Metropolitan's rates are currently adopted by the Board to be reasonable and follow cost of service. Accordingly, Metropolitan's rate structure would still be subject to the exemptions provided for charges that are not subject to voter approval. However, the Board would now be required to adopt the rates for service by a 2/3 majority. Additionally, the new scope of exempt charges as limited to recover "actual" costs and the heightened burden of proof to demonstrate the applicability of an exemption, would place greater burden on Metropolitan in defending litigation challenging the validity of its rates and charges. If submitted to, and approved by the voters, Initiative 1935 would be subject to judicial interpretation.~~

### Preferential Rights

Section 135 of the Act gives each of Metropolitan's member agencies a preferential right to purchase for domestic and municipal uses within the agency a portion of the water served by Metropolitan, based upon a ratio of all payments on tax assessments and otherwise, except purchases of water, made to Metropolitan by the member agency compared to total payments made by all member agencies on tax assessments and otherwise since Metropolitan was formed, except purchases of water. Historically, these rights have not been used in allocating Metropolitan's water. In 2004, the California Court of Appeal upheld Metropolitan's methodology for calculation of the respective member agencies' preferential rights under Section 135 of the Act. SDCWA's litigation challenging Metropolitan's rate structure also challenged Metropolitan's exclusion of payments for Exchange Agreement deliveries from



the calculation of SDCWA's preferential right. On June 21, 2017, the California Court of Appeal held that SDCWA's payments under the Exchange Agreement must be included in the preferential rights calculation. See “–Litigation Challenging Rate Structure.”

### **Litigation Challenging Rate Structure**

Through several lawsuits filed by SDCWA since 2010, SDCWA has challenged the rates adopted by Metropolitan's Board in 2010, 2012, 2014, 2016 and 2018. Each of these lawsuits and the status thereof are briefly described below.

**The 2010 and 2012 Cases.** SDCWA filed *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.* on June 11, 2010 challenging the rates adopted by the Board on April 13, 2010, which became effective January 1, 2011, and January 1, 2012 (the “2010 Case”). The complaint requested a court order invalidating the rates adopted April 13, 2010, and that Metropolitan be mandated to allocate certain costs associated with the State Water Contract and the Water Stewardship Rate to water supply rates and not to transportation rates.

As described under “METROPOLITAN'S WATER SUPPLY–Colorado River Aqueduct – Metropolitan and San Diego County Water Authority Exchange Agreement” in this Appendix A, the contract price payable by SDCWA under the Exchange Agreement between Metropolitan and SDCWA is Metropolitan's transportation rates. Therefore, SDCWA also alleged that Metropolitan breached the Exchange Agreement by allocating certain costs related to the State Water Contract and the Water Stewardship Rate to its transportation rates because it resulted in an overcharge to SDCWA for water delivered pursuant to the Exchange Agreement.

On June 8, 2012, SDCWA filed a new lawsuit challenging the rates adopted by Metropolitan on April 10, 2012, and effective on January 1, 2013, and January 1, 2014 (the “2012 Case”) based on similar claims, and further alleging that Metropolitan's rates adopted in 2012 violated Proposition 26.

Following a trial of both lawsuits in two phases and subsequent trial court ruling, the parties appealed. On June 21, 2017, the California Court of Appeal ruled that Metropolitan may lawfully include its State Water Project transportation costs in the System Access Rate and System Power Rate that are part of the Exchange Agreement's price term, and that Metropolitan may also lawfully include the System Access Rate in its wheeling rate, reversing the trial court decision on this issue. The court held Metropolitan's allocation of the State Water Project transportation costs as its own transportation costs is proper and does not violate the Wheeling Statutes (Water Code, §1810, *et seq.*), Proposition 26 (Cal. Const., Article XIII C, §1, subd. (e)), whether or not that Proposition applies to Metropolitan's rates, California Government Code ~~section~~[Section](#) 54999.7, the common law, or the terms of the parties' Exchange Agreement.

The Court of Appeal also ruled that the record did not support Metropolitan's inclusion of its Water Stewardship Rate as a transportation cost in the Exchange Agreement price or the wheeling rate, under the common law and the Wheeling Statutes. The court noted that its holding does not preclude Metropolitan from including the Water Stewardship Rate in Metropolitan's full-service rate. See also “–Rate Structure – *Water Stewardship Rate*” above.

The Court of Appeal held that because the Water Stewardship Rate was included in the Exchange Agreement price, there was a breach by Metropolitan of the Exchange Agreement in 2011 through 2014 and remanded the case to the trial court for a redetermination of damages in light of its ruling concerning the Water Stewardship Rate. The Court of Appeal also found that the Exchange

Agreement may entitle the prevailing party to attorneys' fees for both phases of the case, and directed the trial court on remand to make a new determination of the prevailing party, if any.

On September 27, 2017, the California Supreme Court denied SDCWA's petition for review, declining to consider the Court of Appeal's decision. The Court of Appeal's decision is therefore final.

After tendering payment in 2019, which SDCWA rejected, in February 2021, Metropolitan paid to SDCWA the same amount previously tendered of \$44.4 million for contract damages for SDCWA's Water Stewardship Rate payments from 2011 to 2014 and pre-judgment and post-judgment interest. In September 2021, following a 2021 Court of Appeal opinion clarifying that its Water Stewardship Rate ruling applies to later years, Metropolitan paid to SDCWA the amount of \$35.9 million for SDCWA's Water Stewardship Rate payments from 2015 to 2017 and pre-judgment interest. These payments ~~include~~included all amounts sought related to breach of the Exchange Agreement resulting from the inclusion of the Water Stewardship Rate in the contract price for Exchange Agreement transactions occurring from 2010 until the Water Stewardship Rate was no longer charged in the contract price for Exchange Agreement transactions, beginning in 2018 (See "Rate Structure" above). The payments included \$58.1 million withdrawn from the Exchange Agreement Set-Aside Fund (See "Financial Reserve Policy" above) and \$22.1 million withdrawn from reserves (the remainder of the statutory interest).

Following the issuance of an order of the Superior Court and Metropolitan's appeal, on March 17, 2022, the Court of Appeal held that SDCWA was the prevailing party in the 2010 and 2012 cases and was therefore entitled to attorney's fees under the parties' Exchange Agreement and litigation costs. On March 21, 2022, Metropolitan paid to SDCWA \$14,296,864.99 (\$13,397,575.66 fees award, plus statutory interest) and \$352,247.79 for costs (\$326,918.34 costs award, plus statutory interest).

On July 27, 2022, Metropolitan paid SDCWA \$411,888.36 for attorneys' fees on appeals of post-remand orders.

***The 2014, 2016 and 2018 Cases.*** SDCWA has also filed lawsuits challenging the rates adopted in 2014, 2016 and 2018 and asserting breach of the Exchange Agreement. Metropolitan filed cross-complaints in the three cases, asserting claims relating to rates and the Exchange Agreement, including reformation.

The operative Petitions for Writ of Mandate and Complaints allege the same Water Stewardship Rate claim and breach of the Exchange Agreement as in the 2010 and 2012 cases, but because Metropolitan paid the amounts sought to SDCWA, and the writ in the 2010 and 2012 cases encompasses these claims, Metropolitan contended that these claims and cross-claims are moot. ~~They also claim Metropolitan's wheeling rate fails to provide wheelers a reasonable credit for "offsetting benefits" pursuant to Water Code Section 1810, et seq., and that Metropolitan has breached the Exchange Agreement by failing to reduce the price for an "offsetting benefits" credit.~~ The cases also alleged that in 2020 and 2021, Metropolitan misallocated its California WaterFix costs as transportation costs and breached the Exchange Agreement by including those costs in the transportation rates charged. In April 2022, the parties requested the court's dismissal with prejudice of the claims and cross-claims relating to California WaterFix. The cases also ~~request claim~~ request claim Metropolitan's wheeling rate fails to provide wheelers a reasonable credit for "offsetting benefits" pursuant to Water Code Section 1810, et seq., and that Metropolitan breached the Exchange Agreement by failing to reduce the price for an "offsetting benefits" credit. The cases additionally requested a judicial declaration that Proposition 26 applies to Metropolitan's rates and charges, and a judicial declaration that SDCWA is not required to pay any portion of a judgment in the litigation. Metropolitan filed cross-complaints in each of these cases, asserting claims relating to rates and the Exchange Agreement.

The cases were stayed pending resolution of the 2010 and 2012 cases, but the stays ~~have been~~were subsequently lifted and the cases ~~have been~~were consolidated in the San Francisco Superior Court.

Metropolitan and SDCWA each filed motions for summary adjudication of certain issues in the 2014, 2016 and 2018 cases with the court. Summary adjudication is a procedure by which a court may determine the merits of a particular claim or affirmative defense, a claim for damages, and/or an issue of duty before trial.

On May 4, 2022, the San Francisco Superior Court issued an order granting Metropolitan's motion for summary adjudication on its cross-claim for declaratory relief that the conveyance facility owner, Metropolitan, determines fair compensation, including any offsetting benefits; and denying its motion on certain other cross-claims and an affirmative defense.

On May 11, 2022, the San Francisco Superior Court issued an order granting SDCWA's motion for summary adjudication on: Metropolitan's cross-claim in the 2018 case for a declaration with respect to the lawfulness of the Water Stewardship Rate's inclusion in the wheeling rate and transportation rates in 2019 and 2020; certain Metropolitan cross-claims and affirmative defenses on the ground that Metropolitan has a duty to charge no more than fair compensation, which includes reasonable credit for any offsetting benefits pursuant to Water Code section 1811(c), with the court also stating that whether that duty arose and whether Metropolitan breached that duty ~~are~~were issues to be resolved at trial; Metropolitan's affirmative defenses that SDCWA's claims ~~are~~were untimely and SDCWA ~~has~~had not satisfied claims presentation requirements; Metropolitan's affirmative defense in the 2018 case that SDCWA ~~has~~had not satisfied dispute resolution requirements under the Exchange Agreement; SDCWA's claim, Metropolitan's cross-claims, and Metropolitan's affirmative defenses regarding the applicability of Proposition 26, finding that Proposition 26 applies to Metropolitan's rates and charges, with the court also stating that whether Metropolitan violated Proposition 26 is a separate issue; and Metropolitan's cross-claims and affirmative defenses regarding the applicability of Government Code section 54999.7, finding that section 54999.7 applies to Metropolitan's rates. The court denied SDCWA's motion on certain other Metropolitan cross-claims and affirmative defenses.

Damages sought by SDCWA in connection with its claims for offsetting benefits credit under the Exchange Agreement exceed \$334 million for the six years (2015 through 2020) at issue in these cases. In the event that SDCWA were to prevail in a final adjudication of this issue, a determination of offsetting benefits credit due to SDCWA, if any, could impact the Exchange Agreement price in future years.

Trial of the 2014, 2016 and 2018 cases occurred May 16 to July 1, 2022. ~~Subsequent to the July 1, 2022 trial closing date of the 2014, 2016 and 2018 cases, and~~ the parties filed post-trial briefs on August 19, 2022. ~~On September 14, 2022, the court granted in part and denied in part SDCWA's motion for partial judgment; the rulings did not resolve any claims or cross claims. Trial closing arguments were held on September 27, 2022. As directed by the court, the parties filed proposed statements of decision on December 16, 2022.~~

On December 27, 2022, the court entered the parties' stipulation memorializing the earlier resolution of the Water Stewardship Rate claims in SDCWA's favor, ~~except a cross-claim that Metropolitan withdrew via the stipulation~~ based on the 2021 Court of Appeal decision in the 2010 and 2012 cases.

On March 14, 2023, the court issued an ~~amended~~ order on SDCWA's motion for partial judgment to address ~~Metropolitan's~~Metropolitan's request for a declaration on ~~Metropolitan's cost causation~~its cost-causation obligations when setting rates. The court ruled that ~~Metropolitan cannot~~

~~demonstrate that a declaration regarding cost causation is the~~this is not a proper subject for declaratory relief.

~~After issuing a tentative statement of decision on March 14, 2023, and receiving SDCWA's objections on March 29, 2023, on~~On April 25, 2023, the court issued its final statement of decision concerning the trial in the 2014, 2016, and 2018 cases. For each claim litigated at trial, the court ruled in favor of Metropolitan or found the claim to be moot based on the rulings in Metropolitan's favor. ~~The~~In particular, the court concluded: (1) the duty to include a reasonable credit for any offsetting benefits pursuant to the Wheeling Statutes did not arise and Metropolitan did not breach the Exchange Agreement by failing to calculate a reasonable credit for any offsetting benefits; (2) because Metropolitan did not breach the Exchange Agreement, the court need not address damages; (3) Metropolitan's conditional claims to reform the Exchange Agreement, if SDCWA prevailed, are moot; (4) Metropolitan's conditional claim for a declaration of its rights and duties under the Wheeling Statutes, if SDCWA prevailed on its claim that the Wheeling Statutes apply to the Exchange Agreement is moot (the court stated that while it finds offsetting benefits under the Wheeling Statutes do not apply to the Exchange Agreement's price term, the court "has made no express finding whether the Wheeling Statutes apply"); (5) SDCWA's rate challenges are rejected; and (6) SDCWA's request for a declaration that it could not be required to contribute to a damages, fees, or costs award in the cases is moot.

~~The court will issue a final judgment in the 2014, 2016, and 2018 cases, which will be subject to appeal. The parties dispute the appropriate form of final judgment and whether a writ should issue. Following briefing, a hearing on the matter occurred on March 13, 2024. Thereafter, the court will determine the prevailing party, if any, for purposes of fees and costs. Either party may appeal from the final judgment.~~

On April 3, 2024, the court issued a final judgment memorializing the pre-trial and post-trial decisions and stipulations described above. The judgment included entry of judgment in favor of SDCWA on breach of contract in the 2014 and 2016 cases, due to the inclusion of Water Stewardship Rate claims and the parties' stipulation; and entry of judgment in favor of Metropolitan on breach of contract in the 2018 case, which concerned only the offsetting benefits claim. On April 3, 2024, the court also issued a writ of mandate commanding Metropolitan to exclude demand management costs (previously collected through the Water Stewardship Rate) from its pre-set wheeling rate and transportation rates, a practice Metropolitan earlier ceased.

Also on April 3, 2024, SDCWA filed its notice of appeal from the final judgment. On April 17, 2024, Metropolitan filed a notice of cross-appeal, and on May 3, 2024, the seven member agencies that have joined the litigation as interested parties in support of Metropolitan filed a notice of appeal.

Both Metropolitan and SDCWA contend that it is the prevailing party in these cases and is therefore entitled to an award of fees and costs under the Exchange Agreement. Following briefing, on July 17, 2024, the court issued a tentative ruling that there is no prevailing party due to the mixed results. After a hearing on July 18, 2024, the court took the matter under submission, stating it expects to issue its ruling in mid-August 2024.

Metropolitan is unable to assess at this time the likelihood of success of the pending ~~cases, any possible appeals~~appeal, settlements or any future claims.

## Other Revenue Sources

**Hydroelectric Power Revenues.** Metropolitan has constructed 15 small hydroelectric plants on its distribution system. The combined generating capacity of these plants is approximately 130 megawatts, and is dependent on available water sources. The plants are located in Los Angeles, Orange,

Riverside, and San Diego Counties at existing pressure control structures and other locations. In addition, the power requirements for the CRA are offset, in part, by Metropolitan's hydroelectric power generation entitlements from Hoover and Parker dams. A net revenue stream results when the CRA power needs are less than Metropolitan's Hoover and Parker power entitlements, and in which the excess energy is imported and sold into the California Independent System Operator ("CAISO") market.

Since 2000, annual energy generation sales revenues have ranged between \$6.0 million and nearly ~~\$29.644.9~~ million, fluctuating with available water supplies. Hydroelectric power revenues ~~were~~ are estimated to be approximately \$6.09.4 million in for fiscal year ~~2022-23~~ 2023-24.

**Investment Income.** In fiscal years ~~2020-21, 2021-2022~~ 2021-22, 2022-23, and ~~2022-23~~ 2023-24, Metropolitan's earnings on investments, including adjustments for gains and losses and premiums and discounts, ~~including~~ excluding construction account and trust fund earnings, excluding gains and losses on swap terminations, on a cash basis (unaudited) were ~~\$12.7~~ 10.2 million, ~~\$11.3~~ 21.3 million, and ~~\$27.3~~ 42.2 million, respectively.

### Investment of Moneys in Funds and Accounts

The Board has delegated to the Treasurer the authority to invest funds. All moneys in any of the funds and accounts established pursuant to Metropolitan's water revenue or general obligation bond resolutions are managed by the Treasurer in accordance with Metropolitan's Statement of Investment Policy. All Metropolitan funds available for investment are currently invested in United States Treasury and agency securities, supranationals, commercial paper, negotiable certificates of deposit, ~~banker's acceptances~~ bank deposits (certificate of deposit), corporate notes, municipal bonds, government-sponsored enterprise, money market funds, California Asset Management Program ("CAMP") and the California Local Agency Investment Fund ("LAIF"). CAMP is a program created through a joint powers agency as a pooled short-term portfolio and cash management vehicle for California public agencies. CAMP is a permitted investment for all local agencies under California Government Code Section 53601(p). LAIF is a voluntary program created by statute as an investment alternative for California's local governments and special districts. LAIF permits such local agencies to participate in an investment portfolio, which invests billions of dollars, managed by the State Treasurer's Office.

The Statement of Investment Policy provides that in managing Metropolitan's investments, the primary objective shall be to safeguard the principal of the invested funds. The secondary objective shall be to meet all liquidity requirements and the third objective shall be to achieve a return on the invested funds. Although the Statement of Investment Policy permits investments in some government-sponsored enterprise, the portfolio does not include any of the special investment vehicles related to sub-prime mortgages. Metropolitan's current investments comply with the Statement of Investment Policy.

As of ~~February 29~~ June 30, 2024, the total market value (cash-basis) of all Metropolitan invested funds was ~~\$1.1~~ 1.4 billion. The market value of Metropolitan's investment portfolio is subject to market fluctuation and volatility and general economic conditions. Over the three years ended ~~February 29~~ June 30, 2024, the market value of the month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) averaged approximately ~~\$1.3~~ 1.2 billion. The minimum month-end balance of Metropolitan's investment portfolio (excluding bond reserve funds) during such period was approximately ~~\$969.0 million~~ 1.0 billion on October 31, 2023. See Note 3 to Metropolitan's audited financial statements in Appendix B for additional information on the investment portfolio.

Metropolitan's Administrative Code requires that (1) the Treasurer provide an annual Statement of Investment Policy for approval by Metropolitan's Board, (2) the Treasurer provide a monthly investment report to the Board and the General Manager showing by fund the description, maturity date,



yield, par, cost and current market value of each security, and (3) the General Counsel review as to eligibility the securities invested in by the Treasurer for that month and report his or her determinations to the Board. The Board approved the Statement of Investment Policy for fiscal year ~~2023-24~~2024-25 on June ~~13~~11, ~~2023~~2024.

Subject to the provisions of Metropolitan's water revenue or general obligation bond resolutions, obligations purchased by the investment of bond proceeds in the various funds and accounts established pursuant to a bond resolution are deemed at all times to be a part of such funds and accounts and any income realized from investment of amounts on deposit in any fund or account therein will be credited to such fund or account. The Treasurer is required to sell or present for redemption any investments whenever it may be necessary to do so in order to provide moneys to meet required payments or transfers from such funds and accounts. For the purpose of determining at any given time the balance in any such funds, any such investments constituting a part of such funds and accounts will be valued at the then estimated or appraised market value of such investments.

All investments, including those authorized by law from time to time for investments by public agencies, contain certain risks. Such risks include, but are not limited to, a lower rate of return than expected and loss or delayed receipt of principal. The occurrence of these events with respect to amounts held under Metropolitan's water revenue or general obligation revenue bond resolutions, or other amounts held by Metropolitan, could have a material adverse effect on Metropolitan's finances. These risks may be mitigated, but are not eliminated, by limitations imposed on the portfolio management process by Metropolitan's Statement of Investment Policy.

The Statement of Investment Policy requires that investments have a minimum credit rating of "A-1/P-1/F1" for short-term securities and "A" for longer-term securities, without regard to modifiers, at the time of purchase. If a security is downgraded below the minimum rating criteria specified in the Statement of Investment Policy, the Treasurer shall determine a course of action to be taken on a case-by-case basis considering such factors as the reason for the downgrade, prognosis for recovery, or further rating downgrades, and the market price of the security. The Treasurer is required to note in the Treasurer's monthly report any securities which have been downgraded below Policy requirements and the recommended course of action.

The Statement of Investment Policy also limits the amount of securities that can be purchased by category, as well as by issuer, and prohibits investments that can result in zero interest income. Metropolitan's securities are settled on a delivery versus payment basis and are held by an independent third-party custodian. See Metropolitan's financial statements included in APPENDIX B- "THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE ~~SIX~~NINE MONTHS ENDED ~~DECEMBER~~MARCH 31, ~~2023~~2024 AND ~~2022~~2023 (UNAUDITED)" for a description of Metropolitan's investments at June 30, 2023, and ~~December~~March 31, ~~2023~~2024.

Metropolitan retains an outside investment firm to manage its core portfolio, a portion of the liquidity portfolio, and the Endowment Portfolio. The Endowment Portfolio includes the Lake Matthews Trust, DVR Multi-Species Reserve Fund, Habitat Maintenance Fund-Lower Colorado, Water Utility Climate Alliance Membership, and the HCP Remedial Measures Fund. This firm managed approximately ~~\$778.3862.8~~ million in total investments on behalf of Metropolitan as of ~~February 29~~June 30, 2024. All outside managers are required to adhere to Metropolitan's Statement of Investment Policy.

Metropolitan's Statement of Investment Policy may be changed at any time by the Board (subject to State law provisions relating to authorized investments). There can be no assurance that State law and/or the Statement of Investment Policy will not be amended in the future to allow for investments that

are currently not permitted under State law or the Statement of Investment Policy, or that the objectives of Metropolitan with respect to investments or its investment holdings at any point in time will not change.

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## METROPOLITAN EXPENSES

## General

The following table sets forth a summary of Metropolitan’s expenses, by major function, for the five years ended June 30, ~~2023~~2024. Data for the ~~four~~three fiscal years ended on or prior to June 30, 2022 is presented on a modified accrual basis, consistent with Metropolitan’s budgetary reporting for such fiscal years. In fiscal year ~~2022-23~~2022-23, the basis for budgeting was changed, therefore data for the fiscal ~~year~~years ended June 30, 2023 and 2024 is presented on a cash basis. ~~For comparative purposes, Metropolitan has provided a summary of its revenues and expenditures for fiscal year 2021-22 on both a modified accrual basis and a cash basis under “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.~~ All information is unaudited. Expenses of Metropolitan for the fiscal years ended June 30, 2023 and June 30, 2022, on an accrual basis, are shown in Metropolitan’s audited financial statements included in Appendix B.

## SUMMARY OF EXPENSES

**Fiscal Years Ended June 30**

(Dollars in Millions)

		Modified Accrual			Cash
		2018	2019	2020	2023
Operation and Maintenance Costs <sup>(1)(2)</sup>	\$ 569	\$ 5	\$ 5	\$ 5	\$ 940
Total State Water Project <sup>(3)</sup>	482	519	54	54	<del>578</del> 579
Total Debt Service	347	285	28	28	301
Construction Expenses from Revenues <sup>(4)</sup>	128	39	10	35	135
Other <sup>(5)</sup>	6	6	6	5	7

Total Expenses (net of reimbursements)

\$  
1,532

\$

\$

\$

\$  
1,961  
2

Source: Metropolitan.

- (1) Includes operation and maintenance, debt administration, conservation and local resource programs, CRA power, and water supply expenses. Fiscal year 2020-21, fiscal year 2021-22, fiscal year 2022-23, and fiscal year ~~2022-23~~2023-2024 include \$25 million, \$25 million, ~~and~~ \$34.5 million, and \$64.5 million for Delta Conveyance expenses, respectively. See “METROPOLITAN’S WATER SUPPLY–State Water Project – Bay-Delta Proceedings Affecting State Water Project – *Delta Conveyance*.”
- (2) The higher level of increases in Operation and Maintenance costs in fiscal years 2021-22 and ~~2022-23~~2022-23 over prior years primarily reflects significant increases in the costs of chemicals and other materials resulting from shortages or supply chain issues and higher than average CRA power and supply program costs.
- (3) Includes operating and capital expense portions and Delta Conveyance.
- (4) At the discretion of the Board, in any given year, Metropolitan may increase or decrease funding available for construction disbursements to be paid from revenues. Does not include expenditures of bond proceeds.
- (5) Includes operating equipment. Fiscal year 2021-22 includes \$51 million for SDCWA litigation payments.

<sup>(6)</sup> [Fiscal year 2023-24 information is based on preliminary results.](#)

### Revenue Bond Indebtedness and Other Obligations

As of ~~April~~[September](#) 1, 2024, Metropolitan ~~had~~[will have](#) total outstanding indebtedness secured by a lien on Net Operating Revenues of ~~\$3.90~~[4.04](#) billion. This indebtedness was comprised of (a)(i) ~~\$2.63~~[2.70](#) billion of Senior Revenue Bonds issued under the Senior Debt Resolutions (each as defined below), which includes ~~\$2.30~~[2.37](#) billion of fixed rate Senior Revenue Bonds, and \$331.9 million of variable rate Senior Revenue Bonds; and (ii) ~~\$176.4~~[384.4](#) million of senior lien short-term notes issued pursuant to Metropolitan's Short-Term Revolving Credit Facility (described below), which bear interest at a variable rate, and which are Senior Parity Obligations (which includes all obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds) (see “–Outstanding Senior Revenue Bonds and Senior Parity Obligations–Senior Parity Obligations”); and (b) ~~\$1.09 billion of~~[953.2 million of](#) Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions (each as defined below), which includes ~~\$599.6~~[650.7](#) million of fixed rate Subordinate Revenue Bonds, and ~~\$493.4~~[302.6](#) million of variable rate Subordinate Revenue Bonds. In addition, Metropolitan has ~~\$338.1~~[272.9](#) million of fixed-payor interest rate swaps which provides a fixed interest rate hedge to an equivalent amount of variable rate debt. Metropolitan's revenue bonds and other revenue obligations are more fully described below.

### REVENUE BOND INDEBTEDNESS AND OTHER OBLIGATIONS

(as of ~~April~~[September](#) 1, 2024)

	Variable Rate	Fixed Rate	Total
		\$	
Senior Lien Revenue Bonds	\$ 331,875,000	<del>2,301,600,000</del> <a href="#">2,367,560,000</a>	\$ <del>2,633,475,000</del> <a href="#">2,699,435,000</a>
Senior Lien Short-Term Notes	<del>176,400,000</del> <a href="#">384,400,000</a>	—	<del>176,400,000</del> <a href="#">384,400,000</a>
Subordinate Lien Revenue Bonds	<del>493,415,000</del> <a href="#">302,550,000</a>	<del>599,595,000</del> <a href="#">650,95,000</a>	<del>1,093,010,000</del> <a href="#">953,245,000</a>
	\$	\$	
<b>Total</b>	<del>1,001,690,000</del> <a href="#">1,018,825,000</a>	<del>2,901,195,000</del> <a href="#">3,239,255,000</a>	\$ <del>3,902,885,000</del> <a href="#">4,037,080,000</a>
Fixed-Payor Interest Rate Swaps	<del>(338,060,000)</del> <a href="#">272,870,000</a>	<del>338,060,000</del> <a href="#">272,870,000</a>	—
	\$	\$	
<b>Net Amount (after giving effect to Swaps)</b>	<del>663,630,000</del> <a href="#">745,955,000</a>	<del>3,239,255,000</del> <a href="#">3,239,255,000</a>	\$ <del>3,902,885,000</del> <a href="#">4,037,080,000</a>

Source: Metropolitan.

As described under “–Outstanding Senior Revenue Bonds and Senior Parity Obligations–Senior Parity Obligations,” in March 2024, Metropolitan entered into a Short-Term Revolving Credit Facility pursuant to which Metropolitan may issue senior lien short-term notes from time-to-time, bearing interest at a variable rate, and payable on parity with Metropolitan's Senior Revenue Bonds. As of ~~April~~[September](#) 1, 2024, ~~\$176,400,000~~[384,400,000](#) of senior lien short-term notes ~~were~~[are](#) outstanding under such Short-Term Revolving Credit Facility. ~~A portion of the~~[Approximately \\$316.0 million of such](#)

outstanding ~~senior lien~~ short-term notes are ~~being~~expected to be refunded with proceeds of Metropolitan's Water System Revenue and Refunding Bonds, 2024 Series C (the "2024C Bonds") and Variable Rate Subordinate Water Revenue Refunding Bonds, 2024 Series AD (the "2024A2024D Subordinate Bonds"). See "PLAN OF FINANCE" in the front part of this Official Statement.

### Limitations on Additional Revenue Bonds

Resolution 8329, adopted by Metropolitan's Board on July 9, 1991, as amended and supplemented (the "Master Senior Resolution," and collectively with all such supplemental resolutions, the "Senior Debt Resolutions"), provides for the issuance of Metropolitan's senior lien water revenue bonds. The Senior Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Senior Debt Resolutions, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any water revenue bonds authorized by the Senior Debt Resolutions ("Senior Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with such Senior Revenue Bonds ("Senior Parity Obligations"). No additional Senior Revenue Bonds or Senior Parity Obligations may be issued or incurred unless the conditions of the Senior Debt Resolutions have been satisfied.

Resolution 9199, adopted by Metropolitan's Board on March 8, 2016, as amended and supplemented (the "Master Subordinate Resolution," and collectively with all such supplemental resolutions, the "Subordinate Debt Resolutions," and together with the Senior Debt Resolutions, the "Revenue Bond Resolutions"), provides for the issuance of Metropolitan's subordinate lien water revenue bonds and other obligations secured by a pledge of Net Operating Revenues that is subordinate to the pledge securing Senior Revenue Bonds and Senior Parity Obligations. The Subordinate Debt Resolutions establish limitations on the issuance of additional obligations payable from Net Operating Revenues. Under the Subordinate Debt Resolutions, with the exception of Senior Revenue Bonds and Senior Parity Obligations, no additional bonds, notes or other evidences of indebtedness payable out of Operating Revenues may be issued having any priority in payment of principal, redemption premium, if any, or interest over any subordinate water revenue bonds authorized by the Subordinate Debt Resolutions ("Subordinate Revenue Bonds" and, together with Senior Revenue Bonds, "Revenue Bonds") or other obligations of Metropolitan having a lien and charge upon, or being payable from, the Net Operating Revenues on parity with the Subordinate Revenue Bonds ("Subordinate Parity Obligations"). No additional Subordinate Revenue Bonds or Subordinate Parity Obligations may be issued or incurred unless the conditions of the Subordinate Debt Resolutions have been satisfied.

The laws governing Metropolitan's ability to issue water revenue bonds currently provide two additional limitations on indebtedness that may be incurred by Metropolitan. The Act provides for a limit on general obligation bonds, water revenue bonds and other evidences of indebtedness of 15 percent of the assessed value of all taxable property within Metropolitan's service area. As of ~~April~~September 1, 2024, outstanding general obligation bonds, water revenue bonds and other evidences of indebtedness in the amount of ~~\$3.924.06~~\$3.733.65 billion represented approximately 0.10 percent of the fiscal year ~~2023-24~~2023-24 taxable assessed valuation of \$3,861.4 billion. {to be updated for fy 2024-25 assessed valuation when available} The second limitation under the Act specifies that no revenue bonds may be issued, except for the purpose of refunding, unless the amount of net assets of Metropolitan as shown on its balance sheet as of the end of the last fiscal year prior to the issuance of such bonds, equals at least 100 percent of the aggregate amount of revenue bonds outstanding following the issuance of such bonds. The net assets of Metropolitan at June 30, 2023 were \$7.45 billion. The aggregate amount of revenue bonds outstanding as of ~~April~~September, 2024 was ~~\$3.733.65~~\$3.733.65 billion. The limitation does not apply to other forms of financing available to Metropolitan. Audited financial statements including the net assets of Metropolitan as of June 30, 2023 and June 30, 2022 are shown in Metropolitan's audited financial statements included in APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN

CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE ~~SIX~~NINE MONTHS ENDED ~~DECEMBER~~MARCH 31, ~~2023~~2024 AND ~~2022~~2023 (UNAUDITED)."

Metropolitan provides no assurance that the Act's limitations on indebtedness will not be revised or removed by future legislation. Limitations under the Revenue Bond Resolutions respecting the issuance of additional obligations payable from Net Operating Revenues on parity with the Senior Revenue Bonds and Subordinate Revenue Bonds of Metropolitan will remain in effect so long as any Senior Revenue Bonds and Subordinate Revenue Bonds authorized pursuant to the applicable Revenue Bond Resolutions are outstanding, provided however, that the Revenue Bond Resolutions are subject to amendment and supplement in accordance with their terms.

### Variable Rate Exposure Policy

As of ~~April~~September 1, 2024, Metropolitan ~~had~~will have outstanding \$~~508.3~~716.3 million of variable rate obligations issued as Senior Revenue Bonds under the Senior Debt Resolutions and variable rate short-term notes incurred as Senior Parity Obligations under Metropolitan's Short-Term Revolving Credit Facility (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations" below). In addition, as of ~~April~~September 1, 2024, \$~~493.4~~302.6 million of variable rate Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions were outstanding (described under "–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations" below).

As of ~~April~~September 1, 2024, of Metropolitan's \$~~1.00~~1.02 billion of variable rate obligations, \$~~338.1~~272.9 million of such variable rate demand obligations are treated by Metropolitan as fixed rate debt, by virtue of interest rate swap agreements (described under "–Outstanding Senior Revenue Bonds and Senior Parity Obligations – Variable Rate and Swap Obligations – *Interest Rate Swap Transactions*" below), for the purpose of calculating debt service requirements. The remaining \$~~663.6~~746.0 million of variable rate obligations represent approximately ~~17.0~~19.1 percent of total outstanding water revenue secured indebtedness (including Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations), as of ~~April~~September 1, 2024.

Metropolitan's variable rate exposure policy requires that variable rate debt be managed to limit net interest cost increases within a fiscal year as a result of interest rate changes to no more than \$5 million. In addition, the maximum amount of variable interest rate exposure (excluding variable rate bonds associated with interest rate swap agreements) is limited to 40 percent of total outstanding water revenue bond debt. Variable rate debt capacity will be reevaluated as interest rates change and managed within these parameters.

### Outstanding Senior Revenue Bonds and Senior Parity Obligations

#### Senior Revenue Bonds

The water revenue bonds issued under the Senior Debt Resolutions outstanding as of ~~April~~September 1, 2024 are set forth below:

#### Outstanding Senior Revenue Bonds

Name of Issue	Principal Outstanding
Water Revenue Refunding Bonds, 2011 Series C	\$ 29,315,000
<del>Water Revenue Refunding Bonds, 2014 Series E</del>	<del>3,560,000</del>

	<del>50,860,000</del> <u>35,120,000</u>
Water Revenue Bonds, 2015 Authorization, Series A	<u>20,000</u>
Water Revenue Refunding Bonds, 2016 Series A	112,415,000
Special Variable Rate Water Revenue Refunding Bonds, 2016 Series B-2 <sup>(1)</sup>	25,325,000
Water Revenue Bonds, 2017 Authorization, Series A <sup>(1)</sup>	24,275,000
Water Revenue Refunding Bonds, 2018 Series B	114,615,000
Water Revenue Refunding Bonds, 2019 Series A	218,090,000
Water Revenue Bonds, 2020 Series A	207,355,000
<del>Special Variable Rate Water Revenue Refunding Bonds, 2020 Series B<sup>(2)</sup></del>	<del>271,815,000</del>
	<del>255,900,000</del> <u>245,970,000</u>
Water Revenue Refunding Bonds, 2020 Series C	<u>970,000</u>
Water Revenue Bonds, 2021 Series A	188,890,000
Water Revenue Refunding Bonds, 2021 Series B	74,465,000
Water Revenue Refunding Bonds, 2022 Series A	268,360,000
Water Revenue Refunding Bonds, 2022 Series B	253,365,000
Special Variable Rate Water Revenue Refunding Bonds, 2022 Series C-1 and C-2 <sup>(2)</sup>	282,275,000
Water Revenue Bonds, 2023 Series A	252,595,000
<u>Water Revenue Refunding Bonds, 2024 Series A</u>	<u>367,005,000</u>
	\$
<b>Total</b>	<del>2,633,475,000</del> <u>2,699,435,000</u>

Source: Metropolitan.

<sup>(1)</sup> Outstanding variable rate obligation.

~~Effective as of April 2, 2024, to bear interest at a variable rate in a long mode to July 1, 2024. Expected to be refunded from proceeds of Metropolitan's 2024A Bonds.~~

**Variable Rate Bonds and Swap Obligations**

As of ~~April~~ September 1, 2024, of Metropolitan's \$~~2.63~~2.70 billion of outstanding Senior Revenue Bonds, \$331.9 million ~~were~~are variable rate Senior Revenue Bonds issued under the Senior Debt Resolutions (described under this caption “–Variable Rate Bonds and Swap Obligations”) in either a daily mode or a weekly mode and supported by standby bond purchase agreements between Metropolitan and various liquidity providers (“Liquidity Supported Senior Revenue Bonds”).



**Liquidity Supported Senior Revenue Bonds.** Metropolitan's outstanding variable rate demand obligations issued under the Senior Debt Resolutions, totaling \$331.9 million as of ~~April~~September 1, 2024, consisted of \$49.6 million principal amount of variable rate Senior Revenue Bonds, the interest rates on which are currently reset on a daily basis, and \$282.3 million principal amount of variable rate Senior Revenue Bonds, the interest rates on which are reset on a weekly basis. The variable rate demand obligations bearing interest at a daily rate are subject to optional tender on any business day with same day notice by the owners thereof and mandatory tender upon specified events. The variable rate demand obligations bearing interest at a weekly rate are subject to optional tender on any business day upon seven days' notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by standby bond purchase agreements between Metropolitan and liquidity providers that provide for purchase of variable rate bonds by the applicable liquidity provider upon tender of such variable rate bonds and a failed remarketing. Metropolitan has secured its obligation to repay principal and interest advanced under the standby bond purchase agreements as Senior Parity Obligations. A decline in the creditworthiness of a liquidity provider will likely result in an increase in the interest rate of the applicable variable rate bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate bonds. Variable rate bonds purchased by a liquidity provider ("bank bonds") would initially bear interest at a per annum interest rate equal to, depending on the liquidity facility, either: (a) the highest of (i) the Prime Rate, (ii) the Federal Funds Rate plus one-half of a percent, or (iii) seven and one-half percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (a) by one percent after 60 days); or (b) the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause (b) by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of the earlier of the 60<sup>th</sup> day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the related liquidity facility, Metropolitan's obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the current liquidity facilities in semi-annual installments over a period ending on the third anniversary of the date on which the variable rate bonds were purchased by the liquidity provider. In addition, upon an event of default under any such liquidity facility, including a failure by Metropolitan to perform or observe its covenants under the applicable standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody's below "A-" or "A3"), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the current liquidity providers, the current expiration date of each facility, and the principal amount of outstanding variable rate demand obligations covered under each facility as of ~~April~~September 1, 2024.

#### Liquidity Facilities and Expiration Dates

Liquidity Provider	Bond Issue	Principal Outstanding	Facility Expiration
TD Bank, N.A.	2016 Series B-2	\$ 25,325,000	January 2026
TD Bank, N.A.	2022 Series C-1	147,650,000	January 2026
PNC Bank, N.A.	2017 Authorization Series A	24,275,000	January 2026
PNC Bank, N.A.	2022 Series C-2	134,625,000	January 2026
<b>Total</b>		<b>\$ 331,875,000</b>	

Source: Metropolitan.

**Interest Rate Swap Transactions.** By resolution adopted on September 11, 2001, Metropolitan's Board authorized the execution of interest rate swap transactions and related agreements in accordance with a master swap policy, which was subsequently amended by resolutions adopted on July 14, 2009 and May 11, 2010. Metropolitan may execute interest rate swaps if the transaction can be expected to reduce exposure to changes in interest rates on a particular financial transaction or in the management of interest rate risk derived from Metropolitan's overall asset/liability balance, result in a lower net cost of borrowing or achieve a higher net rate of return on investments made in connection with or incidental to the issuance, incurring or carrying of Metropolitan's obligations or investments, or manage variable interest rate exposure consistent with prudent debt practices and Board-approved guidelines. The Assistant General Manager, Finance & Administration reports to the Finance, ~~Audit, Insurance and Real Estate~~ and Asset Management Committee of Metropolitan's Board each quarter on outstanding swap transactions, including notional amounts outstanding, counterparty exposures and termination values based on then-existing market conditions.

Metropolitan currently has one type of interest rate swap, referred to in the table below as "Fixed Payor Swaps." Under this type of swap, Metropolitan receives payments that are calculated by reference to a floating interest rate and makes payments that are calculated by reference to a fixed interest rate.

Metropolitan's obligations to make regularly scheduled net payments under the terms of the interest rate swap agreements are payable on a parity with the Senior Parity Obligations. Termination payments under the 2002A and 2002B interest rate swap agreements would be payable on a parity with the Senior Parity Obligations. Termination payments under all other interest rate swap agreements would be on parity with the Subordinate Parity Obligations.

The periodic payments due to Metropolitan from counterparties under its outstanding interest rate swap agreements were previously calculated by reference to the London interbank offering rate ("LIBOR"). On June 30, 2023, LIBOR rates for all tenors used to determine the periodic payments due to Metropolitan from swap counterparties ceased to be published. Prior to such date, Metropolitan adopted the terms of the ISDA 2020 IBOR Fallbacks Protocol for its existing swap agreements. Under the terms of the ISDA 2020 IBOR Fallbacks Protocol, the floating rate calculations based on a USD LIBOR rate switched to a term-adjusted Secured Overnight Financing rate ("SOFR") plus an adjustment. For Metropolitan swaps that had used one-month and three-month LIBOR, the new floating rate for one-month LIBOR will be SOFR plus 0.11448 basis points ("bps"), and the new floating rate for three-month LIBOR will be SOFR plus 0.26161 ~~basis points ("bps")~~.

The following swap transactions ~~were~~are outstanding as of ~~April~~September 1, 2024:

**FIXED PAYOR SWAPS:**

Designation	Notional Amount Outstanding	Swap Counterparty	Fixed Payor Rate	Metropolitan Receives	Maturity Date
2002 A	\$ <del>23,648,450</del> <u>12,270,000</u>	Morgan Stanley Capital Services, Inc.	3.300%	57.74% x (SOFR	7/1/2025
				plus 11.448 bps)	
2002 B	<del>8,846,550</del> <u>4,590,000</u>	JPMorgan Chase Bank	3.300	57.74% x (SOFR	7/1/2025

					plus 11.448 bps)
2003		Wells Fargo Bank	3.257	61.20% x (SOFR	7/1/2030
	<del>122,317,500</del> <u>777,500</u>				
					plus 11.448 bps)
2003		JPMorgan Chase Bank	3.257	61.20% x (SOFR	7/1/2030
	<del>122,317,500</del> <u>777,500</u>				
					plus 11.448 bps)
2004 C	4,672,250	Morgan Stanley Capital Services, Inc.	2.980	61.55% x (SOFR	10/1/2029
				plus 11.448 bps)	
2004 C	3,822,750	Citigroup Financial Products, Inc.	2.980	61.55% x (SOFR	10/1/2029
				plus 11.448 bps)	
2005		JPMorgan Chase Bank	3.360	<del>70.00</del> <u>70.00</u> % x	7/1/2030
	<del>26,217,000</del> <u>80,000</u>			(SOFR	
					plus 26.161 bps)
2005		Citigroup Financial Products, Inc.	3.360	<del>70.00</del> <u>70.00</u> % x	7/1/2030
	<del>26,217,000</del> <u>80,000</u>			(SOFR	
					plus 26.161 bps)
<b>Total</b>	<b>\$</b>				
	<del>338,060,000</del> <u>2,870,000</u>				

Source: Metropolitan.

These interest rate swap agreements entail risk to Metropolitan. One or more counterparties may fail or be unable to perform, interest rates may vary from assumptions, Metropolitan may be required to post collateral in favor of its counterparties and Metropolitan may be required to make significant payments in the event of an early termination of an interest rate swap. Metropolitan seeks to manage counterparty risk by diversifying its swap counterparties, limiting exposure to any one counterparty, requiring collateralization or other credit enhancement to secure swap payment obligations, and by requiring minimum credit rating levels. Initially, swap counterparties must be rated at least “Aa3” or “AA-”, or equivalent by any two of the nationally recognized credit rating agencies; or use a “AAA” subsidiary as rated by at least one nationally recognized credit rating agency. Should the credit rating of an existing swap counterparty drop below the required levels, Metropolitan may enter into additional swaps if those swaps are “offsetting” and risk-reducing swaps. Each counterparty is initially required to have minimum capitalization of at least \$150 million. See Note 5(e) in Metropolitan’s audited financial statements in Appendix B.

Early termination of an interest rate swap agreement could occur due to a default by either party or the occurrence of a termination event (including defaults under other specified swaps and indebtedness, certain acts of insolvency, if a party may not legally perform its swap obligations, or, with respect to Metropolitan, if its credit rating is reduced below “BBB-” by Moody’s or “Baa3” by S&P (under most of the interest rate swap agreements) or below “BBB” by Moody’s or “Baa2” by S&P (under one of the interest rate swap agreements)). As of ~~December 31, 2023~~June 30, 2024, Metropolitan would have been required to pay to its counterparties termination payments if its swaps were terminated on that date. Metropolitan’s net exposure to its counterparties for all such termination payments on that date was approximately \$~~7.1~~3.6 million. Metropolitan does not presently anticipate early termination of any of its interest rate swap agreements due to default by either party or the occurrence of a termination event. However, Metropolitan has previously exercised, and may in the future exercise, from time to time,

optional early termination provisions to terminate all or a portion of certain interest rate swap agreements.

Metropolitan is required to post collateral in favor of a counterparty to the extent that Metropolitan's total exposure for termination payments to that counterparty exceeds the threshold specified in the applicable swap agreement. Conversely, the counterparties are required to release collateral to Metropolitan or post collateral for the benefit of Metropolitan as market conditions become favorable to Metropolitan. As of ~~December 31~~ June 30, 2023 2024, Metropolitan had no collateral posted with any counterparty. The highest, month-end, amount of collateral posted was \$36.8 million, on June 30, 2012, which was based on an outstanding swap notional amount of \$1.4 billion at that time. The amount of required collateral varies from time to time due primarily to interest rate movements and can change significantly over a short period of time. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A. In the future, Metropolitan may be required to post additional collateral, or may be entitled to a reduction or return of the required collateral amount. Collateral deposited by Metropolitan is held by the counterparties; a bankruptcy of any counterparty holding collateral posted by Metropolitan could adversely affect the return of the collateral to Metropolitan. Moreover, posting collateral limits Metropolitan's liquidity. If collateral requirements increase significantly, Metropolitan's liquidity may be materially adversely affected. See "METROPOLITAN REVENUES—Financial Reserve Policy" in this Appendix A.

#### **Direct Purchase Long Mode Bonds**

~~In April 2020, Metropolitan entered into a Bond Purchase Agreement, dated as of April 1, 2020, which was amended in March 2024 (as so amended, the "2020 Direct Purchase Agreement") with Wells Fargo Municipal Capital Strategies, LLC ("WFMCS"), for the purchase by WFMCS and sale by Metropolitan of Metropolitan's \$271.8 million Special Variable Rate Water Revenue Refunding Bonds 2020 Series B (the "2020B Senior Revenue Bonds"). The 2020B Senior Revenue Bonds were issued for the purpose of refunding all of Metropolitan's then outstanding variable rate Senior Revenue Bonds that were designated as self liquidity bonds as part of Metropolitan's self liquidity program ("Self Liquidity Bonds").~~

~~The 2020B Senior Revenue Bonds were issued under the Senior Debt Resolutions and are further described in a related paying agent agreement, dated as of April 1, 2020, as amended (as so amended, the "2020B Paying Agent Agreement"), by and between Metropolitan and Wells Fargo Bank, National Association, as paying agent. Pursuant to the 2020B Paying Agent Agreement, the 2020B Senior Revenue Bonds may bear interest from time to time in any one of several interest rate modes at the election of Metropolitan. The 2020B Senior Revenue Bonds currently bear interest in a Long Mode under the 2020B Paying Agent Agreement. For the period that commenced on April 2, 2024 and will end on July 1, 2024, unless earlier terminated (the "new Long Period"), the 2020B Senior Revenue Bonds bear interest at a variable per annum interest rate equal to the sum of (1) 0.33%, plus (2) the product of (i) 80% and (ii) SOFR as administered by the Federal Reserve Bank of New York (or a successor administrator) as determined for each day in accordance with the 2020B Paying Agent Agreement. If not earlier prepaid or redeemed pursuant to the terms of the 2020 Direct Purchase Agreement and the 2020B Paying Agent Agreement, the 2020B Senior Revenue Bonds are subject to mandatory tender for purchase on July 1, 2024 (the "Mandatory Tender Date"), the last day of the new Long Period. The 2020B Senior Revenue Bonds were initially designated as Self Liquidity Bonds pursuant to the 2020B Paying Agent Agreement and no standby bond purchase agreement or other liquidity facility is in effect for the purchase of such bonds.~~

~~The 2020B Senior Revenue Bonds are expected to be refunded with proceeds of Metropolitan's 2024A Bonds.~~

~~In the event the 2020B Senior Revenue Bonds are not refunded or otherwise converted to another interest rate mode or remarketed to a purchaser or purchasers other than WFMCS prior to the Mandatory Tender Date, Metropolitan is obligated under the 2020 Direct Purchase Agreement to cause 2020B Senior Revenue Bonds that have not been refunded or otherwise converted or remarketed (“Unremarketed 2020B Bonds”) to be redeemed on the Mandatory Tender Date; provided, that if no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct on the Mandatory Tender Date, then the principal amount of the Unremarketed 2020B Senior Revenue Bonds shall be due and payable on the date that is 30 days following the Mandatory Tender Date and shall accrue interest at the Purchaser Rate, a fluctuating interest per annum equal to, the greatest of the (i) the Prime Rate, (ii) Federal Funds Rate plus one half of one percent, and (iii) five percent, as specified in the 2020 Direct Purchase Agreement. If no default or event of default under the 2020 Direct Purchase Agreement shall have occurred and be continuing and the representations and warranties of Metropolitan shall be true and correct at the end of such 30 day period, the Unremarketed 2020B Senior Revenue Bonds will continue to bear interest at the Purchaser Rate plus, after 180 days from the Mandatory Tender Date, a spread of one percent, and the principal amount of such Unremarketed 2020B Senior Revenue Bonds may, at Metropolitan’s request, instead be subject to mandatory redemption in substantially equal installments payable every six months over an amortization period commencing six months after the Mandatory Tender Date and ending on the third anniversary of the Mandatory Tender Date.~~

~~Under the 2020 Direct Purchase Agreement, upon a failure by Metropolitan to pay principal or interest of any 2020B Senior Revenue Bonds, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if S&P shall have assigned a credit rating below “BBB-,” or if any of Fitch, S&P or Moody’s shall have assigned a credit rating below “A-” or “A3,” to Senior Revenue Bonds issued under the Senior Debt Resolutions), WFMCS has the right to cause a mandatory tender of the 2020B Senior Revenue Bonds and accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days’ notice) Metropolitan’s obligation to repay the 2020B Senior Revenue Bonds.~~

~~In connection with the execution of the 2020 Direct Purchase Agreement, Metropolitan designated the principal payable on the 2020B Senior Revenue Bonds on the Mandatory Tender Date as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable in connection therewith on a schedule of Assumed Debt Service. This schedule of Assumed Debt Service assumes that Metropolitan will pay the principal of the 2020B Senior Revenue Bonds over a period of 30 years at a fixed interest rate of approximately 5.00 percent.~~

~~Metropolitan has previously, and may in the future, enter into one or more self liquidity revolving credit agreements which may be drawn upon for the purpose of paying the purchase price of any Self Liquidity Bonds issued by Metropolitan, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.~~

### **Senior Parity Obligations**

***Short-Term Revolving Credit Facility.*** In March 2024, Metropolitan entered into a note purchase and continuing covenant agreement with Bank of America, N.A. (“BANA”), for the purchase by BANA and sale by Metropolitan from time-to-time of short-term flexible rate revolving notes (the “Short-Term Revolving Credit Facility”). Pursuant to the Short-Term Revolving Credit Facility, Metropolitan may borrow, pay down and re-borrow amounts, through the issuance and sale from time to time of short-term notes (with maturity dates not exceeding one year from their delivery date), in an aggregate principal amount not to exceed \$400 million (including, subject to certain terms and



conditions, notes to refund maturing notes) to be purchased by BANA during the term of BANA's commitment to purchase notes thereunder, which commitment currently extends to March 19, 2027. ~~The Short-Term Credit Agreement with BANA was entered into by Metropolitan in replacement of a previously existing short-term revolving credit facility. On the date of delivery of the Short-Term Revolving Credit Facility with BANA, all then-outstanding notes issued under the prior short-term revolving credit facility were purchased by BANA, and the prior short-term revolving credit facility was terminated. As of April~~ As of September 1, 2024, Metropolitan had \$~~176.4~~384.4 million principal amount of short-term notes outstanding under the Short-Term Revolving Credit Facility, consisting of \$~~158.4~~348.4 million of tax-exempt notes and \$~~18.0~~36.0 million of taxable notes. ~~On or about [May \_\_\_\_], 2024, Metropolitan expects to make a draw on the Short-Term Revolving Credit Facility and issue an additional \$35,640,000 principal amount of short-term notes thereunder to fund, together with certain other amounts provided by Metropolitan, an escrow deposit for the purpose of defeasing and redeeming its outstanding Subordinate Water Revenue Refunding Bonds, 2017 Series B maturing on August 1, 2024. A portion of the proceeds of Metropolitan's 2024A Bonds will be applied on the date of delivery of such bonds to repay and redeem the short-term notes issued for such purpose. In addition, approximately \$120.0 million principal amount of the then-outstanding tax-exempt notes previously issued under the Short-Term Revolving Credit Facility are expected to be repaid and redeemed with proceeds of Metropolitan's 2024A Bonds on the date of their delivery. Accrued interest on the notes due on the date of their repayment and redemption is to be paid from other funds provided by Metropolitan. Metropolitan also expects to make a draw on the Short-Term Revolving Credit Facility on or about [May \_\_\_\_], 2024 and issue \$271,255,000 principal amount of short-term notes thereunder to redeem all of Metropolitan's outstanding Subordinate Water Revenue Bonds, 2017 Series C, Subordinate Water Revenue Refunding Bonds, 2017 Series D and Subordinate Water Revenue Refunding Bonds, 2017 Series E on their mandatory tender date of May 21, 2024. A portion of the proceeds of Metropolitan's Subordinate Water Revenue Refunding Bonds, 2024 Series B (the "2024B Subordinate Bonds") are expected to be applied on the date of delivery of such bonds to repay and redeem the short-term notes issued for such purpose. Accrued interest on the notes due on the date of their repayment and redemption is to be paid from other funds provided by Metropolitan. Approximately \$316.0 million of such outstanding short-term notes (consisting of \$280.0 million of the outstanding tax-exempt notes and all of the outstanding taxable notes) are expected to be refunded with proceeds of Metropolitan's 2024C Bonds and 2024D Subordinate Bonds. See "PLAN OF FINANCE" in the front part of this Official Statement.~~

Notes under the Short-Term Revolving Credit Facility bear interest at a fluctuating rate of interest per annum equal to: (A) for taxable borrowings, SOFR as administered by the Federal Reserve Bank of New York (or a successor administrator) as determined for each day in accordance with the Short-Term Revolving Credit Facility ("Daily Simple SOFR" as further defined in the Short-Term Credit Facility) plus ~~a spread of~~ 0.80 percent (so long as the current credit ratings on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions are maintained); and (B) for tax-exempt borrowings, 80 percent of Daily Simple SOFR plus ~~a spread of~~ 0.60 percent (so long as the current credit ratings on Metropolitan's Senior Revenue Bonds issued under the Senior Debt Resolutions are maintained), subject, in each case to an applicable maximum interest rate, which shall not, in any case, exceed 18 percent. Subject to the satisfaction of certain terms and conditions, any unpaid principal borrowed under the Short-Term Revolving Credit Facility remaining outstanding at the March 19, 2027 stated commitment expiration date of the Short-Term Revolving Credit Facility may be refunded by and exchanged for term notes payable by Metropolitan in approximately equal semi-annual principal installments over a period of approximately three years. Any such term notes will bear interest at a fluctuating rate of interest per annum equal to, for each day: (A) for taxable borrowings, (1) the greatest of (i) the Prime Rate plus one percent, (ii) the Federal Funds Rate in effect at such time plus two percent, and (iii) ten percent (such rate as from time to time in effect, the "Taxable Base Rate"), plus (2) ~~a spread of~~ two percent; and (B) for tax-exempt borrowings, (1) the greatest of (i) the Prime Rate plus one

percent, (ii) the Federal Funds Rate in effect at such time plus two percent, and (iii) seven percent (such rate as from time to time in effect, the “Tax-Exempt Base Rate”), plus (2) ~~a spread of~~ two percent.

Under the Short-Term Revolving Credit Facility, upon a failure by Metropolitan to pay principal ~~of~~ or interest ~~on~~ any note thereunder, a failure by Metropolitan to perform or observe its covenants, a default in other specified indebtedness of Metropolitan, certain acts of bankruptcy or insolvency, or other specified events of default (including if any of Fitch, S&P or Moody’s shall have assigned a credit rating below “A-” or “A3,” or if each of Fitch, S&P and Moody’s shall have assigned a credit rating below “BBB-” or “Baa3,” to Senior Revenue Bonds issued under the Senior Debt Resolutions), BANA has the right to terminate its commitments and may accelerate (depending on the event, seven days after the occurrence, or for certain events, only after 180 days’ notice, or, in connection with certain acts of bankruptcy or insolvency or in the event of an acceleration of Metropolitan debt by another lender, credit enhancer or swap counterparty, immediately) Metropolitan’s obligation to repay its borrowings.

Metropolitan has secured its obligation to pay principal and interest on notes evidencing borrowings under the Short-Term Revolving Credit Facility as Senior Parity Obligations.

In connection with the execution of the Short-Term Revolving Credit Facility, Metropolitan designated the principal and interest payable on the notes issued thereunder as Excluded Principal Payments under the Senior Debt Resolutions and thus, for purposes of calculating Maximum Annual Debt Service, included the amount of principal and interest due and payable under the Short-Term Revolving Credit Facility on a schedule of Assumed Debt Service for any outstanding draws.

Metropolitan has previously entered, and may in the future, ~~enter~~, into one or more other or alternative short-term revolving credit facilities, the repayment obligations of Metropolitan under which may be secured as either Senior Parity Obligations or Subordinate Parity Obligations.

## Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations

### Subordinate Revenue Bonds

The water revenue bonds issued under the Subordinate Debt Resolutions outstanding as of ~~April~~September 1, 2024, are set forth below:

### Outstanding Subordinate Revenue Bonds

Name of Issue	Principal Outstanding
Subordinate Water Revenue Refunding Bonds, 2017 Series A	\$ <del>182,745,000</del> <u>140,660,000</u>
<del>Subordinate Water Revenue Refunding Bonds, 2017 Series B<sup>(2)</sup></del>	<del>35,640,000</del>
Subordinate Water Revenue Bonds, <del>2017</del> <u>2018</u> Series <del>C<sup>(+)(3)</sup></del> <u>B</u>	<del>80,000,000</del> <u>57,740,000</u>
Subordinate Water Revenue Refunding Bonds, <del>2017</del> <u>2019</u> Series <del>D<sup>(+)(3)</sup></del> <u>A</u>	<del>95,630,000</del> <u>150,340,000</u>
Subordinate Water Revenue Refunding Bonds, <del>2017</del> <u>2020</u> Series <del>E<sup>(+)(3)</sup></del> <u>A</u>	<del>95,625,000</del> <u>125,570,000</u>
Subordinate Water Revenue <u>Refunding</u> Bonds, <del>2018</del> <u>2021</u> Series <del>B</del> <u>A<sup>(1)</sup></u>	<del>57,740,000</del> <u>222,160,000</u>
<u>Variable Rate</u> Subordinate Water Revenue Refunding Bonds, <del>2019</del> <u>2024</u> Series <del>AB-1<sup>(1)</sup></del>	<del>184,280,000</del> <u>80,390,000</u>
Subordinate Water Revenue Refunding Bonds, <del>2020</del> <u>2024</u> Series <del>AB-2<sup>(2)</sup></del>	<del>139,190,000</del> <u>89,445,000</u>



Subordinate Water Revenue Refunding Bonds, ~~2021~~2024 Series ~~A~~<sup>4</sup>B-3<sup>(3)</sup>

222,160,000

86,940,000

\$

1,093,010,000

**Total**

953,245,000

*Source: Metropolitan.*

- (1) Outstanding variable rate ~~obligation~~obligations.
- (2) ~~Metropolitan expects to refund the \$35,640,000 principal amount of these bonds maturing on August 1, 2024 on their July 1, 2024 optional call date with proceeds of a draw made under its Short Term Revolving Credit Facility. See “ Outstanding Senior Revenue Bonds and Senior Parity Obligations Senior Parity Obligations Short Term Revolving Credit Facility. Initially delivered in a term rate mode at a fixed interest rate to July 1, 2029.~~
- (3) ~~Metropolitan expects to refund the \$271,255,000 aggregate principal amount of these bonds on their May 21, 2024 scheduled mandatory tender date with proceeds of a draw made under its Short Term Revolving Credit Facility. See “ Outstanding Senior Revenue Bonds and Senior Parity Obligations Senior Parity Obligations Short Term Revolving Credit Facility. Initially delivered in a term rate mode at a fixed interest rate to July 1, 2031.~~

### **Variable Rate Bonds**

As of ~~April~~September 1, 2024, of the ~~\$1.09 billion~~953.2 million outstanding Subordinate Revenue Bonds, ~~\$493.4~~302.6 million ~~were~~are variable rate obligations. The outstanding variable rate obligations include Subordinate Revenue Bonds that are variable rate demand obligations supported by a standby bond purchase ~~agreement~~agreements between Metropolitan and a liquidity provider (“Liquidity Supported Subordinate Revenue Bonds”) ~~and Subordinate Revenue Bonds that are bonds bearing interest in a SIFMA Index Mode and subject to mandatory tender for purchase by Metropolitan under certain circumstances, including on certain scheduled mandatory tender dates (unless earlier remarketed or otherwise retired) (“Index Tender Bonds”).~~

***Liquidity Supported Subordinate Revenue Bonds.*** As of ~~April~~September 1, 2024, Metropolitan ~~had~~will have ~~\$222.16~~302.6 million of outstanding Liquidity Supported Subordinate Revenue Bonds issued under the Subordinate Debt Resolutions, ~~consisting of Metropolitan’s Variable Rate as variable rate Subordinate Water Revenue Refunding Bonds, 2021 Series A (Federally Taxable) (the “Subordinate 2021A Bonds”).~~

~~the~~ The interest ~~rate on Metropolitan’s variable rate Subordinate 2021A Bonds is~~ rates on which are currently reset on a weekly basis. While bearing interest at a weekly rate, such variable rate demand obligations are subject to optional tender on any business day upon seven days’ notice by the owners thereof and mandatory tender upon specified events. Such variable rate demand obligations are supported by a standby bond purchase ~~agreement~~agreements ~~each~~ by and between Metropolitan and Bank of America, N.A., as liquidity provider, that ~~provides~~provide for the purchase of the applicable variable rate ~~Subordinate 2021A Bonds~~bonds by the liquidity provider upon tender of such variable rate ~~Subordinate 2021A Bonds~~bonds and a failed remarketing. ~~The current expiration date of such liquidity facility is in June 2025.~~ Metropolitan has secured its obligation to repay principal and interest advanced under ~~the~~each standby bond purchase agreement as a ~~Subordinate Parity Obligation~~First Tier Parity Obligations payable on parity with the Subordinate Revenue Bonds. A decline in the creditworthiness of the liquidity provider will likely result in an increase in the interest rate of the applicable variable rate ~~Subordinate 2021A Bonds~~bonds, as well as an increase in the risk of a failed remarketing of such tendered variable rate ~~Subordinate 2021A Bonds~~bonds. Variable rate ~~Subordinate 2021A Bonds~~bonds purchased by the liquidity provider (“bank bonds”) would initially bear interest at a per annum interest rate equal to, the highest of (i) the Prime Rate plus one percent, (ii) Federal Funds Rate plus two percent, and (iii) seven percent (with the spread or rate increasing in the case of each of (i), (ii) and (iii) of this clause by one percent after 90 days). To the extent such bank bonds have not been remarketed or otherwise retired as of

the earlier of the 90th day following the date such bonds were purchased by the liquidity provider or the stated expiration date of the liquidity facility, Metropolitan's obligation to reimburse the liquidity provider may convert the term of the variable rate bonds purchased by the liquidity provider into a term loan payable under the terms of the liquidity facility in ten equal semi-annual installments over a period ending on the fifth anniversary of the date on which the variable rate ~~Subordinate 2021A Bonds~~ bonds were purchased by the liquidity provider. In addition, upon an event of default under the liquidity facility, including a failure by Metropolitan to pay principal or interest due to the liquidity provider, failure by Metropolitan to perform or observe its covenants under the standby bond purchase agreement, a default in other specified indebtedness of Metropolitan, or other specified events of default (including a reduction in the credit rating assigned to Senior Revenue Bonds issued under the Senior Debt Resolutions by any of Fitch, S&P or Moody's below "A-" or "A3," as applicable), the liquidity provider could require all bank bonds to be subject to immediate mandatory redemption by Metropolitan.

The following table lists the current liquidity provider, the current expiration date of each facility, and the principal amount of outstanding variable rate demand obligations covered under each facility as of September 1, 2024.

#### Liquidity Facilities and Expiration Dates

<u>Liquidity Provider</u>	<u>Bond Issue</u>	<u>Principal Outstanding</u>	<u>Facility Expiration</u>
<u>Bank of America, N.A.</u>	<u>2021 Series A</u>	<u>\$ 222,160,000</u>	<u>June 2025</u>
<u>Bank of America, N.A.</u>	<u>2024 Series B-1</u>	<u>80,390,000</u>	<u>June 2027</u>
<b><u>Total</u></b>		<b><u>\$ 302,550,000</u></b>	

Source: Metropolitan.

#### Term Rate Mode Bonds

As of September 1, 2024, Metropolitan will have outstanding approximately \$176.4 million of Subordinate Revenue Bonds bearing interest in a term rate mode, comprised of \$89.4 million of 2024 Series B-2 Bonds and \$86.9 million of 2024 Series B-3 Bonds (collectively, the "Term Rate Mode Bonds"). The Term Rate Mode Bonds initially bear interest at a fixed rate for a specified period from their date of issuance, after which: (i) there shall be determined a new interest mode for the applicable series of bonds (which may be a flexible index mode, an index mode, a daily mode, a weekly mode or a short-term mode), (ii) the Term Rate Mode Bonds may continue under the term rate mode for another specified period or (iii) the Term Rate Mode Bonds may be converted to bear fixed interest rates through the maturity date thereof. The owners of the Term Rate Mode Bonds of a series must tender for purchase, and Metropolitan must purchase, all of the Term Rate Mode Bonds of such series on the specified scheduled mandatory purchase date of each term rate period for such series. The Term Rate Mode Bonds outstanding as of September 1, 2024, are summarized in the following table:

#### Term Rate Mode Bonds

<u>Bond Issue</u>	<u>Original Principal Amount Issued</u>	<u>Next Scheduled Mandatory Purchase Date</u>
<u>2024 Series B-2</u>	<u>\$ 89,445,000</u>	<u>July 1, 2029</u>
<u>2024 Series B-3</u>	<u>86,940,000</u>	<u>July 1, 2031</u>
<b><u>Total</u></b>	<b><u>\$ 176,385,000</u></b>	

Source: Metropolitan.

~~**SIFMA Mode Index Tender Bonds.** Metropolitan's Metropolitan will pay the principal of, and interest on, the Term Rate Mode Bonds on parity with its other Subordinate Water Revenue Bonds, 2017 Series C, Subordinate Water Revenue Refunding Bonds, 2017 Series D and Subordinate Water Revenue Refunding Bonds, 2017 Series E (collectively, the "Subordinate 2017 Series C, D and E Bonds") bear interest at a rate that fluctuates weekly based on the SIFMA Municipal Swap Index plus a spread. The Subordinate 2017 Series C, D and E Bonds are Index Tender Bonds and are subject to mandatory tender under certain circumstances, including on certain scheduled mandatory tender dates (unless earlier remarketed or otherwise retired) and Subordinate Parity Obligations. Metropolitan anticipates that it will pay the purchase price of tendered Term Rate Mode Bonds from the proceeds of remarketing such Term Rate Mode Bonds or from other available funds. Metropolitan's obligation to pay the purchase price of any such tendered Subordinate 2017 Series C, D and E Term Rate Mode Bonds is a special limited obligation of Metropolitan payable solely from Net Operating Revenues subordinate to the Senior Revenue Bonds and Senior Parity Obligations and on parity with the other outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations. Metropolitan has not secured any liquidity facility or letter of credit to support the payment of the purchase price of Subordinate 2017 Series C, D and E Bonds in connection with a scheduled the Term Rate Mode Bonds on any mandatory tender purchase date. Failure to pay the purchase price of any Subordinate 2017 Series C, D and E Term Rate Mode Bonds on a scheduled mandatory tender purchase date for such Index Tender Term Rate Mode Bonds for a period of five business days following written notice by any Owner of such Subordinate 2017 Series C, D and E Term Rate Mode Bonds will constitute an event of default under the Subordinate Debt Resolutions, upon the occurrence and continuance of which the owners of 25 percent in aggregate principal amount of the Subordinate Revenue Bonds then outstanding may elect a bondholders' committee to exercise rights and powers of such owners under the Subordinate Debt Resolutions, including the right to declare the entire unpaid principal of the Subordinate Revenue Bonds then outstanding to be immediately due and payable.~~

~~The current mandatory tender dates and related tender periods for the Index Tender Bonds outstanding as of April 1, 2024, are summarized in the following table:-~~

**Index Tender Bonds**

<b>Series</b>	<b>Date of Issuance</b>	<b>Original Principal Amount Issued</b>	<b>Next Scheduled Mandatory Tender Date</b>	<b>Maturity Date</b>
Subordinate 2017 Series C	July 3, 2017	\$ 80,000,000	May 21, 2024	July 1, 2047
Subordinate 2017 Refunding Series D	July 3, 2017	95,630,000	May 21, 2024	July 1, 2037
Subordinate 2017 Refunding Series E	July 3, 2017	95,625,000	May 21, 2024	July 1, 2037
<b>Total</b>		<b>\$ 271,255,000</b>		

Source: Metropolitan.

~~As described under "Outstanding Senior Revenue Bonds and Senior Parity Obligations—Senior Parity Obligations—Short Term Revolving Credit Facility," the Subordinate 2017 Series C, D and E Bonds are expected to be refunded on their Scheduled Mandatory Tender Date with proceeds of a draw made and short term notes issued under Metropolitan's Short Term Revolving Credit Facility, which short term notes are expected to be refunded with proceeds of Metropolitan's Subordinate 2024B Bonds.~~

## Other Junior Obligations

Metropolitan currently is authorized to issue up to \$400,000,000 of Commercial Paper Notes payable from Net Operating Revenues on a basis subordinate to both the Senior Revenue Bonds and Senior Parity Obligations and to the Subordinate Revenue Bonds and Subordinate Parity Obligations. Although no Commercial Paper Notes are currently outstanding, the authorization remains in full force and effect and Metropolitan may issue Commercial Paper Notes from time to time.

## General Obligation Bonds

As of ~~April~~September 1, 2024, \$18,210,000 aggregate principal amount of general obligation bonds payable from *ad valorem* property taxes ~~were~~are outstanding. See “METROPOLITAN REVENUES–General” and “–Revenue Allocation Policy and Tax Revenues” in this Appendix A. Metropolitan’s revenue bonds are not payable from the levy of *ad valorem* property taxes.

<b>General Obligation Bonds</b>	<b>Amount Issued<sup>(1)</sup></b>	<b>Principal Outstanding</b>
Waterworks General Obligation Refunding Bonds, 2019 Series A	\$16,755,000	\$ 4,545,000
Waterworks General Obligation Refunding Bonds, 2020 Series A	13,665,000	13,665,000
<b>Total</b>	<b>\$30,420,000</b>	<b>\$18,210,000</b>

Source: Metropolitan.

<sup>(1)</sup> Voters authorized Metropolitan to issue \$850,000,000 of Waterworks General Obligation Bonds, Election 1966, in multiple series, in a special election held on June 7, 1966. This authorization has been fully utilized. This table lists bonds that refunded such Waterworks General Obligation Bonds, Election 1966.

## State Water Contract Obligations

**General.** As described herein, in 1960, Metropolitan entered into its State Water Contract with DWR to receive water from the State Water Project. All expenditures for capital and operations, maintenance, power and replacement costs associated with the State Water Project facilities used for water delivery are paid for by the 29 Contractors that have executed State water supply contracts with DWR, including Metropolitan. Contractors are obligated to pay allocable portions of the cost of construction of the system and ongoing operating and maintenance costs, regardless of quantities of water available from the project. Other payments are based on deliveries requested and actual deliveries received, costs of power required for actual deliveries of water, and offsets for credits received. In exchange, Contractors have the right to participate in the system, with an entitlement to water service from the State Water Project and the right to use the portion of the State Water Project conveyance system necessary to deliver water to them at no additional cost as long as capacity exists. Metropolitan’s State Water Contract accounts for nearly one-half of the total entitlement for State Water Project water contracted for by all Contractors.

DWR and other State Water Project contractors, including Metropolitan, have executed an amendment to extend their State water supply contracts from 2035 to 2085 and to make certain changes related to the financial management of the State Water Project in the future. See “METROPOLITAN’S WATER SUPPLY–State Water Project – State Water Contract” in this Appendix A.

Metropolitan’s payment obligation for the State Water Project for the fiscal year ended June 30, ~~2023~~2024 was ~~estimated to be \$577.5~~estimated to be \$707.7 million, which amount reflects prior year’s credits of ~~\$59.263.5~~ million. For the fiscal year ended June 30, ~~2023~~2024, Metropolitan’s ~~estimated~~ payment obligations under the State Water Contract were approximately ~~29.5~~35.8 percent of Metropolitan’s total

annual expenses. A portion of Metropolitan's annual property tax levy is for payment of State Water Contract obligations, as described above under "METROPOLITAN REVENUES–Revenue Allocation Policy and Tax Revenues" in this Appendix A. Any deficiency between tax levy receipts and Metropolitan's State Water Contract obligations is expected to be paid from Operating Revenues, as defined in the Senior Debt Resolutions. See Note 11(a) to Metropolitan's audited financial statements in Appendix B for an estimate of Metropolitan's payment obligations under the State Water Contract. See also "–Power Sources and Costs; Related Long-Term Commitments" for a description of current and future costs for electric power required to operate State Water Project pumping systems and a description of litigation involving the federal relicensing of the Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville.

Metropolitan capitalizes its share of the State Water Project capital costs as participation rights in State Water Project facilities as such costs are billed by DWR. Unamortized participation rights essentially represent a prepayment for future water deliveries through the State Water Project system. Metropolitan's share of system operating and maintenance costs are annually expensed.

DWR and various subsets of the State Water Project contractors have entered into amendments to the State water supply contracts related to the financing of certain State Water Project facilities. The amendments establish procedures to provide for the payment of construction costs financed by DWR bonds by establishing separate subcategories of charges to produce the revenues required to pay all of the annual financing costs (including coverage on the allocable bonds) relating to the financed project. If any affected Contractor defaults on payment under certain of such amendments, the shortfall may be collected from the non-defaulting affected Contractors, subject to certain limitations.

These amendments represent additional long-term obligations of Metropolitan, as described below.

***Devil Canyon-Castaic Contract.*** On June 23, 1972, Metropolitan and five other Southern California public agencies entered into a contract (the "Devil Canyon-Castaic Contract") with DWR for the financing and construction of the Devil Canyon and Castaic power recovery facilities, located on the aqueduct system of the State Water Project. Under this contract, DWR agreed to build the Devil Canyon and Castaic facilities, using the proceeds of revenue bonds issued by DWR under the State Central Valley Project Act. DWR also agreed to use and apply the power made available by the construction and operation of such facilities to deliver water to Metropolitan and the other contracting agencies. Metropolitan, in turn, agreed to pay to DWR 88 percent of the debt service on the revenue bonds issued by DWR. The bonds matured and were fully retired on July 1, 2022. Additionally, Metropolitan agreed to pay 78.5 percent of the ongoing operation and maintenance expenses of the Devil Canyon facilities and 96 percent of the operation and maintenance expenses of the Castaic facilities.

***Off-Aqueduct Power Facilities.*** In addition to system "on-aqueduct" power facilities costs, DWR has, either on its own or by joint venture, financed certain off-aqueduct power facilities. The power generated is utilized by the system for water transportation and other State Water Project purposes. Power generated in excess of system needs is marketed to various utilities and the CAISO. Metropolitan is entitled to a proportionate share of the revenues resulting from sales of excess power. By virtue of a 1982 amendment to the State Water Contract and the other water supply contracts, Metropolitan and the other water Contractors are responsible for paying the capital and operating costs of the off-aqueduct power facilities regardless of the amount of power generated.

***East Branch Enlargement Amendment.*** In 1986, Metropolitan's State Water Contract and the water supply contracts of certain other State Water Project contractors were amended for the purpose, among others, of financing the enlargement of the East Branch of the California Aqueduct. Under the amendment, enlargement of the East Branch can be initiated either at Metropolitan's request or by DWR



finding that enlargement is needed to meet demands. In March 2022, DWR prepared a draft report for East Branch Enlargement cost reallocation methods. The report describes the methods used to determine the East Branch Enlargement cost allocation with the distinction between enlargement and improvement categories and the associated cost recovery methodology. Discussions among Metropolitan, the other State Water Project contractors on the East Branch, and DWR on any timetable and plan for future East Branch enlargement actions have been deferred.

The amendment establishes a separate subcategory of the Transportation Charge under the State water supply contracts for the East Branch Enlargement and provides for the payment of costs associated with financing and operating the East Branch Enlargement. Under the amendment, the annual financing costs for such facilities financed by bonds issued by DWR are allocated among the participating State Water Project contractors based upon the delivery capacity increase allocable to each participating contractor. Such costs include, but are not limited to, debt service, including coverage requirements, deposits to reserves, and certain operation and maintenance expenses, less any credits, interest earnings or other moneys received by DWR in connection with this facility.

If any participating Contractor defaults on payment of its allocable charges under the amendment, among other things, the non-defaulting participating Contractors may assume responsibility for such charges and receive delivery capability that would otherwise be available to the defaulting participating Contractor in proportion to the non-defaulting Contractor's participation in the East Branch Enlargement. If participating Contractors fail to cure the default, Metropolitan will, in exchange for the delivery capability that would otherwise be available to the defaulting participating Contractor, assume responsibility for the capital charges of the defaulting participating Contractor.

***Water System Revenue Bond Amendment.*** In 1987, Metropolitan's State Water Contract and other water supply contracts were amended for the purpose of financing State Water Project facilities through revenue bonds. This amendment establishes a separate subcategory of the Delta Water Charge and the Transportation Charge under the State water supply contracts for projects financed with DWR water system revenue bonds. This subcategory of charge provides the revenues required to pay the annual financing costs of the bonds and consists of two elements. The first element is an annual charge for repayment of capital costs of certain revenue bond financed water system facilities under the existing water supply contract procedures. The second element is a water system revenue bond surcharge to pay the difference between the total annual charges under the first element and the annual financing costs, including coverage and reserves, of DWR's water system revenue bonds.

If any Contractor defaults on payment of its allocable charges under this amendment, DWR is required to allocate a portion of the default to each of the non-defaulting Contractors, subject to certain limitations, including a provision that no non-defaulting Contractor may be charged more than 125 percent of the amount of its annual payment in the absence of any such default. Under certain circumstances, the non-defaulting Contractors would be entitled to receive an allocation of the water supply of the defaulting Contractor.

The following table sets forth Metropolitan's projected costs of State Water Project water based upon DWR's Appendix B to Bulletin 132-22 (an annual report (for this purpose, the 2022 report) produced by DWR setting forth data and computations used by the State in determining State Water Project contractors' Statements of Charges), Metropolitan's share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project (see "METROPOLITAN'S WATER SUPPLY-State Water Project -Bay-Delta Proceedings Affecting State Water Project - *Bay-Delta Planning Activities*" and " - *Delta Conveyance*" in this Appendix A), and power costs forecasted by Metropolitan.

The projections for fiscal years ~~2024-25~~2024-25 through 2028-29 reflect Metropolitan's ~~proposed~~ biennial budget for fiscal years ~~2024-25~~2024-25 and ~~2025-26~~2025-26, which includes a ten-year financial forecast, and are on a cash basis. See also "HISTORICAL AND PROJECTED REVENUES AND EXPENSES" in this Appendix A. The projections reflect certain assumptions concerning future events and circumstances which may not occur or materialize. Actual costs may vary from these projections if such events and circumstances do not occur as expected or materialize, and such variances may be material.

**PROJECTED COSTS OF METROPOLITAN  
FOR STATE WATER CONTRACT AND DELTA CONVEYANCE  
(Dollars in Millions)**

Year Ending June 30	Capital Costs <sup>(1)</sup>	Minimum OMP&R <sup>(1)</sup>	Power Costs <sup>(2)</sup>	Refunds & Credits <sup>(1)</sup>	Delta Conveyance <sup>(3)</sup>	Total <sup>(4)</sup>
<del>2024</del>	\$ <del>186</del>	\$ <del>349</del>	\$ <del>300</del>	\$ <del>(61)</del>	\$ <del>65</del>	\$ <del>838</del>
2025	\$ 188	\$ 331	\$ 245	\$ (75)	\$ 12	\$ 701
2026	\$ 193	\$ 345	\$ 242	\$ (76)	\$ —	\$ 704
2027	\$ 200	\$ 365	\$ 240	\$ (58)	\$ —	\$ 747
2028	\$ 210	\$ 387	\$ 239	\$ (59)	\$ —	\$ 777
2029	\$ 228	\$ 406	\$ 237	\$ (57)	\$ —	\$ 813

Source: Metropolitan.

- (1) Capital Costs, Minimum Operations, Maintenance, Power and Replacement ("OMP&R") and Refunds and Credits projections are based on DWR's Appendix B to Bulletin ~~132-22~~132-23.
- (2) Power costs are forecasted by Metropolitan based on a ~~40 percent~~ State Water Project allocation of 49 percent in calendar ~~2023, and a 50 percent State Water Project allocation thereafter~~ year 2025, 48 percent in calendar year 2026, 47 percent in calendar year 2027, 46 percent in calendar year 2028, and 44 percent in calendar year 2029. Availability of State Water Project supplies vary, and deliveries may include transfers and storage. All deliveries are based upon availability, as determined by hydrology, water quality and wildlife conditions. See "METROPOLITAN'S WATER SUPPLY—State Water Project" and "—Endangered Species Act and Other Environmental Considerations Relating to Water Supply" in this Appendix A.
- (3) Based on Metropolitan's share of the forecasted planning costs for a single tunnel project. Does not include any capital costs associated with any future proposed Bay-Delta conveyance project. ~~Fiscal year 2023-24 costs will be offset by \$30 million by the use of the California WaterFix refund.~~
- (4) Totals may not add due to rounding.

**Power Sources and Costs; Related Long-Term Commitments**

Current and future costs for electric power required for operating the pumping systems of the CRA and the State Water Project are a substantial part of Metropolitan's overall expenses. Metropolitan's power costs include various ongoing fixed annual obligations under its contracts with the U.S. Department of Energy Western Area Power Administration and the Bureau of Reclamation for power from the Hoover Power Plant and Parker Power Plant, respectively. Under the terms of the Hoover Power Plant and Parker Power ~~Plat~~Plant contracts, Metropolitan purchases energy to pump water through the CRA. Expenses for electric power for the CRA for the fiscal years ~~2021-22~~2022-23 and ~~2022-23~~2023-24 were approximately ~~\$91.1~~\$161.9 million and ~~\$161.9~~\$42.8 million, respectively. Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. Expenses for electric power and transmission service for the State Water Project for fiscal years ~~2021-22~~2022-23 and ~~2022-23~~2023-24 were approximately ~~\$126.5~~\$96.2 million and ~~\$138.2~~\$234.1



million, respectively. Electricity markets are subject to volatility and Metropolitan is unable to give any assurance with respect to the magnitude of future power costs.

**Colorado River Aqueduct.** Approximately 50 percent of the annual power requirements for pumping at full capacity (1.25 million acre-feet of Colorado River water) in Metropolitan's CRA are secured through long-term contracts for energy generated from federal facilities located on the Colorado River (Hoover Power Plant and Parker Power Plant). Payments made under the Hoover Power Plant and Parker Power Plant contracts are operation and maintenance expenses. These contracts provide Metropolitan with reliable and economical power resources to pump Colorado River water to Metropolitan's service area.

As provided for under the Hoover Power Allocation Act of 2011 (H.R. 470), Metropolitan has executed a 50-year agreement with the Western Area Power Administration for the continued purchase of electric energy generated at the Hoover Power Plant through September 2067, succeeding Metropolitan's prior Hoover contract that expired on September 30, 2017.

Depending on pumping conditions, Metropolitan can require additional energy in excess of the base resources available to Metropolitan from the Hoover Power Plant and Parker Power Plant. The remaining up to approximately 50 percent of annual pumping power requirements for full capacity pumping on the CRA is obtained through energy purchases from municipal and investor-owned utilities, third party suppliers, or the CAISO markets. Metropolitan is a member of the Western Systems Power Pool ("WSPP") and utilizes its industry standard form contract to make wholesale power purchases at market cost. The current drought conditions have reduced the water level of Lake Mead and led to declining generation output from Hoover Dam, a condition that is expected to remain for the next several years. This, combined with continued high pumping demand on the CRA, will likely lead to increased reliance on supplemental energy purchases from the WSPP or CAISO markets and continued higher than normal energy costs for the CRA.

Gross diversions of water from Lake Havasu for fiscal years ~~2021-22~~2022-23 and ~~2022-23~~2023-24 were approximately ~~1,104,264~~956,382 acre-feet and ~~956,382~~707,364 acre-feet, respectively, including Metropolitan's basic apportionment of Colorado River water and supplies from water transfer and storage programs. In fiscal years ~~2021-22~~2022-23 and ~~2022-23~~2023-24, Metropolitan purchased approximately ~~1,181,000~~962,595 megawatt-hours and ~~962,595~~486,201 megawatt-hours, respectively, of additional energy.

Metropolitan has agreements with the Arizona Electric Power Cooperative ("AEPSCO") to provide transmission and energy purchasing services to support CRA power operations. The term of these agreements extends to December 31, 2035. AEPSCO's subsidiary, ACES, provides energy scheduling services for Metropolitan's share of Hoover and Parker generation and CRA pumping load.

**State Water Project.** The State Water Project's power requirements are met from a diverse mix of resources, including State-owned hydroelectric generating facilities and short-term contracts entered into by DWR. These resources represent approximately 46% percent of the State Water Project's estimated power requirements for 2024. The remainder of the State Water Project power needs is met by purchases from the CAISO.

DWR is seeking renewal of the license issued by FERC for the State Water Project's Hyatt-Thermalito hydroelectric generating facilities at Lake Oroville. A Settlement Agreement containing recommended conditions for the new license was submitted to FERC in March 2006. That agreement was signed by over 50 stakeholders, including Metropolitan and other State Water Project contractors. With only a few minor modifications, FERC staff recommended that the Settlement

Agreement be adopted as the condition for the new license. DWR issued a final EIR for the relicensing project on July 22, 2008.

Butte County and Plumas County filed separate lawsuits against DWR challenging the adequacy of the final EIR. This lawsuit also named all of the signatories to the Settlement Agreement, including Metropolitan, as “real parties in interest,” since they could be adversely affected by this litigation. On April 7, 2023, the Court of Appeal ruled that the EIR complied with CEQA. On June 28, 2023, the California Supreme Court denied petitioner’s request to review. The Court of Appeal’s decision is therefore final and the litigation is complete.

Regulatory permits and authorizations are also required before the new license can take effect. In December 2016, NMFS issued a biological opinion setting forth the terms and conditions under which the relicensing project must operate in order to avoid adverse impacts to threatened and endangered species. This was the last major regulatory requirement prior to FERC issuing a new license. Following the 2017 Oroville Dam spillway incident, Butte County, the City of Oroville, and others requested that FERC not issue a new license until an Independent Forensic Team (“IFT”) delivered their final report to FERC and FERC has had adequate time to review the report. The Final IFT report was delivered on January 5, 2018. DWR submitted a plan to address the findings of the report to FERC on March 12, 2018. See “METROPOLITAN’S WATER SUPPLY–State Water Project –2017 Oroville Dam Spillway Incident” in this Appendix A Metropolitan anticipates that FERC will issue the new license; however, the timeframe for FERC approval is not currently known. However, FERC has issued one-year renewals of the existing license since its initial expiration date on January 31, 2007 and is expected to issue successive one-year renewals until a new license is obtained.

DWR receives transmission service from the CAISO. The transmission service providers participating in the CAISO may seek increased transmission rates, subject to the approval of FERC. DWR has the right to contest any such proposed increase. DWR may also be subject to increases in the cost of transmission service as new electric grid facilities are constructed.

Numerous legislative bills and Executive Orders have been enacted over the years addressing California’s GHG emissions that ultimately affect energy prices. The California Global Warming Solutions Act of 2006 (AB 32, Núñez), required California to reduce its GHG emissions to 1990 levels by 2020. SB 32 (2016, Pavley) extended AB 32 by requiring the State to reduce GHG emissions to 40 percent below 1990 levels by 2030. In 2018, Governor Brown signed SB 100 (de León) and Executive Order B-55-18, establishing the policy of the State that eligible renewable energy resources and zero-carbon resources supply 100 percent clean energy to all California end-use customers and State agencies by December 31, 2045. SB 100 also increased the 2030 Renewables Portfolio Standard (“RPS”) requirement for retail electric utilities from 50 percent to 60 percent. Metropolitan and DWR are not subject to the RPS requirements. However, as a State agency, DWR is subject to the Executive Order. DWR has an existing climate action plan in order to achieve carbon neutrality by 2045. SB 1020 (2022, Laird) accelerated the date by which State agencies, including DWR, must procure 100 percent of electricity from eligible renewable energy resources and zero-carbon resources from December 31, 2045 to December 31, 2035, and would mandate certain criteria and process requirements that would apply to DWR in connection with its procurement of renewable and zero-carbon resources for the State Water Project.

On October 9, 2019, Governor Newsom signed SB 49 into law. SB 49 requires Natural Resources, in collaboration with the California Energy Commission and DWR, to assess by January 1, 2022 the opportunities and constraints for potential operational and structural upgrades to the State Water Project to aid California in achieving its climate and energy goals, and to provide associated

recommendations consistent with California's energy goals. DWR submitted its draft SB 49 report to the Governor's office for review in April 2022.

### Defined Benefit Pension Plan and Other Post-Employment Benefits

Metropolitan is a member of the California Public Employees' Retirement System ("PERS"), a multiple-employer pension system that provides a contributory defined-benefit pension for substantially all Metropolitan employees. PERS provides retirement and disability benefits, annual cost-of-living adjustments and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State. PERS is a contributory plan deriving funds from employee contributions as well as from employer contributions and earnings from investments. A menu of benefit provisions is established by State statutes within the Public Employees' Retirement Law. Metropolitan selects optional benefit provisions from the benefit menu by contract with PERS.

Metropolitan makes contributions to PERS based on actuarially determined employer contribution rates. The actuarial methods and assumptions used are those adopted by the PERS Board of Administration ("PERS Board"). Employees hired prior to January 1, 2013 are required to contribute 7.00 percent of their earnings (excluding overtime pay) to PERS. Pursuant to the current memoranda of understanding, Metropolitan contributes the requisite 7.00 percent contribution for all employees represented by the Management and Professional Employees Association, the Association of Confidential Employees, Supervisors and Professional Personnel Association and AFSCME Local 1902 and who were hired prior to January 1, 2012. Employees in all four bargaining units who were hired on or after January 1, 2012, pay the full 7.00 percent contribution to PERS for the first five years of employment. After the employee completes five years of employment, Metropolitan contributes the requisite 7.00 percent contribution. Metropolitan also contributes the entire 7.00 percent on behalf of unrepresented employees. Employees hired on or after January 1, 2013 and who are "new" PERS members as defined by [the](#) Public Employees' Pension Reform Act of 2013 pay a member contribution of 8.00 percent in fiscal year ~~2023-24~~[2023-24](#). In addition, Metropolitan is required to contribute the actuarially determined remaining amounts necessary to fund the benefits for its members.

The contribution requirements of the plan members are established by State statute and the employer contribution rate is established and may be amended by PERS. The fiscal year contributions were/are based on the following actuarial reports and discount rates:

Fiscal Year	Actuarial Valuation	Discount Rate
2020-21	June 30, 2018	7.00%
2021-22	June 30, 2019	7.00%
<del>2022-23</del> <a href="#">2022-2</a> <a href="#">3</a>	June 30, 2020	7.00%
<del>2023-24</del> <a href="#">2023-2</a> <a href="#">4</a>	June 30, 2021	6.80%
<del>2024-25</del> <a href="#">2024-2</a> <a href="#">5</a>	June 30, 2022	6.80%

The most recent actuarial valuation reports of PERS, as well as other information concerning benefits and other matters, are available on the PERS website at <https://www.calpers.ca.gov/page/employers/actuarial-resources/public-agency-actuarial-valuation-reports>. Such information is not incorporated by reference herein. Metropolitan cannot guarantee the accuracy

of such information. Actuarial valuations are “forward-looking” information that reflect the judgment of the fiduciaries of the pension plans, and are based upon a variety of assumptions, one or more of which may not materialize or be changed in the future. Actuarial valuations will change with the future experience of the pension plans.

In July 2021, PERS’ Funding Risk Mitigation Policy triggered an automatic discount rate reduction from 7.00 percent to 6.80 percent due to the double-digit investment return for fiscal year 2021 to offset the cost of reducing the expected volatility of future investment returns. In November 2021, the PERS Board voted to retain the 6.80 percent discount rate, which ~~will increase~~increased Metropolitan’s contribution levels beginning fiscal year ~~2023-24~~2023-24.

Metropolitan was required to contribute 34.39 percent and 35.74 percent of annual projected payroll for fiscal years 2021-22 and ~~2022-23~~2022-23, respectively. Metropolitan’s actual contribution for fiscal years 2021-22 and ~~2022-23~~2022-23 were \$81.5 million or 33.79 percent of annual covered payroll and \$88.2 million or 35.31 percent of annual covered payroll, respectively. The fiscal years 2021-22 and ~~2022-23~~2022-23 actual contribution included \$11.0 million or 4.56 percent and \$10.6 million or 4.24 percent of annual covered payroll, respectively, for Metropolitan’s pick-up of the employees’ 7.00 percent share. For fiscal years ~~2023-24~~2023-24 and 2024-25, Metropolitan is required to contribute 33.98 percent and 37.52 percent of annual projected payroll, respectively, in addition to member contributions paid by Metropolitan.

Metropolitan’s required contributions to PERS fluctuate each year and include a normal cost component and a component equal to an amortized amount of the unfunded liability. Many assumptions are used to estimate the ultimate liability of pensions and the contributions that will be required to meet those obligations. The PERS Board has adjusted and may in the future further adjust certain assumptions used in the PERS actuarial valuations, which may increase Metropolitan’s required contributions to PERS in future years. Accordingly, Metropolitan cannot provide any assurances that its required contributions to PERS in future years will not significantly increase (or otherwise vary) from any past or current projected levels of contributions.

The PERS Board adopted a new amortization policy effective with the June 30, 2019 actuarial valuation. The new policy shortens the period over which actuarial gains and losses are amortized from 30 years to 20 years with the payments computed using a level dollar amount. In addition, the new policy removes the five-year ramp-up and ramp-down on unfunded accrued liability bases attributable to assumption changes and non-investment gains/losses. The new policy removes the five-year ramp-down on investment gains/losses. These changes apply only to new unfunded accrued liability bases established on or after June 30, 2019.

On November 17, 2021, the PERS Board adopted new actuarial assumptions based on the November 2021 CalPERS Experience Study and Review of Actuarial Assumptions. This study reviewed the retirement rates, termination rates, mortality rates, rate of salary increases, and inflation assumption for public agencies. The PERS Board also changed the strategic asset allocation, capital market assumptions, and economic assumptions all of which support the new 6.80 percent discount rate. In addition, the PERS Board reduced the inflation assumption from 2.50 percent to 2.30 percent. These changes were incorporated in the June 30, 2021 valuation and will impact Metropolitan’s required contribution for fiscal year ~~2023-24~~2023-24.

The following table shows the funding progress of Metropolitan's pension plan.

<b>Valuation Date</b>	<b>Accrued Liability (\$ in billions)</b>	<b>Market Value of Assets (\$ in billions)</b>	<b>Unfunded Accrued Liability (\$ in billions)</b>	<b>Funded Ratio</b>
6/30/22 <sup>(1)</sup>	\$2.875	\$2.015	\$(0.859)	70.1%
6/30/21	\$2.752	\$2.228	\$(0.524)	81.0%
6/30/20	\$2.625	\$1.848	\$(0.777)	70.4%
6/30/19	\$2.534	\$1.810	\$(0.724)	71.4%
6/30/18	\$2.433	\$1.744	\$(0.689)	71.7%

Source: California Public Employees' Retirement System

(1) Most recent actuarial valuation available.

The market value of assets reflected above is based upon the most recent actuarial valuation as of June 30, 2022. The actuarial valuation as of June 30, 2023 has not yet been released. The June 30, 2022 valuation report will be used to establish the contribution requirements for fiscal year 2024-25. Increased volatility has been experienced in the financial markets in recent years. Significant losses in market value or failure to achieve projected investment returns could substantially increase unfunded pension liabilities and future pension costs.

The following tables show the changes in Net Pension Liability and related ratios of Metropolitan's pension plan.

(Dollars in thousands)	06/30/23	6/30/22	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$ 2,807,458	\$ 2,669,675	\$ 137,783
<b>Plan Fiduciary Net Position</b>	2,016,832	2,229,075	(212,243)
<b>Plan Net Pension Liability</b>	\$ 790,626	\$ 440,600	\$ 350,026
Plan fiduciary net positions as a % of the total pension liability	71.84%	83.50%	
Covered payroll	\$ 241,288	\$ 235,294	
Plan net pension liability as a % of covered payroll	327.67%	187.26%	

(Dollars in thousands)	06/30/22	6/30/21	Increase/ (Decrease)
<b>Total Pension Liability</b>	\$ 2,669,675	\$ 2,578,818	\$ 90,857
<b>Plan Fiduciary Net Position</b>	2,229,075	1,854,231	374,844
<b>Plan Net Pension Liability</b>	\$ 440,600	\$ 724,587	\$ (283,987)

Plan fiduciary net positions as a % of the total pension liability	83.50%	71.90%
Covered payroll	\$ 235,294	\$ 225,707
Plan net pension liability as a % of covered payroll	187.26%	321.03%

Source: GASB 68 Accounting Report for the respective measurement date prepared for Metropolitan by the California Public Employees' Retirement System.

The Net Pension Liability for Metropolitan's Miscellaneous Plan for the fiscal years ended June 30, 2022 and 2023 were measured as of June 30, 2021 and June 30, 2022, respectively, and the Total Pension Liability used to calculate the Net Pension Liability was determined by an annual actuarial valuation as of June 30, 2020 and June 30, 2021, respectively.

For more information on the plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE ~~SIX~~NINE MONTHS ENDED ~~DECEMBER~~MARCH 31, ~~2023~~2024 AND ~~2022~~2023 (UNAUDITED)."

Metropolitan currently provides post-employment medical insurance to retirees and pays the post-employment medical insurance premiums to PERS. On January 1, 2012, Metropolitan implemented a longer vesting schedule for retiree medical benefits, which applies to all new employees hired on or after January 1, 2012. Payments for this benefit were ~~\$23.2 million in fiscal year 2020-21~~, \$23.9 million in fiscal year 2021-22 ~~and~~, \$14.9 million in fiscal year ~~2022-23~~2022-23 and ~~\$15.3 million in fiscal year 2023-24~~. Employees are not required to contribute to the plan. Under Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, Metropolitan is required to account for and report the outstanding obligations and commitments related to such benefits, commonly referred to as other post-employment benefits ("OPEB"), on an accrual basis.

The actuarial valuations dated June 30, ~~2019~~2021 and June 30, ~~2021~~2023, were released in June of 2020 and ~~May~~April of ~~2022~~2024, respectively. The ~~2019~~2021 valuation indicated that the Actuarially Determined Contribution ("ADC") in fiscal years ~~2021-22~~2022-23 and ~~2022-23~~2023-24 were ~~\$23.9 million and \$14.9 million~~ and \$15.3 million, respectively, and the ~~2021~~2023 valuation indicated that the ADC will be ~~\$15.3-23.0 million and \$23.7 million~~ in fiscal ~~year 2023-24~~years 2024-25 and 2025-26, respectively. The ADC consists of two parts: (1) the normal cost, which represents the annual cost attributable to service earned in a given year and (2) the layered amortization of Unfunded Actuarial Liability as a level percentage of payroll.

The actuarial assumptions included the following:

	June 30, <del>2021</del> <u>2023</u> Valuation	June 30, <del>2019</del> <u>2021</u> Valuation
Actuarial Cost Method	Entry Age, level percentage of payroll	Entry age, level percentage of payroll
Amortization Method/Period	Level percentage of payroll over 23 year closed period ( <del>45</del> <u>13</u> years remaining on measurement date <del>6/30/20</del> <u>6/30/23</u> )	Level percentage of payroll over 23 year closed period ( <del>47</del> <u>15</u> years remaining on measurement date 6/30/20)



Asset Valuation Method	Investment gains/losses spread over 5 year rolling period with corridor of 80% and 120% of <del>fair</del> <u>market</u> value	Investment gains/losses spread over 5 year rolling period with corridor of 80% and 120% of fair value
Investment Rate of Return	6.75%	6.75%
Inflation	<del>3.00</del> <u>2.80</u> %	<del>2.75</del> <u>3.00</u> %
Mortality, Disability, Termination, Retirement	CalPERS 2000-2019 Experience Study	CalPERS <del>1997-2015</del> <u>2000-2019</u> Experience Study
Health Care Cost Trends	Pre-Medicare – <del>6.8</del> <u>12.72</u> % for 2023, grading down to <del>3.83</del> <u>4.14</u> % for 2076 and later. Medicare – <del>5.48</del> <u>4.45</u> % for 2022, grading down to <del>3.83</del> <u>4.14</u> % for 2076 and later	Pre-Medicare - <del>7.06</del> <u>8</u> % for <del>2022</del> <u>2023</u> , grading down to <del>4.00</del> <u>3.83</u> % for 2076 and later. Medicare – <del>6.1</del> <u>5.4</u> % for 2022, grading down to <del>4.00</del> <u>3.83</u> % for 2076 and later
Mortality Improvement	Mortality projected fully generational with Scale MP-2021	Mortality projected fully generational with Scale MP- <del>2019</del> <u>2021</u>

As of June 30, ~~2021~~2023, the date of the most recent OPEB actuarial valuation report, the unfunded actuarial liability was estimated to be \$~~94.3~~122.1 million and projected to be \$~~69.7~~125.0 million at June 30, ~~2022~~2024.

In September 2013, Metropolitan's Board established an irrevocable OPEB trust fund with the California Employers' Retiree Benefit Trust Fund. The market value of assets in the trust as of June 30, 2023 was \$345.8 million. As part of its biennial budget process, the Board approved the full funding of the ADC for fiscal years ~~2022-23~~2022-23 and ~~2023-24~~2023-24.

Increased volatility in the financial markets has been experienced in recent years. Declines in the market value of the OPEB trust fund or failure to achieve projected investment returns could negatively affect the funding status of the trust fund and increase ADCs in the future.

The following tables show the changes in Net OPEB Liability and related ratios of Metropolitan's OPEB plan.

(Dollars in thousands)	06/30/23	6/30/22	Increase/ (Decrease)
<b>Total OPEB Liability</b>	\$ 443,189	\$ 429,603	\$ 13,586
<b>Plan Fiduciary Net Position</b>	328,536	377,321	(48,785)
<b>Plan Net OPEB Liability</b>	\$ 114,653	\$ 52,282	\$ 62,371
Plan fiduciary net positions as a % of the total OPEB liability	74.13%	87.83%	
Covered payroll	\$ 241,288	\$ 235,294	
Plan net OPEB liability as a % of covered payroll	47.52%	22.22%	



(Dollars in thousands)	06/30/22	6/30/21	Increase/ (Decrease)
<b>Total OPEB Liability</b>	\$ 429,603	\$ 452,293	\$ (22,690)
<b>Plan Fiduciary Net Position</b>	377,321	287,562	89,759
<b>Plan Net OPEB Liability</b>	\$ 52,282	\$ 164,731	\$ (112,449)
Plan fiduciary net positions as a % of the total OPEB liability	87.83%	63.58%	
Covered payroll	\$ 235,294	\$ 225,707	
Plan net OPEB liability as a % of covered payroll	22.22%	72.98%	

*Source: GASB Statement No. 74/75 Report for the respective fiscal year prepared for Metropolitan by its actuary for the Retiree Healthcare Plan.*

The Net OPEB Liability for the years ended June 30, 2022 and 2023 were measured as of June 30, 2021 and June 30, 2022, respectively, and the Total OPEB Liability used to calculate the Net OPEB Liability as of such dates were determined by an annual actuarial valuation as of June 30, 2021.

For more information on the OPEB plan, see APPENDIX B—"THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE ~~SIX~~NINE MONTHS ENDED ~~DECEMBER~~MARCH 31, ~~2023~~2024 AND ~~2022~~2023 (UNAUDITED)."

## HISTORICAL AND PROJECTED REVENUES AND EXPENSES

The “Historical and Projected Revenues and Expenses” table below for fiscal years ~~2019-20 through 2021-22~~ through 2028-29, provides a summary of revenues and expenses of Metropolitan prepared on a ~~modified accrual~~ cash basis. This is consistent with Metropolitan’s current budgetary reporting ~~for such fiscal years, including the biennial budget for fiscal years 2020-21 and 2021-22. Under the modified accrual basis of accounting, revenues are recognized in the fiscal year in which they are earned, and expenses are recognized when incurred. Thus, water revenues are recognized in the month the water transaction occurs and expenses are recognized when goods have been received and services have been rendered.~~

~~Metropolitan’s accounting method for budgetary purposes changed from modified accrual basis to cash basis beginning with fiscal year 2022-23. Consistent with its biennial budget for fiscal years 2022-23 and 2023-24, Metropolitan’s proposed biennial budget for fiscal years 2024-25 and 2025-26, which includes a ten-year financial forecast, has been prepared on a cash basis, and financial projections for fiscal years 2024-25 through 2028-29 prepared from the ten-year financial forecast on a cash basis are set forth in the table below~~ method. Under cash basis accounting, water sales revenues are recorded when received (two months after billed) and expenses when paid (approximately one month after invoiced). ~~For comparative purposes only, Metropolitan has provided in the table below its fiscal year 2021-22 results on both a modified accrual basis and a cash basis. Fiscal year 2022-23 results are prepared on a cash basis consistent with Metropolitan’s budgetary reporting for such fiscal year. The financial projection for fiscal year 2023-24 reflects results through December 2023.~~ The table does not reflect the accrual basis of accounting, which is used to prepare Metropolitan’s annual audited financial statements. Under accrual accounting, revenues are recorded when earned and expenses are recorded at the time the liabilities are incurred, regardless of the timing of related cash flows. ~~The change to cash basis accounting is for budgetary purposes. Metropolitan will continue to calculate compliance with its rate covenants, limitations on additional bonds and other financial covenants in the Resolutions in accordance with their terms.~~

The information for fiscal year 2023-24 in the table below is based upon preliminary results. The financial projections for fiscal years 2025-26 through 2028-29 in the table below reflect the biennial budget for fiscal years 2024-25 and 2025-26 as well as a ten-year financial forecast provided therein on a cash basis. The financial projections include Metropolitan’s share of the forecasted costs associated with the planning of a single tunnel Bay-Delta conveyance project and certain costs associated with PWSC. See “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities” and “– Delta Conveyance” and “REGIONAL WATER RESOURCES–Local Water Supplies – Recycled Water-Metropolitan Pure Water Southern California Program” in this Appendix A.

The projections are based on assumptions concerning future events and circumstances that may impact revenues and expenses and represent management’s best estimates of results at this time. See the footnotes to the table below entitled “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for relevant assumptions, including projected water transactions and the average annual increase in the effective water rate, and “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” for a discussion of potential impacts. Some assumptions inevitably will not materialize, and unanticipated events and circumstances may occur. Therefore, the actual results achieved during the projection period will vary from the projections and the variations may be material. The budget and projection information, and all other forward-looking statements in this Appendix A, are based on current expectations and are not intended as representations of facts or guarantees of future results.

The presentation below is consistent with Metropolitan's current budgetary reporting method. Metropolitan will continue to calculate compliance with its rate covenants, limitations on additional bonds and other financial covenants in the Resolutions in accordance with their terms.

The presentation below differs from that previously presented in certain of Metropolitan's prior offering documents and continuing disclosure annual report filings with respect to the actual and expected use of certain funds on hand and the application of Reserve Transfers as offsets to operating and maintenance expenses and as Additional Revenues, respectively. Metropolitan now consistently applies these funds as set forth in the table below, which impacted the bond and fixed-charge coverage calculation in fiscal year ~~2019-20~~2021-22 through fiscal year ~~2024-25~~2024-25. O&M, CRA Power and Water Transfer Costs were updated to reflect the set-aside of ~~\$1.2 million in fiscal year 2019-20 and~~ \$12.8 million in fiscal year ~~2020-21~~2020-21, and the use of \$26.5 million in fiscal year 2021-22 from the Exchange Agreement Set-Aside Fund to offset the \$50.5 million payment to SDCWA in connection with the litigation challenging Metropolitan's rates. See "METROPOLITAN REVENUES–Litigation Challenging Rate Structure" in this Appendix A. Lastly, a Reserve Transfer of \$153 million in fiscal year ~~2022-23~~2022-23, and ~~a projected~~an expected Reserve Transfer of ~~\$204~~229 million in ~~2023-24~~2023-24 are reflected in the table below.

~~As noted herein, for comparative purposes in connection with Metropolitan's change in accounting method for budgetary purposes, financial results for fiscal year 2021-22 are provided on both a modified accrual basis and a cash basis. Beginning with fiscal year 2022-23, the results and projections are prepared on a cash basis. The financial projection for fiscal year 2023-24 reflects results through December 2023. The financial projections for fiscal years 2024-25 through 2028-29 in the table below reflect the proposed biennial budget for fiscal years 2024-25 and 2025-26 as well as a ten-year financial forecast provided therein on a cash basis. The financial projections include Metropolitan's share of the forecasted costs associated with the planning of a single tunnel Bay Delta conveyance project and certain costs associated with PWSC. See "METROPOLITAN'S WATER SUPPLY State Water Project – Bay Delta Proceedings Affecting State Water Project – Bay Delta Planning Activities" and "Delta Conveyance" and "REGIONAL WATER RESOURCES Local Water Supplies – Recycled Water Metropolitan Pure Water Southern California Program" in this Appendix A.~~

Metropolitan's resource planning projections are developed using a comprehensive analytical process that incorporates demographic growth projections from recognized regional planning entities, historical and projected data acquired through coordination with local agencies, and the use of generally accepted empirical and analytical methodologies. Due to the unpredictability of future hydrologic conditions, Metropolitan's projected supplemental wholesale water transactions may vary considerably. Metropolitan's Water Resource Management provided ~~the~~ projections of the volume of annual water transactions for the ~~proposed~~ biennial budget for fiscal years 2024-25 and 2025-26 and its ten-year financial forecast ~~provided therein~~. Based on those projections and water sales in recent years, Metropolitan incorporated more conservative assumptions for water transactions in its biennial budget for fiscal years 2024-25 and 2025-26 and its ten-year financial forecast. The water transactions projections used to determine water rates and charges assume a transition from ~~dry~~recent hydrologic conditions to average year hydrology. Actual water transactions are likely to vary from projections. As shown in the chart entitled "Historical Water Transactions" below, water transactions can vary significantly from average and demonstrates the degree to which Metropolitan's commitments to meet supplemental demands can impact water transactions. In years when actual transactions exceed projections, the revenues from water transactions during the fiscal year will exceed budget, potentially resulting in an increase in financial reserves. In years when actual transactions are less than projections, Metropolitan uses various tools to manage reductions in revenues, such as reducing expenses below budgeted levels, reducing funding of capital projects from revenues, and drawing on reserves. See "METROPOLITAN REVENUES–Financial Reserve Policy" in this Appendix A. See also

“~~Projected Preliminary~~ Fiscal Year ~~2023-24~~2023-24 Financial Results.” Metropolitan considers actual transactions, revenues and expenses, and financial reserve balances in setting rates for future fiscal years.

As described above, ~~for comparative purposes, fiscal year 2021-22 results are presented on both a modified accrual basis and a cash basis. Projections in the following table reflect results through December 2023 for fiscal year 2023-24~~the information for fiscal year 2023-24 in the table below is based upon preliminary results. Financial projections for fiscal years ~~2024-25~~2025-26 through 2028-29 reflect the ~~proposed~~ biennial budget for ~~Fiscal Years 2024-25 and 2025-26~~fiscal years 2024-25 and 2025-26 and ten-year financial forecast provided therein on a cash basis. This includes the issuance of \$~~3,430~~3,380 million of bonds for fiscal years ~~2024-25~~2024-25 through 2028-29 to finance a portion of the costs of the CIP including, for planning purposes, certain projected costs of PWSC if a project is approved. The projections also assume the issuance of an additional \$48 million of bonds during the same period to finance other capital expenditures of Metropolitan relating to conservation and supply programs. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” and “CAPITAL INVESTMENT PLAN–Capital Investment Plan Financing” in this Appendix A.

Water transactions with member agencies were 1.65 million acre-feet in fiscal year 2021-22, and 1.39 million acre-feet for fiscal year ~~2022-23~~2022-23, and are estimated to be 1.17 million acre-feet in fiscal year 2023-24. Water transactions ~~with member agencies~~ are projected to be ~~1.22~~1.34 million acre-feet for fiscal ~~years 2023-24 and 1.44~~year 2024-25, 1.34 million acre-feet for fiscal year ~~2024-25, 1.44~~2025-26, 1.34 million acre-feet for fiscal year ~~2025-26, 1.44 million acre-feet for fiscal years 2026-27, 1.45~~1.35 million acre-feet for fiscal year 2027-28 and ~~1.45~~1.35 million acre-feet for fiscal year 2028-29. Rates and charges ~~increased by 5.0 percent on January 1, 2023 and 5.0 percent on January 1, 2024. Rates and charges are projected to increase 13.0~~will increase by 8.5 percent for calendar year 2025, and ~~8.0~~will increase by 8.5 percent for calendar year 2026, ~~12.0~~. Rates and charges are projected to increase by 11.5 percent for calendar year 2027, ~~8.0~~11.5 percent for calendar year 2028, and 5.0 percent for calendar year 2029. Actual rates and charges to be effective in calendar year ~~2025~~2027 and thereafter are subject to adoption by Metropolitan’s Board.

The biennial budget for fiscal years 2024-25 and 2025-26 also assumes additional arrangements enabled by Metropolitan’s record high storage reserves anticipated to generate revenues of \$60 million per year.

Financial projections for fiscal years 2024-25 through 2028-29 reflect a greater portion of Metropolitan’s State Water Contract obligations being paid from property taxes. [if new tax rate established in August add the following:] As assumed by the biennial budget for fiscal years 2024-25 and 2025-26, the Board increased the *ad valorem* tax rate to 0.0070 percent of full assessed valuation beginning in fiscal year 2024-25.]

The projections were prepared by Metropolitan and have not been reviewed by independent certified public accountants or any entity other than Metropolitan. Dollar amounts are rounded.

~~[Remainder of page intentionally left blank.]~~

**HISTORICAL AND PROJECTED REVENUES AND EXPENSES<sup>(a)</sup>**  
**Fiscal Years Ended June 30**  
**(Dollars in Millions)**

	<b>Modified-Accrual</b>			<b>Actual</b>			<b>Cash-Basis</b>					<b>Projected</b>
	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2022<sup>(o)</sup></b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	
	<b>Actual</b>	<b>Actual</b>	<b>Actual</b>	<b>Actual</b>	<b>Actual</b>	<b>Projected Preliminary</b>	<b>Proposed Adopted Budget</b>	<b>Proposed Adopted Budget</b>	<b>10-Yr Forecast</b>	<b>10-Yr Forecast</b>	<b>10-Yr Forecast</b>	
Water Revenues <sup>(b)</sup>	\$1,188	\$1,405	\$1,515	\$1,523	\$1,323	\$1,222	\$1,524	\$1,711	\$1,865	\$2,085	\$2,374	
Other Charge Revenues <sup>(c)</sup>	165	165	172	171	182	196	203	216	233	255	282	
Total Operating Revenues	1,353	1,569	1,687	1,693	1,505	1,417	1,727	1,927	2,098	2,340	2,655	
O&M, CRA Power and Water Transfer Costs <sup>(d)</sup>	(643)	(648)	(796)	(770)	(864)	(743)	(909)	(946)	(1,019)	(1,061)	(1,198)	
Total SWC OMP&R and Power Costs <sup>(e)</sup>	(384)	(393)	(411)	(374)	(412)	(624)	(507)	(503)	(541)	(566)	(620)	
Total Operation and Maintenance	(1,027)	(1,042)	(1,207)	(1,144)	(1,275)	(1,367)	(1,416)	(1,449)	(1,560)	(1,642)	(1,818)	
Net Operating Revenues	\$326	\$528	\$479	\$549	\$229	\$54	\$311	\$478	\$537	\$698	\$838	
Additional Revenue Sources												
Miscellaneous Revenue <sup>(f)</sup>	13	13	18	23	24	72	98	99	52	48	49	
Reserve Transfers <sup>(g)</sup>	—	—	—	—	153	204	—	—	—	—	—	
Sales of Hydroelectric Power <sup>(h)</sup>	16	19	8	9	6	8	172	141	131	13	13	
Interest on Investments <sup>(i)</sup>	20	10	7	10	21	31	49	43	40	43	51	
Total Additional Revenues	49	42	33	42	204	315	165	155	105	103	112	
Adjusted Net Operating Revenues <sup>(j)</sup>	\$375	\$570	\$513	\$591	\$434	\$366	\$476	\$634	\$642	\$801	\$950	
Senior Obligations	(232)	(222)	(178)	(178)	(172)	(196)	(200)	(200)	(237)	(283)	(430)	
Subordinate Obligations	(40)	(57)	(97)	(97)	(121)	(126)	(135)	(151)	(134)	(138)	(104)	
Senior and Subordinate Obligations <sup>(k)</sup>	(272)	(279)	(275)	(275)	(293)	(322)	(336)	(351)	(371)	(421)	(534)	
Funds Available from Operations	\$104	\$292	\$238	\$316	\$141	\$44	\$140	\$283	\$271	\$380	\$416	
Debt Service Coverage (DSC) on all Senior Bonds	1.62	2.57	2.88	3.32	2.52	1.87	2.37	3.17	2.71	2.83	2.21	
DSC on all Senior and Subordinate Bonds <sup>(l)</sup>	1.38	2.05	1.86	2.15	1.48	1.14	1.42	1.80	1.73	1.90	1.78	
Operating Equipment Expense	(6)	(6)	(4)	(4)	(7)	(9)	(10)	(10)	(11)	(11)	(13)	
Pay-As-You Go Construction	(39)	(110)	(135)	(135)	(135)	(35)	(125)	(175)	(175)	(250)	(275)	
Pay-As-You Go Funded from Replacement & Refurbishment Fund Reserves	1	—	1	1	2	—	—	—	—	—	—	

Total SWC Capital Costs Paid from Current Year Operations	(1)	=	=	=	=	=	=	=	=	=	
Remaining Funds Available from Operations	\$-59	\$-176	\$-100	\$ 177	\$ —	\$ —	\$553	\$97137	\$8542	\$11878	\$12813
Fixed Charge Coverage <sup>(m)</sup>	1.38	2.05	1.86	2.15	1.48	1.14	1.421	1.801	1.731	1.901	1.781
Property Taxes <sup>(n)</sup>							71	92	62	81	89
							\$	\$		\$	
	\$-147	\$-161	\$-168	\$ 160	\$ 198	186202	19631	20333		21335	
General Obligation Bonds							7	4	\$ 20834	1	\$ 22735
Debt Service Paid from											
Property Taxes	(13)	(7)	(8)	(8)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
SWC Capital Costs Paid from											
Property Taxes	(134)	(131)	(140)	(140)	(133)	(124122)	(113)	(117)	(142)	(151)	(188170)
SWC O&M Costs Paid from											
Property Taxes							(81202)	(84215)	(6419)	(60197)	(3818
	=	(23)	(21)	(12)	(62)	(5978)	)	)	8)	)	7)

Source: Metropolitan.

(Footnotes to table are on next pages)



(Footnotes to table on prior page)

- (a) Unaudited. Totals may not add due to rounding. Prepared on a ~~modified accrual~~ cash basis ~~through~~. Information for fiscal year ~~2021-22 and prepared and projected on a cash basis fiscal year 2021-22 forward. Fiscal year 2021-22 results are presented on both a modified accrual and cash basis for comparative purposes. Projected revenues and expenses in fiscal year 2023-24 are based on results through December 2023~~ 2023-24 is based on preliminary results. Projections for fiscal year ~~2024-25~~ 2024-25 through fiscal year 2028-29 are based on assumptions and estimates used in the ~~proposed~~ biennial budget for fiscal years ~~2024-25~~ 2024-25 and ~~2025-26~~ 2025-26 and ten-year financial forecast provided therein and reflect the projected issuance of additional bonds. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.
- (b) Water Revenues include revenues from water sales, exchanges, and wheeling. During the fiscal years ended June 30, ~~2020 through June 30, 2022~~ and 2023, annual water transactions with member agencies (in acre-feet) were ~~1.37 million, 1.57 million,~~ 1.65 million, and 1.39 million, respectively, and, for fiscal year ended June 30, 2024, are estimated to be 1.17 million. See the table entitled “Summary of Water Transactions and Revenues” under “METROPOLITAN REVENUES–Water Revenues” in this Appendix A. The water transactions projections (in acre-feet) are ~~1.22~~ 1.34 million acre-feet for ~~fiscal years 2023-24, 1.44 million acre-feet for 2024-25, 1.44~~ 2024-25, 1.34 million acre-feet for fiscal year ~~2025-26, 1.44~~ 2025-26, 1.34 million acre-feet for fiscal years 2026-27, ~~1.45~~ 1.35 million acre-feet for 2027-28, and ~~1.45~~ 1.35 million acre-feet for fiscal years 2028-29. Projections reflect adopted overall rate and charge increase of ~~5.08.5~~ percent for each of the calendar years ~~2023~~ 2025 and ~~2024~~ 2026. Rates and charges are projected to increase ~~13.0 percent for calendar year 2025, 8.0 percent for calendar year 2026, 12.0~~ 11.5 percent for calendar year 2027, ~~8.0~~ 11.5 percent for calendar year 2028, and 5.0 percent for calendar year 2029, subject to adoption by Metropolitan’s Board. See “MANAGEMENT’S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.
- (c) Includes revenues from water standby, readiness-to-serve, and capacity charges. The term Operating Revenues excludes *ad valorem* taxes. See “METROPOLITAN REVENUES–Other Charges” in this Appendix A.
- (d) Water Transfer Costs and PWSC planning costs (described under “REGIONAL WATER RESOURCES–Local Water Supplies – Recycled Water–Metropolitan Pure Water Southern California Program” in this Appendix A) are included in operation and maintenance expenses for purposes of calculating the debt service coverage on all Obligations. Operation and maintenance expenses also include ~~1.2 million in fiscal year 2019-20, \$12.8 million in fiscal year 2020-21 and \$24.0 million in fiscal year 2021-22 in connection with the SDCWA litigation challenging Metropolitan’s rates (\$50.5 million is the total paid in fiscal year 2021-2022, with the balance paid from the Exchange Agreement Set-Aside Fund). See METROPOLITAN REVENUES–Litigation Challenging Rate Structure” in this Appendix A. O&M, CRA Power and Water Transfer Costs are net of grant funds to be applied to fund planning costs of PWSC (see “REGIONAL WATER RESOURCES–Local Water Supplies – Recycled Water–Metropolitan Pure Water Southern California Program”) and California WaterFix refund monies held and applied to offset Delta Conveyance costs (\$4.5 million in fiscal year ~~2022-23~~ 2022-23 and \$30 million in fiscal year ~~2023-24~~ 2023-24). Also net of conservation and supply programs expenses expected to be paid from bond proceeds. See footnote (k) below.~~
- (e) Includes on- and off-aqueduct power and operation, maintenance, power and replacement costs payable under the State Water Contract and Delta Conveyance planning costs. See “METROPOLITAN EXPENSES–State Water Contract Obligations” in this Appendix A. See also “METROPOLITAN’S WATER SUPPLY–State Water Project –Bay-Delta Proceedings Affecting State Water Project – Bay-Delta Planning Activities” and “– Delta Conveyance” in this Appendix A. SWC OMP&R costs are net of (offset by) amounts paid from property taxes as detailed in the table above. See footnote (n) below.
- (f) May include lease and rental net proceeds, net proceeds from sale of surplus property, reimbursements, and PWSC contributions, ~~and in fiscal years 2019-20 and 2020-21, federal interest subsidy payments for Build America Bonds.~~ Includes \$60 million in revenues per year for fiscal years 2024-25 and 2025-26 anticipated to be generated from additional arrangements enabled by Metropolitan’s record high storage reserves.
- (g) Reflects transfers from the Water Stewardship Fund, the Water Treatment Surcharge Stabilization Fund, and the Water Rate Stabilization Fund of \$153 million in fiscal year ~~2022-23~~ 2022-23, and estimated transfers from the Water Rate Stabilization Fund and General Fund of ~~\$204~~ 229 million in fiscal year ~~2023-24~~ 2023-24.
- (h) Includes CRA power sales.
- (i) Does not include interest applicable to Bond Construction Funds, the Excess Earnings Funds, other trust funds and the Deferred Compensation Trust Fund. Includes net gain or loss on investments.
- (j) Adjusted Net Operating Revenues is the sum of all available revenues that the revenue bond resolutions specify may be considered by Metropolitan in setting rates and issuing additional Senior Revenue Bonds and Senior Parity Obligations and Subordinate Revenue Bonds and Subordinate Parity Obligations.

(Footnotes continue on next page)

(Footnotes continued from prior page)

- (k) Includes debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds, Subordinate Parity Obligations, and additional Revenue Bonds (projected). Assumes ~~the issuance~~<sup>bond issuances</sup> of approximately \$~~180~~<sup>130</sup> million in fiscal year ~~2024-25~~<sup>2024-25</sup>, approximately \$150 million in fiscal year ~~2025-26~~<sup>2025-26</sup>, approximately \$900 million in fiscal year 2026-27, approximately \$950 million in fiscal year 2027-28, and approximately \$1,250 million in fiscal year 2028-29. Also assumes the issuance of approximately \$215 million of bonds for other capital expenditures relating to conservation and supply programs in calendar year 2024, and \$29 million and \$19 million of bonds for other capital expenditures relating to conservation in fiscal years ~~2024-25~~<sup>2024-25</sup> and ~~2025-26~~<sup>2025-26</sup>, respectively. ~~Fiscal year 2019-20 debt service was reduced by \$28.5 million due to the prepayment of \$28.5 million in June 2019 of debt service due on July 1, 2019, as such the payment was reflected in fiscal year 2018-19.~~ See “CAPITAL INVESTMENT PLAN–Capital Investment Plan Financing” in this Appendix A. See also “METROPOLITAN WATER SUPPLY–Water Transfer, Storage and Exchange Programs –State Water Project Agreements and Programs – *Antelope Valley-East Kern High Desert Water Bank Program*” in this Appendix A.
- (l) Adjusted Net Operating Revenues, divided by the sum of debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations and additional Revenue Bonds (projected). See “METROPOLITAN EXPENSES–Outstanding Senior Revenue Bonds and Senior Parity Obligations” and “–Outstanding Subordinate Revenue Bonds and Subordinate Parity Obligations” in this Appendix A.
- (m) Adjusted Net Operating Revenues, divided by the sum of State Water Contract capital costs paid from current year operations and debt service on outstanding Senior Revenue Bonds, Senior Parity Obligations, Subordinate Revenue Bonds and Subordinate Parity Obligations, and additional Revenue Bonds (projected).
- (n) Assumes the *ad valorem* tax rate will be increased by the Board to 0.0070 percent of full assessed valuation beginning in fiscal year 2024-25.
- (o) Information for fiscal year 2021-22 is presented on a cash basis in this table, consistent with Metropolitan’s current accounting method for budgetary purposes. Metropolitan’s accounting method changed from modified accrual basis to cash basis beginning with fiscal year 2022-23. Historical information through fiscal year 2021-22 in the table entitled “Summary of Revenues by Source” under the caption “METROPOLITAN REVENUES – Summary of Revenues by Source” and in the table entitled “Summary of Expenses” under the caption “METROPOLITAN EXPENSES – General” in this Appendix A reflect the modified accrual basis of accounting previously used by Metropolitan for budgetary purposes.

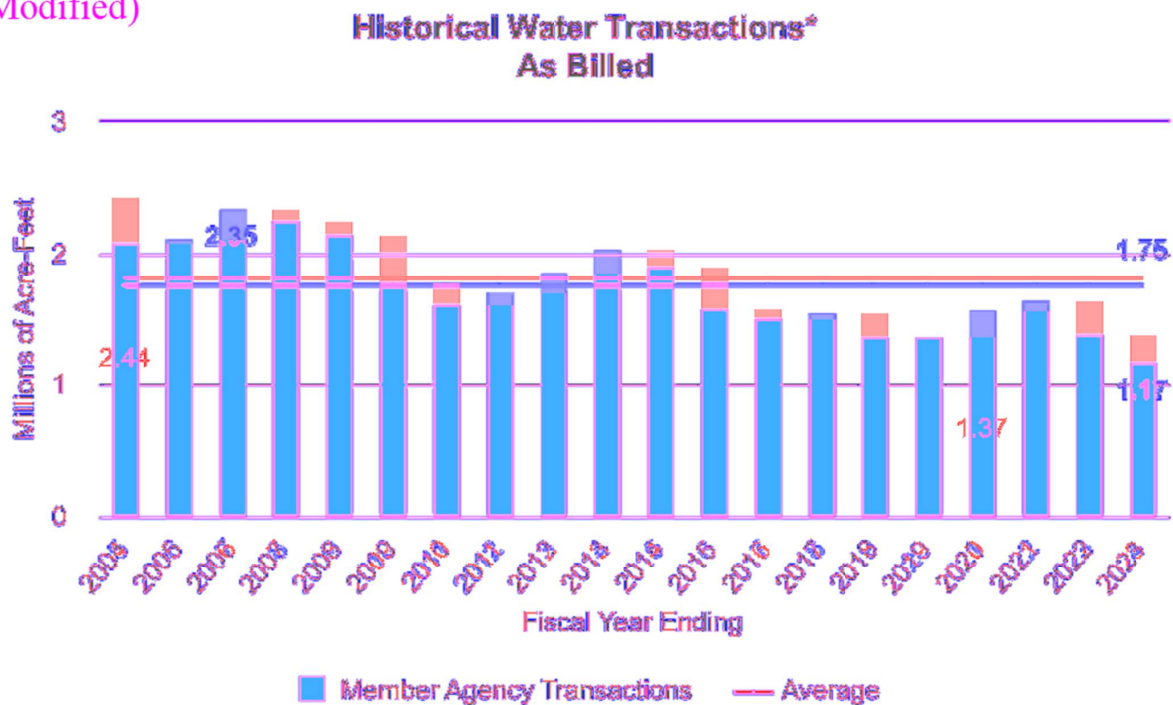
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## MANAGEMENT'S DISCUSSION OF HISTORICAL AND PROJECTED REVENUES AND EXPENSES

### Water Transactions Projections

The water transactions with member agencies in the table above for fiscal year 2021-22 were 1.65 million acre-feet, ~~and 1.39 million acre-feet for fiscal year 2022-23. The water transactions forecast 2022-23, and are estimated to be 1.17 million acre-feet for fiscal year 2023-24 is 1.22 million acre-feet, about 21 percent lower compared to budget projections 2023-24.~~ The water transaction forecast is ~~1.44~~1.34 million acre-feet for fiscal year ~~2024-25, 1.44~~2024-25, 1.34 million acre-feet for fiscal year ~~2025-26, 1.44~~2025-26, 1.34 million acre-feet for fiscal year 2026-27, ~~1.45~~1.35 million acre-feet for 2027-28, and ~~1.45~~1.35 million acre-feet for fiscal year 2028-29, consistent with the ~~proposed~~ biennial budget and ten-year financial forecast. For purposes of comparison, Metropolitan's highest level of water transactions during the past 20 fiscal years was approximately ~~2.44~~2.35 million acre-feet in fiscal year ~~2003-04~~2006-07 and the lowest was ~~1.37~~1.17 million acre-feet in fiscal year ~~2019-20~~2023-24. The chart below shows the volume of water transactions with member agencies over the last 20 fiscal years.

(Modified)



\* Water transactions include sales, exchanges, and wheeling with member agencies. Fiscal Year 2023-24 information based on preliminary results.

### Water Revenues

Metropolitan ~~relies on~~projects revenues from water transactions ~~for~~will be about ~~80~~75 percent of its total revenues after implementation of the adopted biennial budget for fiscal years 2024-25 and 2025-26. In adopting the budget and rates and charges for each fiscal year, Metropolitan's Board reviews the anticipated revenue requirements and projected water transactions to determine the rates necessary to produce the required revenues to be derived from water transactions during the fiscal year. Metropolitan sets rates and charges estimated to provide operating revenues sufficient, with other sources of funds, to

provide for payment of its expenses. See “HISTORICAL AND PROJECTED REVENUES AND EXPENSES” in this Appendix A.

Metropolitan’s Board ~~has adopted~~regularly adopts annual increases in water rates ~~each year beginning with the rates effective January 1, 2004.~~ See “METROPOLITAN REVENUES–Rate Structure” and “–Classes of Water Service” in this Appendix A. On April ~~129, 2022~~2024, the Board adopted average increases in rates and charges of ~~5.0~~8.5 percent, which ~~became~~will become effective on ~~each of~~ January 1, ~~2023~~2025 and January 1, ~~2024~~2026. Rates and charges are projected to increase ~~13.0 percent for calendar year 2025, 8.0 percent for calendar year 2026, 12.0~~11.5 percent for calendar year 2027, ~~8.0~~11.5 percent for calendar year 2028, and 5.0 percent for calendar year 2029. Actual rates and charges to be effective in calendar year ~~2025~~2027 and thereafter are subject to adoption by Metropolitan’s Board.

### **Projected Preliminary Fiscal Year 2023-24 2023-24 Financial Results**

~~Projections~~Based on preliminary results for fiscal year ~~2023-24, in the table above (on a cash basis), are based on results through December 2023. Projected~~2023-24, estimated Water Revenues for fiscal year ~~2023-24 is~~2023-24 were \$~~1,222~~1,167 million, approximately ~~\$317~~371 million lower than budget projections. This reduction in projected water revenues is primarily due to the impact of recent wet weather on demand for supplies by member agencies.

Operation and maintenance expenses in fiscal year ~~2023-24~~2023-24 are ~~projected~~estimated to be \$~~1,367~~1,303 million, which represents approximately ~~67~~66 percent of total ~~projected~~estimated costs for fiscal year 2023-24. These expenditures include the costs of labor, electrical power, materials and supplies of both Metropolitan and its contractual share of the State Water Project. Metropolitan’s operation and maintenance expenses are ~~projected~~estimated to be \$~~208~~4 million lower than budget in fiscal year ~~2023-24~~2023-24. Comparatively, operations and maintenance expenditures in fiscal year ~~2022-23~~2022-23 were \$1,275 million, which represents approximately 66.9 percent of total costs. Overall, ~~projected~~estimated expenditures for the twelve months ending June 30, 2024 are estimated to be \$~~2,043~~1,975 million, which is under budget by \$~~46~~114 million.

Metropolitan maintains cash reserves as a tool to manage the fluctuations in revenues and/or increases in expenses. Water revenues vary based on Metropolitan’s water transactions, which are primarily driven by demand for Metropolitan’s water supplies. Expenses may vary on a host of factors, including but not limited to construction costs, chemical costs for treatment, power costs, hydroelectric power production, variable rate debt costs, among other potential types of costs Metropolitan incurs. Metropolitan’s unrestricted reserves provide the flexibility to increase rates on a scheduled basis as opposed to when additional revenues are needed intermittently. Metropolitan ~~has~~ determined that it ~~is~~was appropriate to use a portion of its unrestricted reserves and other available funds in fiscal year ~~2023-24~~2023-24 to pay for permitted expenditures as a result of the rapid change in hydrology that ~~is~~were projected to reduce demand for Metropolitan supplies, and hence projected water revenues. ~~Projected results~~Results for fiscal year ~~2023-24~~2023-24 reflect the use of approximately \$~~227~~231 million of unrestricted reserves related to operating and maintenance.

Fiscal year ~~2023-24~~2023-24 senior revenue bond debt service coverage (on a cash basis) is ~~projected~~estimated to be ~~1.87x~~1.86x. Fiscal year ~~2023-24~~2023-24 aggregate revenue bond debt service coverage (on a cash basis) is ~~projected~~estimated to be 1.14x and the fixed charge coverage is estimated to be 1.14x. Fiscal year ~~2023-24~~2023-24 capital expenditures, estimated ~~(as of the end of the second quarter of fiscal year 2023-24)~~ at \$~~353~~380 million, are being partially funded by the proceeds of bonds issued for fiscal year ~~2022-23~~2022-23 for such purpose, a portion of Metropolitan’s short-term senior lien notes issued under its Short-Term Revolving Credit Facility ~~(which amount is expected to be refunded by Metropolitan’s 2024A Bonds)~~ and the remainder from pay-as-you-go funding. Metropolitan’s

unrestricted reserves are ~~projected~~estimated to be approximately \$~~327~~323 million on a cash basis at June 30, 2024. See “METROPOLITAN REVENUES–Financial Reserve Policy” in this Appendix A.

Financial projections for fiscal years ~~2024-25~~2024-25 through 2028-29 are reflected in the ~~proposed~~ biennial budget for fiscal years ~~2024-25~~2024-25 and ~~2025-26~~2025-26 and ten-year financial forecast provided therein. The fiscal year ~~2024-25 and 2025-26~~ ~~proposed~~2024-25 and 2025-26 biennial budget and rates set the stage for predictable and reasonable rate increases over the ten-year planning period, with ~~proposed~~ overall rate increases of ~~13.0~~8.5 percent for calendar year 2025 and ~~8.0~~8.5 percent for calendar year 2026. The ~~proposed~~ biennial budget for fiscal years ~~2024-25~~2024-25 and ~~2025-26~~2025-26 and ten-year financial forecast includes rate increases of ~~12.0~~11.5 percent for calendar year 2027, ~~8.0~~11.5 percent for calendar year 2028 and 5.0 percent for calendar year 2029. Actual rates and charges to be effective in calendar year ~~2025~~2027 and thereafter are subject to adoption by Metropolitan’s Board as part of the biennial budget process, at which point the ten-year forecast will be updated as well. Increases in rates and charges reflect the impact of reduced water transactions projections, increasing operations and maintenance costs, and increasing State Water Project costs, when compared to prior fiscal years.

Metropolitan’s financial results during the fiscal years ~~2023-24~~2023-24 through 2028-29 may be impacted by current and subsequent developments relating to the ~~recent pandemic, the~~ effects of changing hydrological conditions (including drought and extreme wet weather), as well as other unforeseen events.

See also the “Management’s Discussion and Analysis” contained in APPENDIX B– “THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA ANNUAL COMPREHENSIVE FINANCIAL REPORT FOR THE FISCAL YEARS ENDED JUNE 30, 2023 AND JUNE 30, 2022 AND BASIC FINANCIAL STATEMENTS FOR THE ~~SIX~~NINE MONTHS ENDED ~~DECEMBER~~MARCH 31, ~~2023~~2024 AND ~~2022~~2023 (UNAUDITED).”

<b>Summary report:</b> <b>Litera Compare for Word 11.7.0.54 Document comparison done on</b> <b>8/9/2024 12:39:08 PM</b>	
<b>Style name:</b> Standard (Color)	
<b>Intelligent Table Comparison:</b> Active	
<b>Original DMS:</b> nd://4862-6456-0818/1/Board Distribution Draft APPENDIX A Spring 2024 Draft (03-27-24) 4888-9824-9134 v.4.docx	
<b>Modified DMS:</b> nd://4891-6684-6924/5/APPENDIX A Fall 2024 Draft - 2024C.docx	
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<del>Delete</del>	1195
<del>Move From</del>	135
<u>Move To</u>	135
<u>Table Insert</u>	21
<del>Table Delete</del>	150
<u>Table moves to</u>	0
<del>Table moves from</del>	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	1
Embedded Excel	0
Format changes	0
<b>Total Changes:</b>	<b>2820</b>





- **Board of Directors**  
***Finance and Asset Management Committee***

8/20/2024 Board Meeting

7-8

## Subject

Review and consider the Lead Agency's adopted Mitigated Negative Declaration and take related CEQA actions, and adopt resolution for 115th Fringe Area Annexation to Eastern Municipal Water District and Metropolitan

## Executive Summary

This action grants final approval for the 115th Fringe Area Annexation, an annexation requested by Eastern Municipal Water District (EMWD), and authorizes collecting Metropolitan's water standby charge and ad valorem tax. This request is compliant with the current annexation policy and requirements, with the exception of leaving an island outside the service area for a small adjacent parcel of land owned by Southern California Edison (SCE) for utility purposes. SCE will not consent to annexation. Both EMWD and Metropolitan staff believe that providing a reliable water service is important, and Metropolitan's interests will not be adversely affected by the small remaining window. The proposed annexation will extend the service area of Metropolitan and EMWD for a total annexation acreage of approximately 7.77 acres with 0.86 acres in public roads leaving a net area of 6.91 acres (**Attachment 1**). The new water demand from Metropolitan is estimated to be 7.35 acre-feet per year (AFY). Eastern meets the demand management measures in the agency's Water Use Efficiency Statement of Compliance (**Attachment 2**). The charge for this annexation, if completed in 2024, is \$57,488.36, which includes a \$5,000 processing fee. The proposed resolution is (**Attachment 3**).

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

Review and consider the Lead Agency's adopted Mitigation Negative Declaration and take related CEQA actions; and adopt resolution for the 115th Fringe Area Annexation to Eastern Municipal Water District and Metropolitan.

**Fiscal Impact:** Receipt of annexation fee of \$57,488.36 for the annexation area and future water sales revenue from the newly annexed territory.

**Business Analysis:** This annexation will provide the ability for water service and associated benefits to the property owners. The initial fixed and variable costs will be borne by the local water supplier and property owners, including processing, infrastructure, and the cost of raw and treated water. This annexation helps to meet Metropolitan's member agency request.

#### Option #2

Decline the request for the proposed 115th Fringe Area Annexation.

**Fiscal Impact:** Unrealized annexation fee and water sales revenue from non-annexed areas.

**Business Analysis:** The subject area will not receive the direct benefits of water supplied through EMWD and Metropolitan.

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## Alternatives Considered

None required. The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.

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## Applicable Policy

Metropolitan Water District Administrative Act Section 350: Annexation of Corporate Area of Agency

Metropolitan Administrative Code Section 3100: Request for Annexation

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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## Related Board Action(s)/Future Action(s)

Metropolitan Board Report, December 2023, stating Metropolitan's 2024 annexation rate

Metropolitan Board Resolution 9347, approved August 15, 2023, setting ad valorem tax rate, anticipating concurrent annual Board review of the proposed future ad valorem tax rate on August 20, 2024

Metropolitan Board Resolution 9357, approved May 14, 2024, setting Standby Charge

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## California Environmental Quality Act (CEQA)

### CEQA determination for Option #1:

Pursuant to the provisions of CEQA Guidelines, Rancho California Water District, acting as the Lead Agency and sub-member agency to Eastern Municipal Water District, adopted the AX108 Project (also known as 115th Fringe Area Annexation) Mitigated Negative Declaration (MND) on August 18, 2023, for the annexation process. Metropolitan, as Responsible Agency under CEQA, is required to certify that it has reviewed and considered the information in the 2023 MND and adopted the Lead Agency's findings to approve the formal terms and conditions for the annexation. The environmental documentation is in **Attachment 4**.

### CEQA determination for Option #2:

None required

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## Details and Background

### Background

On December 20, 2023, EMWD's board of directors adopted Resolution No. 2023-159, and transmittal letter dated May 2, 2024, requesting formal terms and conditions for annexation and collection of water standby charges for the proposed 115th Fringe Area Annexation. The proposed annexation will extend the service area of Metropolitan and EMWD along Adams Avenue for a total annexation acreage of approximately 7.77 acres with 0.86 acres in public roads leaving a net area of 6.91 acres. The annexing area is not scheduled for development beyond operating as the city of Murrieta's public works yard. Not included in this proposed annexation is a 0.23-acre parcel at the end of Fig Street owned by SCE for electric facilities. EMWD has been working with the SCE over the last couple of years but they did not wish to receive municipal water service from EMWD and Metropolitan at this time, leaving a small window area within the proposed service area. EMWD felt it was more beneficial to move forward with the annexation for those property owners requesting service than to deny the request based on SCE's decision not to annex. SCE may request annexation at a later date and pay the necessary processing and annexation fees at that time. Staff believes that Metropolitan's interests will not be adversely affected by this action. This annexation request includes approving the proposed annexation area for water service identified as Assessor Parcel Numbers 909-060-026, located in south Riverside County, north of Adams Avenue and Fig Street in the city of Murrieta.

The proposed annexing area will be served by EMWD as the local water purveyor and will be eligible for imported water through EMWD and Metropolitan after completion of the annexation. The charge for this annexation is \$57,488.36, which includes the \$5,000 processing fee collected at the time of the initial annexation

request; the balance is payable prior to completion. The annexation charge is calculated based on the 2024 per-acre fee of \$7,596. If the annexation is not completed in the calendar year 2024, the fee would be based on the then-current annexation rate pursuant to Section 3300 of Metropolitan's Administrative Code. Pursuant to Section 3107 of Metropolitan's Administrative Code, EMWD has submitted an acceptable Water Use Efficiency Statement of Compliance for this annexation project (**Attachment 2**). The projected water demand from Metropolitan is estimated to be 7.35 AFY.

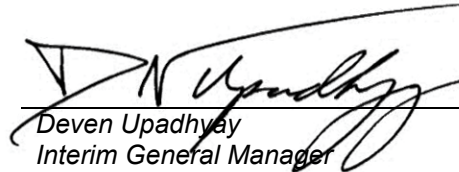
Completion of this annexation would be subject to such terms and conditions as may be fixed by Metropolitan's Board in granting final consent to such annexation, including the Local Agency Formation Commission conditioning approval of the proposed annexation upon a requirement that all previously established and collected taxes, benefit assessments, or property-related fees or charges be established and collected on parcels being annexed to Metropolitan. This action adopts a resolution consenting to EMWD's request for annexation with a water standby charge as set forth in (**Attachment 3**). Upon completion of the annexation, the lands within the 115th Fringe Area Annexation will be subject to the same rates levied in parcels currently within Eastern's service area as set by the Board. Metropolitan's ad valorem property tax is currently levied in the amount of 0.0035 percent of the assessed valuation of each parcel with this rate reviewed under a separate board action. Metropolitan's water standby charge collection on behalf of EMWD in the current amount of \$6.94 per acre, or per parcel if less than one acre. Approval of Metropolitan's standby charge established elsewhere within EMWD's territory is a condition to complete this annexation.



Elizabeth Crosson  
Chief Sustainability, Resilience and  
Innovation Officer

7/19/2024

Date



Deven Upadhyay  
Interim General Manager

8/1/2024

Date

**Attachment 1 – Map and Legal Description**

**Attachment 2 – Water Use Efficiency Statement of Compliance**

**Attachment 3 – Annexation Resolution**

**Attachment 4 – 115th Fringe Area Annexation Environmental Documentation**

Ref# sri127500538

**EXHIBIT A**  
**Legal Description**  
**Eastern Municipal Water District – 115th Fringe Area Annexation**  
**APN 906-060-026**

A portion of Lot 75 of the Murietta portion of the Temecula Rancho as per map recorded in book 8 Page 359 of Maps in the office of the county recorder of San Diego County, State of California, and Parcel 4 of Parcel Map No. 7547 book 27 Page 69 Of Parcel Maps Riverside County Records more particularly described as follows:

Beginning at the most northerly corner of Parcel 4 of said Parcel Map;

- 1 Thence along said Northeasterly line of said Parcel 4 South 42°15'00" East 228.06 feet;
- 2 Thence South 47°44'00" West 100.00 feet;
- 3 Thence South 42°15'00" East 130.00 feet to the centerline of Fig St. (60' width);
- 4 Thence along said centerline South 47°44'00" West 916.45 feet to the centerline intersection of Fig Street (60' width) and Adams Avenue (60' width);
- 5 Thence along said centerline of Adams Avenue (60' width) along a curve concave southwesterly, with a radius of 2155.00 feet, and a radial bearing of North 62°02'22" East thence along said curve a distance of 363.45 feet with a Central Angle of 09°39'47" feet to a point on the southerly projection of the northwesterly line of Parcel 4 of said Parcel Map;
- 6 Thence along said Northwesterly line of said Parcel 4 North 47°44'00" East 956.80 feet to said Northerly corner of Parcel 4, the Point of Beginning, and the end of this legal description.

Containing: 7.77 acres, more or less.

All as shown on the plat attached hereto as "Exhibit B" and by this reference made a part hereof.

This legal description was prepared by me or under my direction in conformance with the Land Surveyor's Act.

Prepared By

NV5, Inc.



J Braley, L.S. 8446

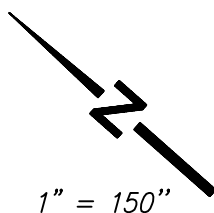
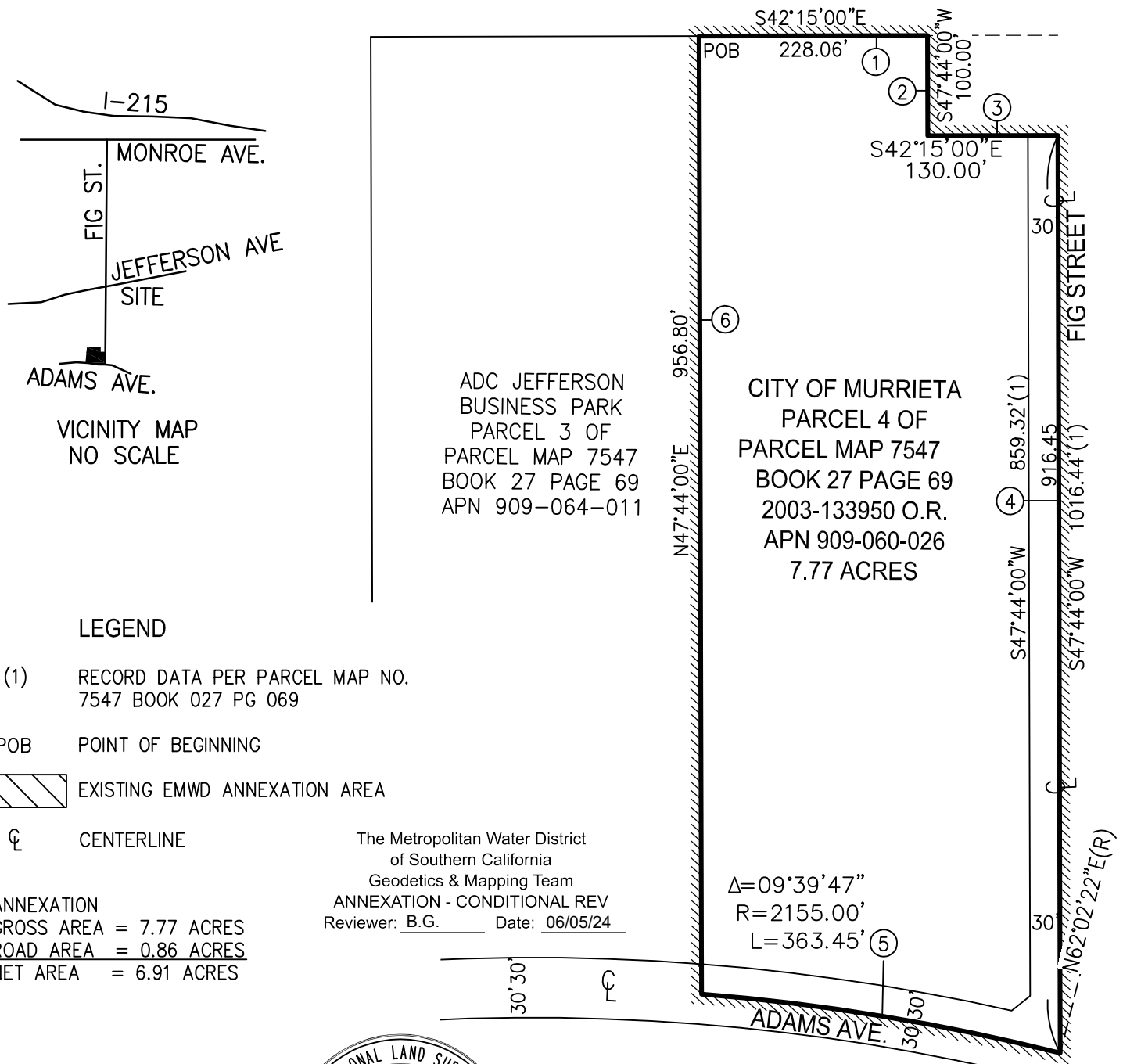
The Metropolitan Water District  
of Southern California  
Geodetics & Mapping Team  
ANNEXATION - CONDITIONAL REV  
Reviewer: B.G. Date: 06/05/24

06-04-2022

Date



CITY OF MURRIETA, COUNTY OF RIVERSIDE  
THIS EXHIBIT IS TO BE ATTACHED TO THE LEGAL DESCRIPTION



THIS PLAT WAS PREPARED BY ME OR UNDER MY DIRECTION  
IN CONFORMANCE WITH THE PROFESSIONAL LAND  
SURVEYOR'S ACT ON JUNE 4, 2024.

*J. Braley*

J BRALEY L.S. 8446

06-04-2024

DATE

NV5

15092 AVENUE OF SCIENCE, SUITE 200  
SAN DIEGO, CA 92128  
P: 858.385.0500

WWW.NV5.COM

EMWD - 115 FRINGE AREA ANNEXATION  
RANCHO CALIFORNIA WATER DISTRICT ANNEXATION  
APN 906-060-026

PREPARED FOR: CITY OF MURRIETA

DATE SUBMITTED: 06-04-2024

SHEET NUMBER

1

OF 1 SHEETS

JOB NUMBER  
227518-0000466.08

**Documentation for Annexation of Territory to  
The Metropolitan Water District of Southern California (MWD)  
Water Use Efficiency Compliance Statement  
Member Agency Annexation**

**A. General Information**

Description of Annexing Area	<p>Member Agency: Eastern Municipal Water District Annexation Name: 115th Fringe Annexation</p> <p>Annexing Water Demand: 7.35 AFY Imported Water Demand: 7.35 AFY Percent MWD Supplied: 100%</p> <p>Development Plans: The property is adjacent to Business Parks and Industrial Properties. The project site has no schedule for development beyond operating as the City of Murrieta's Public Works Yard</p> <p>Zoning: Public Industrial Preferred Land Use: Civic/Institutional</p> <p>Address: 41625 Fig Street APN: 909-060-026</p> <p>Additional Water Agencies Involved in Annexation: 1. Rancho California Water District</p>
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## B. Member Agency Water Use and Efficiency Plans

### (1) Annual Water Use.

<p>1. Does your agency minimize annual water demand and peak demands by incorporating water conservation measures throughout the service area?</p> <p>Please describe such conservation measures in the service area.</p> <p><b>MWD Administrative Code § 3107 (a)(1)(i)</b></p>	<p>Member Agency Response: <u>Yes</u>/No (circle one)</p> <p>Description: EMWD minimizes annual water demand by incorporating water conservation measures into new development plans and service agreements. Since 2009, residential and landscape customers have participated in a budget-based tiered rate program that assigns individualized indoor and outdoor water budgets based on each account's persons per household, landscape area, conservation factor, and billing period. The conservation factor (CF) is a percentage of the reference evapotranspiration (ET<sub>o</sub>) calculated by the California Irrigation Management Information System (CIMIS) and uses spatial ET<sub>o</sub> algorithms to assign values specific to the customer's location. The CF used to calculate water budgets depends on the original water meter connection date. Accounts with meters installed on or before 2010 are assigned a CF of at most 0.8; accounts connected between 2010 and May 2015 receive a CF of 0.7; accounts connected on or after June 2015 receive a CF of 0.5. EMWD has measured over 608 million square feet of landscape through onsite audits, Geographic Information Systems (GIS), or customer variance requests. As of January 2018, the daily allocation used to calculate the indoor budget has been reduced from 60 gallons per person per day to 55 gallons per person per day. All water use surpassing the total water budget is charged at a significantly higher rate.</p> <p>All new development must submit a Landscape Plan Check Application and consent to a Landscape Irrigation Water Budget Agreement to ensure that all individually metered landscape/irrigation projects comply with EMWD's landscape requirements. Furthermore, new development must also submit a Site Usage Analysis form that clearly displays the accurate landscape square footage broken down into functional turf and non-functional turf. This information is used to ensure that no account will receive a water budget that exceeds the District's maximum budget limits.</p> <p>In addition to the above, Title 5, Article 6 of EMWD's Administrative Code contains other conservation policies, practices, and procedures. Developers must adhere to State and local plumbing and landscaping codes. All customers are prohibited from hosing down driveways and other hard surfaces except for health or sanitary reasons and then only by use of a hand-held container. Additionally, customers are:</p> <ul style="list-style-type: none"> <li>• Required to repair faucets, toilets, and other potential sources of water leaks within 48 hours of the occurrence,</li> <li>• Water outdoors between 9 pm and 6 am only and are prohibited from producing run-off or over watering and from watering during rain</li> <li>• Prohibited from allowing water to run while washing vehicles,</li> <li>• Prohibited from using decorative fountains unless they are equipped with a recycling system, and,</li> <li>• Limited to no more than 15 minutes of watering per day per station if using an unattended irrigation system or watering device.</li> </ul> <p>Penalties for water inefficiency are enforced through the tier rate budgets and through other additional fines. For commercial, multi family, and landscape accounts, such fines include an initial warning, followed by a final written notice,</p>
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which may then be followed by a surcharge of \$100 added to the customer's bill if a third violation occurs within 12 months of the first notice. A fourth violation and any subsequent violations could incur an additional \$200 surcharge to the customer's water bill. For single family residential accounts, the surcharges are \$25 for the third violation, and \$50 for the fourth violation and subsequent violations. The revenue derived from the surcharges and other fines explained in article 6 is used to support water use efficiency programs and rebates.

EMWD has initiated a long term campaign to encourage all customers to use water wisely. A staff of conservation and education specialists provides public education programs, landscape irrigation workshops, student education programs, and conservation related campaigns. EMWD sponsors workshops on California-friendly plants to promote landscaping using drought tolerant plants and has a comprehensive Water Waste Program to report/correct the wasteful use of water. The New Residential Development Campaign is targeted at new residential customers and consists of a welcome letter, a quarterly newsletter containing seasonal tips and ideas for water conservation, and a survey. EMWD's new development conservation programs, including residential water surveys, water-wise landscape/irrigation workshops, high-efficiency washing machine rebates, moisture sensors, CII programs, etc. are offered to all of our customers, including new development and subagencies.

In 2019, the District launched its WaterWise Plus program, a comprehensive and forward-thinking program designed to assist customers and partner agencies with finding new and cost-effective ways to become more water efficient. The program integrates existing water use efficiency-based programs with long-term solutions that are promoted regardless of drought conditions. These programs help customers make lifestyle changes to their water use habits resulting in becoming more efficient with their water use, gaining a better understanding of their water usage, and making them better able to manage their monthly bills.

In 2021, the District launched its Landscapes for Living program, designed to assist residential customers to become more water efficient. The program integrates home consultations with a landscape expert, free direct installation of smart irrigation controllers and high efficiency nozzles, landscape design assistance, and staff support to assist customers who want to apply for water saving rebates through the MWD.

These programs are promoted via bill stuffers, EMWD's website, newspaper articles, and homeowners' association meetings and civic associations, etc.

RCWD minimizes annual water demand by incorporating water conservation measures into new development plans and service agreements. In July 2010, RCWD implemented a Budget Based Water Rate program that adds a greater level of fairness for customers. A customer's water budget will be determined each and every day based on the number of people in household and the actual weather. The ET adjustment factor in our water budget calculation determines the appropriate amount of water needed each day for the customer's landscape area based on weather. RCWD's goal isn't to restrict each customer's water use, but rather to encourage water efficiency. RCWD's water budget provides enough water for indoor and outdoor use which includes an efficient amount for grass

	<p>with some trees and shrubs mixed in. Water budgets are imposed upon residential, multifamily and dedicated landscape customers only.</p> <p>RCWD offers rebates to commercial, industrial, and institutional customers under MWD's CII program. RCWD is a signatory to the California Urban Water Conservation Council and promotes the Best Management Water Conservation Practices throughout its service area. Staff provides conservation and educational programs to the public through education, landscape irrigation workshops, student education programs, and conservation related campaigns.</p> <p>Supporting Documentation: (Attach supporting documents or web links)</p> <p><a href="#">Administrative Code Article 6 - Water Conservation (pg 362)</a></p> <p><a href="#">EMWD Rebate Information</a></p> <p>Rancho Water's Water Use Efficiency Webpage (<a href="https://www.ranchowater.com/387/Water-Use-Efficiency">https://www.ranchowater.com/387/Water-Use-Efficiency</a>)</p>
<p>2. Does your service area maximize use of groundwater, local surface water, and recycled wastewater supplies to minimize annual water demand on MWD?</p> <p>Please describe such maximizing uses in the service area.</p> <p><b>MWD Administrative Code § 3107 (a)(1)(ii)</b></p>	<p>Member Agency Response: <input checked="" type="radio"/> Yes/No (circle one)</p> <p>Description:</p> <p>EMWD operates storage facilities, groundwater facilities, and promotes conservation to minimize annual water demands on MWD. Currently, EMWD's potable supply system includes 79 tanks with over 204 million gallons of storage capacity. Tank levels are adjusted based on demand forecasting, allowing this storage to serve as a buffer against peak demands on MWD's system.</p> <p>The District has also developed significant local supplies to reduce EMWD's need for imported water. EMWD operates 15 potable wells and an additional 14 brackish wells, which provide influent for the District's three operational desalination plants. The District proactively manages its groundwater basins in order to ensure the continued availability of a highly reliable and economic water supply. Efforts include the diversion of surface water (up to 5,760 AF annually, depending on availability), and a groundwater recharge program. EMWD currently plans to enhance and optimize its groundwater programs with a groundwater banking and storm water capture program along with an indirect potable reuse project.</p> <p>EMWD has initiated a long term campaign to encourage all customers to use water wisely. EMWD sponsors workshops on California-friendly plants to promote landscaping using drought tolerant plants and has a comprehensive Water Waste Program to report/correct the wasteful use of water. The New Residential Development Campaign is targeted at new residential customers and consists of a welcome letter, a quarterly newsletter containing seasonal tips and ideas for water conservation, and a survey. EMWD's conservation programs, which include residential water surveys, water-wise landscape/irrigation workshops, high-efficiency washing machine rebates, moisture sensors, CII programs, etc., are</p>

offered to all of our customers, including new development and subagencies. These programs are promoted via bill stuffers, EMWD's website, newspaper articles, and homeowners' association meetings and civic associations, etc. With grant funding from United States Bureau of Reclamation (USBR), MWD, and CA Department of Water Resources (DWR) Prop 84, EMWD has removed 10.6 Million square feet of non-functional turf. Additionally, EMWD has invested greatly in producing easily accessible educational resources. In partnership with 4 other Inland Empire agencies, EMWD has published a region specific landscape guidebook that takes any Inland Empire resident through each step of creating a water efficient landscape. With chapters such as "Design Inspiration," "How to Garden," "Landscape Elements," and "Design It Yourself," this guidebook was designed to be an all-inclusive workbook for a resident without landscaping experience.

EMWD minimizes annual water demand by incorporating water conservation measures into new development plans and service agreements. EMWD enforces local and state landscape ordinances through the use of budget based tiered rates. Since 2009, residential and landscape customers have participated in a budget-based tiered rate program that assigns individualized indoor and outdoor water budgets based on each account's persons per household, landscape area, conservation factor, and billing period. The conservation factor is an ET factor based on the development's connection date that determines what percentage of the reference evapotranspiration rate will be used to calculate the outdoor budget. Evapotranspiration rates are continuously monitored and recorded across EMWD's entire service region and are specific to the customer's location. Effective January 2018, all customer water budgets were lowered to reflect current water efficiency trends and a mix of conventional turf and drought-tolerant landscaping more closely, decreasing from 100 percent to 80 percent ET. Accounts with meters installed on or before 2010 are assigned an ET factor of at most 0.8; accounts connected between 2010 and May 2015 receive an ET factor of 0.7; accounts connected on or after June 2015 receive an ET factor of 0.5. EMWD has measured over 608 million square feet of landscape through onsite audits, GIS, or customer variance requests. As of January 2018, the daily allocation used to calculate the indoor budget has been reduced from 60 gallons per person per day to 55 gallons per person per day. All water use surpassing the total water budget is charged at a significantly higher rate.

RCWD derives 35% of its water supplies from local groundwater. An annual groundwater budget is developed every year for the semi-adjudicated groundwater basin, in order to maximize the sustainable groundwater yield. Other sources of water included recycled water produced from its Santa Rosa Water Reclamation Facility and recycled water purchases from EMWD all for non-potable reuse. In 2018, RCWD completed the Recycled Water Resources Plan to maximize the beneficial use of recycled water within the RCWD service area.

Supporting Documentation: (Attach supporting documents or web links)

[EMWD Water Wide Landscaping Resources](#)

[Administrative Code Article 6 - Water Conservation \(pg 362\)](#)

[Groundwater Management Plan Annual Report, Hemet/San Jacinto](#)

[Groundwater Management Plan Annual Report, West San Jacinto](#)

[SGMA Portal - Groundwater Sustainability Plan Annual Report, West San Jacinto](#)  
[Water Budgets and Tiered Rates](#)

	<p>RCWD's Recommended Ground Water Production Fiscal Year 2019/2020 (document attached)</p> <p>RCWD's Recycled Water Resources Plan (<a href="https://www.ranchowater.com/DocumentCenter/View/4191/2018-Recycled-Water-Resources-Plan">https://www.ranchowater.com/DocumentCenter/View/4191/2018-Recycled-Water-Resources-Plan</a>)</p>
<p>3. Does your service area construct and operate local storage and groundwater production facilities as required by California Water Code Sections 10700-10710 (Groundwater Resources)?</p> <p>Please describe such construction and operations in the service area.</p> <p><b>MWD Administrative Code § 3107 (a)(1)(iii)</b></p>	<p>Member Agency Response: <u>Yes</u>/No (circle one)</p> <p>Description:</p> <p>EMWD has invested significantly in the development of local water supplies. The District currently operates 15 wells producing potable groundwater, with an additional 14 wells that pump brackish groundwater as influent into three reverse osmosis desalination plants. Recycled water is produced from four regional water reclamation facilities that collect wastewater from both EMWD's retail and wholesale service area. EMWD also has a permit allowing the District to divert up to 5,760 acre-feet (AF) of San Jacinto River flows annually (when available). Diverted water is captured at the District's Grant Avenue Ponds for the purpose of recharging the local groundwater basin.</p> <p>In 2022, local sources accounted for roughly 51% of EMWD's retail water supply portfolio. This total includes nearly 12,450 AF of potable groundwater, 10,850 AF of desalinated groundwater, and nearly 53,400 AF of recycled water.</p> <p>Future local supply projects that are in various stages of planning and/or construction include:</p> <ul style="list-style-type: none"> <li>• Groundwater banking and stormwater capture programs (Santa Ana River Conservation and Conjunctive Use Program / Enhanced Recharge and Recovery Program), and</li> <li>• An indirect potable reuse project (Purified Water Replenishment).</li> <li>• A groundwater development project in the Moreno Valley/Perris North area (Perris North Contamination Prevention and Remediation Program).</li> </ul> <p>In addition, EMWD is completing an accelerated retrofit program geared towards expanding the availability of recycled water within its service area.</p> <p>Rancho's Groundwater pumping has historically provided one-third of the overall District water demand. The District receives groundwater from the Temecula Valley Groundwater Basin, as identified in California's Groundwater Bulletin 118. The Basin underlies several valleys in southwestern Riverside County and a portion of northern San Diego County, within the Santa Margarita River Watershed. The District overlies 2 major aquifers, the Temecula and the Pauba, which have been the subject of a number of studies over the years. The Pauba aquifer, covering approximately 18 square miles, is "comprised of younger alluvial sediments that occur along the principal streams of the watershed. The Temecula Valley Groundwater basin is an alluvial basin identified as Basin 9-5 in DWR Bulletin 118. In addition to the District, other agencies pump from the basins including WMWD, Pechanga Band of Luiseño Mission Indians (Pechanga), and other private pumpers. Accounting for these users,</p>

	<p>the total natural yield available to the District varies, and is estimated to average approximately 17,000 AFY.</p> <p>In addition to the extraction of the natural yield of the basins, the Rancho Water artificially recharges the Pauba Valley Basin with untreated imported water for enhanced groundwater production. The District maintains 2 groundwater recharge sites: the Upper VDC in the easternmost area of the Pauba Valley and the Lower VDC, approximately 2 miles to the west. Untreated MWDSC water and/or Vail Lake surface water are introduced into the infiltration ponds for recharge into the ground. Over the past 10 years, this supplemental water provided an average of 13,875 AFY of artificial groundwater recharge through the VDC recharge basins provided an average of 13,875 AFY of artificial groundwater recharge through the VDC recharge basins.</p> <p>Rancho Water currently maintains 54 production wells, including inactive and offline wells. Production recommendations are based primarily on a review of individual well production and historical hydrographs, consideration of groundwater level elevations from all production and monitoring wells, information from hydrologic subareas and index wells representing water level changes in the subarea, and District staff input. In accordance with sound groundwater basin management practices, the recommended production is considered a guide and is subject to revision as additional data is available.</p> <p>In addition, RCWD is completing an accelerated retrofit program geared towards expanding the availability of recycled water within its service area.</p> <p>Supporting Documentation: (Attach supporting documents or web links)</p> <p><a href="#">Brochure - Maximizing Resources</a>  <a href="#">Brochure - Salinity Management Program</a>  <a href="#">Administrative Code Article 6 – Recycled Water Use (pg 369)</a>  <a href="#">Groundwater Management Plan Annual Report, Hemet/San Jacinto</a>  <a href="#">Groundwater Management Plan Annual Report, West San Jacinto</a>  <a href="#">SGMA Groundwater Sustainability Plan Annual Report, West San Jacinto</a>  <a href="#">EMWD Construction Projects</a></p> <p>RCWD's 5-Year Capital Improvement Plan  <a href="https://www.ranchowater.com/DocumentCenter/View/5075/Draft-5-Year-CIP-FYs-2021-2025">https://www.ranchowater.com/DocumentCenter/View/5075/Draft-5-Year-CIP-FYs-2021-2025</a>)  RCWD's Urban Water Management Plan  <a href="https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan">https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan</a>)</p>
<p>4. Does your agency condition all new territory to be consistent with all applicable city, county, and state laws?</p> <p>MWD Administrative Code § 3107 (a)(1)(iv)</p>	<p>Member Agency Response: <input checked="" type="radio"/> Yes <input type="radio"/> No (circle one)</p> <p>Description:  EMWD minimizes annual water demand by incorporating water conservation measures into new development plans and service agreements. EMWD enforces local and state landscape ordinances through the use of budget based tiered rates. Since 2009, residential and landscape customers have participated in a budget-based tiered rate program that assigns individualized indoor and outdoor</p>



water budgets based on each account's persons per household, landscape area, conservation factor, and billing period. The conservation factor is an ET factor based on the development's connection date that determines what percentage of the reference evapotranspiration rate will be used to calculate the outdoor budget. Evapotranspiration rates are continuously monitored and recorded across EMWD's entire service region and are specific to the customer's location. Effective January 2018, all customer water budgets were lowered to reflect current water efficiency trends and a mix of conventional turf and drought-tolerant landscaping more closely, decreasing from 100 percent to 80 percent ET. Accounts with meters installed on or before 2010 are assigned an ET factor of at most 0.8; accounts connected between 2010 and May 2015 receive an ET factor of 0.7; accounts connected on or after June 2015 receive an ET factor of 0.5. EMWD has measured over 608 million square feet of landscape through onsite audits, GIS, or customer variance requests. As of January 2018, the daily allocation used to calculate the indoor budget has been reduced from 60 gallons per person per day to 55 gallons per person per day. All water use surpassing the total water budget is charged at a significantly higher rate.

RCWD conditions all new territory to be consistent with all applicable city, county, and state laws. All water service is furnished to customers only in accordance with the Rules and Regulations outlined in the District's Administrative Code.

RCWD provides a tiered budget for water use for each customer. Tier 1 (Base Tier / Indoor Tier) - All single family residential customers are provided with an indoor water budget to accommodate a minimum of 3 people per household. Customers receive 55 gallons of water per person per day times the number of days in the billing period. A variance for additional residents can be requested by completing a Residential Variance Form. Tier 2 (Outdoor Efficient Tier) - All single family residential customers are provided with an appropriate outdoor water budget to accommodate the efficient irrigation of their landscaped areas (grass, trees, shrubs, groundcover, etc.). The factors used to calculate the budget for this tier include landscape area square feet and real time weather conditions specific to the property's geographic location. Landscape square footage is determined by measurements taken of each property's landscape area using detailed aerial imagery and a highly accurate Geographic Information System (GIS). Tier 3 (Outdoor Inefficient Tier) – Tier 3 provides a budget for additional outdoor water use that exceeds efficient watering needs. Tier 3 is 50% of the sum of Tiers 1 and 2. Note: going into Tier 3 is considered going over budget. Tier 4 (Wasteful Tier) – All water use above the Tier 3 budget falls into Tier 4. Note: going into Tier 4 is considered going over budget. Indoor water allocations are based on information from the State of California that establishes 55 gallons per person per day as a provisional standard (SBx 7-7, 2009). The factors used to determine the outdoor water budget are based on a property's actual planted landscape area and real time weather factors.

RCWD's Administrative Code Pt III, Chapter 1, Section 1.  
(<https://www.ranchowater.com/DocumentCenter/View/3138/Chapter-1-Section-1-Water-System-Facilities-02132020?bidId=>)



**(2) Recycled Water.**

5. Does your service area use recycled water in accordance with California Water Code Sections 13550-13557 (Water Reuse)?

Please describe such recycled water use in the service area.

**MWD Administrative Code § 3107 (a)(2)**

Member Agency Response: ☒ Yes / ☐ No (circle one)

Description:

EMWD has an extensive recycled water system with integrated supply, conveyance and storage facilities creating four stabilized service zones throughout its service area. The system consists of four operating regional water reclamation facilities producing 49 MGD of recycled water, more than 260 miles of pipeline, 19.5 MG of elevated service level storage, 7,500 AF of seasonal storage pond capacity, 9 pond pump stations and 5 inline booster stations. EMWD has over 700 recycled water service connections and sells approximately 37,000 acre feet of recycled water per year, ranking EMWD among the top water recycling agencies in California. Recycled water customers include agricultural, parks, schools, common area landscape, environmental and industrial. EMWD maintains a Mandatory Use Policy for new development and works closely with land use agencies and the development community to selectively condition new projects. Developments that are serviced by EMWD and meet the Recycled Water Facilities and Service Guidelines adopted by EMWD's Board of Directors as required in Water Code sections 13550 are conditioned for recycled water use and construction of local pipelines thereby expanding the recycled water distribution system. EMWD supports existing potable water landscape customers wishing to retrofit to recycled water through the Accelerated Retrofit Program (ARP). The ARP provides technical design and permitting support, new service connections and funding assistance to help customers complete recycled water retrofits which maintains green recreational areas for our community while reducing the use of valuable imported potable supplies.

RCWD is encouraging recycled water use by potential recycled water users through a variety of measures. To ensure that recycled water continues to be used to the fullest extent possible, the District uses several methods to expand the use of recycled water within its service area. These methods include the following:

- Strategic Plan Objective: The District's 2015 Strategic Business Plan, Guiding Principal 1 (Reliability) states that the District will "provide a level of water reliability that ensures customers' water needs are met." Specifically, Strategy 2 of Guiding Principle 1 is to "increase the use of recycled water in the service area" through the following objectives:
  - o Process onsite recycled water conversions; and
  - o Coordinate recycled service opportunities with area agencies.
- Mandatory Recycled Water Use Policy (Resolution 2007-10-5): The District adopted a policy requiring the use of recycled water for landscape irrigation for new development projects, as well as the retrofit of existing landscape irrigation sites under specific criteria when recycled water is available and permitted.
- Water Supply Assessments: The District's Water Supply Assessments place conditions on all qualifying new developments to use recycled water as a condition of service where it is available and permitted.
- Rate Incentives: Recycled water is currently priced significantly below the cost of potable water for both municipal and agricultural use

	<ul style="list-style-type: none"> <li>Financing Policy (Resolution 2007-10-5): The District adopted a financing policy for recycled water retrofits, which defines District-sponsored financing for both voluntary and mandatory recycled water retrofits. The District will assist private parties to arrange financing for construction of facilities needed to convert potable demands to recycled water.</li> <li>Public Education: the District actively promotes the use of recycled water within its water education program. The District also places prominent signage at public recycled water use sites promoting the benefits of water recycling.</li> </ul> <p>Supporting Documentation: (Attach supporting documents or web links)</p> <p><u>EMWD's Recycled Water Service</u></p> <p>RCWD's Mandatory Recycled Water Use Policy  <a href="https://www.ranchowater.com/DocumentCenter/View/3344/Chapter-5-Section-3-Mandatory-Recycled-and-Raw-Water-Use-Policy?bidId=">https://www.ranchowater.com/DocumentCenter/View/3344/Chapter-5-Section-3-Mandatory-Recycled-and-Raw-Water-Use-Policy?bidId=</a></p>
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### (3) Local Resources.

<p>6. Has your agency established measures to sustain a seven-to 21-day interruption in service, as required by MWD Administrative Code Section 4503(b)?</p> <p><b>MWD Administrative Code § 3107 (a)(3)</b></p>	<p>Member Agency Response: Yes/No (circle one)</p> <p>Description:</p> <p>EMWD would be able to sustain a 7-day interruption in service as described in MWD's Administrative Code Section 4503.</p> <p>Significant, mandatory water conservation efforts would be required to sustain a 7-day and 21-day interruption. Such efforts include communication outreach through automated customer service systems as well as our Public and Governmental Affairs Department. EMWD has a diverse portfolio of water supply including 204 MG of elevated storage, 14 brackish and 15 potable wells, two Microfiltration and three brackish water desalters. Domestic well production and desalter production capacity exceeds 39 Million Gallons per Day.</p> <p>RCWD would be able to sustain a 7-day interruption in service as described in MWD's Administrative Code Section 4503. RCWD has developed a Water Shortage Contingency Plan (WSC Plan) in accordance with California Water Code Section 10632. Section 10632 states that water agencies must develop an urban water shortage contingency plan in the event of drought, water supply reductions, failure of a water distribution system, other emergencies, or regulatory statutes, rules, regulations or policies reducing water supplies by state and federal agencies with jurisdiction over the District. The contingency plan must demonstrate the ability of an agency to meet demands under a supply shortage of up to 50 percent. Emphasis is placed on protection of public health, sanitation, fire protection, and the general public welfare. The WSC Plan adopts regulations and restrictions on outdoor water use through Water Shortage Stage 4 and on indoor water use in Water Shortage Stage 5, including domestic (residential), commercial/institutional/industrial, landscape, parks and golf courses, and agriculture. Recycled water users may be exempt from some restrictions in this WSC Plan, depending on the availability of recycled water.</p> <p>Supporting Documentation: (Attach supporting documents or web links)</p>
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	<a href="#">Administrative Code Article 10</a>  <a href="#">Disaster Preparedness Link</a>  <a href="#">Draft Hazard Mitigation Plan</a>  <a href="#">RCWD's Water Shortage Contingency Plan</a>
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### C. Reporting to the District

<p>7. Has your agency incorporated conservation measures in the new territory?</p> <p>Please describe such measures.</p> <p><b>MWD Administrative Code § 3107(b)(1)</b></p>	<p>Member Agency Response: <u>Yes</u>/No (circle one)</p> <p>Description:</p> <p>All new development must submit a Landscape Plan Check Application and consent to a Landscape Irrigation Water Budget Agreement in order to ensure that all individually metered landscape/irrigation projects comply with EMWD's Landscape/Irrigation Ordinance 72. Furthermore, new development must also submit a Site Usage Analysis form that clearly displays the accurate landscape square footage broken down into functional turf and non-functional turf. This information is used to ensure that no account will receive a water budget that exceeds the District's maximum budget limits. In addition to all of the above, article 6 of EMWD's Administrative Codes puts into action many more conservation policies, practices, and procedures. Developers must adhere to State and local plumbing and landscaping codes. All customers are prohibited from hosing down driveways and other hard surfaces except for health or sanitary reasons and then only by use of a hand-held container. Additionally, customers are:</p> <ul style="list-style-type: none"> <li>• Required to repair faucets, toilets, and other potential sources of water leaks within 48 hours of the occurrence,</li> <li>• Water outdoors between 9 pm and 6 am only and are prohibited from producing run-off or over watering and from watering during rain</li> <li>• Prohibited from allowing water to run while washing vehicles,</li> <li>• Prohibited from using decorative fountains unless they are equipped with a recycling system, and,</li> <li>• Limited to no more than 15 minutes of watering per day per station if using an unattended irrigation system or watering device.</li> </ul> <p>Penalties for water inefficiency are enforced through the tier rate budgets and through other additional fines. For commercial, multi family, and landscape accounts, such fines include an initial warning, followed by a final written notice, which may then be followed by a surcharge of \$100 added to the customer's bill if a third violation occurs within 12 months of the first notice. A fourth violation and any subsequent violations could incur an additional \$200 surcharge to the customer's water bill. For single family residential accounts, the surcharges are \$25 for the third violation, and \$50 for the fourth violation and subsequent violations. The revenue derived from the surcharges and other fines explained in article 6 is used to support water use efficiency programs and rebates.</p> <p>EMWD has initiated a long term campaign to encourage all customers to use water wisely. A staff of conservation and education specialists provides public education</p>
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programs, landscape irrigation workshops, student education programs, and conservation related campaigns. EMWD sponsors workshops on California-friendly plants to promote landscaping using drought tolerant plants and has a comprehensive Water Waste Program to report/correct the wasteful use of water. The New Residential Development Campaign is targeted at new residential customers and consists of a welcome letter, a quarterly newsletter containing seasonal tips and ideas for water conservation, and a survey. EMWD's new development conservation programs, including residential water surveys, water-wise landscape/irrigation workshops, high-efficiency washing machine rebates, moisture sensors, CII programs, etc. are offered to all of our customers, including new development and subagencies. In 2019, the District launched its WaterWise Plus program, a comprehensive and forward-thinking program designed to assist customers and partner agencies with finding new and cost-effective ways to become more water efficient. The program integrates existing water use efficiency-based programs with long-term solutions that are promoted regardless of drought conditions. These programs help customers make lifestyle changes to their water use habits resulting in becoming more efficient with their water use, gaining a better understanding of their water usage, and making them better able to manage their monthly bills.

In 2021, the District launched its Landscapes for Living program, designed to assist residential customers to become more water efficient. The program integrates home consultations with a landscape expert, free direct installation of smart irrigation controllers and high efficiency nozzles, landscape design assistance, and staff support to assist customers who want to apply for water saving rebates through the MWD.

These programs are promoted via bill stuffers, EMWD's website, newspaper articles, and homeowners' association meetings and civic associations, etc.

RCWD finds and determines that because of the prevailing conditions in the State it is necessary and appropriate for the District to adopt, implement, and enforce a Water Conservation Policy to ensure sufficient water for human consumption, sanitation, and fire protection. The District further finds the waste or unreasonable use, or unreasonable method of use of water shall be prevented and that water conservation practices shall be encouraged at all times. In times of drought or water supply cutbacks, provisions of this Policy may be modified in accordance with State of California Regulations, the Metropolitan Water District of Southern California's Water Surplus and Drought Management and Water Supply Action Plans, as well as Rancho California Water District's Water Shortage Contingency Plan (WSC Plan). This Policy is in effect at all times and defers updates and implementation strategies, regarding water conditions and supplies to the WSC Plan for timely communications and media outreach when stage alerts are executed.

In order to comply with requirements of state legislation and Best Management Practices, it is a violation of RCWD Policy at any time to make, cause, or permit the use of water for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner constituting waste. Customers shall abide by all requirements outlined in the applicable Shortage Stage of the WSC Plan including, but not limited to the following requirements at all times: 1. Refrain from hosing down driveways and other hard surfaces, except for health or sanitary reasons. 2. Repair faucets, toilets, pipes and other potential sources of water leaks. 3. Irrigate landscape only between 6 p.m. and 9 a.m. This provision does not apply when: a. Manually watering during the establishment period of a new landscape; b. Supervised spot

	<p>watering is done to address landscape issues; c. Temperatures are predicted to fall below freezing; d. Testing/repairing an irrigation system; e. Using drip and point-to-point irrigation systems; and f. A longer watering window is needed due to system constants. 4. Adjust and operate all landscape irrigation systems in a manner that will maximize irrigation efficiency and avoid over watering or watering of hardscape and the resulting runoff. 5. Prevent excessively irrigating any lawn or landscape area that would cause the sheeting of water to flow; eliminate water runoff from lawns or landscape areas into any gutters, streets, or alleys. 6. Do not use decorative fountains unless they are equipped with a re-circulating system. 7. When installing plumbing fixtures, use low-flow devices, except for those that require high-flow fixtures for health and/or sanitary reasons. Where possible, install pool and spa covers to minimize water loss due to evaporation during non-operating days. 8. Do not allow water to run while washing vehicles. Use a hose with an automatic shutoff valve to avoid runoff into gutters, streets or alleys. 9. When installing new landscaping, refer to the Water Use Classification of Landscape Species (WUCOLS). Plant low-water California Friendly® Landscapes. Non-functional turf areas RCWD Water Conservation Policy Revised 6/11/15 4 are not recommended. Turf lined channels are only permitted when justified by environmental regulations. 10. Refrain from watering during rain, or high winds by turning off irrigation timer.</p> <p>Supporting Documentation: (Attach supporting documents or web links)  <a href="#">Administrative Code Article 6 - Water Conservation (pg 362)</a></p> <p><a href="#">EMWD Rebate Information</a></p> <p>RCWD's Water Conservation Policy  <a href="https://www.ranchowater.com/DocumentCenter/View/3340/Chapter-5-Section-1-Water-Conservation-Policy?bidId=">https://www.ranchowater.com/DocumentCenter/View/3340/Chapter-5-Section-1-Water-Conservation-Policy?bidId=</a></p>
<p>8. What is your agency's total annual production of local water supplies including, but not limited to, recycled water, groundwater, and local surface water use?</p> <p><b>MWD Administrative Code § 3107(b)(2)</b></p>	<p>Member Agency Response: 76,672 AF</p> <p>Description: During Calendar Year 2022, EMWD produced 76,672 AF of local water through its groundwater, desalter, and recycled water facilities.</p> <p>In Fiscal Year 2022/2023, RCWD produced 30,813 AF of local water through its groundwater and recycled water facilities.</p> <p>Form of Documentation:  <a href="#">2020 Urban Water Management Plan (UWMP)</a></p> <p><a href="#">RCWD's July 2019 Engineering and Operations Committee Item 6 (document attached)</a></p>
<p>9. Has your agency established resources to sustain a seven-to 21-day interruption in service, as required by MWD Administrative Code Section 4503(b)?</p> <p>Please describe such resources, as</p>	<p>Member Agency Response: <u>Yes</u>/No (circle one)</p> <p>Description:</p> <p>EMWD would be able to sustain a 7-day interruption in service as described in MWD's Administrative Code Section 4503.</p>

<p>applicable to your agency's facilities, as specified in MWD Administrative Code §§ 3107(b)(3).</p> <p><b>MWD Administrative Code § 3107(b)(3)</b></p>	<p>Significant, mandatory water conservation efforts would be required to sustain a 7-day and 21-day interruption. Such efforts include communication outreach through automated customer service systems as well as our Public and Governmental Affairs Department. EMWD has a diverse portfolio of water supply including 204 MG of elevated storage, 14 brackish and 15 potable wells, two Microfiltration and three brackish water desalters. Domestic well production and desalter production capacity exceeds 39 Million Gallons per Day.</p> <p>RCWD would be able to sustain a 7-day interruption in service as described in MWD's Administrative Code Section 4503. RCWD has developed a Water Shortage Contingency Plan (WSC Plan) in accordance with California Water Code Section 10632. Section 10632 states that water agencies must develop an urban water shortage contingency plan in the event of drought, water supply reductions, failure of a water distribution system, other emergencies, or regulatory statutes, rules, regulations or policies reducing water supplies by state and federal agencies with jurisdiction over the District. The contingency plan must demonstrate the ability of an agency to meet demands under a supply shortage of up to 50 percent. Emphasis is placed on protection of public health sanitation, fire protection, and the general public welfare. The WSC Plan adopts regulations and restrictions on outdoor water use through Water Shortage Stage 4 and on indoor water use in Water Shortage Stage 5, including domestic (residential), commercial/institutional/industrial, landscape, parks and golf courses, and agriculture. Recycled water users may be exempt from some restrictions in this WSC Plan, depending on the availability of recycled water.</p> <p>RCWD has a diverse portfolio of water supply including 54 production wells, and approximately 200 MG of elevated storage. Groundwater production could provide over 42,000 gpm.</p> <p>Form of Documentation:  <a href="#">2020 Urban Water Management Plan (UWMP)</a>  <a href="#">RCWD's 2020 Urban Water Management Plan</a>  <a href="https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan">https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan</a>  <a href="#">RCWD's 2015 Water Facilities Master Plan</a>  <a href="https://www.ranchowater.com/DocumentCenter/View/1802/2015-Water-Facilities-Master-Plan">https://www.ranchowater.com/DocumentCenter/View/1802/2015-Water-Facilities-Master-Plan</a></p>
<p>10. Has your agency submitted a current Urban Water Management Plan (UWMP) to the reporting agency?</p> <p><b>MWD Administrative Code § 3107(b)(4)(i)</b></p>	<p>Member Agency Response: <u>Yes</u>/No (circle one)</p> <p>Description:</p> <p>EMWD's 2020 Urban Water Management Plan (UWMP) is an update to the 2015 UWMP and was prepared in response to Water Code Sections 10610 through 10656 of the Urban Water Management Planning Act. It was adopted in June 2021 and has been submitted to the reporting agency. Included in the plan is detailed information about EMWD's water demand, supply, and reliability for the next 25 years.</p> <p>RCWD's 2020 Urban Water Management Plan (UWMP) is an update to the 2015 UWMP and was prepared in response to Water Code Sections 10610 through 10656 of the</p>

	<p>Urban Water Management Planning Act. It was adopted in June 2021 and has been submitted to the reporting agency. Included in the plan is detailed information about RCWD's water demand, supply and reliability for the next 25 years.</p> <p>Form of Documentation:</p> <p><a href="#">2020 Urban Water Management Plan (UWMP)</a></p> <p>RCWD's 2020 Urban Water Management Plan (<a href="https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan">https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan</a>)</p>
<p>11. Does your agency's most current UWMP include a narrative description addressing the nature and extent of each water demand management measure implemented over the past 5 years, as required by California Water Code Section 10631(f)?</p> <p><b>MWD Administrative Code § 3107(b)(4)(ii)</b></p>	<p>Member Agency Response: <b>Yes</b>/No (circle one)</p> <p>Description:</p> <p>The 2020 Urban Water Management Plan provides a narrative description addressing the nature and extent of each water demand measure implemented over the past 5 years. This includes narratives on EMWD's implementation of the water waste prevention ordinances, metering with commodity rates for all new connections and retrofit of existing connections, public information programs, retail conservation pricing, school education programs, water loss control programs, and all other demand management measures described in Chapter 9 of the 2015 UWMP. EMWD is a member of the California Water Efficiency Partnership (CalWEP) and the Alliance for Water Efficiency (AWE), which supports the implementation of demand management measures and related legislative and regulatory requirements.</p> <p>RCWD's 2020 Urban Water Management Plan provides a narrative description addressing the nature and extent of each water demand measure implemented over the past 5 years. RCWD recognizes water use efficiency as an integral component of current and future water supply strategy for its service area. Demand Management Measures (DMMs) refer to policies, programs, rules, regulation and ordinances, and the use of devices, equipment, and facilities that, over the long-term, have been generally justified and accepted by the industry as providing a "reliable" reduction in water demand. DMMs are equivalent and correlate to the BMPs, as established and recently reorganized by the California Urban Water Conservation Council (CUWCC). Two general classes of efficiency measures are foundational activities: 1) operations practices and education programs – that which water providers in California are expected to pursue as part of a well-managed utility; and 2) programmatic measures that target potential efficiency improvements in each customer sector – residential, CII, and landscape – as implemented through the use of more efficient devices or practices. The BMPs (or DMMs) are generally based on what is technically and economically reasonable and environmentally and socially acceptable, and are not otherwise unreasonable for most water suppliers to implement.</p> <p>RCWD has made implementation of BMPs the cornerstone of its conservation programs and became a Signatory to the MOU Regarding Urban Water Conservation in California with the CUWCC, last amended on January 4, 2016. As signatory to the MOU, the District is responsible for completing and submitting BMP Activity Reports to the CUWCC every 2 years for each year prior. The District's BMP Activity Report is a</p>



	<p>comprehensive document that shows implementation of each BMP and provides a determination of implementation. BMP “implementation” means achieving and maintaining the staffing, funding, and, in general, the priority levels necessary to achieve the level of activity called for in each BMP’s definition, and to satisfy the commitment by the signatories to use good faith efforts to optimize water savings from implementing BMPs as described in the MOU.</p> <p>The District’s most effective conservation effort has been the implementation of a tiered rate structure in 2010. As supported by the reduction in GPCD annual averages for the District presented in Chapter 5, the introduction of tiered water rates has been a fundamental component of the District’s implementation plan toward achieving a 20% reduction in potable water consumption by 2020. Furthermore, during stages 3, 4, and 5 of the District’s WSC Plan, the General Manager has the ability to recommend a water budget decrease to the District’s Board of Directors, which provides a critical consumption reduction measure when necessary.</p> <p>Section 6 “Demand Management Measures” of RCWD’s 2020 UWMP provides an overview of the California Urban Water Conservation Council and a summary of RCWD’s retail demand management measures.</p> <p>Form of Documentation:  <a href="#">2020 Urban Water Management Plan (UWMP)</a>  <a href="#">RCWD’s 2020 Urban Water Management Plan</a>  <a href="https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan">https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan</a></p>
<p>12. Does your agency’s most current UWMP adequately address California Water Code requirements?</p> <p><b>MWD Administrative Code § 3107(b)(4)(iii)</b></p>	<p>Member Agency Response: <u>Yes</u>/No (circle one)</p> <p>Description:</p> <p>Chapter 1 of the 2020 Urban Water Management Plan addresses California Water Code requirements. This 2020 UWMP was developed to incorporate all requirements, under the guidance of DWR’s 2020 UWMPs Guidebook for Urban Water Suppliers. A checklist to document compliance of this 2020 UWMP with the Act and the CWC is provided in Appendix A. This UWMP includes all required DWR standardized tables within relevant chapters and they are compiled in Appendix B. Within the UWMP chapters, DWR’s standardized tables include the DWR assigned table number in the first row of the table.</p> <p>RCWD’s 2020 UWMP was developed to incorporate all requirements, under the guidance of DWR’s 2015 UWMPs Guidebook for Urban Water Suppliers. A checklist to document compliance of this 2015 UWMP with the Act and the CWC is provided in Appendix M. This UWMP includes all required DWR standardized tables within relevant chapters. Within the UWMP chapters, DWR’s standardized tables include the DWR assigned table number.</p> <p>Form of Documentation: Link to the UWMP  <a href="#">2020 Urban Water Management Plan (UWMP)</a>  <a href="#">RCWD’s 2020 Urban Water Management Plan</a></p>

	<a href="https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan">https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan</a>
<p>13. What is the status of implementing the water plans, projects, and programs described in the UWMP to implement California Water Code Section 10620 et seq.?</p> <p><b>MWD Administrative Code § 3107(b)(5)</b></p>	<p>Member Agency Response: <u>Active</u></p> <p>Description:</p> <p>EMWD continues to advance the water supply projects and programs described in Chapter 6 of the 2020 UWMP.</p> <p>EMWD has invested significantly in the development of local water supplies. The District currently operates 15 wells producing potable groundwater, with an additional 14 wells that pump brackish groundwater as influent into three reverse osmosis desalination plants. Recycled water is produced from four regional water reclamation facilities that collect wastewater from both EMWD's retail and wholesale service area. EMWD also has a permit allowing the District to divert up to 5,760 acre-feet (AF) of San Jacinto River flows annually (when available). Diverted water is captured at the District's Grant Avenue and Mountain Avenue West Ponds for the purpose of recharging the local groundwater basin.</p> <p>In 2022, local sources accounted for roughly 51% of EMWD's retail water supply portfolio. This total includes nearly 12,450 AF of potable groundwater, over 10,850 AF of desalinated groundwater, and over 53,400 AF of recycled water.</p> <p>Future local supply projects that are in various stages of planning and/or construction include:</p> <ul style="list-style-type: none"> <li>• Groundwater banking and stormwater capture programs (Santa Ana River Conservation and Conjunctive Use Program / Enhanced Recharge and Recovery Program), and</li> <li>• An indirect potable reuse project (Purified Water Replenishment).</li> <li>• A groundwater development project in the Moreno Valley/Perris North area (Perris North Contamination Prevention and Remediation Program).</li> </ul> <p>In addition, EMWD is completing an accelerated retrofit program geared towards expanding the availability of recycled water within its service area.</p> <p>EMWD has initiated a long term campaign to encourage all customers to use water wisely. A staff of conservation and education specialists provides public education programs, landscape irrigation workshops, student education programs, and conservation related campaigns. EMWD sponsors workshops on California-friendly plants to promote landscaping using drought tolerant plants and has a comprehensive Water Waste Program to report/correct the wasteful use of water. The New Residential Development Campaign is targeted at new residential customers and consists of a welcome letter, a quarterly newsletter containing seasonal tips and ideas for water conservation, and a survey. EMWD's new development conservation programs, including residential water surveys, water-wise landscape/irrigation workshops, high-efficiency washing machine rebates, moisture sensors, CII programs, etc. are offered to all of our customers, including new development and subagencies. In 2019, the District launched its WaterWise Plus program, a comprehensive and forward-thinking program designed to assist customers and partner agencies with</p>

finding new and cost-effective ways to become more water efficient. The program integrates existing water use efficiency-based programs with long-term solutions that are promoted regardless of drought conditions. These programs help customers make lifestyle changes to their water use habits resulting in becoming more efficient with their water use, gaining a better understanding of their water usage, and making them better able to manage their monthly bills.

In 2021, the District launched its Landscapes for Living program, designed to assist residential customers to become more water efficient. The program integrates home consultations with a landscape expert, free direct installation of smart irrigation controllers and high efficiency nozzles, landscape design assistance, and staff support to assist customers who want to apply for water saving rebates through the MWD.

These programs are promoted via bill stuffers, EMWD's website, newspaper articles, and homeowners' association meetings and civic associations, etc.

RCWD's 2020 UWMP and 2015 Water Facilities Master Plan (WFMP) were prepared to assist the RCWD in developing a long-term water supply strategy that can meet demands now until 2050. Acting upon the RCWD's Mission Statement to deliver reliable, high-quality water, wastewater, and reclamation services to its customers and communities in a prudent and sustainable manner, the following water resource management goals and implementation strategy were developed.

Goal No. 1: To enhance water use efficiency in order to comply with state regulations (SB X7-7 20x2020 Water Conservation Plan & the governor's current drought declaration). RCWD actions to implement this goal include:

- Continue the implementation of RCWD's Blueprint for Water Use Efficiency; and
- Monitoring compliance with state regulations and revise RCWD's policies and programs, as necessary, to ensure compliance.

Goal No. 2: To use fiscal responsibility to minimize the cost of purchased water supplies. RCWD actions to implement this goal include:

- Minimize the purchase of MWDSC Tier II imported treated water by increasing recharge/recovery at the Upper VDC; and
- Continue to monitor opportunities to purchase economically advantageous water supplies, such as:
  - MWDSC replenishment water or other MWDSC reduced-price water supply program
  - Water transfers
  - Future desalination projects

Goal No. 3: Enhance the water quality of RCWD's water supply sources. RCWD actions to implement this goal include:

- Continue compliance with federal and state water quality regulations;
- Continue the implementation of RCWD's Salt & Nutrient Management Plan; and
- Consider the demineralization of RCWD's groundwater and/or recycled water

supply sources to reduce salt loading within the watershed:

- Acquire capacity rights for future brine waste disposal (currently underway)
- Evaluate the potential for groundwater demineralization and optimization
- Consider the implementation of a small scale Indirect Potable Reuse (550 AFY)

Goal No. 4: Enhance the reliability/sustainability of RCWD's water supply. RCWD actions to implement this goal include:

- Minimize the purchase of MWDSC Tier II imported treated water due to potential climate change impacts, uncertainty of the SWP and Colorado River water supply, and potential long-term drought scenarios;
- Maximize the use of local water supplies, approximately 5,300 AFY of recycled water capacity;
- Develop opportunities to assist with the conversion of existing potable water customers to recycled water use (currently underway)
- Consider the implementation of a small scale Indirect Potable Reuse (550 AFY); and
- Maximize the storage/banking of water in the Temecula/Murrieta groundwater basin and in Vail Lake;
- RCWD is currently in Phase III of the Upper VDC Conjunctive Use Optimization Project. This project includes purchasing more untreated water from MWDSC, and delivering it to the VDC recharge basins. 10 new wells will be installed at the Upper VDC to increase groundwater production through artificial recharge; pumping would occur year-round. The recharge goal under this alternative is 35,854 AFY by 2040, representing an increase of 22,695 AFY over current artificial recharge capacity. Vail Lake and the groundwater basin can be utilized for storage, which allows the RCWD to lower imported water costs by taking advantage of MWDSC's replenishment rates, when available. This also provides a level of reliability, as Vail Lake water or banked groundwater may be available for release or extraction during dry weather periods when MWDSC imposes mandatory reductions. MWDSC requires any replenishment water to remain in Vail Lake for a minimum of 1 year.

Form of Documentation:

[2020 Urban Water Management Plan \(UWMP\)](#)

[RCWD's 2020 Urban Water Management Plan](#)

<https://www.ranchowater.com/DocumentCenter/View/6144/2020-Urban-Water-Management-Plan>

## MWD

MWD Employee Name: Ethel Young

File Date: June 24, 2024

MWD Employee Name: Marcelo Alvarez

Review Date: 6/24/24

Notes:

### **MWD Member Agency**

The following member agency assures compliance with the provisions of Metropolitan's Water Use Efficiency Guidelines for the next five years as indicated in Metropolitan's Administrative Code § 3107 and shall report to Metropolitan regarding such compliance.

Agency Name: Eastern Municipal Water District

Date: 6/18/2024

Member Agency Representative Name: Joseph Mouawad, P.E., General Manager

Notes:

**RESOLUTION XXXX**

**RESOLUTION OF THE BOARD OF DIRECTORS OF  
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA  
CONSENTING TO EASTERN MUNICIPAL WATER DISTRICT'S  
115th FRINGE AREA ANNEXATION  
AND FIXING THE TERMS AND  
CONDITIONS OF THE ANNEXATION TO  
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA**

WHEREAS, the Board of Directors of the Eastern Municipal Water District (EMWD), a county water authority situated in the county of Riverside, state of California, pursuant to Resolution No. 2023-159, in accordance with the provisions of the Metropolitan Water District Act (MWD Act), has applied to the Board of Directors of The Metropolitan Water District of Southern California (Metropolitan) for consent to annex thereto certain uninhabited territory situated in the county of Riverside referred to as 115th Fringe Area Annexation, more particularly described in an application to the Riverside County Local Agency Formation Commission (LAFCO), concurrently with 115th Fringe Area Annexation thereof to EMWD, such annexation to Metropolitan to be upon such terms and conditions as may be fixed by the Board of Directors of Metropolitan;

WHEREAS, the owner, city of Murrieta (Property owner) of Riverside County Assessor Parcel Number 909-060-026 (Property) has applied for annexation into the EMWD and Metropolitan service areas;

WHEREAS, completion of said 115th Fringe Area Annexation shall be contingent upon approval by the LAFCO;

WHEREAS, Metropolitan requests that LAFCO condition its approval of 115th Fringe Area Annexation upon a requirement that Metropolitan's existing and established taxes, benefit assessments, or property-related fees or charges in place in the service area are levied or fixed and collected on the parcels being annexed to the agency; these taxes, benefit assessments, or property-related fees or charges are identified below;

WHEREAS, Metropolitan has levied and collected ad valorem taxes on parcels within the territory of EMWD. Such charges for fiscal year 2023/24 are described in Resolution 9347, adopted by Metropolitan's Board on August 15, 2023;

WHEREAS, since fiscal year 1992/93, Metropolitan has levied and collected water standby charges pursuant to Section 134.5 of the MWD Act on parcels within the territory of EMWD. Such charges for fiscal year 2024/25 are described in Resolution 9357, adopted by Metropolitan's Board on May 14, 2024;

WHEREAS, upon 115th Fringe Area Annexation, the parcel will be within Metropolitan's service area, Metropolitan water will be available to such parcels and such parcels will receive the benefit of the projects provided in part with proceeds of Metropolitan's water standby charges; and

WHEREAS, pursuant to the provisions of the California Environmental Quality Act (CEQA), Rancho California Water District acting as Lead Agency and sub-member agency to Eastern Municipal Water District, adopted the AX108 Project (also known as 115th Fringe Area Annexation) Mitigated Negative Declaration on August 18, 2023, and approved the Project for the development of the proposed annexation parcels. Metropolitan, as Responsible Agency under CEQA, reviewed and considered the information contained in the MND prior to approval of the formal terms and conditions for the 115th Fringe Area Annexation.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Metropolitan, acting as Responsible Agency, reviewed and considered the information in the 2023 MND prior to approval of the final terms and conditions for the 115th Fringe Area Annexation; and subject to the following terms and conditions, does hereby grant the application of the governing body of Eastern Municipal Water District for consent to annex 115th Fringe Area Annexation, to Metropolitan and does hereby fix the terms and conditions of such annexation.

Section 1. Annexation of said area to EMWD shall be made concurrently with annexation thereof to Metropolitan, and all necessary certificates, statements, maps, and other documents required to be filed by or on behalf of EMWD to effectuate 115th Fringe Area Annexation shall be filed on or before December 31, 2026.

Section 2. Prior to filing a request for a Certificate of Completion of 115th Fringe Area Annexation proceeding with LAFCO, EMWD shall submit a certified copy of LAFCO's resolution approving 115th Fringe Area Annexation to EMWD and shall pay to Metropolitan \$57,488.36 for its annexation fee if annexation is completed by December 31, 2024. If the annexation is completed during the 2025 calendar year, the annexation charge will be calculated based on the then-current rate, in accordance with Metropolitan's Administrative Code Section 3300.

Section 3. a. Metropolitan shall be under no obligation to provide, construct, operate, or maintain feeder pipelines, structures, connections, and other facilities required for the delivery of water to said area from works owned and operated by Metropolitan.

b. EMWD shall not be entitled to demand that Metropolitan deliver water to EMWD for use, directly or indirectly, within said area, except for domestic or municipal use therein.



c. The delivery of all water by Metropolitan, regardless of the nature and time of use of such water, shall be subject to the water service regulations, including rates and charges promulgated from time to time by Metropolitan.

d. Except upon the terms and conditions specifically approved by the Board of Directors of Metropolitan, water sold and delivered by Metropolitan shall not be used in any manner which intentionally or avoidably results in the direct or indirect benefit of areas outside Metropolitan, including use of such water outside Metropolitan or use thereof within Metropolitan in substitution for other water outside Metropolitan.

Section 4. LAFCO has conditioned approval of 115th Fringe Area Annexation upon a requirement that Metropolitan levy or fix and collect all previously established and collected taxes, benefit assessments, or property-related fees or charges on parcels being annexed to the agency.

Section 5. Such charges, which are subject to change over time, include but are not limited to:

a. Metropolitan's ad valorem tax on properties located within the territory of EMWD is in the amount of 0.0035 percent of the assessed value of each parcel. Metropolitan shall levy the ad valorem tax in the amount, at the same time and in the same manner as ad valorem tax on other properties located within the territory of EMWD. Such charges for fiscal year 2023/24 are described in Resolution 9347, adopted by Metropolitan's Board on August 15, 2023.

b. Metropolitan's water standby charge on properties located within the territory of EMWD in the amount of \$6.94 per an acre, or per a parcel of less than one acre. Metropolitan shall levy the water standby charge in the amount, at the same time and in the same manner as the water standby charge on other properties located within the territory of EMWD. Such charges for fiscal year 2024/25 are described in Resolution 9357, adopted by Metropolitan's Board on May 14, 2024.

Section 6. That the General Manager is hereby authorized and directed to take all necessary action to secure the collection of the ad valorem taxes and water standby charges by the appropriate county officials, including payment of the reasonable cost of collection.

Section 7. That the Board of Directors of Metropolitan, acting as Responsible Agency, reviewed and considered the information in the 2023 MND prior to approval of the final terms and conditions for the 115th Fringe Area Annexation; and subject to the following terms and conditions, does hereby grant the application of the governing body of Eastern for consent to annex the 115th Fringe Area Annexation to Metropolitan and does hereby fix the terms and conditions of such annexation.

Section 8. That the General Manager and General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this resolution, including, without limitation, the commencement of defense of litigation.

Section 9. That if any provision of this resolution or the application to any member agency, property or person whatsoever is held invalid, that invalidity shall not affect the other provisions or applications of this resolution which can be given effect without the invalid portion or application, and to that end the provisions of this resolution are severable.

BE IT FURTHER RESOLVED that the Board Executive Secretary is directed to transmit forthwith to the governing body of EMWD a certified copy of this resolution.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on August 20, 2024.

---

Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California



Lead Agency: RANCHO CALIFORNIA WATER DISTRICT  
ATTN: JEFF KIRSHBERG, DIRECTOR OF PLANNING  
Address: 42135 WINCHESTER ROAD  
TEMECULA, CA 92590

**FILED / POSTED**

County of Riverside  
Peter Aldana  
Assessor-County Clerk-Recorder

E-202300851  
08/18/2023 03:42 PM Fee: \$ 50.00  
Page 1 of 1

Removed: By: Deputy  


**Project Title**

ANNEXATION NO. 108 [PROJECT NO. AX108]

**Filing Type**

- ☐ Environmental Impact Report  
☒ Mitigated/Negative Declaration  
☐ Notice of Exemption  
☐ Other:

**Notes**

LARGE FEE PREVIOUSLY PAID ON E-202300857.  
REFILING TO ADD A MISSING PAGE OF ORIGINAL DOCUMENT

**NOTICE OF DETERMINATION**

<b>TO:</b>	<input type="checkbox"/> Clerk of the Board of Supervisors or <input checked="" type="checkbox"/> County Clerk Address: County Clerk County of Riverside Post Office Box 751 Riverside, CA 92502-0751	<b>FROM:</b>	Public Agency/Lead Agency: Rancho California Water District (Rancho Water/District) Address: 42135 Winchester Road Temecula, CA 92590 Contact: Jeff Kirshberg, Ph.D., P.E. Director of Planning Phone: (951) 296-6900
<b>TO:</b>	<input type="checkbox"/> Office of Planning and Research P. O. Box 3044 Sacramento, CA 95812-3044  <input type="checkbox"/> 1400 Tenth Street, Rm. 113 Sacramento, CA 95814	Lead Agency (if different from above) Address: Contact: Phone:	


**SUBJECT:** Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (If submitted to SCH):
Project Title: Annexation No. 108 [Project No. AX108]
Project Applicant (include address and telephone number):  Ivan Holler, Assistant City Manager City of Murrieta 1 Town Square 24601 Jefferson Avenue Murrieta, CA 92562
Specific Project Location – Identify street address and cross street or attach a map showing project site (preferably a USGS 15' or 7 ½' topographical map identified by quadrangle name): APN 909-060-026, Parcel No. 4 of Parcel Map No. 7547, 6.91 Acres, located off Fig Street and Adams Avenue
General Project Location (City and/or County): Murrieta, Riverside County
Project Description: Concurrent annexation of 6.91 acres to Rancho Water, Eastern Municipal Water District (EMWD), and the Metropolitan Water District of Southern California (MWD)
Identify the person or entity undertaking the project, including any private applicant, any other person undertaking an activity that receives financial assistance from the Public Agency as part of the project, and any person receiving a lease, permit, license, certificate, or other entitlement of use from the Public Agency as part of the project.



This is to advise that the (☒ Lead Agency or ☐ Responsible Agency) has approved the above-described project on August 17, 2023 and has made the following determinations regarding the above-described project:

1.	The project [ <input type="checkbox"/> will <input checked="" type="checkbox"/> will not] have a significant effect on the environment.	
2.	<input type="checkbox"/>	An Environmental Impact Report was prepared and certified for this project pursuant to the provisions of CEQA and reflects the independent judgment of the Lead Agency.
	<input checked="" type="checkbox"/>	A Negative Declaration was prepared for this project pursuant to the provisions of CEQA and reflects the independent judgment of the Lead Agency.
	<input type="checkbox"/>	A Mitigated Negative Declaration was prepared for this project pursuant to the provisions of CEQA and reflects the independent judgment of the Lead Agency.
3.	<input type="checkbox"/>	Mitigation measures [ <input type="checkbox"/> were <input checked="" type="checkbox"/> were not] made a condition of the approval of the project.
4.	<input type="checkbox"/>	A Mitigation Monitoring or Reporting Plan [ <input type="checkbox"/> was <input checked="" type="checkbox"/> was not] adopted for this project.
5.	<input type="checkbox"/>	A Statement of Overriding Considerations [ <input type="checkbox"/> was <input checked="" type="checkbox"/> was not] adopted for this project.
6.	<input type="checkbox"/>	Findings [ <input type="checkbox"/> were <input checked="" type="checkbox"/> were not] made pursuant to the provisions of CEQA.
This is to certify that the Final EIR with comments and responses and record of project approval, or the Negative Declaration, is available to General Public at:		
Custodian: Rancho California Water District (951) 296-6900		Location: 42135 Winchester Road Temecula, CA 92590

Date: August 17, 2023	
	Signature
	Name: Jeff Kirshberg, Ph.D., P.E.
Title: Director of Planning	
Date Received for Filing:	

Authority cited: Sections 21083, Public Resources Code.  
Reference Section 21000-21174, Public Resources Code.



**NEGATIVE DECLARATION**

1. Name or description of project:	Annexation No. 108 [Project No. AX108]
2. Project Location – Identify street address and cross streets or attach a map showing project site (preferably a USGS 15' or 7 1/2' topographical map identified by quadrangle name):	Assessor's Parcel Number 909-060-026, Parcel No. 4 of Parcel Map No. 7547, 6.91 Acres, located off Fig Street and Adams Avenue.
3. Entity or Person undertaking project:	
A. Entity	City of Murrieta
(1) Name:	Ivan Holler, Assistant City Manager
(2) Address:	1 Town Square 24601 Jefferson Avenue Murrieta, CA 92562
B. Other (Private)	
(1) Name:	
(2) Address:	
<p>The Lead Agency, having reviewed the Initial Study of this proposed project, having reviewed the written comments received prior to the public meeting of the Lead Agency, and having reviewed the recommendation of the Lead Agency's Staff, does hereby find and declare that the proposed project will not have a significant effect on the environment. A brief statement of the reasons supporting the Lead Agency's findings are as follows:</p> <p>No significant impacts are anticipated as a result of this project, as the project is a concurrent annexation only. However, upon completion of the annexation process, the property will be eligible for water service by the Rancho California Water District (Rancho Water/District), which could have an incremental impact of existing systems in the immediate area. The project will not significantly impact existing water supplies, nor require expanded water entitlements. The property is within Rancho Water's Sphere of Influence and service to this area has been anticipated within the District's Water System Master Plan and Urban Water Master Plan.</p> <p>The Lead Agency hereby finds that the Negative Declaration reflects its independent judgment. A copy of the Initial Study is attached.</p> <p>The location and custodian of the documents and any other material which constitute the record of proceedings upon which the Lead Agency based its decision to adopt this Negative Declaration are as follows:</p> <p>Rancho California Water District 42135 Winchester Road Temecula, CA 92590</p> <p>Phone No.: (951) 296-6900</p>	

Date Received  
for Filing: August 17, 2023

Jeff Kirshberg, Ph.D., P.E.  
Director of Planning

Negative Declaration

FORM "E"

23\JKJG:mb005\AX108





Exhibit A

APN  
909060026

## Legend

-  RCWD Service Area
-  Annexation 108



0 250 500 1,000 Feet





ASSESSOR'S MAP BR909 PG.06  
Riverside County, Calif.



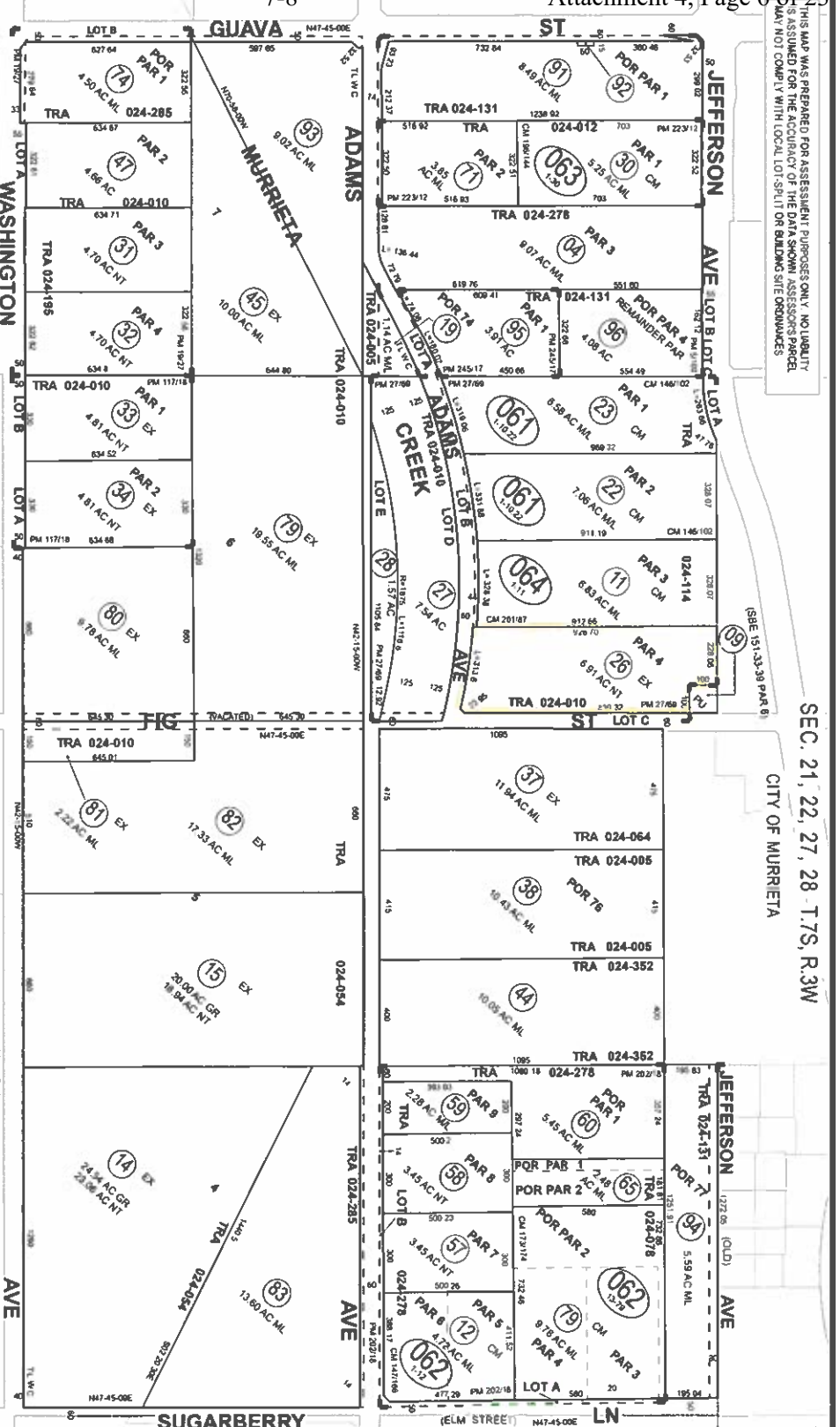
08/27/2019

RS 9245  
CO SUR 85-0  
RS 6328-48  
LLA 2122  
RS 951, 852, 14-1-6

Pg. 06	Pg. 18	Pg. 17	Pg. 16	Pg. 15	Pg. 14	Pg. 13	Pg. 12	Pg. 11	Pg. 10	Pg. 09

Map Reference  
PM 202/18 - 19 PARCEL MAP NO. 30186  
CM 147/166 - 193 PAR 5 & 6 0031223 04/27/05  
CM 173/174 - 206 PAR 3, 4 FOR 2 00381861 09/14/05  
MB 8339 SOTENECULA LAND AND WATER CO.  
PM 5/100 PARCEL MAP NO. 4634  
PM 2769 PARCEL MAP NO. 7547  
CM 146/102 - 119 PAR 1 & 2 00201833 03/14/05  
CM 201/87 - 103 PAR 3 00381833 07/16/08  
PM 1927 PARCEL MAP NO. 6703  
PM 117/18 - 19 PARCEL MAP NO. 18863  
PM 223/12 - 15 PARCEL MAP NO. 34685  
CM 186/144 - 153 PAR 1 00740003 12/26/07  
PM 245/17 - 19 PARCEL MAP NO. 37267

Jan 2019



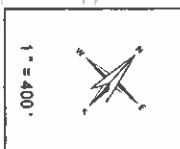
THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSURED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSORS PRACTICE MAY NOT COMPLY WITH LOCAL LOT SPLIT OR BUILDING SITE ORDINANCES.

SEC. 21, 22, 27, 28 T.7S, R.3W

CITY OF MURRIETA

TRA 024-005  
024-010  
024-012  
024-054  
024-064  
024-114  
024-131  
024-195  
024-278  
024-285  
024-352

909-06  
204  
SHEET 1 OF 6



Legend	Lot Lines
Lot Lines	Lot Lines
Right-of-Way	Right-of-Way
Other Lot Lines	Other Lot Lines
Other Easements	Other Easements
Other Features	Other Features

Date	Old Number	New Number
10/1/1913	1	1
10/1/1913	2	2
10/1/1913	3	3
10/1/1913	4	4
10/1/1913	5	5
10/1/1913	6	6
10/1/1913	7	7
10/1/1913	8	8
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**Peter Aldana**  
**Riverside County**  
**Assessor-County Clerk-Recorder**  
 2724 Gateway Drive  
 Riverside, CA 92507  
 (951) 486-7000  
 www.rivcoacr.org

**Receipt: 23-229398**

\*\*\* REPRINT \*\*\* REPRINT \*\*\* REPRINT \*\*\*

<b>Product</b>	<b>Name</b>	<b>Extended</b>
FISH	CLERK FISH AND GAME FILINGS	\$2,814.00
	# Pages	4
	Document #	E-202300857
	Filing Type	2
	State Fee Prev Charged	false
	No Charge Clerk Fee	false
F&G Negative Declaration		\$2,764.00
F&G Clerk Handling Fee		\$50.00
<b>Total</b>		<b>\$2,814.00</b>
<b>Tender (On Account)</b>		<b>\$2,814.00</b>
Account#	CEQARCWD	
Account Name	CEQARCWD - Rancho California Water District-CEQA Filings	
Balance	\$2,864.00	

\*\*\* REPRINT \*\*\* REPRINT \*\*\* REPRINT \*\*\*



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 Riverside, CA 92507  
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[www.rivcoacr.org](http://www.rivcoacr.org)

**Receipt: 23-231048**

<b>Product</b>	<b>Name</b>	<b>Extended</b>
FISH	CLERK FISH AND GAME FILINGS	\$50.00
	# Pages	1
	Document #	E-202300861
	Filing Type	5
	State Fee Prev Charged	true
	No Charge Clerk Fee	false
F&G Clerk Handling Fee		\$50.00
<b>Total</b>		<b>\$50.00</b>
<b>Tender (On Account)</b>		<b>\$50.00</b>
Account#	CEQARCWD	
Account Name	CEQARCWD - Rancho California Water District-CEQA Filings	
Balance	\$5,728.00	

**2023 ENVIRONMENTAL DOCUMENT FILING FEE****CASH RECEIPT**

DFW 753.5a (REV. 01/01/23) Previously DFG 753.5a

RECEIPT NUMBER:

23-231048

STATE CLEARINGHOUSE NUMBER (If applicable)

**SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.**

## LEAD AGENCY

RANCHO CALIFORNIA WATER DISTRICT

## LEAD AGENCY EMAIL

BUEROH@RANCHOWATER.COM

## DATE

08/18/2023

## COUNTY/STATE AGENCY OF FILING

RIVERSIDE

## DOCUMENT NUMBER

E-202300861

## PROJECT TITLE

ANNEXATION NO. 108 [PROJECT NO. AX108]

## PROJECT APPLICANT NAME

CITY OF MURRIETA

## PROJECT APPLICANT EMAIL

BUEROH@RANCHOWATER.COM

## PHONE NUMBER

(951) 296-6977

## PROJECT APPLICANT ADDRESS

1 TOWN SQUARE, 24601 JEFFERSON AVENUE

## CITY

MURRIETA

## STATE

CA

## ZIP CODE

92562

## PROJECT APPLICANT (Check appropriate box)

☐ Local Public Agency☐ School District☒ Other Special District☐ State Agency☐ Private Entity**CHECK APPLICABLE FEES:**☐ Environmental Impact Report (EIR)

\$3,839.25

\$

☐ Mitigated/Negative Declaration (MND)(ND)

\$2,764.00

\$

☐ Certified Regulatory Program (CRP) document - payment due directly to CDFW

\$1,305.25

\$

☐ Exempt from fee☐ Notice of Exemption (attach)☐ CDFW No Effect Determination (attach)☒ Fee previously paid (attach previously issued cash receipt copy)☐ Water Right Application or Petition Fee (State Water Resources Control Board only)

\$850.00

\$

☒ County documentary handling fee

\$

\$50.00

☐ Other

\$

**PAYMENT METHOD:**☐ Cash☐ Credit☐ Check☒ Other

TOTAL RECEIVED

\$

\$50.00

## SIGNATURE

X

## AGENCY OF FILING PRINTED NAME AND TITLE

Deputy

Irma Rodriguez

LARGE FEE PREVIOUSLY PAID ON E-202300857.

REFILING TO ADD A MISSING PAGE OF ORIGINAL DOCUMENT.

**INITIAL STUDY**

NOTE: The following is a sample form that may be tailored by the Lead Agency to satisfy project circumstances. It may be used to meet the requirements for an initial study when the criteria set forth in the State and Local CEQA Guidelines have been met. Substantial evidence of potential impacts that are not listed on this form must also be considered. The sample questions in this form are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance.

1. Project Title: Annexation No. 108 [Project No. AX108]
2. Lead Agency Name and Address:  
Rancho California Water District (Rancho Water/District)  
42135 Winchester Road, Temecula, CA 92590
3. Contact Person and Phone Number: Jeff Kirshberg (951) 296-6973
4. Project Location: Assessor's Parcel Number 909-060-026, Parcel No. 4 of Parcel Map No. 7547, 6.91 Acres, located of Fig Street and Adams Avenue.
5. Project Sponsor's Name and Address:  
Ivan Holler, Assistant City Manager  
City of Murrieta  
1 Town Square  
Murrieta, CA 92562
6. General Plan Designation: Public Industrial
7. Zoning: Civic/Institutional
8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheet(s) if necessary.)  
  
Concurrent annexation of 6.91 acres to Rancho Water, Eastern Municipal Water District (EMWD), and the Metropolitan Water District of Southern California (MWD)
9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings.)  
  
The property is adjacent to business parks and industrial properties.
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):  
  
Local Agency Formation Commission (LAFCO)  
EMWD  
MWD
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

AB52 consultation letters will be sent to all Native American tribes on May 1, 2023, prior to public notice.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.



**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                | <input type="checkbox"/> Agriculture/Forestry Resources | <input type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources      | <input type="checkbox"/> Cultural Resources             | <input type="checkbox"/> Geology / Soils                    |
| <input type="checkbox"/> Greenhouse Gas Emissions  | <input type="checkbox"/> Hazards & Hazardous Materials  | <input type="checkbox"/> Hydrology / Water Quality          |
| <input type="checkbox"/> Land Use / Planning       | <input type="checkbox"/> Mineral Resources              | <input type="checkbox"/> Noise                              |
| <input type="checkbox"/> Population / Housing      | <input type="checkbox"/> Public Services                | <input type="checkbox"/> Recreation                         |
| <input type="checkbox"/> Transportation            | <input type="checkbox"/> Utilities / Service Systems    | <input type="checkbox"/> Mandatory Findings of Significance |
| <input type="checkbox"/> Tribal Cultural Resources | <input type="checkbox"/> Wildfire                       | <input type="checkbox"/> Energy                             |

**DETERMINATION (To be completed by the Lead Agency):**

On the basis of this initial evaluation:

- ☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- ☐ I find that the proposed project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Jeff Kirshberg, Ph.D., P.E., Director of Planning  
Printed Name

June 7, 2023

Date

Rancho California Water District  
For

**EVALUATION OF ENVIRONMENTAL IMPACTS:**

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a Lead Agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the Lead Agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.



- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead Agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
- Earlier Analyses Used. Identify and state where they are available for review.
  - Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- the significance criteria or threshold, if any, used to evaluate each question; and
  - the mitigation measure identified, if any, to reduce the impact to less than significance.

### SAMPLE QUESTION

Issues:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS.</b> Except as provided in Public Resources Code section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>





- |  | Potentially<br>Significant<br>Impact | Less Than<br>Significant<br>With<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact                        |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?) | <input type="checkbox"/>             | <input type="checkbox"/>                                       | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?  | <input type="checkbox"/>             | <input type="checkbox"/>                                       | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |

**II. AGRICULTURE AND FOREST RESOURCES.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest protocols adopted by the California Air Resources Board. Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?   | v                        | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Potentially  
Significant  
Impact☐Less Than  
Significant  
With  
Mitigation  
Incorporated☐Less Than  
Significant  
Impact☐No  
Impact☒

**III. AIR QUALITY.** Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- c) Expose sensitive receptors to substantial pollutant concentrations?
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

☐☐☐☒☐☐☐☒☐☐☐☒☐☐☐☒

**IV. BIOLOGICAL RESOURCES.** Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

☐☐☐☒☐☐☐☒☐☐☐☒

- |  | Potentially<br>Significant<br>Impact | Less Than<br>Significant<br>With<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact                        |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/>             | <input type="checkbox"/>                                       | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/>             | <input type="checkbox"/>                                       | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?   | <input type="checkbox"/>             | <input type="checkbox"/>                                       | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |

**V. CULTURAL RESOURCES.** Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries?                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**VI. ENERGY.** Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**VII. GEOLOGY AND SOILS.** Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**VIII. GREENHOUSE GAS EMISSIONS.** Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**IX. HAZARDS AND HAZARDOUS MATERIALS.** Would the project:

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**X. HYDROLOGY AND WATER QUALITY.** Would the project:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XI. LAND USE AND PLANNING.** Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XII. MINERAL RESOURCES.** Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**XIII. NOISE.** Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Potentially  
Significant  
Impact☐Less Than  
Significant  
With  
Mitigation  
Incorporated☐Less Than  
Significant  
Impact☐No  
Impact☒

**XIV. POPULATION AND HOUSING.** Would the project:

- a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?
- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

☐☐☐☒☐☐☐☒

**XV. PUBLIC SERVICES.** Would the project:

- a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

☐☐☐☒

Fire protection?

☐☐☐☒

Police protection?

☐☐☐☒

Schools?

☐☐☐☒

Parks?

☐☐☐☒

Other public facilities?

☐☐☐☒

**XVI. RECREATION.**

- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

☐☐☐☒



- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?

Potentially  
Significant  
Impact☐Less Than  
Significant  
With  
Mitigation  
Incorporated☐Less Than  
Significant  
Impact☐No  
Impact☒**XVII. TRANSPORTATION.** Would the project:

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
- b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- d) Result in inadequate emergency access?

☐☐☐☒☐☐☐☒☐☐☐☒☐☐☐☒**XVIII. TRIBAL CULTURAL RESOURCES**

- a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
- i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

☐☐☐☒☐☐☐☒☐☐☐☒

**XIX. UTILITIES AND SERVICE SYSTEMS.** Would the project:

- |  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Summary Explanation of Impacts for Utilities and Service Systems

For issues a, c, d, e: The concurrent annexation is an administrative action, and as such will have no significant impact.

References: None.

For issue b: The concurrent annexation is an administrative action, and as such will have no impact of water supplies. However, upon completion of the annexation process, the property will be eligible for water service by Rancho Water, which could have an incremental impact of existing systems in the immediate area. The project will not significantly impact existing water supplies, nor require expanded water entitlements. This property would be served by water imported via the EMWD from the MWD, which has indicated that sufficient capacity exists to meet current and future demands of Rancho Water, though additional supplies will be charged a higher Tier 2 water rate. The property is within Rancho Water's Sphere of Influence, and service to this area has been anticipated within Rancho Water's Urban Water Master Plan and Water System Master Plan, which identified sufficient connected capacity at MWD's water supply turnouts; therefore, no significant impacts are anticipated as a result of this project.

References: 2015 Water Facilities Master Plan Update, December 2015 and 2020 Urban Water Management Plan, June 2021



	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>XX. WILDFIRE.</b> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>XXI. MANDATORY FINDINGS OF SIGNIFICANCE.</b> (State CEQA Guidelines section 15065(a).)				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



- |   | Potentially<br>Significant<br>Impact | Less Than<br>Significant<br>With<br>Mitigation<br>Incorporated | Less Than<br>Significant<br>Impact | No<br>Impact                        |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current project, and the effects of probable future projects.) | <input type="checkbox"/>             | <input type="checkbox"/>                                       | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |
| d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?   | <input type="checkbox"/>             | <input type="checkbox"/>                                       | <input type="checkbox"/>           | <input checked="" type="checkbox"/> |

Note: Authority cited: Public Resources Code sections 21083, 21083.05, 21083.09.

Reference: Gov. Code section 65088.4; Public Resources Code sections 21073, 21074, 21080(c), 21080.1, 21080.3, 21080.3.1, 21080.3.2, 21082.3, 21083, 21083.3, 21083.5, 21084.2, 21084.3, 21093, 21094, 21095 and 21151; *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey County Board of Supervisors* (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.





Finance and Asset Management Committee

# 115th Fringe Area Annexation to EMWD and Metropolitan

Item 7-8

August 20, 2024

# Annexation Overview

## Subject

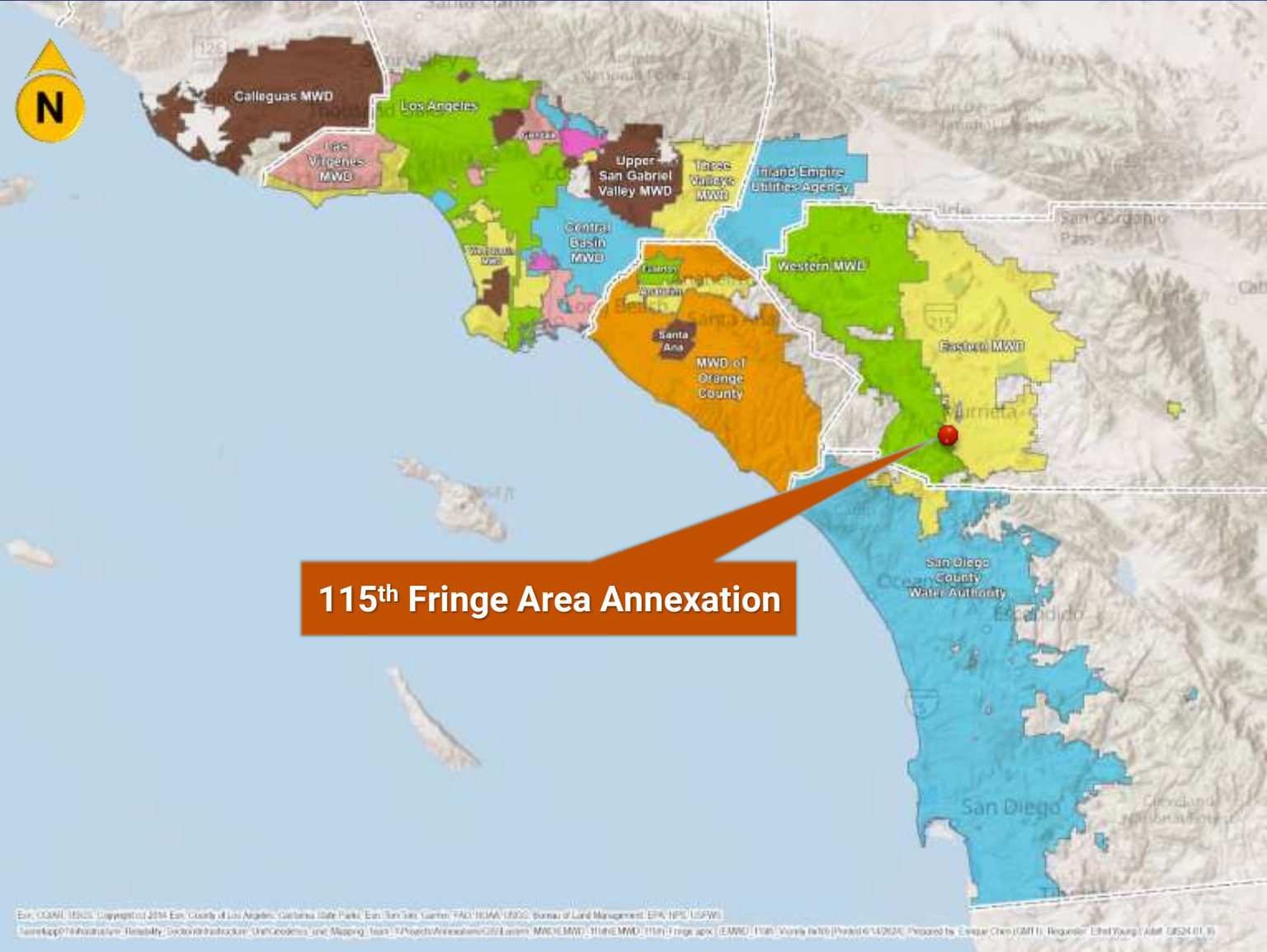
- Review and consider the Lead Agency's adopted Mitigated Negative Declaration and take related CEQA actions, and adopt resolution for the 115th Fringe Area Annexation concurrently to Eastern Municipal Water District and Metropolitan

## Purpose

- This annexation will provide the ability for water service and associated benefits to the property owner. The initial fixed and variable costs will be borne by the local water supplier and property owner.



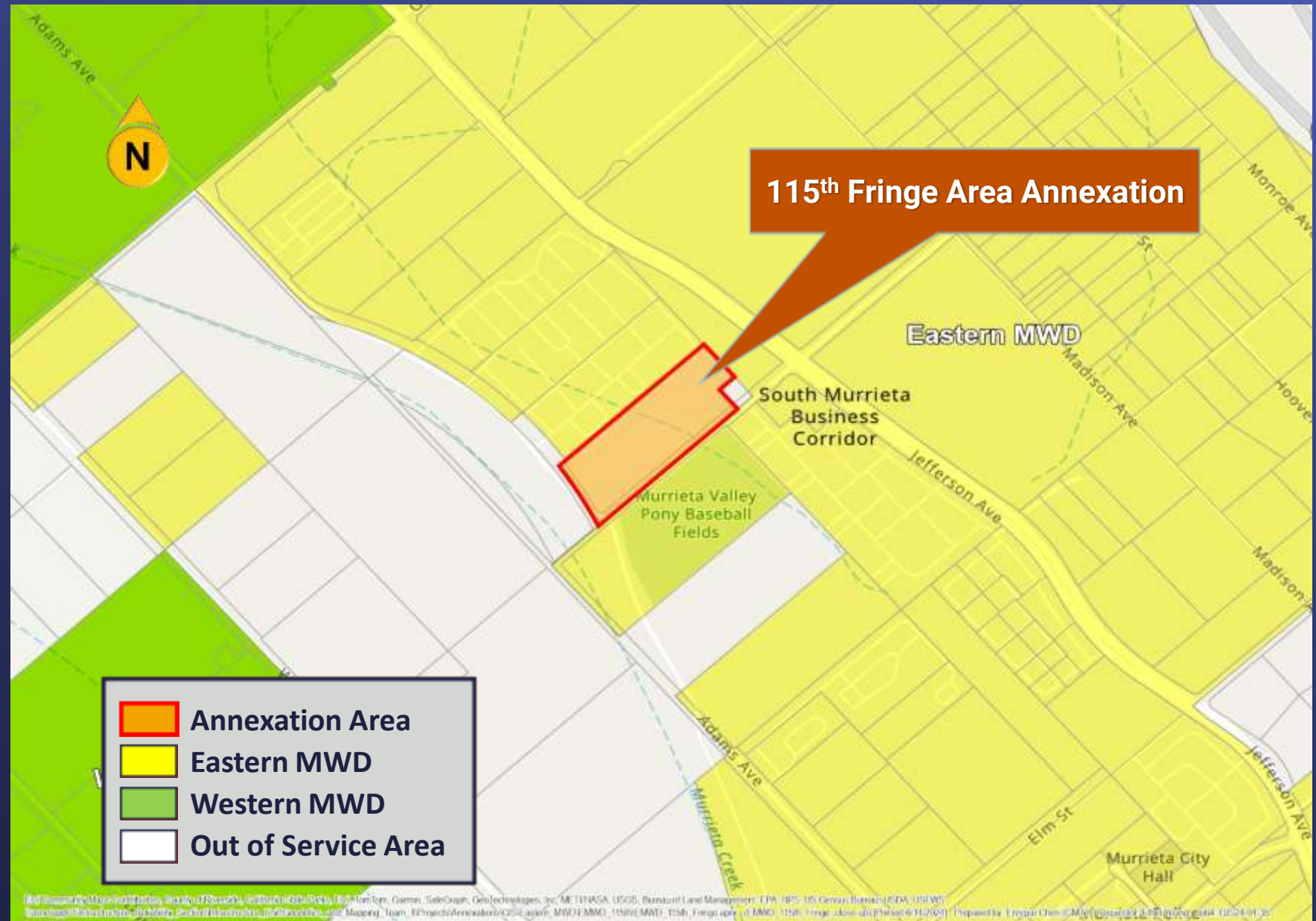
# Service Area Map





# Annexation Site Map

Gross Area = 7.77 Acres  
Public Road = .86 Acres  
Net Area = 6.91 Acres



## Key Provisions

- Annexation area is 7.77 acres with 0.86 acres in public roads leaving a net area of 6.91 acres.
- Total fees are \$57,488.36
- Water use estimate is 7.35 AF/Y
- Annexation request is compliant with current policies and requirements with the exception of leaving a quarter acre island outside the service area for SCE utility purposes.

## Board Options

### Option 1:

- Review and consider the Lead Agency's adopted Mitigated Negative Declaration and take related CEQA actions
- Adopt resolution granting approval for the 115th Fringe Area Annexation concurrently to Eastern Municipal Water District and Metropolitan
- Establish Metropolitan's terms and conditions for the annexation, conditioned upon approval by Riverside County's Local Agency Formation Commission
- Upon receipt of the annexation fee of \$57,488.36

### Option 2:

- Decline the Request

# Board Options

## Staff Recommendations

- Option 1







- **Board of Directors**  
***One Water and Stewardship Committee***

8/20/2024 Board Meeting

8-1

## Subject

Authorize the General Manager to enter into: (1) a forbearance agreement with Coachella Valley Water District, Imperial Irrigation District, Palo Verde Irrigation District, and the City of Needles to allow water conserved under the U.S. Bureau of Reclamation's conservation program to be added to Lake Mead; and (2) agreements with Imperial Irrigation District and San Diego County Water Authority under U.S. Bureau of Reclamation's conservation program to add water conserved by Imperial Irrigation District to Lake Mead that would otherwise accrue to San Diego County Water Authority; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

## Executive Summary

Staff seeks authorization for the General Manager to enter into agreements to allow water to be added to Lake Mead pursuant to funding provided by the U.S. Bureau of Reclamation's (Reclamation) Lower Colorado Conservation Program (LC Conservation Program). These agreements demonstrate how multi-agency partnerships can benefit the Colorado River. Staff specifically seek authorization to enter the following agreements:

1. A forbearance agreement among Metropolitan, Palo Verde Irrigation District (PVID), Imperial Irrigation District (IID), Coachella Valley Water District (CVWD), and the City of Needles that will cover conservation actions taken by CVWD and IID under the LC Conservation Program in 2024, 2025, and 2026.
2. Agreements among IID, San Diego County Water Authority (SDCWA), and Metropolitan to include up to 100,000 acre-feet of water conserved by IID per year from 2024–2026, that would otherwise be transferred to SDCWA and exchanged under the Exchange Agreement, under IID's system conservation agreement with Reclamation. SDCWA would be required to purchase an equivalent volume of Metropolitan supplies. The General Manager would be delegated authority to execute agreements with IID and SDCWA regarding how much of the 100,000 acre-feet of water to include each year based on water supply conditions.

## Timing and Urgency

These agreements would help California achieve the goals set out in the Colorado River Board of California's October 5, 2022, letter, which proposed that California agencies conserve 400,000 AF per year of water to benefit Lake Mead from 2023 through 2026.



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## Proposed Action(s)/Recommendation(s) and Options

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### Staff Recommendation: Option #1

#### Option #1

Authorize the General Manager to enter into: (1) a forbearance agreement with Coachella Valley Water District, Imperial Irrigation District, Palo Verde Irrigation District, and the City of Needles to allow water conserved under the U.S. Bureau of Reclamation's conservation program to be added to Lake Mead; and (2) agreements with Imperial Irrigation District and San Diego County Water Authority under Reclamation's conservation program to add water conserved by Imperial Irrigation District to Lake Mead that would otherwise accrue to San Diego County Water Authority.

**Fiscal Impact:** To the extent that IID leaves conserved water in Lake Mead that was planned for transfer to SDCWA, Metropolitan would see revenue from increased water sales to SDCWA. The amount of revenue in any given year would depend on the volume of water left in Lake Mead each year. In 2024, staff expect that 50,000–75,00 acre-feet of water that had been planned for transfer to SDCWA will be left in Lake Mead as conserved water. For this range of volumes, Metropolitan would see revenues ranging from \$16.6 million–\$24.9 million, based on the additional supply rate element that applies to water sales, but does not apply to the SDCWA-Metropolitan Exchange Agreement price. The revenue anticipated under this board action will constitute a portion of the \$60 million in additional revenue generation assumed in the fiscal year 2024/2025 budget. At this time, for 2025 and 2026, staff does not have a projection of the volume of water planned for transfer to SDCWA that would be left in Lake Mead as conserved water.

**Business Analysis:** The agreements would forbear additional system conservation to augment Colorado River supplies at no additional cost to Metropolitan and would increase revenue from increased sales to SDCWA in 2024 and potentially also increase sales in 2025 and 2026.

#### Option #2

Direct the General Manager not to enter into the agreements under the proposed terms.

**Fiscal Impact:** None

**Business Analysis:** Metropolitan would forego an opportunity to augment Colorado River water supplies to reduce the risk of future curtailment.

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## Alternatives Considered

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Staff considered an alternative with a firm volume commitment for the next three years on including supplies originally intended for transfer from IID to SDCWA (with SDCWA purchasing a like amount from Metropolitan at the full-service rate). However, this option could result in a direct withdrawal from Metropolitan's storage accounts to meet demand in years in which Metropolitan did not have a sufficient surplus of supplies, or a reduction in additions to storage in years with a small volume of surplus supplies. The recommended alternative preserves regional flexibility in the face of unknown future hydrologic conditions over the three-year period.

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## Applicable Policy

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Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 53051 in December 2022, Metropolitan's Board adopted legislative priorities and principles to support the funding of conservation projects to enhance the resiliency of the Colorado River System to reduce the risk of Lake Mead and Lake Powell falling below critical elevations.

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## Related Board Action(s)/Future Action(s)

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By Minute Item 53447 in November 2023, Metropolitan's Board approved a similar action for system conservation created by CVWD and IID in 2023 to be left in Lake Mead as system water under Reclamation's LC Conservation Program.

By Minute Item 53469 in December 2023, Metropolitan's Board approved a similar action for system conservation projects with the Palo Verde Irrigation District, Bard Water District, and the Quechan Tribe under Reclamation's LC Conservation Program.

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## Summary of Outreach Completed

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All LC Conservation Program projects were discussed with and received input from the Colorado River Ad-hoc Committee.

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## California Environmental Quality Act (CEQA)

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### CEQA determination for Option #1:

The proposed actions are not defined as a project under CEQA because they involve organizational, maintenance, or administrative activities; personnel-related actions; and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5).) In addition, the proposed actions are not subject to CEQA because they involve the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment. (State CEQA Guidelines Section 15378(b)(4)).

### CEQA determination for Option #2:

None required

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## Details and Background

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### Background

Metropolitan often collaborates with other agencies to provide system water to Lake Mead. In 2006, Metropolitan entered into an agreement with Reclamation to provide up to 10,000 AF of conserved Colorado River water during 2006 and 2007 to increase Colorado River system storage. The water was conserved through voluntary fallowing under the Palo Verde Irrigation District Land Fallowing Program. Metropolitan and other Colorado River users benefitted from the resultant increase in system storage. Reclamation provided about \$1.7 million to cover Metropolitan's expenditures associated with the supplemental fallowing.

In 2014, Reclamation initiated the Pilot System Conservation Program, which was a collective effort of the federal government and major urban water agencies to fund water-saving actions to create conserved system water to protect the elevation of Lake Powell and Lake Mead and thus benefit all Colorado River water users. The Pilot System Conservation Program funded projects that created at least 175,000 AF of conserved system water. Metropolitan provided \$5 million, which represented 15 percent of the total funding.

In 2021, Metropolitan entered into a funding agreement with Reclamation, Central Arizona Water Conservation District, and Southern Nevada Water Authority to fund additional land fallowing to conserve Colorado River system water to improve Lake Mead storage. The funding agreement was terminated during the third year to shift participation to the LC Conservation Program starting August 1, 2023.

### The LC Conservation Program

The 2021 Bipartisan Infrastructure Law and the 2022 Inflation Reduction Act both seek to fund water management and conservation efforts to relieve drought conditions in the western United States, with a focus on the Colorado River. The Department of the Interior, through Reclamation, created the LC Conservation Program to increase system conservation and efficiency opportunities to address the drought in the Lower Colorado River Basin. Similar conservation programs are being developed in the Upper Colorado River Basin. The LC Conservation Program provides funding opportunities for voluntary participation to increase system conservation.

A total of six conservation agreements have been or are being developed in California under Bucket 1 of the LC Conservation Program to help California conserve 400,000 AF of water annually from 2023–2026. A forbearance agreement among Metropolitan, PVID, IID, CVWD, and the City of Needles is needed to cover conservation from all six conservation agreements from 2024–2026. The Board has previously granted authority to forbear three of the conservation agreements, one each with PVID, Bard Water District, and the Quechan Indian Tribe. Therefore, there are currently three items under the LC Conservation Program for which staff is seeking board authorization.

Forbearance is necessary for these actions because, under the California priority system, Colorado River water conserved by a higher-priority user is available to the next lower-priority user. Thus, as part of a program to fund the conservation of Colorado River water, contractors need to agree to forbear exercising their rights to ensure that the conserved water remains in the Colorado River system rather than becoming available to the next lower-priority user. Before entering into any forbearance agreement, Metropolitan staff will review the underlying agreements between Reclamation and the contractors to ensure that Metropolitan's rights as the junior priority in California are protected. For additional background on the purpose and mechanics of a forbearance by Metropolitan, please see the June 2024 presentation on that subject, available at: <https://mwdh2o.legistar.com/View.ashx?M=F&ID=13012478&GUID=5C7533D3-F668-4FC6-A12E-EACEF0DF52DD>.

First, forbearance is needed for an agreement between Reclamation and CVWD to fund a reduction in groundwater replenishment by up to 35,000 acre-feet per year in 2024 and 2025 at \$400 per acre-foot.

Second, forbearance is needed for an agreement between Reclamation and CVWD to fund agricultural conservation from 2024–2026 at \$400 per acre-foot. Under the agreement with CVWD, up to 10,000 acre-feet of conserved water from a new agricultural conservation program will be left in Lake Mead as system water each year. The new conservation program currently covers full-season fallowing and retirement of permanent crops.

Third, forbearance is needed for an agreement being developed between Reclamation and IID to fund agricultural conservation from 2024-2026 at a rate that is based on the rate paid by SDCWA to IID for SDCWA's transfer supplies. Under the proposed agreement, IID would conserve and leave in Lake Mead as system water, up to 300,000 acre-feet per year with a three-year cumulative maximum of 700,000 acre-feet. This conserved water could come from IID's existing on-farm conservation program, a new deficit irrigation program, or an updated farm-unit fallowing program. IID's board approved a supplemental payment to their existing On-Farm Efficiency Conservation Program to incentivize increased conservation savings from the existing on-farm program. IID's board also approved the implementation of a new deficit irrigation program where farmers would cease irrigation on alfalfa, bermuda, or klein grass for a period of 45–60 days.

In addition to a forbearance agreement, staff is seeking board authorization to enter into agreements with IID and SDCWA for joint participation in IID's system conservation agreement with Reclamation. This joint participation would be under the same system conservation agreement described above for forbearance. Under this partnership, water conserved by IID that would otherwise be transferred to SDCWA and exchanged under the Exchange Agreement would be made available as system conservation as a part of IID's system conservation agreement with Reclamation. Staff seek authorization for the General Manager to execute agreements that would include up to 100,000 acre-feet per year from 2024–2026 with IID's and SDCWA's consent. To the extent that water otherwise intended for transfer to SDCWA and exchange under the Exchange Agreement is made available as system water, SDCWA would be required to purchase a like amount of water from Metropolitan at the full-service rate. Each year, IID, Metropolitan, and SDCWA would mutually agree on the volume of water, if any, from the IID-SDCWA transfer program that would be made available as system conservation under IID's system conservation agreement for that year. Each year, the parties will consider water supply conditions and IID's status in developing conserved water. This flexibility allows all parties to adapt to evolving hydrologic conditions over the next three years. The parties anticipate this volume in 2024 will be from 50,000 to 75,000 acre-feet. At this time, there are no projected amounts for 2025 or 2026.

### **Benefits**


With forbearance of these three additional conservation programs, over 800,000 AF of water will be added to Lake Mead over three years, increasing elevation by approximately 10 feet. All parties benefit from increased Lake Mead elevation, power generation, and reliability of Colorado River water supplies. Metropolitan also directly benefits from increased revenues through full-service sales to SDCWA rather than exchange deliveries under the Exchange Agreement.

**Summary**

Metropolitan continues to expand and support opportunities to conserve Colorado River system water. This action reduces the risk of Lake Mead falling to elevations that trigger shortages and Drought Contingency Plan contributions. It also helps implement the proposed goals in the Colorado River Board of California's October 5, 2022, letter. All Lower Basin water users benefit from delaying the timing and depth of shortages, DCP contributions, and preserving hydroelectric generation at Hoover Dam.

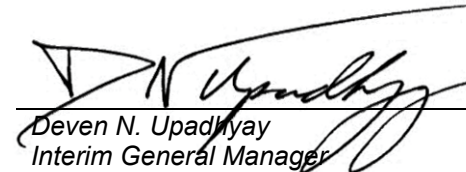
**Project Milestone**

No independent project milestones. Savings from conservation actions will be verified annually as is current practice.

  
\_\_\_\_\_  
Brandon J. Goshi  
Interim Manager  
Water Resource Management

8/15/2024

Date

  
\_\_\_\_\_  
Deven N. Upadhyay  
Interim General Manager

8/15/2024

Date

Ref# wrm12693575



One Water and Stewardship Committee

# Authorize Colorado River System Conservation Agreements

Item 8-1

August 19, 2024

## Item 8-1

# Authorize Colorado River System Conservation Agreements

### Subject

Authorize the General Manager to enter into (1) a forbearance agreement with Coachella Valley Water District, Imperial Irrigation District, Palo Verde Irrigation District, and the City of Needles to allow water conserved under the U.S. Bureau of Reclamation's conservation program to be added to Lake Mead, and (2) agreements with Imperial Irrigation District and San Diego County Water Authority under Reclamation's conservation program to add water conserved by Imperial Irrigation District to Lake Mead that would otherwise accrue San Diego County Water Authority

### Purpose

To obtain Board approval for agreements allowing water conserved by CVWD and IID to be added to Lake Mead under Reclamation's LC Conservation Program in 2024-26.

### Recommendation and Fiscal Impact

Authorize entering into agreements to allow water to be added to Lake Mead under Reclamation's LC Conservation Program in 2024-26.

### Budget

Not budgeted.

Metropolitan would benefit from increased revenues through increased full-service sales to SDCWA.



# Background

November 2023

**MWD Board approves  
forbearance for IID and  
CVWD Lower Colorado  
System Conservation  
projects for 2023**

December 2023

**MWD Board approves PVID,  
Bard, and Quechan Lower  
Colorado System  
Conservation projects**

June 2024

**Update on status of  
additional conservation  
projects under development  
and forbearance**



# Two Agreements for Board Approval

1

Forbearance Agreement with CVWD, IID, PVID,  
and City of Needles

2

Implementing Agreements with IID and SDCWA

# 2024-2026 Forbearance Agreement for System Conservation Projects

## Forbearance Agreements



- PVID System Conservation Project
- Bard System Conservation Project
- Quechan System Conservation Project

- IID Irrigation Reduction System Conservation Project
- CVWD's Agricultural System Conservation Project
- CVWD's Groundwater Replenishment System Conservation Project

**MWD Approved Forbearance  
in Previous Board Actions**

**MWD Approval for  
Forbearance Still Needed**

# Groundwater Replenishment Reduction in CVWD



## CVWD System Conservation Project

- ❖ Project: Reduction in groundwater replenishment
- ❖ Volume: 35,000 acre-feet per year
- ❖ Duration: 2024 and 2025

No Impact to MWD's Advanced Delivery Account

## Agricultural Conservation in CVWD



# CVWD System Conservation Project

- ❖ Project: Fallowing
- ❖ Volume: Up to 10,000 acre-feet per year
- ❖ Duration: 2024, 2025, 2026

# Irrigation Reduction in Imperial Irrigation District

## IID System Conservation Project

### ❖ Projects:

- IID's Existing On-Farm Conservation Program
  - Including water planned for transfer to SDCWA
- New Deficit Irrigation Program
- Potential Fallowing Program

### ❖ Volume:

- Annual: Up to 300,000 AF
- Cumulative: Up to 700,000 AF

### ❖ Duration: 2024, 2025, 2026



# Implementing Agreements with IID and SDCWA

## Terms

- Source: IID/SDCWA Transfer
- Volumes :
  - 2024: Up to 100,000 AF
  - 2025: Up to 100,000 AF
  - 2026: Up to 100,000 AF
- SDCWA agrees to purchase a like amount of MWD water

## Financial Impact

- Additional revenue dependent on volumes
  - Expected 50-75 TAF in 2024, would result in \$16.6M - \$24.9 M in extra revenue

Part of \$60M  
Revenue Target  
for FY24-25

# Board Options

- Option #1

Authorize the General Manager to enter into: (1) a forbearance agreement with Coachella Valley Water District, Imperial Irrigation District, Palo Verde Irrigation District, and the City of Needles to allow water conserved under the U.S. Bureau of Reclamation's conservation program to be added to Lake Mead, and (2) agreements with IID and San Diego County Water Authority under Reclamation's conservation program to add water conserved by Imperial Irrigation District to Lake Mead that would otherwise accrue to San Diego County Water Authority

- Option #2

Direct the General Manager not to enter into agreements under the proposed terms.

# Staff Recommendation

- Option #1





- **Board of Directors**  
***Finance and Asset Management Committee***

8/20/2024 Board Meeting

8-2

## Subject

Adopt the Twenty-Sixth Supplemental Resolution to the Master Bond Resolution authorizing the issuance of up to \$425 million of Water Revenue and Refunding Bonds, 2024 Series; providing the terms and conditions for the sale and issuance of the Bonds; and approve expenditures to fund the costs of issuance of the Bonds; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

The Twenty-Sixth Supplemental Resolution to the Master Bond Resolution (the Twenty-Sixth Supplemental Resolution) in **Attachment 1** would authorize the issuance of up to \$425 million of Water Revenue and Refunding Bonds. Bond proceeds would fund a portion of projected FYs 2025 and 2026 Capital Investment Plan (CIP) expenditures, reimburse a portion of capital expenditures made during FY 2024, and all or a portion of the costs of issuance.

## Proposed Action(s)/Recommendation(s) and Options

### Staff Recommendation: Option #1

#### Option #1

- Adopt the Twenty-Sixth Supplemental Resolution to the Master Bond Resolution authorizing the issuance of up to \$425 million of Water Revenue and Refunding Bonds, 2024 Series, and providing the terms and conditions for the sale and issuance of the Bonds; and
- Approve approximately \$1.2 million for the payment of the costs of issuance of the Water Revenue Bonds to be paid from bond proceeds or Metropolitan funds.

**Fiscal Impact:** Estimated increase in debt service payments of approximately \$20 million per year for the issuance of \$361 million of Water Revenue Bonds will be paid from net operating revenues.

**Business Analysis:** Approval would enable Metropolitan to access the capital markets to provide funding for ongoing capital expenditures in accordance with the Adopted Budget for Fiscal Years 2024/25 and 2025/26.

#### Option #2

Do not adopt the Twenty-Sixth Supplemental Resolution to the Master Bond Resolution.

**Fiscal Impact:** May miss the opportunity to fund capital expenditures at favorable interest rate levels, thereby resulting in higher debt service costs and/or higher water rates.

**Business Analysis:** Capital market access would be delayed, thereby limiting Metropolitan's options or ability to fund ongoing capital expenditures, or Metropolitan may have to curtail funding capital projects. Inflation could further increase the estimated cost of CIP projects if delayed.

## Alternatives Considered

Not applicable

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**Applicable Policy**

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Metropolitan Water District Act Section 57: Vote Required for Board Action

Metropolitan Water District Act Section 61: Ordinances, Resolutions and Orders

Metropolitan Water District Act Section 123: Borrowing, Limitation

Metropolitan Water District Act Sections 235-239.4: Revenue Bonds

Metropolitan Board Ordinance No. 126, dated March 12, 1974: Revenue Bond Election

Metropolitan Board Ordinance No. 151, dated September 15, 2020: Determining that the Interests of the District Require the Use of Revenue Bonds in the Aggregate Principal Amount of \$500,000,000 to Finance a Portion of Capital Expenditures

Metropolitan Board Ordinance No. 152, dated July 11, 2023: Determining that the Interests of the District Require the Use of Revenue Bonds in the Aggregate Principal Amount of \$500,000,000 to Finance a Portion of Capital Expenditures

By Minute Item 52790, dated April 12, 2022, the Board approved the FYs 2022/23 and 2023/24 Biennial Budget, and approved appropriations for debt service and approved budget for capital expenditures.

By Minute Item 53596, dated April 9, 2024, the Board approved the FYs 2024/25 and 2025/26 Biennial Budget, and approved appropriations for debt service and approved budget for capital expenditures.

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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**Related Board Action(s)/Future Action(s)**

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Approve and authorize the distribution of Appendix A for use in the issuance and remarketing of Metropolitan's Bonds, August 20, 2024

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**Summary of Outreach Completed**

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Not applicable

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**California Environmental Quality Act (CEQA)**

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**CEQA determination(s) for Option #1:**

The proposed action is not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment. (State CEQA Guidelines Section 15378(b)(4).)

**CEQA determination(s) for Option #2:**

None required

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**Details and Background**

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**Background**

On September 15, 2020, Metropolitan's Board adopted Ordinance No. 151, which determined that the interests of Metropolitan require the use of revenue bonds up to an aggregate amount of \$500 million to fund a portion of capital expenditures. On July 11, 2023, Metropolitan's Board adopted Ordinance No. 152, which similarly authorized the use of revenue bonds up to an aggregate amount of \$500 million to fund a portion of capital expenditures. There remains \$62,055,000 under Ordinance No. 151 and all of the \$500,000,000 authorized under Ordinance 152. The Twenty-Sixth Supplemental Resolution would authorize the issuance of up to \$425 million in bonds from the remaining \$562 million authorization under Ordinances No. 151 and No. 152.



If authorized, the bonds are expected to be issued in one or more series on a taxable or tax-exempt basis for federal income tax purposes. Annual debt service on \$361 million of bonds is estimated to be approximately \$20 million per year. The costs of issuance, estimated to be \$1.2 million, would be funded from bond proceeds or Metropolitan funds.

The proceeds from the sale of bonds under the Twenty-Sixth Supplemental Resolution would be used to pay for capital expenditures, primarily for Fiscal Years 2024/25 and 2025/26. The Biennial Budget for Fiscal Years 2024/25 and 2025/26, adopted by the Board on April 9, 2024, includes funding of \$626 million for CIP expenditures and \$98 million for Metropolitan's conservation program over the biennium period. A portion of the CIP expenditures are expected to be funded from operating revenues in the amount of \$175 million in FY 2024/25 and \$175 million in FY 2025/26. The remaining \$286 million of CIP expenditures are anticipated to be funded with the issuance of new revenue bonds. A portion of the conservation program expenditures are expected to be funded from operating revenues in the amount of \$25 million in FY 2024/25 and \$25 million in FY 2025/26. The remaining \$48 million of conservation expenditures are anticipated to be funded with the issuance of new revenue bonds. Under current market conditions, issuance of \$362.6 million in par would provide approximately \$393.3 million in total proceeds (including premium) necessary to fund the CIP and conservation program requirements in the Adopted Budget for the current biennium and refinance several outstanding short-term note obligations that were issued as part of an interim funding plan of expenditures in the prior biennium budget period.

Consistent with past board practice, the Twenty-Sixth Supplemental Resolution establishes an Ad Hoc Committee of the Board with authority to determine the aggregate principal amount and the terms and conditions of each sale of bonds. The Ad Hoc Committee consists of the Chair of the Board, the Chair of the Finance and Asset Management Committee, and the General Manager.

  
\_\_\_\_\_  
Katano Kasaine  
Assistant General Manager/  
Chief Financial Officer  
8/12/2024  
Date

  
\_\_\_\_\_  
Deven Upadhyay  
Interim General Manager  
8/13/2024  
Date

**Attachment 1 – Resolution Authorizing The Issuance Of Up To \$425,000,000 Of Water Revenue and Refunding Bonds and Providing The Terms And Conditions For The Sale And Issuance Of Said Water Revenue Bonds (Twenty-Sixth Supplemental Resolution)**

Ref# cfo12702667

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA  
RESOLUTION \_\_\_\_\_

RESOLUTION AUTHORIZING THE ISSUANCE OF UP TO  
\$425,000,000 OF WATER REVENUE BONDS  
AND PROVIDING THE TERMS AND CONDITIONS  
FOR THE SALE AND ISSUANCE OF SAID WATER REVENUE BONDS  
(TWENTY-SIXTH SUPPLEMENTAL RESOLUTION)

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THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

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RESOLUTION AUTHORIZING THE ISSUANCE OF UP TO  
\$425,000,000 WATER REVENUE BONDS  
AND PROVIDING THE TERMS AND CONDITIONS  
FOR THE SALE AND ISSUANCE OF SAID WATER REVENUE BONDS  
(TWENTY-SIXTH SUPPLEMENTAL RESOLUTION)

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WHEREAS, pursuant to the Act (as defined in the Master Resolution described below), the Board of Directors of The Metropolitan Water District of Southern California (the “District”) may authorize the issuance of revenue bonds for any purpose permitted under the Act;

WHEREAS, pursuant to Resolution 8329 adopted by the District on July 9, 1991, as amended and supplemented (the “Master Resolution”), the District has authorized the issuance of The Metropolitan Water District of Southern California Water Revenue Bonds (the “Bonds”) by adoption of supplemental resolutions from time to time, with the payment of the principal of, interest on, and any redemption premiums thereon being secured by and payable solely from the Net Operating Revenues (as defined in the Master Resolution) of the District;

WHEREAS, pursuant to Ordinance 151 adopted by the District on September 15, 2020, the District has determined that the interests of the District require the use of revenue bonds in the aggregate principal amount of \$500,000,000 to fund a portion of the District’s capital expenditures, the cost of which is too great to be paid out of the ordinary annual income and revenue of the District;

WHEREAS, of the \$500,000,000 aggregate principal amount of revenue bonds authorized under Ordinance 151 to fund a portion of the District’s capital expenditures, \$62.055 million remains authorized to be issued;

WHEREAS, pursuant to Ordinance 152 adopted by the District on July 11, 2023, the District has determined that the interests of the District require the use of revenue bonds in the aggregate principal amount of \$500,000,000 to fund a portion of the District’s capital expenditures, the cost of which is too great to be paid out of the ordinary annual income and revenue of the District;

WHEREAS, of the \$500,000,000 aggregate principal amount of revenue bonds authorized under Ordinance 152 to fund a portion of the District's capital expenditures, \$500 million remains authorized to be issued;

WHEREAS, the interests of the District require the District to proceed under the Master Resolution and Ordinances 151 and 152, and issue and sell from time to time revenue bonds in an aggregate principal amount not to exceed \$425,000,000 secured by and payable from the Net Operating Revenues for the purpose of, among other things, (i) paying all or a portion of the costs of acquisition, construction and improvements to the Water System (as defined in the Master Resolution) in the approximate principal amount of \$100,000,000, (ii) to refund or prepay certain outstanding Parity Obligations in the approximate principal amount of \$325,000,000, and (iii) to pay costs incurred in connection with the issuance of the Bonds; and

WHEREAS, the District desires to adopt this Supplemental Resolution to the Master Resolution (the "Twenty-Sixth Supplemental Resolution") for the purposes of authorizing the issuance of revenue bonds;

NOW, THEREFORE, the Board of Directors of the District, DOES HEREBY RESOLVE, DETERMINE AND ORDER as follows:

## ARTICLE I

### AUTHORIZATION OF BONDS; DEFINITIONS

SECTION 1.01 Definitions. All terms which are defined in Section 1.01 of the Master Resolution or in the Act shall, unless otherwise defined herein, have the same meanings, respectively, in this Twenty-Sixth Supplemental Resolution. Unless the context otherwise requires, the terms defined in this Section shall, for all purposes of this Twenty-Sixth Supplemental Resolution and of any certificate, opinion or other document herein mentioned, have the meanings herein specified, to be equally applicable to both the singular and the plural forms of any of the terms herein defined.

"Ad Hoc Committee" has the meaning set forth in Section 5.01 hereof.

"Authorized Denominations" means, with respect to the Fixed Rate Bonds, \$5,000 and integral multiples thereof, and with respect to the Variable Rate Bonds, except as otherwise set forth in the applicable Trust Agreement, \$100,000 and integral multiples of \$5,000 in excess thereof.

"Bond Reserve Requirement" means the reserve requirement established for a Series of Bonds under the terms of the Sales Documents or Trust Agreement with respect to such Series and pursuant to the terms of Section 3.04 hereof.

"Bonds" means the Bonds described in Section 2.01 hereof, authorized and issued pursuant to the Master Resolution, as supplemented by this Twenty-Sixth Supplemental Resolution, and includes Fixed Rate Bonds and Variable Rate Bonds.



“Capital Appreciation Bonds” means the Bonds issued as Capital Appreciation Bonds as described in Section 2.02(B) of this Twenty-Sixth Supplemental Resolution.

“Current Interest Bonds” means the Bonds issued as Current Interest Bonds as described in Section 2.02(A) of this Twenty-Sixth Supplemental Resolution.

“Code” means the Internal Revenue Code of 1986, as amended.

“Construction Costs” means the cost of acquiring, constructing, reconstructing, replacing, extending and improving any project eligible to be financed under the Act.

“Construction Fund” means, with respect to a Series of Bonds, the Construction Fund, established for such Series pursuant to Section 3.03 hereof.

“Continuing Disclosure Certificate” means, with respect to a Series of Bonds, the Continuing Disclosure Certificate or Undertaking of the District, delivered by the District in connection with the issuance of such Series of Bonds.

“Costs of Issuance” means all items of expense directly or indirectly payable by or reimbursable to the District and related to the authorization, execution, sale and delivery of a Series of Bonds, including but not limited to advertising and printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of any agent including any Fiscal Agent, Paying Agent, Remarketing Agent, legal fees and charges, underwriter discounts, fees and disbursements of consultants and professionals, financial advisor fees and expenses, rating agency fees, fees and charges for preparation, execution, transportation and safekeeping of the Bonds, and any other cost, charge or fee in connection with the delivery of the Bonds.

“Costs of Issuance Fund” means, with respect to a Series of Bonds, the Costs of Issuance Fund established for such Series pursuant to Section 3.02 hereof.

“DTC” means the Depository Trust Company, New York, New York, and its successors and assigns.

“Excess Earnings Fund” means, with respect to a Series of Bonds, the Water Revenue Excess Earnings Fund established for such Series pursuant to Section 3.05 hereof.

“Final Compounded Amount” shall have the meaning ascribed to such term in the Master Resolution; provided that upon redemption of any Capital Appreciation Bonds prior to their respective maturity date, then such term shall refer to the Accreted Value of such Bonds on their respective redemption date.

“Fiscal Agent” means the fiscal agent appointed pursuant to Section 4.01 hereof.

“Fixed Rate Bonds” means Bonds other than Variable Rate Bonds.

“Master Resolution” means Resolution 8329 adopted by the District on July 9, 1991, as from time to time amended and supplemented.

“Nominee” means the nominee of the Securities Depository, which may be the Securities Depository, as determined from time to time pursuant hereto.

“Participants” means those broker-dealers, banks and other financial institutions for which the Securities Depository directly or indirectly holds certificates as securities depository.

“Paying Agent” means a paying agent appointed pursuant to Section 4.01 of this Twenty-Sixth Supplemental Resolution.

“Record Date” means, with respect to Fixed Rate Bonds of a Series, the close of business on the fifteenth (15th) day of each month preceding an interest payment date, and with respect to Variable Rate Bonds of a Series means the record date established pursuant to the applicable Trust Agreement.

“Remarketing Agent” means, with respect to a Series of Variable Rate Bonds, a remarketing agent appointed by the District from time to time pursuant to the applicable Trust Agreement.

“Representation Letter” means a representation letter from the District to the Securities Depository as described in Section 2.09 hereof.

“Reserve Fund” means, with respect to a Series of Bonds, the Reserve Fund established for such Series pursuant to Section 3.04 hereof.

“Reserve Fund Credit Policy” means, with respect to a Series of Bonds, an insurance policy, surety bond, letter of credit or other credit facility deposited with the Fiscal Agent pursuant to Section 3.04(D) hereof.

“Sales Documents” means, in the case of a negotiated sale, that certain bond purchase contract or other agreement for the purchase of one or more Series of Bonds between the District and the Underwriters for such Series or, in the case of a competitive sale, the notice of sale, bid form and other documents providing for the sale of one or more Series of Bonds by the District to the Underwriters.

“Securities Depository” means the Securities Depository acting as such hereunder (initially DTC) and which may be the District.

“Twenty-Sixth Supplemental Resolution” means this resolution of the District, and any amendments, modifications or supplements hereto.

“Tax Certificate” means, with respect to a Series of Bonds, the Tax and Nonarbitrage Certificate of the District delivered by the District in connection with the issuance of such Series of Bonds.

“Trust Agreement” means the trust agreement, paying agent agreement or such other instrument or instruments executed and delivered in connection with the issuance of a Series of Bonds and which sets forth the terms and conditions of such Series of Bonds and which appoints any Paying Agent, Remarketing Agent or other agent with respect to such Series of Bonds.

“Underwriters” means, with respect to a Series of Bonds, in the case of a negotiated sale, the original purchaser or purchasers of such Series of Bonds and in the case of a competitive sale, the successful bidder or bidders for such Series of Bonds.

“Variable Rate Bonds” means Bonds bearing interest as determined from time to time by a Remarketing Agent or a calculation agent, pursuant to an index or otherwise in accordance with the provisions of the Trust Agreement with respect to such Series of Bonds.

## ARTICLE II

### THE BONDS

SECTION 2.01 Authorization. Bonds are hereby authorized to be issued pursuant to the Act and the Master Resolution. The Bonds shall be designated as “The Metropolitan Water District of Southern California Water Revenue and Refunding Bonds, 2024 Series (the “Bonds”); or as otherwise designated by the District. The Bonds may be issued in one or more Series at one time or from time to time in accordance with the terms hereof, and each Series of Bonds shall bear such additional designation as may be ascribed thereto in the Sales Documents for such Series. A Series of Bonds may be issued on a taxable or tax-exempt basis for federal income tax purposes. A Series of Bonds may be issued as Fixed Rate Bonds (including Current Interest Bonds and Capital Appreciation Bonds) or Variable Rate Bonds and shall be issued in the aggregate principal amount specified in the Sales Documents for such Series; provided, however, in no event shall the total aggregate principal amount of the Bonds exceed \$425,000,000.

#### SECTION 2.02 Terms of the Bonds.

(A) Current Interest Bonds. Each Series of Current Interest Bonds, if any, shall be Current Interest Bonds as described in the Master Resolution and shall be issued in the aggregate principal amount and be dated such date as shall be specified in the Sales Documents for such Series, shall bear interest from such dated date at the rates and shall mature on the date or dates and in the principal amount or amounts set forth in such Sales Documents, or Trust Agreement, if any, for such Series. Each Series of Current Interest Bonds, if any, shall be delivered in fully registered form in principal amounts in Authorized Denominations, and shall be numbered in such manner as the Fiscal Agent determines.

The Sales Documents or Trust Agreement, if any, with respect to a Series of Bonds shall designate which, if any, of the Current Interest Bonds of such Series shall be Term Bonds.

(B) Capital Appreciation Bonds. Each Series of Capital Appreciation Bonds shall be Capital Appreciation Bonds as described in the Master Resolution and, if any shall be issued, shall be issued in the aggregate Initial Amount, shall mature on the dates and have a yield to maturity as set forth in the Sales Documents for such Series. The Capital Appreciation Bonds, if any, shall be issued, shall be dated the date of delivery thereof, shall be delivered in fully registered form with Final Compounded Amounts in Authorized Denominations, and shall be numbered in such manner as determined by the Fiscal Agent.

The Accreted Value for a Capital Appreciation Bond having a \$5,000 Final Compounded Amount shall be illustrated by the Accreted Value Table set forth as an exhibit to the Sales Documents for such Capital Appreciation Bonds.

(C) Sources of Payment. The payment of the principal, Accreted Value and Final Compounded Amount of, and interest and any redemption premiums on the Bonds shall be secured by and payable solely from Net Operating Revenues and other funds pledged under the Master Resolution and the Twenty-Sixth Supplemental Resolution.

#### SECTION 2.03 Interest.

(A) Current Interest Bonds. The Current Interest Bonds of any Series which are Fixed Rate Bonds, if any, shall bear interest at the rates set forth in the Sales Documents for such Series (calculated on the basis of a 360-day year consisting of twelve 30-day months), payable on the dates set forth in such Sales Documents. Current Interest Bonds of any Series which are Variable Rate Bonds, if any, shall bear interest as determined pursuant to the Trust Agreement for such Series (calculated on the basis of a 365- or 366-day year, as applicable, and actual days elapsed, unless otherwise provided in the Trust Agreement) payable as provided in such Trust Agreement. Each Current Interest Bond shall bear interest from the interest payment date before the date of authentication thereof unless it is authenticated during the period after a Record Date but on or before the next interest payment date, in which event it shall bear interest from that interest payment date, or unless it is authenticated prior to the first Record Date, in which event it shall bear interest from the dated date of the Current Interest Bonds specified in the Sales Documents, or Trust Agreement if any, or unless at the time of authentication interest is in default, in which event it shall bear interest from the interest payment date to which interest has been paid or provided for.

(B) Capital Appreciation Bonds. Interest with respect to the Capital Appreciation Bonds of any maturity shall be compounded at the original yield thereof set forth in the Sales Documents on the dates specified in such Sales Documents, computed using a year of 360 days comprised of twelve months of 30 days and shall be payable only at maturity or upon redemption as part of the Accreted Value. Accreted Value on any date other than the dates on which interest is compounded as specified in such Sales Documents shall be calculated by straight line interpolation of the Accreted Value as of the immediately preceding and succeeding dates on which interest is compounded as specified in such Sales Documents.

(C) Payment of Interest. Each Bond shall bear or accrete interest until the principal or Final Compounded Amount thereof has been paid; provided, however, that if at the maturity date of any Bond or if on the redemption date thereof if the same has been fully called for redemption, in each case, funds are available for the payment thereof in full in accordance with the terms of Article IX of the Master Resolution, such Bond shall then cease to bear or accrete interest.

SECTION 2.04 Place of Payment. Subject to Section 2.08 hereof, for so long as the Treasurer is the Fiscal Agent, the principal or Final Compounded Amount of the Bonds shall be payable in lawful money of the United States of America upon presentation and surrender of such Fixed Rate Bonds at the corporate office of the District. Interest on the Current Interest Bonds shall be paid by check or draft mailed by first class mail to the persons whose names appear on the

registration books of the Fiscal Agent as the registered Owners of such Current Interest Bonds as of the close of business on the Record Date at such persons' addresses as they appear on such registration books, except that an Owner of \$1,000,000 or more in principal amount of Fixed Rate Bonds which are Current Interest Bonds may be paid interest by wire transfer to an account in the United States if such Owner makes a written request of the Fiscal Agent at least thirty (30) days preceding any interest payment date specifying the wire transfer instructions for such Owner. Such notice may provide that it will remain in effect for later interest payments until changed or revoked by another written notice. Payments of default interest shall be paid by check, draft or wire transfer to the Owners as of a special record date to be fixed by the Fiscal Agent, notice of which special record date shall be given to the Owners by the Fiscal Agent not less than ten (10) days prior thereto. Principal of and interest on the Variable Rate Bonds shall be payable as provided in the applicable Trust Agreement.

#### SECTION 2.05 Redemption.

(A) Optional Redemption. The Fixed Rate Bonds of any Series shall be subject to call and redemption prior to maturity, at the option of the District, in the amounts, at the redemption prices and on the dates set forth in the Sales Documents with respect to such Series. The Variable Rate Bonds of any Series shall be subject to call or redemption as provided in the Trust Agreement with respect to such Series.

(B) Mandatory Sinking Account Payments. The Term Bonds of any Series, if any, shall be called before maturity and redeemed at a redemption price equal to the par amount thereof from Mandatory Sinking Account Payments with respect to such Series which have been deposited in the Bond Service Fund, in the amounts and upon the dates established for each such maturity, as set forth in the Sales Documents or Trust Agreement, as the case may be, with respect to such Series.

(C) Disposition of Redemption Rights. The Sales Documents applicable to a Series of Bonds may contain provisions with respect to the sale or disposition of the right of the District to redeem any Bonds of such Series.

(D) Conditional Notice of Redemption. In addition to the notice requirements for redemption included in the Master Resolution, each such notice may also state that the proposed redemption is conditioned on there being on deposit in the applicable fund or account on the Redemption Date sufficient money to pay the full Redemption Price of the Bonds to be redeemed. Upon deposit of sufficient money to pay the full Redemption Price and provision of irrevocable instructions to the Fiscal Agent or Paying Agent to apply such money to the payment of the Redemption Price and interest with respect to the Bonds to be redeemed, all liability of the District in respect of such Bonds shall be discharged as provided in Section 9.02 of the Master Resolution.

SECTION 2.06 Form of Bonds. Except as otherwise provided in the applicable Sales Documents, the Current Interest Bonds and Capital Appreciation Bonds of each Series that are Fixed Rate Bonds shall be issued in substantially the form set forth in Exhibit A1 and Exhibit A2, respectively, which exhibits are incorporated herein by this reference as if set forth in full. The Variable Rate Bonds of each Series shall be issued in substantially the form set forth in the Trust Agreement relating to such Series of Bonds.

SECTION 2.07 CUSIP Identification Numbers. CUSIP identification numbers shall be ordered by the Underwriters and caused by the District to be printed on the Bonds, but such numbers shall not be deemed a part of the Bonds or a part of the contract evidenced thereby and no liability shall attach to the District or its officers, employees or agents because of or on account of such CUSIP identification numbers.

SECTION 2.08 Book-Entry System. Except as otherwise provided in the Trust Agreement with respect to Variable Rate Bonds of any Series, the Bonds shall be initially issued in the form of a single (unless more than a single Bond is required by the Securities Depository), separate, fully registered Bond (which may be typewritten) for each of the maturities of the Bonds. Upon initial issuance, the ownership of each such Bond shall be registered in the Bond Register of the Fiscal Agent in the name of the Nominee of the Securities Depository. Except as provided in Section 2.10 hereof, the ownership of each Outstanding Bond shall be registered in the Bond Register of the Fiscal Agent in the name of the Nominee.

With respect to the Bonds registered in the Bond Register of the Fiscal Agent in the name of the Nominee, the District and the Fiscal Agent shall have no responsibility or obligation to any Participant or to any person on behalf of which a Participant holds an interest in the Bonds. Without limiting the immediately preceding sentence, the District and the Fiscal Agent shall have no responsibility or obligation (unless the Fiscal Agent is at such time the Securities Depository) with respect to (i) the accuracy of the records of the Securities Depository, the Nominee or any Participant with respect to any ownership interest in the Bonds, (ii) the delivery to any Participant or any other person, other than an Owner as shown in the Bond Register of the Fiscal Agent, of any notice with respect to the Bonds, or (iii) the payment to any Participant or any other person, other than an Owner as shown in the Bond Register of the Fiscal Agent, of any amount with respect to principal of or interest and premium, if any, on the Bonds. The District and the Fiscal Agent may treat and consider the person in whose name each Bond is registered in the Bond Register of the Fiscal Agent as the holder and absolute Owner of such Bond for the purpose of payment of principal or Final Compounded Amount of, and interest on, such Bond, for the purpose of giving notices and other matters with respect to such Bond, and for all other purposes whatsoever.

The Fiscal Agent shall pay all principal and Accreted Value of and interest on the Bonds only to or upon the order of the respective Owners, as shown in the Bond Register of the Fiscal Agent, or their respective attorneys, duly authorized in writing, and all such payments shall be valid and effective to fully satisfy and discharge the obligations hereunder with respect to the payment of principal and Final Compounded Amount of, and interest on, the Bonds to the extent of the sum or sums so paid. No person other than an Owner, as shown in the Bond Register of the Fiscal Agent, shall receive a Bond evidencing the obligation to make payments of principal, Final Compounded Amount and interest and premium, if any, pursuant to this Twenty-Sixth Supplemental Resolution. Upon delivery by the Securities Depository to the Fiscal Agent and the District of written notice to the effect that the Securities Depository has determined to substitute a new nominee in place of the Nominee, and subject to the provisions herein with respect to record dates, the word Nominee in this Twenty-Sixth Supplemental Resolution shall refer to such new nominee of the Securities Depository.

SECTION 2.09 Representation Letter. To qualify the Bonds for the Securities Depository's book-entry system, the Authorized Representative is hereby authorized to execute

and deliver on behalf of the District to such Securities Depository a letter, if necessary, from the District representing such matters as shall be necessary to so qualify the Bonds (the "Representation Letter"). The execution and delivery of the Representation Letter shall not in any way limit the provisions of Section 2.08 hereof or in any other way impose upon the District any obligation whatsoever with respect to persons having interests in the Bonds other than the Owners, as shown on the Bond Register of the Fiscal Agent. In the Representation Letter, the Fiscal Agent shall agree to take all actions necessary to comply with all representations of the District in the Representation Letter. In addition to the execution and delivery of the Representation Letter, each Authorized Representative of the District is hereby authorized to take any other actions, not inconsistent with this Twenty-Sixth Supplemental Resolution, to qualify the Bonds for the Securities Depository's book-entry program.

SECTION 2.10 Transfers Outside Book-Entry System. In the event (i) the Securities Depository determines not to continue to act as securities depository for the Bonds, or (ii) the District determines that the Securities Depository shall, subject to the provisions of the applicable Trust Agreement with respect to Variable Rate Bonds of such Series, no longer so act and delivers a written certificate to the Fiscal Agent to that effect, then the District will discontinue the book-entry system with the Securities Depository. Subject to the provisions of the applicable Trust Agreement with respect to Variable Rate Bonds of any Series, if the District determines to replace the Securities Depository with another qualified securities depository, the District shall prepare or direct the preparation of a new, single, separate, fully registered Bond for each of the maturities of the Bonds, registered in the name of such successor or substitute qualified securities depository or its nominee, or make such other arrangement acceptable to the District and the Securities Depository as are not inconsistent with the terms of this Twenty-Sixth Supplemental Resolution. If the District fails to identify another qualified securities depository to replace the Securities Depository, then the Bonds shall no longer be restricted to being registered in the Bond Register of the Fiscal Agent in the name of the Nominee, but shall be registered in whatever name or names the Participants transferring or exchanging Bonds shall designate, in accordance with the provisions of Article II of the Master Resolution and, with respect to the Variable Rate Bonds, the provisions of the applicable Trust Agreement.

SECTION 2.11 Payments and Notices to the Nominee. Notwithstanding any other provision of this Twenty-Sixth Supplemental Resolution or the Master Resolution to the contrary, so long as any Bond is registered in the name of the Nominee, all payments with respect to principal and Final Compounded Amount of, and interest and premium, if any, on, such Bond and all notices with respect to such Bond shall be made and given, respectively, as provided in the Representation Letter or as otherwise instructed by the Securities Depository.

SECTION 2.12 Initial Depository and Nominee. The initial Securities Depository under this Twenty-Sixth Supplemental Resolution shall be DTC. The initial Nominee shall be Cede & Co., as Nominee of DTC.



### ARTICLE III

#### APPLICATION OF BOND PROCEEDS; ESTABLISHMENT OF FUNDS; COVENANTS

SECTION 3.01 Application of Proceeds of Bonds. The proceeds of the sale of a Series of Bonds and such other moneys as are available and necessary to accomplish the purposes of this Twenty-Sixth Supplemental Resolution from time to time shall be deposited with the Treasurer and shall be held in trust and, unless otherwise specified in a Certificate of an Authorized Representative, shall be set aside by the Treasurer as follows:

(a) The Treasurer shall deposit in the Bond Service Fund the amount of such proceeds representing interest accrued, if any, on such Series of Bonds to the date of delivery thereof.

(b) The Treasurer shall deposit in the applicable Reserve Fund, if any, for each Series of Bonds an amount equal to the Bond Reserve Requirement for each such Series of Bonds or provide for a Reserve Fund Credit Policy to satisfy the Bond Reserve Requirement for each such Series of Bonds.

(c) The Treasurer shall deposit in the Costs of Issuance Fund for the applicable Series of Bonds the amount of such proceeds necessary to pay all Costs of Issuance that are not to be paid from other sources.

(d) To the extent all or a portion of a Series of Bonds is issued to refund or prepay outstanding Parity Obligations, the Treasurer shall cause the proceeds of a Series of Bonds issued for such purpose to be applied to the refunding or prepayment of such outstanding Parity Obligations.

(e) The remaining proceeds shall be deposited in the Construction Fund for the applicable Series of Bonds.

#### SECTION 3.02 Establishment and Application of Costs of Issuance Funds.

(A) The District shall establish, and the Treasurer shall maintain and hold in trust one or more separate funds which shall be designated as the “Water Revenue and Refunding Bonds 2024 Series \_\_\_\_\_ Costs of Issuance Fund” (inserting the designation for each Series or multiple Series of Bonds, as applicable), and shall bear such additional designation as shall be determined by an Authorized Representative. The moneys in each such Costs of Issuance Fund shall be used and withdrawn by the Treasurer to pay Costs of Issuance incurred in connection with the issuance of the applicable Series of Bonds. The Treasurer shall hold moneys in each such Costs of Issuance Fund uninvested until expended unless directed otherwise by a Certificate of an Authorized Representative. Any amounts remaining in a Costs of Issuance Fund six months following the date of issuance of the Bonds with respect thereto either (i) shall be transferred to the corresponding Construction Fund and applied as provided in Section 3.03 or (ii) shall be applied for such other lawful purposes determined by the District as are approved in an Opinion of Bond Counsel to the effect that such action shall not, in and of itself, adversely affect the tax-exempt status of interest on the Bonds.

(B) The Treasurer shall keep a record of all payments from each Costs of Issuance Fund, which record shall state: (i) the item number of such payment; (ii) the name and address of the person to whom each such payment is due, which may be the District in the case of reimbursement for costs theretofore paid by the District; and (iii) the purpose by general classification for which each obligation to be paid was incurred.

**SECTION 3.03    Establishment and Application of Construction Funds.**

(A) The District shall establish, and the Treasurer shall maintain and hold in trust, one or more separate funds which shall be designated as the “Water Revenue and Refunding Bonds 2024 Series \_\_\_\_\_ Construction Fund” (inserting the designation for each Series or multiple Series of Bonds, as applicable), and shall bear such additional designation as shall be determined by an Authorized Representative. The moneys in each Construction Fund shall be used and withdrawn by the Treasurer to pay Construction Costs. All investment earnings on funds held in each Construction Fund shall be credited to such fund unless otherwise specified in a Certificate of an Authorized Representative.

(B) The Treasurer shall keep a record of all payments from each Construction Fund, which record shall state: (i) the item number of such payment; (ii) the name and address of the person to whom each such payment is due, which may be the District in the case of reimbursement for costs theretofore paid by the District; and (iii) the purpose by general classification for which each obligation to be paid was incurred.

**SECTION 3.04    Establishment, Pledge, Funding and Application of Reserve Funds.**

(A) In connection with the issuance of each Series of Bonds pursuant to this Twenty-Sixth Supplemental Resolution, the District may establish and, if established, the Treasurer shall maintain and hold in trust a separate fund for such Series designated as the “Water Revenue and Refunding Bonds 2024 Series \_\_\_\_\_ Reserve Fund” (inserting the designation for each Series or multiple Series of Bonds, as applicable) and shall bear such additional designation as shall be determined by an Authorized Representative. Each Reserve Fund shall be funded as set forth in Section 3.01 hereof and applied as set forth in this Section 3.04. All amounts held by the Treasurer in a Reserve Fund established with respect to a Series of Bonds shall be pledged to secure the payment of the principal and Final Compounded Amount of, and interest on, such Series of Bonds in accordance with their terms.

(B) The District shall at all times maintain an amount equal to the applicable Bond Reserve Requirement in a Reserve Fund established with respect to a Series of Bonds until such Series is discharged in accordance with the provisions of Article IX of the Master Resolution. The amount of the Bond Reserve Requirement applicable to a designated Series of Bonds shall be set forth in the Sales Documents for such Series of Bonds. In the event of any deficiency in a Reserve Fund, the Treasurer shall replenish such deficiency in accordance with the provisions of Section 5.07 of the Master Resolution.

(C) All amounts in a Reserve Fund established with respect to a Series of Bonds shall be used and withdrawn by the Treasurer, as hereinafter provided, solely for the purpose of (i) paying principal and Final Compounded Amount of, and interest on, such Series of Bonds in the

event moneys in the Bond Service Fund are insufficient, or (ii) for the payment of the final principal and Final Compounded Amount and interest payment on such Series of Bonds. Any amounts in a Reserve Fund established with respect to a Series of Bonds in excess of the Bond Reserve Requirement for such Series shall be transferred to the Bond Service Fund for such Series unless otherwise specified in a Certificate of an Authorized Representative.

All Authorized Investments credited to a Reserve Fund shall be valued as of June 30 of each year (or the next preceding or succeeding Business Day, as determined by the District, if such day is not a Business Day) at their fair market value determined to the extent practical by reference to the closing bid price thereof published in The Wall Street Journal or any other financial publication or quotation service selected by the Treasurer at his or her discretion.

(D) Notwithstanding anything herein to the contrary, at the option of the District, amounts required to be held in a Reserve Fund may be substituted, in whole or in part, by the deposit with the Fiscal Agent of a Reserve Fund Credit Policy in a stated amount equal to the amounts so substituted, provided that prior to the substitution of such Reserve Fund Credit Policy the Rating Agencies shall have been notified of such proposed substitution and the substitution shall not result in a downgrading or withdrawal of any rating of such Series of Bonds then in effect by the Rating Agencies. Any such substituted moneys shall be applied as provided in a Certificate of an Authorized Representative.

So long as a Reserve Fund Credit Policy shall be in force and effect with respect to such Series of Bonds, any deposits required to be made with respect to the applicable Reserve Fund pursuant to Section 5.07 of the Master Resolution shall include any amounts due to the provider of such Reserve Fund Credit Policy resulting from a draw on such Reserve Fund Credit Policy (which amounts shall constitute a “deficiency” or “withdrawal” from the applicable Reserve Fund within the meaning of Section 5.07 of the Master Resolution). Any such amounts shall be paid to the provider of such Reserve Fund Credit Policy as provided in such Reserve Fund Credit Policy or any related agreement.

**SECTION 3.05** Establishment and Application of Excess Earnings Funds. To ensure proper compliance with the tax covenants contained in Section 3.06 hereof, the District shall establish when required and, if established, the Treasurer shall maintain, a fund for each Series of Bonds issued hereunder the interest on which is intended to be excluded from gross income for federal income tax purposes, which fund, if any, shall be separate from any other fund or account established and maintained hereunder or under the Master Resolution. The fund, if any, shall be designated as the “Water Revenue and Refunding Bonds 2024 Series \_\_\_\_\_ Excess Earnings Fund” (inserting the designation for each Series or multiple Series of Bonds, as applicable), and shall bear such additional designation as shall be determined by an Authorized Representative. All money at any time deposited in the Excess Earnings Fund with respect to a Series of Bonds in accordance with the provisions of the Tax Certificate applicable to such Series shall be held by the Treasurer for the account of the District in trust for payment to the federal government of the United States of America, and neither the District nor the Owner of any bonds of such Series of Bonds shall have any rights in or claim to such money. All amounts deposited into or on deposit in any such Excess Earnings Fund shall be governed by this Twenty-Sixth Supplemental Resolution and by the applicable Tax Certificate. The Treasurer shall invest all amounts held in any such Excess Earnings Fund in accordance with the applicable Tax Certificate. Money shall

not be transferred from the Excess Earnings Fund established for a Series of Bonds except in accordance with the Tax Certificate with respect to such Series.

SECTION 3.06 Tax Covenants. In order to maintain the exclusion from gross income of the interest on each Series of Bonds issued hereunder the interest on which is intended to be excluded from gross income for federal income tax purposes, the District covenants to comply with each applicable requirement of Section 103 and Sections 141 through 150 of the Code and the District agrees to comply with the covenants contained in, and the instructions given pursuant to, each Tax Certificate which by this reference is incorporated herein, as a source of guidance for compliance with such provisions.

Notwithstanding any other provisions of the Master Resolution or this Twenty-Sixth Supplemental Resolution to the contrary, upon the District's failure to observe, or refusal to comply with, the foregoing covenant, no Person other than the Owners of the Bonds shall be entitled to exercise any right or remedy provided to the Owners under the Master Resolution or this Twenty-Sixth Supplemental Resolution on the basis of the District's failure to observe, or refusal to comply with, such covenant.

SECTION 3.07 Establishment and Application of Additional Funds. In addition to the funds established pursuant to the Master Resolution and this Twenty-Sixth Supplemental Resolution, there shall be established and maintained such additional funds and/or accounts as shall be set forth in the Trust Agreement, if any, including funds with respect to the purchase and remarketing of Variable Rate Bonds, with respect to the payments to be made by the District under any interest rate swap agreement or agreements entered into by the District, and for such other purposes as the District or the Fiscal Agent deem necessary or desirable.

#### ARTICLE IV

##### FISCAL AGENT AND PAYING AGENT

SECTION 4.01 Fiscal Agent and Paying Agent. The Treasurer of the District is hereby appointed as Fiscal Agent with respect to the Bonds. In addition, with respect to a Series of Variable Rate Bonds, if any, an Authorized Representative may appoint a Paying Agent, which shall have such duties as shall be set forth in the respective Trust Agreement.

#### ARTICLE V

##### SALE OF BONDS; APPROVAL OF SALES DOCUMENTS, TRUST AGREEMENTS AND OTHER DOCUMENTS

SECTION 5.01 Ad Hoc Committee. The Chair of the Board, or in the event of a vacancy, the Acting Chair of the Board, the Chair of the Finance and Asset Management Committee of the Board (or in the event the Finance and Asset Management Committee is renamed, dissolved, or reorganized, such other committee of the Board which shall have substantially all of the duties of the Finance and Asset Management Committee prior to such renaming, dissolution, or reorganization), or in the event of a vacancy, the Vice Chair or Acting Chair of the Finance and Asset Management Committee of the Board (or in the event the Finance

and Asset Management Committee is renamed, dissolved, or reorganized, such other committee of the Board which shall have substantially all of the duties of the Finance and Asset Management Committee prior to such renaming, dissolution, or reorganization), and the General Manager or his or her designee, or in the event of a vacancy, the Acting General Manager or the Interim General Manager, as applicable, or his or her designee, acting jointly, are hereby constituted an ad hoc committee (the "Ad Hoc Committee").

SECTION 5.02 Approval of Sales Documents, Trust Agreements and Other Documents. The Ad Hoc Committee is authorized and directed to determine on behalf of the District the aggregate principal amount, terms and conditions of each Series of Bonds, and the terms and conditions of the sale of each Series of Bonds at either a private sale or a competitive sale to one or more purchasers. The Ad Hoc Committee is hereby empowered to establish on behalf of the District such aggregate principal amount, terms and conditions of each Series of Bonds, and the terms and conditions of the sale of each Series of Bonds to the Underwriters, as the members of the Ad Hoc Committee shall agree upon in their sole discretion as being in the best interests of the District, subject only to the provisions of the Act and of this Twenty-Sixth Supplemental Resolution, and shall be so empowered solely to implement the fundamental policies established by this Twenty-Sixth Supplemental Resolution in a manner that is most advantageous to the District, and, if required, to deem the preliminary official statement relating to each Series of Bonds as being final within the meaning of Rule 15c2-12 promulgated under the Securities Exchange Act of 1934, as amended.

Such aggregate principal amount, terms and conditions of each Series of Bonds and the terms and conditions of their sale shall be set forth in the Sales Documents with respect to such Series of Bonds and, with respect to Variable Rate Bonds of a Series, if any, in the respective Trust Agreement. Such terms and conditions as so set forth, together with the other terms and conditions of each Series of Bonds set forth in this Twenty-Sixth Supplemental Resolution, shall, upon execution and delivery of the Sales Documents with respect to such Series and, if any, the Trust Agreement, by the Ad Hoc Committee, or its designee, on behalf of the District, be all the terms and conditions of each Series of Bonds, as if all such terms and conditions were fully set forth in this Twenty-Sixth Supplemental Resolution. The Ad Hoc Committee is hereby further empowered to deliver one or more refunding or escrow instructions in connection with any Series of Bonds that is issued, in whole or in part, to refund outstanding Parity Obligations, and such other documents, amendment and agreements as the Ad Hoc Committee shall determine to be necessary or advisable to the issuance of a Series of Bonds.

The provisions of the Sales Documents, and Trust Agreement, if any, pertaining to the terms of each Series of Bonds are hereby incorporated by reference into this Twenty-Sixth Supplemental Resolution with the same force and effect as if set forth herein.

In connection with the sale of Bonds, the Ad Hoc Committee or its designee is further hereby authorized to approve on behalf of the District, one or more credit enhancement instruments (such as municipal bond insurance), all upon such terms and conditions as the Ad Hoc Committee shall determine to be in the best interests of the District.

In connection with the sale of Bonds that are Variable Rate Bonds, the Ad Hoc Committee or its designee is further hereby authorized to approve on behalf of the District, one or more

remarketing agreements providing for the remarketing of such Variable Rate Bonds, if necessary, fiscal agent agreements, calculation agent agreements or any other agreement in connection with such Variable Rate Bonds and one or more liquidity or credit agreements, standby bond purchase agreements and/or similar agreements providing liquidity or credit support for remarketing the Variable Rate Bonds, if applicable, and one or more agreements providing for reimbursement of draws under such liquidity or credit support instrument, all upon such terms and conditions as the Ad Hoc Committee shall determine to be in the best interests of the District.

The Board hereby finds and determines that the interests of the District and the public interest and necessity require that the provisions of Section 225 and of Section 226 of the Act be waived.

The Ad Hoc Committee shall file a certificate concerning its actions pursuant to this Twenty-Sixth Supplemental Resolution with the District. The Controller of the District shall maintain true and correct copies of the final Sales Documents and any Trust Agreement for each Series of Bonds in the files of the District.

**SECTION 5.03 Further Action.** The Chair of the Board, the General Manager, and the Assistant General Manager/Chief Financial Officer of the District shall be and each of them is hereby authorized, empowered and directed to execute such other documents and agreements in addition to those enumerated herein and take such other actions as they deem necessary or advisable in order to carry out and perform the purposes of this Twenty-Sixth Supplemental Resolution.

## ARTICLE VI

### UNDERTAKINGS

**SECTION 6.01 Municipal Securities Disclosure.** The District hereby agrees to provide or cause to be provided certain annual financial information and notices of certain material events to the extent required by Rule 15c2-12 adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, with respect to each Series of Bonds in accordance with the terms of the Continuing Disclosure Certificate, delivered by the District in connection with such Series of Bonds.

**SECTION 6.02 Default.** Failure to comply with the provisions of Section 6.01 hereof shall not be deemed an Event of Default under the Master Resolution. The sole remedy under this Article VI in the event of any failure of the District to comply with this Article VI shall be an action to compel performance, and no person or entity shall be entitled to recover monetary damages hereunder under any circumstances.

**SECTION 6.03 Amendment.** This Article VI may be amended, supplemented, modified or deleted, from time to time and at any time, as the District may determine without the consent of any Owner of the Bonds.

## ARTICLE VII

## MISCELLANEOUS

SECTION 7.01 Bonds Subject to Master Resolution. This Twenty-Sixth Supplemental Resolution is adopted in accordance with the provisions of the Master Resolution. The Master Resolution, as supplemented by this Twenty-Sixth Supplemental Resolution, is in all respects ratified and approved. Except as expressly provided in this Twenty-Sixth Supplemental Resolution, every term and condition contained in the Master Resolution shall apply to this Twenty-Sixth Supplemental Resolution and to the Bonds with the same force and effect as if it were herein set forth at length, with such omissions, variations and modifications thereof as may be appropriate to make the same conform to this Twenty-Sixth Supplemental Resolution.

SECTION 7.02 Severability of Invalid Provisions. If any one or more of the provisions contained in this Twenty-Sixth Supplemental Resolution or in the Bonds shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions contained in this Twenty-Sixth Supplemental Resolution and such invalidity, illegality or unenforceability shall not affect any other provision of this Twenty-Sixth Supplemental Resolution, and this Twenty-Sixth Supplemental Resolution shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein. The District hereby declares that it would have adopted this Twenty-Sixth Supplemental Resolution and each and every other Section, paragraph, sentence, clause or phrase hereof and authorized the issuance of the Bonds pursuant thereto irrespective of the fact that any one or more Sections, paragraphs, sentences, clauses or phrases of this Twenty-Sixth Supplemental Resolution may be held illegal, invalid or unenforceable.

SECTION 7.03 Article and Section Headings and References; Interpretation. The headings or titles of the several Articles and Sections hereof shall be solely for convenience of reference and shall not affect the meaning, construction or effect of this Twenty-Sixth Supplemental Resolution.

All references herein to “Article,” “Sections” and other subdivisions are to the corresponding Articles, Sections or subdivisions of this Twenty-Sixth Supplemental Resolution; the words “herein,” “hereof,” “hereby,” “hereunder” and other words of similar import refer to this Twenty-Sixth Supplemental Resolution as a whole and not to any particular Article, Section or subdivision hereof; and words of the masculine gender shall mean and include words of the feminine and neuter genders.

SECTION 7.04 Governing Law. This Twenty-Sixth Supplemental Resolution shall be construed and governed in accordance with the laws of the State of California.

**I HEREBY CERTIFY** that the foregoing is a full, true and correct copy of a Resolution adopted by the affirmative votes of members representing more than 50 percent (50%) of the total number of votes of all members of the Board of Directors of The Metropolitan Water District of Southern California at its meeting held on August 20, 2024.

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Secretary of the Board of Directors  
of The Metropolitan Water District of  
Southern California

**EXHIBIT A1****FORM OF FIXED RATE 2024 WATER REVENUE AND REFUNDING  
CURRENT INTEREST BOND**

UNITED STATES OF AMERICA

No. \_\_\_\_\_ \$ \_\_\_\_\_

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA  
WATER REVENUE AND REFUNDING BONDS, 2024  
SERIES \_\_\_\_

UNLESS THIS BOND IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE SECURITIES DEPOSITORY (AS DEFINED IN THE TWENTY-SIXTH SUPPLEMENTAL RESOLUTION) TO THE FISCAL AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE, OR PAYMENT, AND ANY BOND ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE SECURITIES DEPOSITORY (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE SECURITIES DEPOSITORY), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

INTEREST RATE	MATURITY DATE	ORIGINAL ISSUE DATE	CUSIP #
_____%	_____	_____	_____

REGISTERED OWNER: CEDE &amp; CO.

PRINCIPAL AMOUNT: \_\_\_\_\_ (\$ \_\_\_\_\_)

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, FOR VALUE RECEIVED, hereby promises to pay, solely from Net Operating Revenues, as hereinafter provided, to the registered owner named above, or registered assigns, on the maturity date set forth above, unless redeemed prior thereto as hereinafter provided, the principal amount set forth above, and to pay interest (calculated on the basis of a 360-day year consisting of twelve 30-day months) on such principal amount from the interest payment date before the date of authentication hereof (unless this Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ is authenticated during the period after a record date but on or before the next interest payment date, in which event this Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ shall bear interest from that interest payment date, or unless this Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ is authenticated prior to the first record date, in which event this Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ shall bear interest from \_\_\_\_\_, 2024 or unless at the time of authentication interest is in default, in which event it shall bear interest from the interest payment date to which interest has been paid

or provided for), semi-annually on \_\_\_\_\_ and \_\_\_\_\_ of each year, commencing \_\_\_\_\_, 2024 at the interest rate set forth above, until the principal amount hereof is paid or made available for payment. For so long as the Treasurer of the District is the Fiscal Agent (the "Fiscal Agent"), the principal of this Water Revenue and Refunding Bond, 2024 Series \_\_ is payable to the registered holder hereof in lawful money of the United States of America upon presentation and surrender of this Water Revenue and Refunding Bond, 2024 Series \_\_ at the corporate office of the District. Interest on this Water Revenue and Refunding Bond, 2024 Series \_\_ shall be paid by check or draft of the Fiscal Agent mailed by first class mail to the registered holder hereof as of the close of business on the 15th day of the month immediately preceding an interest payment date (a "record date") at such registered holder's address as it appears on the registration books maintained by the Fiscal Agent, except that a registered holder of \$1,000,000 or more in principal amount of the Water Revenue and Refunding Bonds, 2024 Series \_\_ may be paid interest by wire transfer to an account in the United States if such registered owner makes a written request of the Fiscal Agent at least 30 days preceding any interest payment date specifying the wire transfer instructions for such registered owner. Such notice may provide that it will remain in effect for later interest payments until changed or revoked by another written notice.

This Water Revenue and Refunding Bond, 2024 Series \_\_ is one of a duly authorized issue of "The Metropolitan Water District of Southern California Water Revenue and Refunding Bonds, 2024 Series \_\_\_\_" (the "Water Revenue and Refunding Bonds, 2024 Series \_\_\_\_") issued in the aggregate principal amount of \$\_\_\_\_\_ pursuant to the Metropolitan Water District Act, California Statutes 1969, Chapter 209, as amended and supplemented (the "Act"), Resolution 8329 of the District adopted on July 9, 1991 (as amended and supplemented, the "Master Resolution") and Resolution \_\_\_\_\_ adopted by the District on August 20, 2024 (the "Twenty-Sixth Supplemental Resolution"; the Master Resolution as supplemented by the Twenty-Sixth Supplemental Resolution is referred to herein as the "Resolution"). Reference is hereby made to the Master Resolution, the Twenty-Sixth Supplemental Resolution and to the Act for a description of the terms on which the Water Revenue and Refunding Bonds, 2024 Series \_\_ are issued and to be issued, the provisions with regard to the nature and extent of the Net Operating Revenues (as defined in the Master Resolution), and all of the terms of the Resolution and the Act are hereby incorporated herein and constitute a contract between the District and the registered owner from time to time of this Water Revenue and Refunding Bond, 2024 Series \_\_, and by acceptance hereof the registered holder of this Water Revenue and Refunding Bond, 2024 Series \_\_ assents to said terms and conditions. The Resolution is adopted under, and this Water Revenue and Refunding Bond, 2024 Series \_\_ is issued under, and all are to be construed in accordance with, the laws of the State of California.

This Water Revenue and Refunding Bond, 2024 Series \_\_ is a special limited obligation of the District payable from and secured by a pledge of and a lien and charge upon the Net Operating Revenues on a parity with all Bonds and all other debt issued or incurred and payable from Net Operating Revenues on a parity with the Bonds. The principal of, premium (if any) and interest on this Water Revenue and Refunding Bond, 2024 Series \_\_ is not a debt of the District, nor a legal or equitable pledge, charge, lien or encumbrance upon any of its property or upon any of its income, receipts or revenues, except the Net Operating Revenues. The general fund of the District is not liable for the payment of the Water Revenue and Refunding Bonds, 2024 Series \_\_ or their interest, nor is the credit or the taxing power of the District or the forfeiture of any of its property for the payment of this Water Revenue and Refunding Bond, 2024 Series \_\_ or any interest hereon.

The Water Revenue and Refunding Bonds, 2024 Series \_\_\_ are payable as to principal, interest and any redemption premium exclusively from the Net Operating Revenues and other funds pledged under the Master Resolution and the Twenty-Sixth Supplemental Resolution.

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ is one of the Current Interest Bonds described in the Resolution.

[Redemption provisions to be inserted]

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ may be transferred without charge upon the registration books required to be kept by the Fiscal Agent, by the person in whose name it is registered, in person or by his or her duly authorized attorney, upon surrender of this Water Revenue and Refunding Bond, 2024 Series \_\_\_ for cancellation, accompanied by delivery of a written instrument of transfer, duly executed in a form approved by the Fiscal Agent. Whenever any Water Revenue and Refunding Bond, 2024 Series \_\_\_ is surrendered for transfer, the District shall execute and the Fiscal Agent shall authenticate and deliver a new Water Revenue and Refunding Bond, 2024 Series \_\_\_ or Bonds, of the same tenor and maturity and for a like aggregate principal amount. This Water Revenue and Refunding Bond, 2024 Series \_\_\_ may be exchanged without charge at the office of the Fiscal Agent in Los Angeles, California for Water Revenue and Refunding Bonds, 2024 Series \_\_\_ of authorized denominations having the same aggregate principal amount, tenor and maturity. The Fiscal Agent need not transfer registration or exchange any Water Revenue and Refunding Bond, 2024 Series \_\_\_ later than 15 days prior to the date of selection of Water Revenue and Refunding Bonds, 2024 Series \_\_\_ for redemption or any portion thereof for redemption. The Fiscal Agent may require the holder of any Water Revenue and Refunding Bond, 2024 Series \_\_\_ requesting transfer of registration or exchange to pay any tax or other governmental charge required to be paid with respect to such transfer of registration or exchange.

The rights and obligations of the District, the Fiscal Agent and of the owners of the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ may be modified or amended from time to time in the manner, to the extent and upon the terms provided in the Resolution, provided that no such modification or amendment shall extend the fixed maturity of this Water Revenue and Refunding Bond, 2024 Series \_\_\_, or reduce the amount of principal hereof, or extend the time of payment, or reduce the rate of interest hereon, or extend the time of payment of interest hereon, or reduce any premium payable upon the redemption hereof without the consent of the owner hereof, or reduce the percent of Water Revenue and Refunding Bonds, 2024 Series \_\_\_ the consent of the holders of which is required to effect any such modification or amendment, or permit the creation of any lien on the Net Operating Revenues and other assets pledged under the Resolution prior to the lien created by the Resolution, or deprive the holders of the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ of the lien created by the Resolution on such Net Operating Revenues and other assets (in each case, except as expressly provided in the Resolution), without the consent of the holders of all of the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ then outstanding.

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ shall not be entitled to any benefit under the Resolution, or become valid or obligatory for any purpose, until the certificate of authentication and registration hereon endorsed shall have been executed and dated by the Fiscal Agent. It is hereby certified and recited that any and all acts, conditions and things required to

exist, to have happened and to have been performed precedent to and in the issuance of this Water Revenue and Refunding Bond, 2024 Series \_\_ to exist, have happened, and have been performed in due time, form and manner as required by the Constitution and laws of the State of California and that this Water Revenue and Refunding Bond, 2024 Series \_\_, together with all other indebtedness of the District, does not exceed any limit prescribed by the Constitution and laws of the State of California and the Act and is not in excess of the amount of Water Revenue and Refunding Bonds, 2024 Series \_\_ permitted to be issued under the Resolution.

IN WITNESS WHEREOF, the District has caused this Water Revenue and Refunding Bond, 2024 Series \_\_ to be signed by the Chair of the Board of Directors and the Secretary of the Board of Directors of the District, and countersigned by the Controller of the District, each by their facsimile or manual signatures, and sealed with the corporate seal of said District as of the Original Issue Date specified above.

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Chair of the Board of Directors,  
The Metropolitan Water District  
of Southern California

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Secretary of the Board of Directors,  
The Metropolitan Water  
District of Southern California

COUNTERSIGNED:

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Controller of The Metropolitan  
Water District of Southern California

FISCAL AGENT'S CERTIFICATE OF AUTHENTICATION  
AND REGISTRATION

This Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ is one of The Metropolitan Water District of Southern California Water Revenue and Refunding Bonds, 2024 Series \_\_\_\_ delivered pursuant to the within mentioned Master Resolution and Twenty-Sixth Supplemental Resolution.

Treasurer of The Metropolitan  
Water District of Southern  
California, as Fiscal Agent

By \_\_\_\_\_  
Authorized Signature



## ASSIGNMENT

The following abbreviations, when used in the inscription on the face of the within-mentioned Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ and in the assignment below, shall be construed as though they were written out in full according to applicable laws or regulations.

TEN COM:           as tenants in common

TEN ENT: as tenants by the entireties

JT TEN: as joint tenants with right of survivorship and not as tenants in common

[illegible]

Additional abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED, the undersigned do(es) hereby sell, assign and transfer unto the \_\_\_\_\_ the within-mentioned registered Water Revenue and Refunding Bond, 2024 Series \_\_ and hereby irrevocably constitute(s) \_\_\_\_\_ and \_\_\_\_\_ appoint(s) \_\_\_\_\_ attorney, to transfer the same on the books of the Fiscal Agent with full power of substitution in the premises.

Dated:

SIGNATURE GUARANTEED:

**Note:** The signature(s) to this Assignment must correspond with the name(s) as written on the face of the within Water Revenue and Refunding Bond, 2024 Series \_\_ in every particular, without alteration or enlargement or any change whatsoever.

**NOTICE:** Signature(s) must be guaranteed by a member firm of the New York Stock Exchange or a commercial bank or trust company.

**EXHIBIT A2****FORM OF FIXED RATE 2024 WATER REVENUE AND REFUNDING  
CAPITAL APPRECIATION BOND**

UNITED STATES OF AMERICA

No. \_\_\_\_\_ \$ \_\_\_\_\_

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA  
WATER REVENUE AND REFUNDING BONDS, 2024  
SERIES \_\_\_\_

UNLESS THIS BOND IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE SECURITIES DEPOSITORY (AS DEFINED IN THE TWENTY-SIXTH SUPPLEMENTAL RESOLUTION) TO THE FISCAL AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE, OR PAYMENT, AND ANY BOND ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE SECURITIES DEPOSITORY (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF THE SECURITIES DEPOSITORY), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

YIELD TO MATURITY	MATURITY DATE	ORIGINAL ISSUE DATE	CUSIP #
_____%	_____	_____	_____

REGISTERED OWNER: CEDE &amp; CO.

INITIAL AMOUNT: \_\_\_\_\_ (\$ \_\_\_\_\_)

FINAL COMPOUNDED AMOUNT: \_\_\_\_\_ (\$ \_\_\_\_\_)

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, FOR VALUE RECEIVED, hereby promises to pay, solely from Net Operating Revenues, as hereinafter provided, to the registered owner named above, or registered assigns, on the maturity date set forth above, unless redeemed prior thereto as hereinafter provided, the Final Compounded Amount set forth above. Interest with respect to the Initial Amount hereof will accrete at the Yield to Maturity per annum shown above from the Original Issue Date above, shall be compounded on \_\_\_\_\_, 2024 and semiannually on \_\_\_\_\_ and \_\_\_\_\_ of each year until the maturity date specified above, but shall be payable only at maturity or the earlier redemption hereof as part of the Accreted Value hereof. The Accreted Value hereof as of any date of calculation shall be equal to the sum of the Initial Amount hereof and the interest accreted and compounded semiannually hereon at the Yield to maturity set forth above, all as determined in accordance with the provisions

of the Twenty-Sixth Supplemental Resolution (as hereinafter defined). For so long as the Treasurer of the District is the Fiscal Agent (the “Fiscal Agent”), the Final Compounded Amount of this Water Revenue and Refunding Bond, 2024 Series \_\_\_ is payable to the registered holder hereof in lawful money of the United States of America upon presentation and surrender of this Water Revenue and Refunding Bond, 2024 Series \_\_\_ at the corporate office of the District.

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ is one of a duly authorized issue of “The Metropolitan Water District of Southern California Water Revenue and Refunding Bonds, 2024 Series” (the “Water Revenue and Refunding Bonds, 2024 Series \_\_\_”) issued in the aggregate principal amount of \$\_\_\_\_\_ pursuant to the Metropolitan Water District Act, California Statutes 1969, Chapter 209, as amended and supplemented (the “Act”), Resolution 8329 of the District adopted on July 9, 1991 (as amended and supplemented, the “Master Resolution”) and Resolution \_\_\_\_\_ adopted by the District on August 20, 2024 (the “Twenty-Sixth Supplemental Resolution”; the Master Resolution as supplemented by the Twenty-Sixth Supplemental Resolution is referred to herein as the “Resolution”). Reference is hereby made to the Master Resolution, the Twenty-Sixth Supplemental Resolution and to the Act for a description of the terms on which the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ are issued and to be issued, the provisions with regard to the nature and extent of the Net Operating Revenues (as defined in the Master Resolution), and all of the terms of the Resolution and the Act are hereby incorporated herein and constitute a contract between the District and the registered owner from time to time of this Water Revenue and Refunding Bond, 2024 Series \_\_\_, and by acceptance hereof the registered holder of this Water Revenue and Refunding Bond, 2024 Series \_\_\_ assents to said terms and conditions. The Resolution is adopted under, and this Water Revenue and Refunding Bond, 2024 Series \_\_\_ is issued under, and all are to be construed in accordance with, the laws of the State of California.

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ is a special limited obligation of the District payable from and secured by a pledge of and a lien and charge upon the Net Operating Revenues on parity with all Bonds and all other debt issued or incurred and payable from Net Operating Revenues on parity with the Bonds. The Accreted Value of and premium (if any) on this Water Revenue and Refunding Bond, 2024 Series \_\_\_ is not a debt of the District, nor a legal or equitable pledge, charge, lien or encumbrance upon any of its property or upon any of its income, receipts or revenues, except the Net Operating Revenues. The general fund of the District is not liable for the payment of the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ or their interest, nor is the credit or the taxing power of the District or the forfeiture of any of its property for the payment of this Water Revenue and Refunding Bond, 2024 Series \_\_\_ or any interest hereon.

The Water Revenue and Refunding Bonds, 2024 Series \_\_\_ are payable as to Accreted Value and any redemption premium exclusively from the Net Operating Revenues and other funds pledged under the Master Resolution and the Twenty-Sixth Supplemental Resolution.

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ is one of the Capital Appreciation Bonds described in the Resolution.

[Redemption provisions to be inserted]

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ may be transferred without charge upon the registration books required to be kept by the Fiscal Agent, by the person in whose name it is registered, in person or by his or her duly authorized attorney, upon surrender of this Water Revenue and Refunding Bond, 2024 Series \_\_\_ for cancellation, accompanied by delivery of a written instrument of transfer, duly executed in a form approved by the Fiscal Agent. Whenever any Water Revenue and Refunding Bond, 2024 Series \_\_\_ is surrendered for transfer, the District shall execute and the Fiscal Agent shall authenticate and deliver a new Water Revenue and Refunding Bond, 2024 Series \_\_\_ or Bonds, of the same tenor and maturity and for a like aggregate Final Compounded Amount. This Water Revenue and Refunding Bond, 2024 Series \_\_\_ may be exchanged without charge at the office of the Fiscal Agent in Los Angeles, California for Water Revenue and Refunding Bonds, 2024 Series \_\_\_ of authorized denominations having the same aggregate Final Compounded Amount, tenor and maturity. The Fiscal Agent need not transfer registration or exchange any Water Revenue and Refunding Bond, 2024 Series \_\_\_ later than 17 days prior to the date of selection of Water Revenue and Refunding Bonds, 2024 Series \_\_\_ for redemption or any portion thereof for redemption. The Fiscal Agent may require the holder of any Water Revenue and Refunding Bond, 2024 Series \_\_\_ requesting transfer of registration or exchange to pay any tax or other governmental charge required to be paid with respect to such transfer of registration or exchange.

The rights and obligations of the District, the Fiscal Agent and of the owners of the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ may be modified or amended from time to time in the manner, to the extent and upon the terms provided in the Resolution, provided that no such modification or amendment shall extend the fixed maturity of this Water Revenue and Refunding Bond, 2024 Series \_\_\_, or reduce the Final Compounded Amount hereof, or extend the time of payment, or reduce the rate of interest hereon, or extend the time of payment of interest hereon, or reduce any premium payable upon the redemption hereof without the consent of the owner hereof, or reduce the percent of Water Revenue and Refunding Bonds, 2024 Series \_\_\_ the consent of the holders of which is required to effect any such modification or amendment, or permit the creation of any lien on the Net Operating Revenues and other assets pledged under the Resolution prior to the lien created by the Resolution, or deprive the holders of the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ of the lien created by the Resolution on such Net Operating Revenues and other assets (in each case, except as expressly provided in the Resolution) without the consent of the holders of all of the Water Revenue and Refunding Bonds, 2024 Series \_\_\_ then outstanding.

This Water Revenue and Refunding Bond, 2024 Series \_\_\_ shall not be entitled to any benefit under the Resolution, or become valid or obligatory for any purpose, until the certificate of authentication and registration hereon endorsed shall have been executed and dated by the Fiscal Agent. It is hereby certified and recited that any and all acts, conditions and things required to exist, to have happened and to have been performed precedent to and in the issuance of this Water Revenue and Refunding Bond, 2024 Series \_\_\_ to exist, have happened, and have been performed in due time, form and manner as required by the Constitution and laws of the State of California and that this Water Revenue and Refunding Bond, 2024 Series \_\_\_, together with all other indebtedness of the District, does not exceed any limit prescribed by the Constitution and laws of the State of California and the Act and is not in excess of the amount of Water Revenue and Refunding Bonds, 2024 Series \_\_\_ permitted to be issued under the Resolution.

IN WITNESS WHEREOF, the District has caused this Water Revenue and Refunding Bond, 2024 Series \_\_ to be signed by the Chair of the Board of Directors and the Secretary of the Board of Directors of the District, and countersigned by the Controller of the District, each by their facsimile or manual signatures, and sealed with the corporate seal of said District as of the Original Issue Date specified above.

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Chair of the Board of Directors,  
The Metropolitan Water District  
of Southern California

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Secretary of the Board of Directors,  
The Metropolitan Water  
District of Southern California

COUNTERSIGNED:

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Controller of The Metropolitan  
Water District of Southern California

FISCAL AGENT'S CERTIFICATE OF AUTHENTICATION  
AND REGISTRATION

This Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ is one of The Metropolitan Water District of Southern California Water Revenue and Refunding Bonds, 2024 Series \_\_\_\_ delivered pursuant to the within mentioned Master Resolution and Twenty-Sixth Supplemental Resolution.

Treasurer of The Metropolitan  
Water District of Southern  
California, as Fiscal Agent

By \_\_\_\_\_  
Authorized Signature

## ASSIGNMENT

The following abbreviations, when used in the inscription on the face of the within-mentioned Water Revenue and Refunding Bond, 2024 Series \_\_ and in the assignment below, shall be construed as though they were written out in full according to applicable laws or regulations.

TEN COM:           as tenants in common

TEN ENT:           as tenants by the entireties

JT TEN: as joint tenants with right of survivorship and not as tenants in common

UNIF GIFT MIN ACT                      \_\_\_\_\_ Custodian \_\_\_\_\_  
  (Cust)                                  (Minor)

Additional abbreviations may also be used though not in the above list.

FOR VALUE RECEIVED, the undersigned do(es) hereby sell, assign and transfer unto the \_\_\_\_\_ the within-mentioned registered Water Revenue and Refunding Bond, 2024 Series \_\_\_\_ and hereby irrevocably constitute(s) \_\_\_\_\_ and appoint(s) \_\_\_\_\_ attorney, to transfer the same on the books of the Fiscal Agent with full power of substitution in the premises.

Dated:

SIGNATURE GUARANTEED:

Note: The signature(s) to this Assignment must correspond with the name(s) as written on the face of the within Water Revenue and Refunding Bond, 2024 Series \_\_ in every particular, without alteration or enlargement or any change whatsoever.

NOTICE: Signature(s) must be guaranteed by a member firm of the New York Stock Exchange or a commercial bank or trust company.





- **Board of Directors**  
***Finance and Asset Management Committee***

8/20/2024 Board Meeting

8-3

## Subject

Adopt resolution establishing the Ad Valorem tax rate for fiscal year 2024/25; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## Executive Summary

Metropolitan collects ad valorem (AV) property taxes from all non-exempt properties within its service area to pay for debt service on its general obligation bonds and to pay a portion of its State Water Contract obligations for participation in the State Water Project (SWP). The property tax collection pays for voter-approved indebtedness and is therefore not subject to the limitations and requirements of Proposition 13, passed by the voters in 1978. Additionally, the property tax collection is not subject to the limitations of Section 124.5 of the Metropolitan Water District Act (MWD Act) because of the Board of Directors finding on April 12, 2022, that it is essential to Metropolitan's fiscal integrity to collect more than the Section 124.5 limits from fiscal year (FY) 2022/23 through 2025/26.

Since FY 2012/13, Metropolitan has maintained a property tax rate of 0.0035 percent. The current tax rate is the lowest rate Metropolitan has ever assessed. On April 12, 2024, the Board of Directors approved a biennial budget for FYs 2024/25 and 2025/26 (Adopted Budget) that assumed a property tax rate of 0.007 percent that is essential to Metropolitan's ability to meet its forecasted expenditures. The information presented to the Board during the budget, rates, and charges process earlier this year shows that the Board's Section 124.5 finding for the current four-year period continues to be applicable. Accordingly, staff proposes the Board fix the AV property tax rate at the assumed 0.007 percent rate in the Adopted Budget to generate approximately \$330.9 million in revenue during FY 2024/25. **Attachment 1**, Resolution Levying Ad Valorem Property Taxes for the Fiscal Year Commencing July 1, 2024 and Ending June 30, 2025 for the Purposes of The Metropolitan Water District of Southern California (Option 1), supports this recommendation.

Based on the recently received county tax assessors' reports, the estimated revenue to be collected is approximately \$330.9 million in FY 2024/25. This is \$14 million more than projected for FY 2024/25. While the amount of property taxes actually collected by the counties will vary, it is important to note that estimated SWP costs of \$700 million far exceed the estimated tax revenues generated by the levy. Therefore, the additional revenue can be used towards the authorized purposes. Based on Zillow's Single Family Home Value Index for the six counties in Metropolitan's district, the average home value of approximately \$875,000 would pay about \$60 per year in AV taxes towards Metropolitan's costs.

If the Board does not set the AV property tax rate at least at 0.007 percent, it has the option to adopt the resolution at a different tax rate and direct staff to set a process to revisit the FYs 2024/25 and 2025/26 biennial budget, as well as the water rates and charges for calendar years (CY) 2025 and potentially 2026 to make up the lost revenue.

## Proposed Action(s)/Recommendation(s) and Options

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### Staff Recommendation: Option #1

#### Option #1

- a. Adopt the resolution establishing the ad valorem property tax rate for fiscal year 2024/25 at 0.007 percent; and
- b. Direct staff to transmit that resolution to the county auditor-controllers, or equivalent, for the levy and collection of the ad valorem property tax.

**Fiscal Impact:** Fiscal year 2024/25 certified assessed valuations within Metropolitan's district, assuming an ad valorem tax rate of 0.007 percent and after certain adjustments, result in an estimated increase of approximately \$14 million compared to the Adopted Budget for fiscal year 2024/25.

**Business Analysis:** No negative impact to the Adopted Biennial Budget for fiscal years 2024/25 and 2025/26 and water rates and charges for calendar years 2025 and 2026 as they were based on a tax rate of 0.007 percent as assumed in the Adopted Budget.

#### Option #2

- a. Adopt the resolution establishing the ad valorem property tax rate for fiscal year 2024/25 at a rate to be determined by the Board;
- b. Direct staff to transmit that resolution to the county auditor-controllers, or equivalent, for the levy and collection of the ad valorem property tax; and
- c. Direct staff to revisit the biennial budget for fiscal years 2024/25 and 2025/26 and rates and charges for calendar years 2025 and potentially 2026 to make up any loss in assumed property tax revenues, and propose a revised biennial budget, rates and charges to the Board.

**Fiscal Impact:** Up to \$325 million loss of fixed revenue (net of approximately \$5 million for unsecured tax revenues based on last year's 0.0035 percent ad valorem tax rate), dependent upon board action for the new ad valorem tax rate.

**Business Analysis:** Setting an ad valorem property tax rate less than 0.007 percent would require revisiting the adopted biennial budget for fiscal years 2024/25 and 2025/26 and water rates and charges for calendar years 2025 and potentially 2026 to make up for lost revenues.

## Alternatives Considered

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Staff presented alternatives to the proposed 0.007 percent property tax rate during the budget, rates, and charges process from February through April 2024. The alternative tax rate scenarios can be found at <https://www.mwdh2o.com/budget-finance/>. Based on those alternative scenarios, the Board approved budget, rates, and charges that assumed a 0.007 percent AV property tax rate for both FYs 2024/25 and 2025/26. Accordingly, if the tax rate is not set at least at 0.007 percent, then the Board should direct staff to revisit the current biennial budget, as well as the rates and charges for CYs 2025 and potentially 2026, to make up the lost revenue. Staff would then present a revised biennial budget, rates and charges to the Board. However, the Board should note that the timing to get a new AV tax rate on the counties' tax rolls for fiscal year 2024/25 may be compromised.

## Applicable Policy

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Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

## Related Board Action(s)/Future Action(s)

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Metropolitan Water District Act Section 61: Ordinances, Resolutions and Orders

Metropolitan Water District Act Section 124: Taxes, Levy and Limitation

Metropolitan Water District Act Section 124.5: Ad Valorem Tax Limitation

Metropolitan Water District Act Section 130: General Powers to Provide Water Services

Metropolitan Water District Act Section 305: Certification of Assessed Valuations; Segregation of Valuations

Metropolitan Water District Act Section 307: Tax Levies – Determination of Rates

Metropolitan Water District Act Section 310: Statement of Tax Rates

Metropolitan Water District Act Section 311: Collection of Taxes

Metropolitan Water District Administrative Code Section 4301: Cost of Service and Revenue Requirement

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item No. 52789, the Board, at its April 12, 2022 meeting, adopted the Resolution Finding that for Fiscal Years 2022/23 through 2025/26, the Ad Valorem Property Tax Rate Limitation in Section 124.5 of the Metropolitan Act is Not Applicable Because it is Essential to Metropolitan's Fiscal Integrity to Collect Ad Valorem Property Taxes in Excess of that Limitation (Resolution 9301), adopted charges for Calendar Year 2023 (Resolutions 9303 and 9304), and adopted water rates for Calendar Years 2023 and 2024 (Resolution 9302).

By Minute Item No. 53594, the Board, at its April 9, 2024 meeting, adopted the Resolution for the 113th Fringe Area Annexation to Eastern Municipal Water District and Metropolitan.

### **Summary of Outreach Completed**

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On February 24, 2022, Metropolitan provided notice to the Legislature of the Board's hearing regarding its review of the applicability of Section 124.5 for FYs 2022/23 through 2025/26, in accordance with the requirements of Section 124.5. Thereafter, from February through April 2022, the Board held a series of workshops relating to the budget, rates, and charges proposals that supported the need for the collection of property tax revenues in excess of the limits set forth in Section 124.5. On March 8, 2022, the Board held a public hearing specifically for the public to provide its comments on the proposed Section 124.5 determination, as well as the proposed budget, rates, and charges that supported the determination. Public notice for each of the hearings was published in major newspapers of general circulation.

In 2024, the Board again held a series of workshops and public hearings regarding the budget, rates, and charges for another biennial period. Additionally, CFO staff participated in meetings of the member agencies to present and answer questions regarding the budget, rates, and charges, that assumed a 0.007 percent AV property tax rate. See <https://www.mwdh2o.com/budget-finance/>.

### **California Environmental Quality Act (CEQA)**

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#### **CEQA determination for Option #1:**

The proposed action is not defined as a project under CEQA because it involves the creation of government funding mechanisms or other government fiscal activities which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment. (State CEQA Guidelines Section 15378(b)(4).)

#### **CEQA determination for Option #2:**

None required

### **Details and Background**

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#### **Background**

Every year, Metropolitan receives the certified assessed valuation from the county auditors for the six counties where Metropolitan provides water service to its member agencies. All county auditors have until the 15<sup>th</sup> day of August to provide the certified assessed valuation to Metropolitan, which is why Metropolitan's Board adjourns its August regular and committee meetings to the third week of the month. This year, Metropolitan received the last of the counties' information on August 15, 2024. On or before the 20<sup>th</sup> day of August, Metropolitan's Board is required to determine, based on the information received, the

amount of money necessary to be raised by taxation during the fiscal year and fix the AV property tax rates.

Metropolitan has assessed AV property taxes in its service area since its inception. Metropolitan has constitutional and statutory authority, as well as voter authorization, to collect revenues through AV taxes assessed on real property within its service territory. Pursuant to Section 305 of the MWD Act, each fiscal year Metropolitan applies the Board-determined tax rate to the certified assessed valuations received from the county auditors for the six counties that include portions of Metropolitan's service area to produce the gross tax levy.

In 1978, years after the voters authorized the State Water Contract (SWC) indebtedness to be paid from AV property taxes, the voters in California passed Proposition 13. Although Proposition 13 limits the collection of AV property taxes and requires an election for approval of new property taxes, it also exempts from its provisions any property taxes collected to pay for voter-approved indebtedness. Metropolitan's AV property tax is exempt from Proposition 13 because the voters approved the SWC indebtedness and the use of property taxes to pay for that indebtedness. *Goodman v. County of Riverside* (1983) 140 Cal.App.3d 900.

In 1984, the Legislature added Section 124.5 to the MWD Act, effective since FY 1990/91. Section 124.5 limits property tax collections to the amount necessary to pay the total annual debt service on Metropolitan's general obligation bonds and a portion of its SWC payment obligation, limited to the preexisting debt service on state general obligation bonds (Burns-Porter bonds) used to finance the construction of SWP facilities for the benefit of Metropolitan. However, Section 124.5 also provides that "the restrictions contained in this section do not apply if Metropolitan's Board of Directors, following a hearing held to consider that issue, finds that a tax in excess of these restrictions is essential to the fiscal integrity of the district." The Section 124.5 limit exceeded Metropolitan's property tax rate for many years. However, the AV property tax rate limit under Section 124.5 has been decreasing, and will continue to decrease, as the bonds are paid off. In the meantime, Metropolitan's SWC obligations have been increasing over the long term and will continue to increase.

The Board made the determination for FY 2012/13 that it was essential to Metropolitan's fiscal integrity to collect more property tax revenues than the limit in Section 124.5. The Board continued to make the determination upon reviewing Metropolitan's fiscal conditions in the years since. Most recently, on April 12, 2022, the Board found that it is essential to Metropolitan's fiscal integrity to collect property taxes in excess of the Section 124.5 limit for a four-year period running from FY 2022/23 through FY 2025/26. All documents supporting that determination are available at: <https://www.mwdh2o.com/budget-finance/property-tax-rate-for-fy-202021/>. Therefore, the Section 124.5 limit does not apply through FY 2025/26.

### **Metropolitan's Current Need for Ad Valorem Property Tax Revenues**

The factors that have a fiscal impact on Metropolitan have intensified since the Board's adoption of its Section 124.5 determination in April 2022 for the following four-year period. In the 2024 budget, rates, and charges process, staff presented to the Board financial information that initially proposed overall rate increases of 13 percent in calendar year 2025 and 8 percent in calendar year 2026. The Board went through a series of workshops in which it reviewed many potential alternatives to rate increases while still addressing the significant reduction in water sales, unrestricted reserves, and increasing costs. Fiscal information considered by the Board during that process is available at: <https://www.mwdh2o.com/budget-finance/>.

Since the Board's adoption of the current biennial budget, rates, and charges, Metropolitan has closed FY 2023/24 with the lowest water sales ever at approximately 1.21 million acre-feet. Additionally, the Board's actions in April to balance the budget assume a reduction of \$18 million in administrative expenses per year and additional miscellaneous revenue of \$60 million from Colorado River water exchanges. The additional cost reductions and potential \$60 million in new miscellaneous revenues have yet to be identified. Therefore, it remains essential to Metropolitan's fiscal integrity to set an AV property tax rate of at least 0.007 percent to maintain a balanced budget.

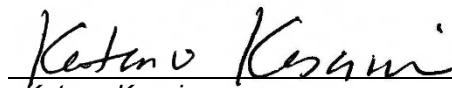
**Proposed AV Property Tax Rate**

This letter recommends setting an AV property tax rate at 0.007 percent for FY 2024/25 to collect approximately \$330.9 million in property tax revenues, reiterating its finding that it continues to be essential to Metropolitan's fiscal integrity to collect more property tax revenue than the Section 124.5 limit. The Board adopted a budget for FY 2024/25 and has also adopted rates and charges for CYs 2025 and 2026, based on the assumption that the AV property tax rate would be set at 0.007 percent.

The biennial budget projected AV tax revenues of \$316.5 million in FY 2024/25. Based on the certified assessed valuations recently provided by the six counties in Metropolitan's service area, the estimated AV property tax revenue to be collected in FY 2024/25 is \$330.9 million. While the amount of property taxes actually collected will vary, it is important to note that estimated SWP costs of approximately \$700 million far exceed the estimated tax revenues generated by the levy.

**Alternatives to the Proposed AV Tax Rate**

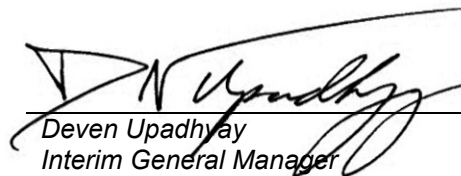
If the tax rate is not set at least at 0.007 percent, then the Board should direct staff to revisit the current biennial budget, as well as the rates and charges for CYs 2025 and potentially 2026, to make up the lost revenue. Staff would then present a revised biennial budget, rates and charges to the Board. However, the Board should note that the timing to get a new AV tax rate on the counties' tax rolls for fiscal year 2024/25 may be compromised.



Katano Kasaine  
Assistant General Manager/  
Chief Financial Officer

8/16/2024

Date



Deven Upadhyay  
Interim General Manager

8/16/2024

Date

**Attachment 1 – Resolution Levying Ad Valorem Property Taxes for The Fiscal Year Commencing July 1, 2024 and Ending June 30, 2025 for the Purposes of The Metropolitan Water District of Southern California (Option 1 and the rate may be modified for Option 2)**

Ref# cfo12701974

THE METROPOLITAN WATER  
DISTRICT OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_\_

A RESOLUTION LEVYING AD VALOREM PROPERTY TAXES FOR THE FISCAL  
YEAR COMMENCING JULY 1, 2024 AND ENDING JUNE 30, 2025  
FOR THE PURPOSES OF THE METROPOLITAN WATER  
DISTRICT OF SOUTHERN CALIFORNIA

The Board of Directors of The Metropolitan Water District of Southern California, after receiving, considering, and evaluating evidence and all material factors pertaining thereto, including budget requirements and estimated revenues from water rates, charges, and ad valorem property tax rates, finds, determines, and resolves:

Section 1.

RECITALS

Effective Water Rates and Charges during Fiscal Year 2024/25

The Board of Directors fixes water rates and charges on a calendar year basis and adopts its biennial budget and ad valorem property taxes on a fiscal year basis. During fiscal year (FY) 2024/25, the applicable rates and charges are those set by the Board for calendar year (CY) 2024 and CY 2025. The Board of Directors, with full review of (1) evidence presented, and (2) all material factors and considerations, has adopted water rates and charges for CYs 2024 and 2025, which, in the debated, informed and considered discretion of the Board, are in compliance with Metropolitan Administrative Code Section 4301 and Section 134 of the Metropolitan Water District Act (the MWD Act), in that the Board, so far as practicable, has fixed such rates and charges as will result in revenue which will pay the District's operating expenses, provide for maintenance and repairs, provide for payment of the purchase price or other charges for property or services or other rights acquired by the District, and provide for the payment of the interest and principal of District bonds, notes and other evidences of indebtedness under the applicable provisions of the Act authorizing debt issuance and retirement, assuming the ad valorem property tax rate for FYs 2024/25 and 2025/26 at a rate of 0.007 percent. This Resolution establishes the tax rate for FY 2024/25.

Board Finding re Applicability of Ad Valorem Property Tax Limitations Pursuant to the MWD Act for FYs 2022/23 through 2025/26

Section 124.5 of the MWD Act limits property tax collections to the amount necessary to pay the total annual debt service on Metropolitan's general obligation bonds and only a portion of its State Water Contract (SWC) payment obligation, limited to the preexisting debt service on state general obligation bonds (Burns-Porter bonds) used to finance construction of State Water Project (SWP) facilities for the benefit of Metropolitan. However, the limitation of Section 124.5 does not apply if, following a public hearing, the Board of Directors finds that collection of tax revenue in excess of that limitation is essential to the fiscal integrity of the District. The Board held the public hearing pursuant to Section 124.5 of the Act on March 8, 2022 to determine the applicability of the limitation for FYs 2022/23 through 2025/26. On April 12, 2022, the Board adopted Resolution No. 9301, through which the Board:

1. Found and determined that it is essential to Metropolitan's fiscal integrity to collect ad valorem property taxes in excess of the Section 124.5 limitation on ad valorem property taxes in FYs 2022/23 through 2025/26;
2. Resolved and determined that pursuant to its finding, the tax rate restriction in Section 124.5 of the MWD Act is inapplicable when setting the ad valorem property tax rate for FYs 2022/23 through 2025/26; and

3. Waived compliance with Section 4301(b) of Metropolitan's Administrative Code for any tax levy that utilizes the April 2022 finding regarding Section 124.5 of the MWD Act.

FY 2024/25 Ad Valorem Property Tax Levy and Continuing Need for Property Tax Revenues in Excess of Section 124.5 Limit

In its informed discretion, based upon full review of evidence presented and all material factors and considerations, the Board of Directors determines that the District's revenues for FY 2024/25 from water transactions and sources other than ad valorem property taxes, after payment of the District's operation and maintenance expenses, the payment of the purchase price or other charges for property or services or other rights acquired by the District, the operation, maintenance, power, and replacement charges due under the District's state contract, revenue bond service, deposits to the revenue bond reserve fund, short term revenue certificate (commercial paper note) service, net costs of operating equipment, and net inventory costs during the fiscal year, as well as the maintenance of prudent reserves for unforeseen District expenditures or unforeseen reduction in District revenue, will be insufficient to provide for general obligation bond service and to pay the District's contract obligations to the state for sale and delivery of water. Review of its April 12, 2022 determination regarding Section 124.5 of the MWD Act and review of Metropolitan's updated financial conditions as presented during the budget, rates, and charges process for the current biennial period, establishes that it remains essential to Metropolitan's fiscal integrity to collect more property tax revenues than the limit set by Section 124.5 of the MWD Act. Therefore, the Board levies ad valorem property taxes for FY 2024/25 as provided in this Resolution at sections 4 through 7 and the exhibits attached, sufficient, when taken with other revenues available for the purpose, to meet all the foregoing obligations and financial requirements, in the amounts and rates set forth in this Resolution and the schedules attached and incorporated therein.

Section 2.

DEFINITIONS

The following terms as used herein shall have the following meanings:

- (1) "MWD OF SC" shall mean The Metropolitan Water District of Southern California  
 "MWD" shall mean Municipal Water District  
 "SDCWA" shall mean the San Diego County Water Authority  
 "ID" shall mean Irrigation District  
 "PUD" shall mean Public Utility District.
- (2) "Fiscal Year" or "FY 2024/25" shall mean the fiscal year commencing July 1, 2024 and ending June 30, 2025.
- (3) "Schedule A and B" as shown in Section 9 shall mean:  
 Schedule A - a tabulation setting forth for the Fiscal Year the estimated funds to be produced by MWD of SC ad valorem property tax levies made by this Resolution.  
 Schedule B - a tabulation setting forth for the Fiscal Year ad valorem property tax rates as set forth in Sections 4, 5, and 6 hereof, the total tax rates, and the amounts of money to be derived from respective areas from the tax levies made by this Resolution.
- (4) The following city areas represent the corporate areas of cities within the County of Los Angeles at their respective times of annexation to MWD of SC, and may include areas subsequently annexed to said city areas at times when such areas were not within MWD of SC, and may include those areas which, at the time of their



respective annexation to said city areas, were within non-city member public agencies and subsequently excluded from such non-city member public agencies:

“City of Beverly Hills Area”	December 6, 1928
“City of Burbank Area”	December 6, 1928
“City of Glendale Area”	December 6, 1928
“City of Los Angeles Area” (Including portion of Original Area of Las Virgenes MWD excluded from Las Virgenes MWD on November 9, 1962)	December 6, 1928
“City of Pasadena Area”	December 6, 1928
“City of San Marino Area”	December 6, 1928
“City of Santa Monica Area”	December 6, 1928
“City of Long Beach Area”	February 27, 1931
“City of Torrance Area”	February 27, 1931
“City of Compton Area”	June 23, 1931
“City of San Fernando Area”	November 12, 1971

- (5) “West Basin MWD” shall include the following areas; annexed to West Basin MWD and to MWD of SC on the dates cited:

Original Area	July 23, 1948
City of Gardena Area	December 9, 1948
Inglewood Area	June 9, 1952
Dominguez Area	October 16, 1952
Hawthorne Area	October 23, 1953
La Casa Territory Area	November 23, 1953
A B C Territory Area	January 11, 1955
Culver City-County Territory Area	January 11, 1955
Frawley Territory Area	January 13, 1958
Imperial Strip Territory Area	November 22, 1960
Marina Area	January 10, 1962
Belle View Area	November 12, 1963
Municipal Parking Area	November 12, 1963
La Tijera Area	December 21, 1965
Jefferson Blvd. Area	October 30, 1969
Marina Second Fringe Area	May 3, 1978
West Hollywood Area	June 23, 1981
Reorganization No. 2014-10, Parcel A, and concurrently detached from the city of Torrance	December 22, 2014
Reorganization No. 2009-16, and concurrently detached from Las Virgenes MWD	February 19, 2015
Reorganization No. 2014-06, and concurrently detached from Las Virgenes MWD	July 19, 2016

- (6) “Three Valleys MWD” shall include the following areas, annexed to Three Valleys MWD (formerly Pomona Valley MWD) and to MWD of SC on the dates cited:

Original Area	November 15, 1950
Glendora Area	October 2, 1952
Rowland Area	June 15, 1953
Stephens Area	November 27, 1957

- (7) “Foothill MWD” shall include the following areas, annexed to Foothill MWD and to MWD of SC on the dates cited:

Original Area of Foothill MWD	January 15, 1953
Foothill First Fringe Area	March 21, 1968

Foothill Second Fringe Area  
La Vina Annexation

November 21, 1968  
July 13, 1993

- (8) “Central Basin MWD” shall include the following areas, annexed to Central Basin MWD and to MWD of SC on the dates cited:

Original Area	November 12, 1954
Compton Territory Area	January 4, 1957
Bellflower Territory Area	December 30, 1958
Shoestring Strip Territory Area	January 23, 1961
Signal Hill Territory Area	November 14, 1963
Lakewood Area	November 14, 1963
Vernon Area	June 24, 1965
Dairy Valley Area	June 21, 1967
Boyle Heights Area	July 24, 1967
Cerritos Area	December 22, 1969
Hawaiian Gardens Area	November 22, 1977

- (9) “Las Virgenes MWD” shall include the following areas annexed to Las Virgenes MWD and to MWD of SC on the dates cited, excluding that portion annexed to the City of Los Angeles on November 9, 1962:

Original Area	December 1, 1960
Twin Lakes Area	March 12, 1965
Bell Canyon Area	March 16, 1966
Hidden Hills Annexation 87-1	April 22, 1988
Reorganization No. 2017-10, and concurrently detached from West Basin MWD	February 16, 2021

- (10) “Upper San Gabriel Valley MWD” shall include the following areas annexed to Upper San Gabriel Valley MWD and to MWD of SC on the dates cited:

Original Area	March 27, 1963
West Covina Area	November 1, 1965
Garvey Reservoir Area	December 1, 1976
Mountain Cove Annexation	July 17, 2002

- (11) The following city areas represent the corporate areas of cities within the County of Orange at their respective times of annexation to MWD of SC, and may include areas subsequently annexed to said city areas at times when such areas were not within MWD of SC, and may include those areas which, at the time of their respective annexation to said city areas, were within non-city member public agencies and subsequently excluded from such non-city member public agencies:

City of Anaheim Area	December 6, 1928
Including:	

Serrano/Nohl Ranch Rd. Reorganization (RO 01-05),  
Parcel 2, detached from MWD of Orange County on  
April 19, 2001;

Reorganization Area 1 (RO 03-17) detached from MWD of  
Orange County on August 26, 2003;

Reorganization Area 2 (RO 03-17) detached from MWD of  
Orange County on August 26, 2003;

Reorganization Brookhurst ARCO (RO 02-02) detached  
from MWD of Orange County on July 8, 2003;

North-Central Islands Annexation (IA 04-08) detached  
from MWD of Orange County on August 20, 2004;

Serrano Heights Reorganization (RO 04-01) detached from  
MWD of Orange County on May 28, 2004;  
Ball Road/Santa Ana River Reorganization (RO 04-02)  
detached from MWD of Orange County on  
December 13, 2004  
Meyer Reorganization (RO 15-01) and concurrently  
detached from MWD of Orange County on May 16, 2016

City of Santa Ana Area  
Including:

December 6, 1928

Reorganization Area 4 (RO 03-17) detached from  
MWD of Orange County on August 26, 2003

City of Fullerton Area  
Including:

February 27, 1931

Hawks Point Reorganization (RO 00-11) detached from  
MWD of Orange County on April 19, 2001;  
Reorganization Area 3 (RO 03-17) detached from MWD of  
Orange County on August 26, 2003;  
Page Avenue Island Annex. (IA 04-14) detached from  
MWD of Orange County on November 3, 2004;  
Somerset Island Annex. (IA 04-15) detached from MWD of  
Orange County on November 3, 2004

- (12) “Remainder of MWD of Orange County” shall include the following areas, annexed to MWD of Orange County and to MWD of SC on the dates cited excluding that portion thereof of Reorganization No. 62 annexed to Coastal MWD on March 7, 1984:

Original Area	November 26, 1951
Annexation No. 1 Territory Area	November 25, 1957
Annexation No. 4 Territory Area	December 11, 1958
Annexation No. 5 Territory Area	December 7, 1959
Annexation No. 7 Territory Area	December 8, 1960
Annexation No. 10 Territory Area	December 11, 1961
Annexation No. 11 Territory Area	January 6, 1964
Annexation No. 8A Territory Area	March 29, 1965
Annexation No. 8B Territory Area	March 29, 1965
Annexation No. 8D Territory Area	March 29, 1965
Annexation No. 8E Territory Area	March 29, 1965
Annexation No. 8F Territory Area	March 29, 1965
Annexation No. 8G Territory Area	March 29, 1965
Annexation No. 8H Territory Area	March 29, 1965
Annexation No. 13 Territory Area	June 30, 1969
(Excluded from Coastal MWD for purpose of such annexation)	
Annexation No. 16 Territory Area	November 7, 1972
Annexation No. 15 Territory Area	November 15, 1972
Annexation No. 18 Territory Area	December 16, 1982
Annexation No. 19 Territory Area	December 27, 1983
Annexation No. 17 Territory Area	December 29, 1983
City of Brea Area	March 7, 1984
Brea Fringe Annexation Area	March 7, 1984
Serrano/Nohl Ranch Road Reorganization Parcel 1 (RO 01-05) detached from City of Anaheim	April 19, 2001

Coastal MWD

January 17, 2001

Coastal MWD and MWD of Orange County have been consolidated into a single district (RO 97-06) effective January 17, 2001. It shall include the following areas, annexed to Coastal MWD and to MWD of SC on the dates cited:

Original Area	June 15, 1942
Fairview Farms Area	September 21, 1946
Irvine Subdivision Areas	November 26, 1948
1948 Portion of City of Newport Beach Area	November 29, 1948
Parts of Dana Point Area	August 3, 1949
Capistrano Beach-San Clemente Area	October 28, 1954
Tri-Cities Annexation No. 2 Area	December 12, 1962
Laguna Canyon Annexation Area	December 20, 1962
Lido Sands Annexation Area	January 6, 1964
Laguna Niguel Area	June 30, 1969
(Including Reorganization 32 Parcel A Area excluded from Annexation No. 4 on January 4, 1977)	
Tri-Cities Annexation No. 79-1 Area	December 22, 1982
Reorganization No. 62 Parcel C and that portion of Parcel B Area excluded from Annexation No. 5 of MWD of Orange County	March 7, 1984
Reorganization No. 64 Area excluded from Annexation No. 7 of MWD of Orange County	March 18, 1983
Reorganization No. 123 excluded from Annexation No. 7 of MWD of Orange County	August 6, 1990

- (13) "Remainder of Eastern MWD" shall include the following areas, annexed to Eastern MWD and to MWD of SC on the dates cited:

Original Area	July 20, 1951
(Portion of area excluded from Eastern MWD and annexed to Western MWD)	
Adjacent Area	May 22, 1953
First Fringe Area	April 20, 1956
(Portion of area excluded from Eastern MWD and annexed to Western MWD)	
Third Fringe Area	November 20, 1958
(Area excluded from Original Area of Western MWD)	
Fourth Fringe Area	December 6, 1960
Fifth Fringe Area	May 31, 1962
(Portion of area excluded from Eastern MWD and annexed to Western MWD)	
Sixth Fringe Area	December 10, 1962
Seventh Fringe Area	March 11, 1963
Eight Fringe Area	April 23, 1963
Ninth Fringe Area	April 23, 1963
Tenth Fringe Area	September 22, 1964
Eleventh Fringe Area	September 22, 1964
Twelfth Fringe Area	October 22, 1965
Thirteenth Fringe Area	October 13, 1967
(Portion of area excluded from Eastern MWD and annexed to Western MWD)	
Fourteenth Fringe Area	October 23, 1967
Sixteenth Fringe Area	July 1, 1969
(Area excluded from First Fringe Area of Western MWD)	
Fifteenth Fringe Area	August 12, 1969
Seventeenth Fringe Area	March 5, 1970
Eighteenth Fringe Area	March 5, 1970

Nineteenth Fringe Area	May 8, 1970
Twentieth Fringe Area	September 29, 1971
Twenty-First Fringe Area	September 30, 1971
Twenty-Second Fringe Area	April 27, 1972
Twenty-Third Fringe Area	May 23, 1975
Twenty-Fourth Fringe Area	December 30, 1975
Twenty-Fifth Fringe Area	April 26, 1983
Twenty-Sixth Fringe Area	November 27, 1985
Twenty-Seventh Fringe Area	December 19, 1985
Twenty-Eighth Fringe Area	November 18, 1986
Twenty-Ninth Fringe Area	May 4, 1987
Thirty-First Fringe Area	July 9, 1987
Thirty-Second Fringe Area	July 9, 1987
Thirty-Third Fringe Area	August 27, 1987
Thirtieth Fringe Area	December 15, 1987
Thirty-Fourth Fringe Area	March 16, 1988
Thirty-Fifth Fringe Area	May 2, 1988
Thirty-Eighth Fringe Area	October 14, 1988
Thirty-Sixth Fringe Area	December 5, 1988
Fortieth Fringe Area	August 1, 1989
Forty-Second Fringe Area	May 25, 1990
Forty-Third Fringe Area	June 19, 1990
Thirty-Ninth Fringe Area	July 13, 1990
Forty-First Fringe Area	July 27, 1990
Forty-Fifth Fringe Area	March 13, 1991
Forty-Seventh Fringe Area	June 3, 1991
Forty-Eighth Fringe Area	November 21, 1991
Forty-Ninth Fringe Area	November 21, 1991
Fiftieth Fringe Area	November 21, 1991
Fifty-First Fringe Area	December 19, 1991
Forty-Fourth Fringe Area	June 3, 1992
Fifty-Second Fringe Area	June 29, 1992
Forty-Sixth Fringe Area	July 7, 1992
Fifty-Third Fringe Area	August 27, 1992
Fifty-Fifth Fringe Area	April 29, 1993
Fifty-Sixth Fringe Area	June 22, 1993
Fifty-Eighth Fringe Area	June 22, 1993
Fifty-Ninth Fringe Area	June 22, 1993
Sixtieth Fringe Area	November 29, 1993
Fifty-Seventh Fringe Area	December 9, 1994
Sixty-Second Fringe Area	July 3, 1996
Sixty-Third Fringe Area	October 28, 1996
Sixty-Fourth Fringe Area	August 28, 1997
Sixty-Fifth Fringe Area	December 28, 2000
Seventieth Fringe Area	August 29, 2001
Sixty-Seventh Fringe Area Reorganization (Area detached from portion of Original Area of Western MWD)	August 29, 2001
Sixty-Eighth Fringe Area	January 15, 2002
Seventy-First Fringe Area	June 20, 2002
Sixty-Ninth Fringe Area	November 27, 2002
Seventy-Second Fringe Area	October 21, 2003
Sixty-Sixth Fringe Area	November 17, 2003
Seventy-Third Fringe Area	November 17, 2003
Seventy-Fourth Fringe Area	November 17, 2003
Seventy-Fifth Fringe Area	June 2, 2004
Seventy-Sixth Fringe Area	April 6, 2004
Seventy-Eighth Fringe Area	April 19, 2005

Eighty-Third Fringe Area	December 15, 2005
Seventy-Ninth Fringe Area	December 20, 2005
Eighty-First Fringe Area	December 20, 2005
Eighty-Fourth Fringe Area	December 20, 2005
Eighty-Seventh Fringe Area	February 14, 2006
Eighty-Sixth Fringe Area	March 24, 2006
Eighty-Fifth Fringe Area	May 22, 2006
Eighty-Eighth Fringe Area	May 22, 2006
Eighty-Ninth Fringe Area	June 28, 2006
Ninety-Second Fringe Area	August 2, 2006
Ninety-First Fringe Area	November 28, 2006
Ninety-Fifth Fringe Area	December 14, 2006
Ninetieth Fringe Area	December 19, 2006
Ninety-Seventh Fringe Area	April 16, 2007
Ninety-Third Fringe Area	July 26, 2007
101st Fringe Area	January 24, 2008
Ninety-Ninth Fringe Area Reorganization (Area detached from Western Municipal Water District)	September 10, 2008
100 <sup>th</sup> Fringe Area	November 17, 2008
Ninety-Sixth Fringe Area	December 11, 2008
102 <sup>nd</sup> Fringe Area	December 22, 2009
103 <sup>rd</sup> Fringe Area	October 1, 2013
104 <sup>th</sup> Fringe Area	September 22, 2015
105 <sup>th</sup> Fringe Area (2015-11-3 Reorganization)	September 19, 2017
107 <sup>th</sup> Fringe Area (2017-04-5 Reorganization)	September 12, 2017
106 <sup>th</sup> Fringe Area (2017-12-3 Reorganization)	December 14, 2017
108 <sup>th</sup> Fringe Area (2017-24-3 Reorganization)	November 8, 2018
110 <sup>th</sup> Fringe Area (2019-03-3 Reorganization)	July 17, 2019
109 <sup>th</sup> Fringe Area (2019-06-3 Reorganization)	November 22, 2019
111 <sup>th</sup> Fringe Area (2020-25-3 Reorganization)	February 11, 2021
112 <sup>th</sup> Fringe Area (2023-02-3 Reorganization)	November 3, 2023

- (14) “Remainder of Western MWD” shall include the following areas, annexed to Western MWD and to MWD of SC on the dates cited:

Original Area (Portion of area excluded from Western MWD and annexed to Eastern MWD)	November 12, 1954
First Fringe Area (Portion of area excluded from Western MWD and annexed to Eastern MWD)	December 20, 1957
Second Fringe Area	December 18, 1961
Third Fringe Area	June 27, 1962
Fifth Fringe Area	July 2, 1964
Fourth Fringe Area	December 19, 1966
Seventh Fringe Area	December 19, 1966
Eighth Fringe Area (Area excluded from Fifth Fringe Area of Eastern MWD on July 26, 1967)	September 18, 1967
Sixth Fringe Area	September 27, 1967
Ninth Fringe Area	November 17, 1967
Tenth Fringe Area	June 12, 1968
Thirteenth Fringe Area (Area excluded from Fifth Fringe Area of Eastern MWD)	June 23, 1969
Twelfth Fringe Area (Area excluded from First Fringe Area of Eastern MWD)	July 1, 1969

Eleventh Fringe Area	July 17, 1969
Fifteenth Fringe Area	July 13, 1972
(Area lying entirely within the County of Orange)	
Fourteenth Fringe Area	October 11, 1973
Sixteenth Fringe Area	August 30, 1977
(Area excluded from Thirteenth Fringe Area of Eastern MWD)	
Seventeenth Fringe Area	December 23, 1980
Eighteenth Fringe Area	December 15, 1981
Twentieth Fringe Area	December 4, 1987
Twenty-Second Fringe Area	October 14, 1988
Twenty-First Fringe Area	December 5, 1988
Twenty-Third Fringe Area	November 3, 1989
Twenty-Fourth Fringe Area	May 18, 1990
Twenty-Seventh Fringe Area	May 18, 1990
Twenty-Sixth Fringe Area	June 6, 1990
Twenty-Fifth Fringe Area	July 13, 1990
Twenty-Eighth Fringe Area	January 28, 1991
Thirtieth Fringe Area	March 13, 1991
Twenty-Ninth Fringe Area	November 4, 1991
Thirty-First Fringe Area	February 19, 1992
Thirty-Third Fringe Area	May 26, 1993
Thirty-Fourth Fringe Area	October 31, 1994
(Area excluded from Fifth Fringe Area of Eastern MWD)	
Thirty-Sixth Fringe Area	September 29, 1997
(Area excluded from Original Area of Eastern MWD)	
Thirty-Seventh Fringe Area	December 30, 1997
Thirty-Eighth Fringe Area	June 29, 1999
Fortieth Fringe Area	November 22, 1999
Thirty-Ninth Fringe Area	October 24, 2000
Forty-First Fringe Area	December 28, 2000
Forty-Fifth Fringe Area	June 20, 2002
Forty-Second Fringe Area	February 7, 2002
(Area excluded from Fifth Fringe Area of Eastern MWD)	
Forty-Sixth Fringe Area	November 24, 2003
Forty-Eighth Fringe Area	December 15, 2003
Forty-Ninth Fringe Area	April 28, 2004
Fiftieth Fringe Area	May 27, 2005
Forty-Seventh Fringe Area	June 21, 2005
Forty-Fourth Fringe Area	June 22, 2006
Forty-Third Fringe Area	October 21, 2014
Fifty-First Fringe Area Annexation	October 16, 2018
Fifty-Second Fringe Area Annexation	June 16, 2020

- (15) “Original Area of Chino Basin MWD” shall mean the area of Chino Basin MWD annexed to MWD of SC on November 26, 1951.
- (16) “Mid-Valley Area of Chino Basin MWD” shall mean the Mid-Valley area annexed to Chino Basin MWD and to MWD of SC on April 20, 1954.
- (17) “Bryant Annexation Area of Chino Basin MWD” shall mean the “Bryant Annexation area annexed to Chino Basin MWD and to MWD of SC on November 25, 1957.
- (18) “North Perimeter No. 1 Annexation Area of Chino Basin MWD” shall mean the North Perimeter No. 1 Annexation area annexed to Chino Basin MWD and to MWD of SC on November 28, 1969.



- (19) “Remainder of SDCWA” shall include the following areas annexed to SDCWA and to MWD of SC on the dates cited:

Original Area of SDCWA Annexation (Including areas subsequently annexed to city public agencies which were included within Original Area of SDCWA at times when such areas were not within MWD of SC, and areas excluded from non-city public agencies of SDCWA at times when such areas were within said city public agencies)	December 17, 1946
Crest PUD Territory Area	December 13, 1948
San Dieguito ID Area	December 13, 1948
Santa Fe ID Area	December 13, 1948
1950 Fallbrook PUD Annexation Area (Including De Luz Heights MWD Reorganization, originally De Luz Heights MWD annexed to MWD of SC on June 28, 1967 and dissolved on July 1, 1990)	August 1, 1950
City of Escondido Area	October 9, 1950
San Diego Gas and Electric Company Area	May 14, 1952
San Diego Eucalyptus Company’s Lands Area	July 18, 1952
South Bay ID Area	November 3, 1952
Rainbow MWD Area	April 10, 1954
City of Poway Area	April 21, 1954
Bueno Colorado MWD Area (Area dissolved and annexed to Rainbow MWD, Vista Irrigation District, Carlsbad MWD and Vallecitos Water District on November 24, 1993)	June 11, 1954
Rincon Del Diablo MWD	June 14, 1954
Costa Real MWD Area	June 16, 1954
El Cajon Valley-Dry Island Area (Including Lakeside-Boukai Joint Venture Reorganization detached from Padre Dam MWD on September 11, 1996)	December 20, 1954
Valley Center MWD Area	May 9, 1955
Sweetwater Reservoir Area	October 10, 1955
Padre Dam MWD Area	June 7, 1956
Bueno Colorado Annexation No. 1 Area	June 11, 1956
Otay MWD Area	October 26, 1956
Original Area of Ramona MWD within MWD of SC	August 27, 1957
Fallbrook No. 2 Annexation Area	November 24, 1958
Helix Watson Ranch-Island Area	February 20, 1959
Rainbow No. 1 Annexation Area	May 12, 1959
Ramona No. 1 Annexation Area	May 29, 1959
Helix-Fletcher Annexation Area	June 26, 1959
San Dieguito Concurrent Annexation No. 1 Area	September 15, 1959
Helix-Sunnyslope Heights Annexation Area	September 17, 1959
Poway No. 1 Annexation Area	September 21, 1959
Padre Dam MWD No. 2 Annexation Area	November 6, 1959
Padre Dam MWD No. 1 Annexation Area	November 10, 1959
San Dieguito Local Inclusion Annexation Area	November 18, 1959
Santa Fe No. 1 Annexation Area	November 30, 1959
Olivenhain MWD Area (Including Encinitas Municipal Services Reorganization Parcels 1, 2, & 3 detached from San Dieguito No. 2 Annexation Area of SDCWA on June 16, 1995)	July 25, 1960
Helix-Willis-Houston Annexation Area	August 10, 1960
Padre Dam MWD No. 3 Annexation Area	October 16, 1960
Otay No. 3 Annexation Area	October 20, 1960

Valley Center No. 1 Annexation Area	December 12, 1960
Rincon del Diablo No. 1 Annexation Area	December 12, 1960
Ramona No. 2 Annexation Area within MWD of SC	September 22, 1961
Rincon del Diablo No. 2 Annexation Area	September 29, 1961
City of Del Mar Area	November 23, 1962
Ramona No. 3 Annexation Area	September 20, 1963
Yuima MWD Area	December 16, 1963
(Excluding Adams/Fitzsimmons Reorganization Parcel 1 annexed to Valley Center MWD, including Adams/Fitzsimmons Reorganization Parcel 2 excluded from Valley Center MWD on March 26, 1991)	
Rincon del Diablo No. 3 Annexation Area	August 27, 1964
Olivenhain No. 1 Annexation Area	February 11, 1965
South Bay Tidelands Area	May 11, 1965
De Luz Heights Annexation Area (Reorganization)	June 28, 1967
Olivenhain No. 4 Annexation Area	November 13, 1967
Yuima No. 1 Annexation Area	November 21, 1967
Ramona Dos Picos Area	November 27, 1967
Ramona No. 4 Annexation Area	November 27, 1967
Valley Center No. 2 Annexation Area	November 29, 1967
Valley Center No. 3 Annexation Area	November 30, 1967
Rainbow No. 3 Annexation Area of SDCWA within MWD of SC” shall mean the Rainbow No. 3 Annexation area annexed to SDCWA and to MWD of SC; omitting therefrom the Werner Detachment excluded on August 4, 1980, the Brown Detachment excluded on January 1, 1981, and the Mann- Gosser Detachment excluded on March 4, 1981 from SDCWA and MWD of SC.	December 6, 1967
De Luz Heights No. 1 Annexation Area	October 15, 1969
Yuima No.2 Annexation Area	November 24, 1969
Fallbrook Community Air Park Annexation Area of SDCWA shall mean the Fallbrook Community Air Park Annexation area annexed to SDCWA and to MWD of SC	December 22, 1969
Padre Dam MWD No. 4	August 3, 1970
Ramona No. 5 Annexation Area	May 17, 1972
Rincon del Diablo No. 4 Annexation Area	November 2, 1972
San Dieguito No. 2 Annexation Area	December 8, 1972
(Including Encinitas Municipal Services Reorganization on June 16, 1995)	
Santa Fe No. 2 Annexation Area	April 11, 1973
Valley Center No. 4 Annexation Area	November 5, 1973
Rainbow No. 5 Annexation Area	November 22, 1973
San Onofre State Beach and Park Area	December 16, 1977
Pendleton Military Reservation Area -Nuclear Generating Plant Portion	December 16, 1977
Remainder of Pendleton Military Reservation Area	December 16, 1977
Rancho Jamul Estates Annexation Area	March 13, 1979
Lake Hodges Estates Annexation Area	June 26, 1980
Burdick Annexation No. 5 Area to Padre Dam MWD	July 26, 1982
Palo Verde Annexation No. 6 Area to Padre Dam MWD	November 15, 1983
Lake Ranch Viejo Annexation to Rainbow MWD	December 13, 1983
Honey Springs Ranch Annexation Area to Otay MWD	December 14, 1983
Thweatt Annexation Area to Rincon del Diablo MWD	December 30, 1983
Hewlett-Packard Annexation Area to Rainbow MWD	December 31, 1985
4S Ranch Annexation Area to Olivenhain MWD	November 5, 1986
Quail Park Reorganization Area Annexed to San Dieguito Water District and excluded from	July 11, 1989

## Olivenhain MWD

Paradise Mountain Area Annexed to Valley Center MWD  
 Boathouse Area Annexed to Otay Water District  
 Guajome Regional Park Annexation to Vista Irrigation District  
 Podrasky Ohlson Annexation to Valley Center MWD  
 San Elijo Ridge Reorganization (Altman) to Vallecitos Water District  
 Baxter Annexation (RO 03-19) to Padre Dam MWD  
 Citrus Heights Annexation  
 Erreca Annexation  
 Meadowood Reorganization (RO12-11) to SDCWA  
 Lake Wohlford Reorganization (R014-16) to SDCWA  
 Greenwood Memorial Park Island Reorganization (City of San Diego, RO 17-01)  
 Campus Park West (RO 14-08)  
 SVBF Temple Reorganization (LAFCO RO20-16 et al.)  
 Rancho Corrido RV Park Reorganization (LAFCO RO20-21 et al.)

January 11, 1993  
 September 6, 1994  
 October 23, 1998  
  
 March 11, 2004  
 August 9, 2004  
  
 July 9, 2005  
 March 4, 2008  
 November 4, 2009  
 December 4, 2014  
 April 21, 2015  
 May 26, 2017  
  
 December 13, 2017  
 December 16, 2021  
 February 14, 2022

- (20) “Remainder of Calleguas MWD” shall include the following areas annexed to Calleguas MWD and to MWD of SC on the dates cited:

Original Area of Calleguas MWD  
 Calleguas Annexation No. 1 Area  
 Lake Sherwood Area  
 Annexation No. 3 Territory  
 Oxnard Mandalay Area  
 Oxnard First Fringe Area  
 Annexation No. 6 Territory  
 Oxnard Second Fringe Area  
 Camarillo First Fringe Area  
 Oxnard Third Fringe Area  
 Oxnard Fourth Fringe Area  
 Point Mugu State Park Area  
 Oxnard Fifth Fringe Area  
 Oxnard Sixth Fringe Area  
 Oxnard Seventh Fringe Area  
 Ventura School for Girls Area  
 Oxnard Eighth Fringe Area  
 Calleguas Annexation No. 17 Area  
 Calleguas Annexation No. 19 Area  
 Calleguas Annexation No. 20 Area  
 Calleguas Annexation No. 18 Area  
 Calleguas Annexation No. 21 Area  
 Calleguas Annexation No. 22 Area  
 Calleguas Annexation No. 23 Area  
 Calleguas Annexation No. 24 Area  
 Calleguas Annexation No. 25 Area  
 Calleguas Annexation No. 26 Area  
 Calleguas Annexation No. 27 Area  
 Calleguas Annexation No. 28 Area  
 Calleguas Annexation No. 29 Area  
 Calleguas Annexation No. 30 Area  
 Calleguas Annexation No. 31 Area  
 Calleguas Annexation No. 33 Area

December 14, 1960  
 March 16, 1961  
 March 14, 1963  
 March 15, 1963  
 December 8, 1964  
 December 8, 1964  
 October 17, 1968  
 November 7, 1969  
 December 19, 1969  
 December 14, 1970  
 December 19, 1972  
 June 22, 1973  
 December 16, 1974  
 December 30, 1975  
 December 17, 1976  
 December 17, 1976  
 December 12, 1977  
 December 28, 1979  
 December 9, 1981  
 December 21, 1981  
 December 29, 1981  
 March 24, 1982  
 December 2, 1983  
 November 30, 1984  
 June 19, 1985  
 November 27, 1985  
 July 25, 1986  
 December 31, 1987  
 October 4, 1988  
 October 10, 1989  
 July 6, 1990  
 September 25, 1990  
 November 27, 1991

Calleguas Annexation No. 34 Area	June 24, 1992
Calleguas Annexation No. 35 Area	February 26, 1993
Calleguas Annexation No. 36 Area	February 26, 1993
Calleguas Annexation No. 39 Area	February 2, 1994
Calleguas Annexation No. 40 Area	May 16, 1994
Calleguas Annexation No. 41 Area	August 16, 1994
Calleguas Annexation No. 43 Area	August 16, 1994
Calleguas Annexation No. 45 Area	August 16, 1994
Calleguas Annexation No. 46 Area	September 27, 1994
Calleguas Annexation No. 38 Area	December 19, 1994
Calleguas Annexation No. 44 Area	December 19, 1994
Calleguas Annexation No. 47 Area	September 19, 1995
Calleguas Annexation No. 48 Area	December 21, 1995
Calleguas Annexation No. 32 Area	March 5, 1996
Calleguas Annexation No. 49 Area	December 18, 1996
Calleguas Annexation No. 52A Area	November 4, 1997
Calleguas Annexation No. 53 Area	December 19, 1997
Calleguas Annexation No. 52B Area	December 23, 1997
Calleguas Annexation No. 51 Area	June 9, 1998
Calleguas Annexation No. 54 Area	January 26, 1999
Calleguas Annexation No. 55 Area	January 27, 1999
Calleguas Annexation No. 61 Area	October 27, 1999
Calleguas Annexation No. 57 Area	December 29, 1999
Calleguas Annexation No. 58 Area	December 29, 1999
Calleguas Annexation No. 60 Area	December 29, 1999
Calleguas Annexation No. 65 Area	August 2, 2000
Calleguas Annexation No. 66 Area	August 4, 2000
Calleguas Annexation No. 63 Area	December 27, 2000
Calleguas Annexation No. 68 Area	April 17, 2001
Calleguas Annexation No. 69 Area	July 20, 2001
Calleguas Annexation No. 70 Area	July 27, 2001
Calleguas Annexation No. 74 Area	November 26, 2001
Calleguas Annexation No. 72 Area	December 17, 2001
Calleguas Annexation No. 75 Area	April 24, 2002
Calleguas Annexation No. 76-A Area	July 2, 2002
Calleguas Annexation No. 76-B Area	July 26, 2002
Calleguas Annexation No. 79	May 27, 2003
Calleguas Annexation No. 81	August 11, 2003
Calleguas Annexation No. 82	September 22, 2003
Calleguas Annexation No. 80	December 9, 2002
Calleguas Annexation No. 67	December 22, 2003
Calleguas Annexation No. 73	December 22, 2003
Calleguas Annexation No. 77	June 4, 2004
Calleguas Annexation No. 78	March 3, 2004
Calleguas Annexation No. 84	October 22, 2004
Calleguas Annexation No. 83	November 23, 2005
Calleguas Annexation No. 85	January 3, 2006
Calleguas Annexation No. 92	November 28, 2007
Calleguas Annexation No. 91	April 7, 2008
Calleguas Annexation No. 90	May 21, 2008
Calleguas Annexation No. 89	September 25, 2008
Calleguas Annexation No. 87	December 28, 2009
Calleguas Annexation No. 93	December 28, 2009
Calleguas Annexation No. 94	September 21, 2010
Calleguas Annexation No. 96	April 23, 2012
Calleguas Annexation No. 95	December 20, 2012
Calleguas Annexation No. 97	December 12, 2013

Calleguas Annexation No. 98	April 8, 2014
Calleguas Annexation No. 100	January 26, 2017
Calleguas Annexation No. 102	July 30, 2018
Calleguas Annexation No. 103	December 17, 2019
Calleguas Annexation No. 104	July 25, 2022
Calleguas Annexation No. 106	October 26, 2022

- (21) “Exclusions from City of Los Angeles Area” shall mean the following areas excluded from the City of Los Angeles and from MWD of SC on the dates cited:

Alhambra Hills Annexation to City of Alhambra	January 27, 1964
Portion of Reorganization No. 85-2 of City of Los Angeles	December 30, 1985
Crescent Condominiums (Reorganization 98-01)	September 11, 2002

- (22) “Exclusion from Las Virgenes MWD” shall mean the following area excluded from Las Virgenes MWD and from MWD of SC on the date cited:

Portion of Reorganization No. 85-2 of Original Area of Las Virgenes MWD	December 30, 1985
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- (23) “Exclusion from Three Valleys MWD” shall mean the following area excluded from Three Valleys MWD and from MWD of SC on the date cited:

Azusa Reorganization (Parcels 1, 2, 3 & 20)	May 21, 1996
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- (24) “Exclusions from Ramona No. 2 Annexation Area” shall mean the following areas excluded from Ramona No. 2 Annexation area of SDCWA and from MWD of SC on the dates cited:

Schlueter Detachment	December 19, 1977
Bonfils Detachment	December 29, 1978

- (25) “Exclusions from Rainbow No. 3 Annexation Area” shall mean the following areas excluded from Rainbow No. 3 Annexation area of SDCWA and from MWD of SC on the dates cited:

Werner Detachment	August 4, 1980
Brown Detachment	January 1, 1981
Mann-Gosser Detachment	March 4, 1981

- (26) “Exclusion from Original Area of Ramona MWD” shall mean the following area excluded from Ramona MWD Area of SDCWA and from MWD of SC on the date cited:

Meyer Detachment	March 10, 1983
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- (27) “Exclusion from Original Area of Western MWD” shall mean the following area excluded from Original Area of Western MWD and from MWD of SC on the date cited:

LAFCO 94-28-2 Detachment	January 21, 1997
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- (28) “Exclusion from Central Basin MWD” shall mean the following area excluded from Central Basin MWD and from MWD of SC on the date cited:

Reorganization No. 1-1998, Parcel 1 & 2 to San Gabriel Valley Water District	December 29, 1999
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## Section 3.

ASSESSED VALUATIONS

The county auditors of the counties of Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura have certified the assessed valuations of all property taxable by MWD of SC, consistent with the areas described in definitions (4) through (28) of Section 2, for the Fiscal Year and their respective certificates have been filed with the Board of Directors.

## Section 3.1

STATEMENT REGARDING ARTICLES XIII A, XIII C AND XIII D OF THE  
CONSTITUTION OF THE STATE OF CALIFORNIA

None of the property tax levies made by the Board of Directors of MWD of SC in the next succeeding sections fall within Section 1(a) of Article XIII A approved by the electorate on June 6, 1978 for addition to the California Constitution, effective July 1, 1978. All said levies fall under the Section 1(b) exemption to said Section 1(a) and are otherwise exempt from said Section 1(a) by reason of the impairment of contract clause of Article I, Section 10 of the United States Constitution. None of said levies fall within Articles XIII C and XIII D approved by the electorate on November 5, 1996, for addition to the California Constitution, by reason of the aforementioned provisions and exemptions and the provisions of Section 3(a)(1) of Article XIII D. All said levies are made pursuant to Revenue and Taxation Code Section 93(a) and are for the purpose of and shall be used for payment of “voter-approved indebtedness.”

## Section 4.

ANNEXATION LEVY

For FY 2024/25, there is no amount remaining to be raised under the Resolutions for annexed properties. Therefore, no annexation levies are shown in the attached schedules.

## Section 5.

BOND LEVY

For the purposes of paying the annual interest on the outstanding bonded indebtedness of MWD of SC incurred as a result of approval by the voters residing within MWD of SC and such part of the principal of such bonds as shall become due before the time when money will be available from the next property tax levy, or such portion thereof as shall not be met from previous levies or other revenues of the District:

- a. The amount of money necessary to be raised by ad valorem property taxation during FY 2024/25 is the sum set forth in the last line in Column #1 of Schedule A.
- b. The rate of such taxation of MWD of SC for the FY 2024/25 upon secured taxable property within MWD of SC hereby is fixed and levied at 0.00002% of assessed valuation, as set forth in Column #1 of Schedule B. The rate of such taxation for the FY 2024/25 upon unsecured taxable property is the rate fixed and levied for the preceding year applicable to secured taxable property, as required by operation of law and set forth in Column #2 of Schedule B.
- c. The amounts of money necessary to be derived from said levy are set forth in Column #7 of Schedule B, including the amounts of money to be derived from the area of MWD of SC within each separate member agency.

## Section 6.

STATE WATER CONTRACT LEVY

For the purpose of raising funds in excess of those funds raised under Section 5 of this Resolution, necessary and sufficient to provide for payments due or to become due within the current fiscal year or within the following fiscal year before the time when money will be available from the next property tax levy, or such portion thereof as shall not be met from previous levies or other revenues of the District, under the:

“CONTRACT BETWEEN THE STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES AND THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA FOR A WATER SUPPLY, dated November 4, 1960,” as amended (State Water Contract),

- a. The amount of money necessary to be raised by ad valorem property taxation during FY 2024/25 in excess of the sum raised under Section 5 of this Resolution is the sum set forth in the last line of Column #2 of Schedule A.
- b. The rate of such taxation of MWD of SC for the FY 2024/25 upon secured taxable property within MWD of SC hereby is fixed and levied at 0.00698% of assessed valuation, as set forth in Column #3 of Schedule B. The rate of such taxation for the FY 2024/25 upon the unsecured taxable property is the rate fixed for the preceding year applicable to secured taxable property, as required by operation of law and set forth in Column #4 of Schedule B.
- c. The amounts of money necessary to be derived from said levy are set forth in column #8 of Schedule B, including the amounts of money to be derived from the area of MWD of SC within each separate member agency.



## Section 7.

TOTAL AD VALOREM PROPERTY TAX COLLECTION

The total rates of ad valorem property taxation of MWD of SC for FY 2024/25 upon secured taxable property are set forth in Column #5 of Schedule B. The total rates of ad valorem property taxation of MWD of SC for FY 2024/25 upon unsecured taxable property are set forth in Column #6 of Schedule B. The total amounts of money to be derived by virtue of such tax levies for the Fiscal Year are set forth in Column #9 of Schedule B, including the amounts of money to be derived from the area of MWD of SC within each separate member agency.

The Board of Directors hereby finds that it continues to be essential to Metropolitan's fiscal integrity to continue to collect property tax revenues in excess of the limits set forth in Section 124.5 of the MWD Act. On April 12, 2022, the Board of Directors considered all available financial information, testimony from the public, and comments from member agencies, and concluded that it is essential to fiscal integrity for Metropolitan to collect property tax revenue in excess of the Section 124.5 limit in FY 2022/23 through FY 2025/26. After considering the proposed property tax rate for FY 2024/25, the third year of the Board's Section 124.5 determination, the Board finds that it continues to be essential to Metropolitan's fiscal integrity to collect more property tax revenue than the limits of Section 124.5.

## Section 8.

REDEVELOPMENT AGENCIES

Pursuant to Assembly Bill X1 26 ("ABX1 26"), chaptered and effective on June 27, 2011, and as modified in part by the California Supreme Court in the decision of *California Redevelopment Association v. Matosantos*, Case No. S194681, redevelopment agencies in California were dissolved. Such dissolution laws were modified in part by Assembly Bill 1484 ("AB 1484"), chaptered and effective on June 27, 2012, and Senate Bill 107 ("SB 107"), chaptered and effective on September 22, 2015.

The total rates of taxation of MWD of SC for the Fiscal Year set forth in Column #5 of Schedule B are the rates of taxation upon taxable property taxable by MWD of SC within the areas shown in said Schedule, including taxable property formerly within redevelopment agencies as well as all other property so taxable by MWD of SC. The total amounts of money shown in Column #9 of Schedule B to be derived from some of said areas by virtue of tax levies of MWD of SC include monies to be allocated to the successor agencies of former redevelopment agencies for the payment of enforceable obligations and allowable administrative expenses approved by the State Department of Finance and local successor agency oversight boards, as well as amounts of money to be allocated to MWD of SC. The estimated adjustment to be made to account for the difference between the total amount levied and the amount to be derived is included in the provision for estimated collection delinquencies shown in Schedule A.

Section 9.

SCHEDULES A AND B

Schedules A and B are attached after the last page of this resolution and are incorporated herein.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution of the Board of Directors of The Metropolitan Water District of Southern California, adopted at its meeting held August 20, 2024.

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Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California

## THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

## SCHEDULE A

Estimated Funds to be Produced by Tax Levy, Fiscal Year 2024/25  
(Cents Omitted)

		Bond Levy Column #1	State Contract Levy Column #2	Totals Column #3
<u>Secured Property</u>				
Assessed Value	\$ 3,936,880,458,091			
Tax Rate		0.00002%	0.00698%	
Amount of Levy		\$ 787,362	\$ 274,794,256	\$ 275,581,618
<u>Unsecured Property</u>				
Assessed Value	\$ 140,715,040,105			
Tax Rate		0.00002%	0.00348%	
Amount of Levy		\$ 28,143	\$ 4,896,883	\$ 4,925,026
<u>All Property</u>				
Assessed Value	\$ 4,077,595,498,196			
Amount of Levy from Schedule B		\$ 815,505	\$ 279,691,139	\$ 280,506,644
Allocation of County-wide Tax on Utilities		198,703	69,347,366	69,546,069
Total Tax Levy		\$ 1,014,208	\$ 349,038,506	\$ 350,052,713
Estimated Collection Adjustments *		(57,712)	(19,135,114)	(19,192,826)
Estimated Funds to be Produced by Tax Levy		\$ 956,496	\$ 329,903,392	\$ 330,859,888

\* 0.25% allowance for delinquencies  
 8.4% allowance for allocations to successors of former redevelopment agencies  
 \$3.8 million estimated supplemental tax collections  
 \$7.2 million estimated prior years tax collections

Note: All rates expressed as percent of A.V.

Schedule B - Tax Rates and Amounts to be Derived from Respective Areas  
for State Controller and MWD Board of Directors

Agency	Area (a)	Secured Bond Rate Col. 1	Unsecured Bond Rate Col. 2	Secured SWC Rate Col. 3	Unsecured SWC Rate Col. 4	Total Secured Rate Col. 5	Total Unsecured Rate Col. 6	Bond Levy Col. 7	SWC Levy Col. 8	Total Levy Col. 9
Included in MWD										
Los Angeles County										
City of Beverly Hills										
City of Beverly Hills Area	1-1-01-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	9,359.41	3,238,783.23	3,248,142.64
	Agency Totals:							9,359.41	3,238,783.23	3,248,142.64
City of Burbank										
City of Burbank Area	1-1-02-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	6,677.04	2,231,007.43	2,237,684.47
	Agency Totals:							6,677.04	2,231,007.43	2,237,684.47
City of Glendale										
City of Glendale Area	1-1-03-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	8,355.04	2,889,549.95	2,897,904.99
	Agency Totals:							8,355.04	2,889,549.95	2,897,904.99
City of Los Angeles										
City of Los Angeles Area	1-1-04-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	168,085.29	57,752,256.55	57,920,341.84
	Agency Totals:							168,085.29	57,752,256.55	57,920,341.84
City of Pasadena										
City of Pasadena Area	1-1-05-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	8,107.35	2,800,738.38	2,808,845.72
	Agency Totals:							8,107.35	2,800,738.38	2,808,845.72
City of San Marino										
City of San Marino Area	1-1-06-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	1,675.19	584,080.08	585,755.27
	Agency Totals:							1,675.19	584,080.08	585,755.27
City of Santa Monica										
City of Santa Monica Area	1-1-07-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	10,121.61	3,487,092.02	3,497,213.63
	Agency Totals:							10,121.61	3,487,092.02	3,497,213.63

Schedule B - Tax Rates and Amounts to be Derived from Respective Areas  
for State Controller and MWD Board of Directors

Agency	Area (a)	Secured Bond Rate Col. 1	Unsecured Bond Rate Col. 2	Secured SWC Rate Col. 3	Unsecured SWC Rate Col. 4	Total Secured Rate Col. 5	Total Unsecured Rate Col. 6	Bond Levy Col. 7	SWC Levy Col. 8	Total Levy Col. 9
Included in MWD										
Los Angeles County										
City of Long Beach										
City of Long Beach Area	1-1-08-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	13,655.79	4,621,875.76	4,635,531.55
	Agency Totals:							13,655.79	4,621,875.76	4,635,531.55
City of Torrance										
City of Torrance Area	1-1-09-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	7,590.07	2,592,617.44	2,600,207.51
	Agency Totals:							7,590.07	2,592,617.44	2,600,207.51
City of Compton										
City of Compton Area	1-1-10-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	1,364.44	465,884.07	467,248.51
	Agency Totals:							1,364.44	465,884.07	467,248.51
West Basin Municipal Water District										
West Basin Municipal Water District Area	1-1-11-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	57,669.69	19,756,778.48	19,814,448.16
	Agency Totals:							57,669.69	19,756,778.48	19,814,448.16
Three Valleys Municipal Water District										
Three Valleys Municipal Water District Area	1-1-12-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	18,129.56	6,245,089.50	6,263,219.06
	Agency Totals:							18,129.56	6,245,089.50	6,263,219.06
Foothill Municipal Water District Foothill Municipal Water District Area	1-1-13-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	5,106.28	1,777,110.98	1,782,217.26
	Agency Totals:							5,106.28	1,777,110.98	1,782,217.26
Central Basin Municipal Water District Central Basin Municipal Water District Area	1-1-14-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	40,718.44	13,888,929.35	13,929,647.79
	Agency Totals:							40,718.44	13,888,929.35	13,929,647.79

Schedule B - Tax Rates and Amounts to be Derived from Respective Areas  
for State Controller and MWD Board of Directors

Agency	Area (a)	Secured Bond Rate Col. 1	Unsecured Bond Rate Col. 2	Secured SWC Rate Col. 3	Unsecured SWC Rate Col. 4	Total Secured Rate Col. 5	Total Unsecured Rate Col. 6	Bond Levy Col. 7	SWC Levy Col. 8	Total Levy Col. 9
Included in MWD										
Los Angeles County										
Las Virgenes Municipal Water District										
Las Virgenes Municipal Water District Area	1-1-15-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	6,464.03	2,238,893.38	2,245,357.41
Agency Totals:								6,464.03	2,238,893.38	2,245,357.41
Upper San Gabriel Valley MWD										
Upper San Gabriel Valley MWD Area	1-1-16-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	28,289.11	9,730,580.76	9,758,869.87
Agency Totals:								28,289.11	9,730,580.76	9,758,869.87
City of San Fernando										
City of San Fernando Area Area	1-1-17-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	551.32	184,836.65	185,387.98
Agency Totals:								551.32	184,836.65	185,387.98
County Totals:								391,919.67	134,486,104.02	134,878,023.69
Orange County										
City of Anaheim										
City of Anaheim Area Area	1-2-01-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	12,652.40	4,316,774.12	4,329,426.52
Agency Totals:								12,652.40	4,316,774.12	4,329,426.52
City of Santa Ana										
City of Santa Ana Area Area	1-2-02-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	7,165.69	2,427,282.52	2,434,448.21
Agency Totals:								7,165.69	2,427,282.52	2,434,448.21
City of Fullerton										
City of Fullerton Area Area	1-2-03-000-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	5,553.46	1,895,379.30	1,900,932.77
Agency Totals:								5,553.46	1,895,379.30	1,900,932.77
Municipal Water District of Orange County										
Remainder of MWD of Orange County	1-2-05-999-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	136,656.39	46,930,259.13	47,066,915.53
Agency Totals:								136,656.39	46,930,259.13	47,066,915.53
County Totals:								162,027.95	55,569,695.09	55,731,723.03

Schedule B - Tax Rates and Amounts to be Derived from Respective Areas  
for State Controller and MWD Board of Directors

Agency	Area (a)	Secured Bond Rate Col. 1	Unsecured Bond Rate Col. 2	Secured SWC Rate Col. 3	Unsecured SWC Rate Col. 4	Total Secured Rate Col. 5	Total Unsecured Rate Col. 6	Bond Levy Col. 7	SWC Levy Col. 8	Total Levy Col. 9
Riverside County										
Eastern Municipal Water District										
Remainder of Eastern MWD	1-3-01-999-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	25,975.89	8,936,495.52	8,962,471.40
Agency Totals:								25,975.89	8,936,495.52	8,962,471.40
Western Municipal Water District										
Eleventh Fringe Area of Western MWD	1-3-02-011-0	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00	0.00	0.00
Fifteenth Fringe Area of Western Mwd	1-3-02-012-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	0.08	29.23	29.32
Remainder of Western MWD	1-3-02-999-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	31,521.28	10,783,093.19	10,814,614.47
Agency Totals:								31,521.37	10,783,122.42	10,814,643.79
County Totals:								57,497.25	19,719,617.94	19,777,115.20
San Bernardino County										
Inland Empire Utilities Agency										
Original Area of Chino Basin MWD	1-4-01-001-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	14,033.82	4,763,177.58	4,777,211.40
Mid-valley Area of Chino Basin MWD	1-4-01-002-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	20,270.56	6,874,471.50	6,894,742.06
Bryant Annexation Area of Chino Basin MWD	1-4-01-003-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	15.92	5,548.21	5,564.13
North Perimeter No. 1 Annexation Area of Chino Basin MWD	1-4-01-004-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	10.54	3,676.32	3,686.86
Agency Totals:								34,330.83	11,646,873.61	11,681,204.44
County Totals:								34,330.83	11,646,873.61	11,681,204.44



Schedule B - Tax Rates and Amounts to be Derived from Respective Areas  
for State Controller and MWD Board of Directors

Agency	Area (a)	Secured Bond Rate Col. 1	Unsecured Bond Rate Col. 2	Secured SWC Rate Col. 3	Unsecured SWC Rate Col. 4	Total Secured Rate Col. 5	Total Unsecured Rate Col. 6	Bond Levy Col. 7	SWC Levy Col. 8	Total Levy Col. 9
Included in MWD										
San Diego County										
San Diego County Water Authority Remainder of SDCWA +	1-5-01-999-9	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	142,335.32	48,865,837.40	49,008,172.72
Agency Totals:								142,335.32	48,865,837.40	49,008,172.72
County Totals:								142,335.32	48,865,837.40	49,008,172.72
Ventura County										
Calleguas Municipal Water District										
Remainder of Calleguas MWD	1-6-01-999-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	27,389.41	9,396,498.74	9,423,888.15
Agency Totals:								27,389.41	9,396,498.74	9,423,888.15
County Totals:								27,389.41	9,396,498.74	9,423,888.15
Included Totals:								815,500.44	279,684,626.79	280,500,127.23

Schedule B - Tax Rates and Amounts to be Derived from Respective Areas  
for State Controller and MWD Board of Directors

Agency	Area (a)	Secured Bond Rate Col. 1	Unsecured Bond Rate Col. 2	Secured SWC Rate Col. 3	Unsecured SWC Rate Col. 4	Total Secured Rate Col. 5	Total Unsecured Rate Col. 6	Bond Levy Col. 7	SWC Levy Col. 8	Total Levy Col. 9
Excluded from MWD										
Los Angeles County										
City of Los Angeles										
Alhambra Hills	2-1-04-001-0	0.00000%	0.00000%	0.00698%	0.00348%	0.00698%	0.00348%	0.00	5,060.74	5,060.74
Portion of Reorganization No. 85-2	2-1-04-002-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	2.28	796.84	799.12
Agency Totals:								2.28	5,857.58	5,859.86
Las Virgenes Municipal Water District										
Portion of Reog No. 85-2 Exclusion from Las Virgines MWD	2-1-15-001-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	0.18	62.49	62.67
Agency Totals:								0.18	62.49	62.67
County Totals:								2.46	5,920.07	5,922.53

Schedule B - Tax Rates and Amounts to be Derived from Respective Areas  
for State Controller and MWD Board of Directors

Agency	Area (a)	Secured	Unsecured	Secured	Unsecured	Total	Total	Bond Levy	SWC Levy	Total Levy
		Bond Rate	Bond Rate	SWC Rate	SWC Rate	Secured Rate	Unsecured Rate			
		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9
Excluded from MWD										
San Diego County										
San Diego County Water Authority										
Exclusion from Original Area of Ramona MWD	2-5-01-017-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	0.03	9.76	9.79
Exclusions From Ramona No.2 Annexation Area	2-5-01-030-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	0.62	214.83	215.44
Rainbow No.3 Annexation Area	2-5-01-041-0	0.00002%	0.00002%	0.00698%	0.00348%	0.00700%	0.00350%	1.05	367.93	368.98
Agency Totals:								1.70	592.51	594.21
County Totals:								1.70	592.51	594.21
Excluded Totals:								4.16	6,512.58	6,516.74
Report Totals:								815,504.60	279,691,139.37	280,506,643.97



Finance and Asset Management Committee

# Adopt Resolution Establishing the Tax Rate for FY 2024/2025

Item 8-3  
August 20, 2024

Item 8-3

# Adopt Resolution Establishing the Tax Rate for FY 2024/2025

## Subject

Adopt Resolution Establishing the Tax Rate for FY 2024/2025

## Purpose

To adopt a resolution to set the ad valorem tax rate for FY 2024/25

# Tax Rate Adoption Process

February 24, 2022	Notice of public hearing provided to Legislature
February 22, 2022	Published notice of hearing
March 7, 2022	Presentation to F&I Committee
March 8, 2022	Public Hearing
April 12, 2022	Board action to adopt resolution on the applicability of the tax rate limit (Section 124.5)
March 12, 2024	Public hearing on proposed rates and charges (FY 25 & FY 26 Proposed Budget)
April 9, 2024	Board approved Adopted Budget for FY 2024/25 & FY 2025/26
<b>August 2024</b>	<b>Board action to adopt resolution establishing the tax rate for FY 2024/25</b>

# Proposed Tax Rate Adoption

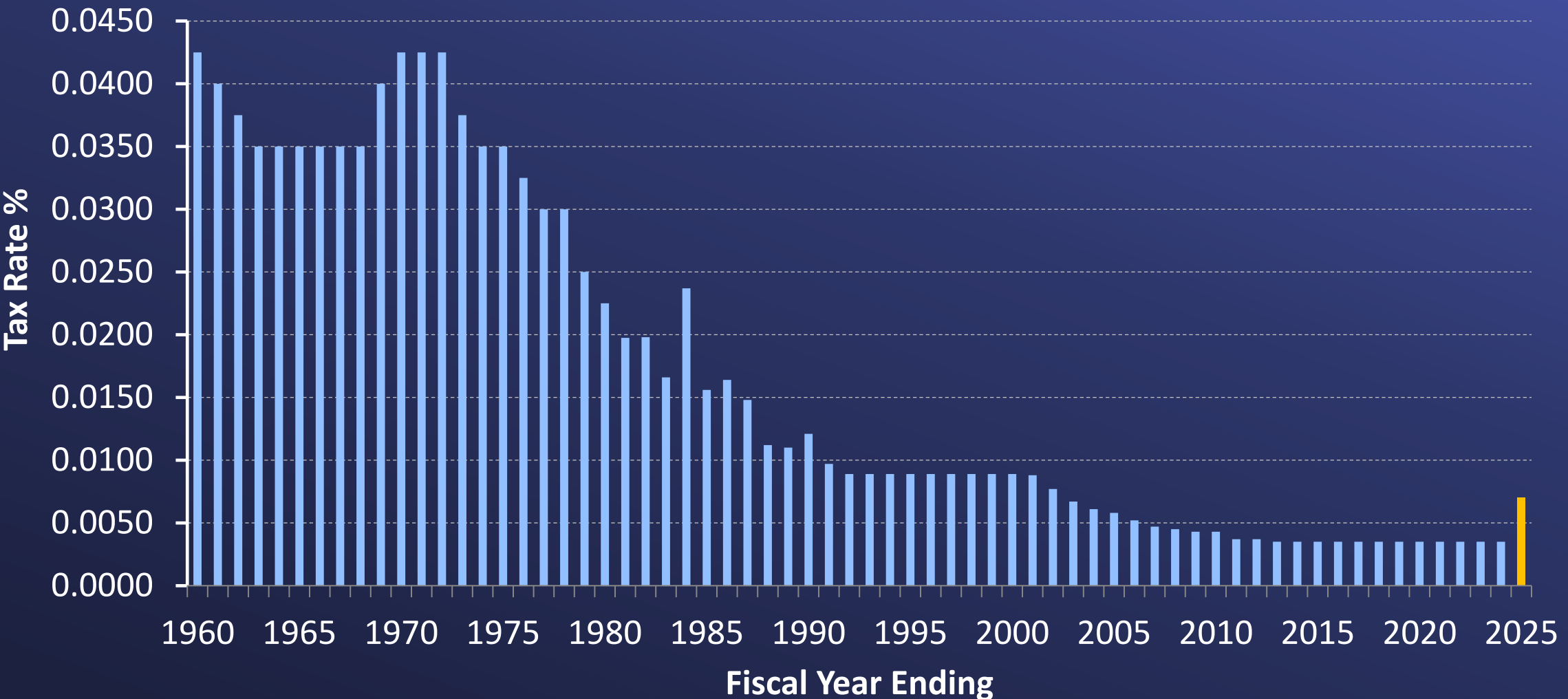
- Set the rate assumed in Metropolitan's Current Budget
- Biennial budget for FYs 2024/25 and 2025/26, water rates for CYs 2024 and 2025, and charges for CYs 2024 and 2025, adopted in April 2024 are based on an increase of the ad valorem tax rate to 0.007%



# Ad Valorem Tax Background

- Metropolitan Water District (MWD) Act authorizes property taxes to pay obligations of the district
- Proposition 13 allows agencies to repay existing voter-approved indebtedness
- Metropolitan's share of State Water Contract (SWC) costs are within the Prop 13 exception for indebtedness
- Metropolitan's general obligation bonds are within the Prop 13 exception for indebtedness

# Historical Property Tax Rate



# Proposed Ad Valorem Tax Rate

- 0.007% of assessed valuations
- A single-family residence in Metropolitan's service area assessed at \$875,000 currently pays about \$60 per year in ad valorem taxes towards Metropolitan's costs

June 2024 Typical Single Family Home Value: Zillow Home Value Index [ZHVI]		
County		Estimated Taxes per Year
Los Angeles	\$ 915,652	\$64
Orange	1,240,096	\$87
Riverside	621,613	\$44
San Bernardino	555,078	\$39
San Diego	1,012,094	\$71
Ventura	905,891	\$63

# Board Options

## Option #1

- Adopt the resolution establishing the ad valorem property tax rate for FY 2024/25 at 0.007 percent; and
- Direct staff to transmit that resolution to the county auditor-controllers, or equivalent, or equivalent, for the levy and collection of the ad valorem property tax.
- **Fiscal Impact:** Fiscal year 2024/25 certified assessed valuations within Metropolitan's district, assuming an ad valorem tax rate of 0.007 percent and after certain adjustments, result in an estimated increase of approximately \$14 million compared to the Adopted Budget for fiscal year 2024/25.
- **Business Analysis:** No negative impact to the Adopted Biennial Budget for fiscal years 2024/25 and 2025/26 and water rates and charges for calendar years 2025 and 2026 as they were based on a tax rate of 0.007 percent as assumed in the Adopted Budget.

# Board Options

## Option #2

- Adopt the resolution establishing the ad valorem property tax rate for FY 2024/25 at a rate to be determined by the Board;
- Direct staff to transmit that resolution to the county auditor-controllers, or equivalent, for the levy and collection of the ad valorem property tax; and
- Direct staff to revisit the biennial budget for FYs 2024/25 and 2025/26 and rates and charges for CYs 2025 and 2026 to make up any loss in assumed property tax revenues, and propose a revised biennial budget, rates and charges to the Board.
- **Fiscal Impact:** Up to \$325 million loss of fixed revenue (net of approximately \$5 million for unsecured tax revenues based on last year's 0.0035 percent ad valorem tax rate), dependent upon Board action for the new ad valorem tax rate.
- **Business Analysis:** Setting an AV property tax rate less than 0.007 percent would require revisiting the adopted biennial budget for fiscal years 2024/25 and water rates and charges for calendar years 2025 and potentially 2026 to make up for lost revenues.

# Staff Recommendation

- Option #1









## • Board of Directors

8/20/2024 Board Meeting

8-4

### Subject

Approve salary increase of 8.25 percent effective June 13, 2024 for Deven Upadhyay as Interim General Manager to reflect the added responsibilities and duties; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

### Executive Summary

On June 13, 2024, the Board of Directors appointed Deven Upadhyay Interim General Manager.

Presented for consideration is an increase to Mr. Upadhyay's salary to recognize the additional duties and responsibilities of the position. The proposed 8.25 percent salary increase aligns with the increase Represented Staff receive for long-term temporary promotions as governed by their specific Memorandum of Understanding (MOU) provisions.

### Proposed Action(s)/Recommendation(s) and Options

#### Staff Recommendation: Option #1

##### Option #1

Approve salary increase of 8.25 percent effective June 13, 2024 for Deven Upadhyay as Interim General Manager to reflect the added responsibilities and duties.

**Fiscal Impact:** None, additional costs will be absorbed by current budget.

**Business Analysis:** The administrative leave of the current General Manager necessitates appointment of an Interim General Manager.

##### Option #2

Do not approve salary increase of 8.25 percent effective June 13, 2024 for Deven Upadhyay as Interim General Manager.

**Fiscal Impact:** None

**Business Analysis:** Additional compensation will not be provided to the Interim General Manager.

### Applicable Policy

Metropolitan Water District Administrative Code Section 6208: Pay Rate Administration

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

### Related Board Action(s)/Future Action(s)

Board of Directors appointed Mr. Upadhyay Interim General Manager on June 13, 2024

## California Environmental Quality Act (CEQA)

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### CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities; personnel-related actions; and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5).)

### CEQA determination for Option #2:

None required

## Details and Background

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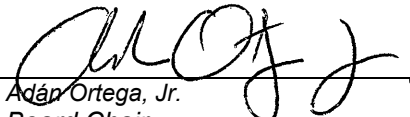
The General Manager position is Unrepresented and the salary for the position is set by the Board of Directors upon hire and evaluated annually per Administrative Code Section 6208:

“(b) Pay rates for Department Heads shall be individually fixed by the Board.”

As such, any adjustment to the Interim General Manager’s compensation must be approved by the Board of Directors.

The proposed 8.25 percent salary increase aligns with the increase Represented Staff receive for long-term temporary promotions as governed by their specific MOU provisions.

The temporary salary increase will end at the conclusion of Mr. Upadhyay’s Interim appointment at which time he would return to his previous position of Executive Officer and Assistant General Manager / Water and Technical Resources.

  
Adán Ortega, Jr.  
Board Chair

08/12/2024

Date



## Water Resource Management Group

### • Conservation Board Report August 2024

#### Summary

This report provides a summary of conservation activity and expenditures for June 2024.

#### Purpose

Informational

#### Detailed Report

### Conservation Expenditures – FY2022/23 & FY2023/24 <sup>(1)</sup>

	Paid <sup>(2)</sup>	Committed <sup>(3)</sup>
Regional Devices	\$15.3 M	\$2.3 M
Member Agency Administered	\$12.0 M	\$1.6 M
Turf Replacement	\$47.9 M	\$17.0 M
Advertising	\$9.6 M	\$0.9 M
Other	\$4.8 M	\$1.6 M
<b>TOTAL</b>	<b>\$89.6 M</b>	<b>\$23.4 M</b>

(1) The Conservation Program biennial expenditure authorization is \$86 million.

(2) Paid as of 7/1/2022 - 6/30/2024. Financial reporting on cash basis.

(3) Committed dollars as of July 10, 2024

### Summary of Expenditures in June 2024: \$3,428,565 (1)

### Lifetime Water Savings to be achieved by all rebates in June 2024: 7,182 AF

FY2022/23-FY2023/24: 138,740 AF lifetime water savings

#### Turf Replacement Rebates:

June: 619,690 ft<sup>2</sup> replaced

FY2022/23-FY2023/24: 22,296,299 ft<sup>2</sup> replaced

#### Smart Controllers:

June: 648 units rebated

FY2022/23-FY2023/24: 20,287 units rebated

#### Rain Barrels and Cisterns:

June: 86 units rebated

FY2022/23-FY2023/24: 6,029 units rebated

#### Clothes Washers:

June: 659 units rebated

FY2022/23-FY2023/24: 22,660 units rebated

#### Toilets:

June: 4,467 units rebated

FY2022/23-FY2023/24: 48,892 units rebated

#### Sprinkler Nozzles:

June: 1,963 units rebated

FY2022/23-FY2023/24: 48,296 units rebated

(1) Expenditures may include advertising and Water Savings Incentive Program activity in addition to the incentives highlighted above.



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

# Board Information

- **Board of Directors**  
***One Water and Stewardship Committee***

8/20/2024 Board Meeting

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9-2

## Subject

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Update on proposed agreements with the Plumas Community Protection I Forest Resilience Bond LLC, North Feather I Forest Resilience Bond LLC, and Upper Butte Creek I Forest Resilience Bond LLC to establish watershed partnerships and forest health pilot investigations in the Northern Sierra Nevada; each agreement will not exceed \$200,000 per year for a maximum of two years

## Executive Summary

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Staff proposes that Metropolitan enter agreements with Plumas Community Protection I Forest Resilience Bond (FRB) LLC, North Feather I FRB LLC, and Upper Butte Creek I FRB LLC (LLCs) in amounts not to exceed \$200,000 per year each for a maximum of two years. These agreements would be funded from the approved FY 2024/25-FY 2025/26 Bay-Delta Initiatives Grant/Donation budget.

Staff has been exploring upper Bay-Delta watershed partnerships in support of Metropolitan's One Water approach and Bay-Delta Policies to improve water supply resiliency in the face of climate change. Supplies from the Bay-Delta watershed are integral to implementing Metropolitan's water supply portfolio and Metropolitan's One Water approach. Impacts of climate change include changes in hydrology (wetter and drier periods than experienced historically) and wildfire risk threatening water supply reliability and water quality that Metropolitan relies upon. Investments in watershed health in the Bay-Delta watershed could help to protect or enhance, inform and improve water source resilience for the State Water Project, along with other source supplies from the Bay-Delta watershed that Metropolitan relies upon, such as critical dry year supplemental supplies (e.g. Yuba Accord transfer water).

Metropolitan staff, consistent with the Board's adopted Bay-Delta Policies, has advanced efforts to participate in three distinct and complimentary watershed partnerships to assess the potential water supply and water quality benefits of various watershed management techniques (pilot investigations). The proposed pilot investigations would be facilitated by Blue Forest, a 501(c)(3) nonprofit and developer of the FRB conservation finance model. Metropolitan would enter into agreements with LLCs which are subsidiaries of Blue Forest and were developed to finance portions of larger watershed programs and projects being led by the U.S. Department of Agriculture (USDA Forest Service). The primary purpose of the proposed programs and projects led by the USDA Forest Service is to reduce the risk of wildfire impacts to communities and critical infrastructure (including State Water Project infrastructure). Metropolitan staff and Blue Forest have identified a suite of potential water supply and water quality benefits that could accrue once the programs and projects have been implemented. Metropolitan's investment at this time would ensure that the programs and projects, subject to the agreements, would be implemented such that the potential water supply and water quality benefits would be assessed and reported. Evaluating the potential water supply and water quality benefits of watershed health treatments over the next two years would provide valuable information to guide: Metropolitan's future policies, potential and existing investments related to the State Water Project or supplemental water supplies, future legislative and regulatory development by state and federal administrations and agencies. Other funding partners are specific to each LLC and are listed below. Blue Forest has successfully implemented similar watershed partnerships in the upper Yuba and Mokelumne watersheds in the past.

- Upper Butte Creek I FRB LLC - up to \$200,000 per year in FY 2024/25 and FY 2025/26
- North Feather I FRB LLC - up to \$200,000 per year in FY 2024/25 and FY 2025/26
- Plumas Community Protection I FRB LLC – up to \$200,000 per year in fiscal year (FY) 2024/25 and FY 2025/26

The key deliverable for each agreement will be an Annual Impact Report. These reports will summarize pilot investigation outcomes, including those associated with water supply and other key information. In addition, these pilot investigations will create opportunities for additional science, foster collaborative relationships in the upper watersheds, and establish a methodology for valuing ecosystem services to help inform Metropolitan’s potential future participation in upper watershed health initiatives to help inform Metropolitan’s future policies, potential and existing investments related to the State Water Project or supplemental water supplies, future legislative and regulatory development by state and federal administrations and agencies. Staff plans to bring the proposed agreements for the watershed pilot investigations to the Board for approval in September 2024.

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### **Fiscal Impact**

If the Board approves the agreements, the total fiscal impact would be \$1.2 million over the term of the biennial budget; \$200,000 per year, per agreement, for two years. These funds were included in the approved FY 2024/25-FY 2025/26 Bay-Delta Initiatives Grant/Donation budget and therefore would not require a budget adjustment.

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### **Applicable Policy**

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

By Minute Item 53012, dated October 11, 2022, the Board adopted the revision and restatement of Bay-Delta Policies.

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### **Related Board Action(s)/Future Action(s)**

Staff plans to bring the three proposed agreements for watershed pilot investigations to the Board for approval in September 2024.

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### **Details and Background**

#### **Background**

Over the past few years, staff has been exploring upper watershed partnerships in support of Metropolitan’s One Water approach and Bay-Delta Policies to improve water supply resiliency in the face of climate change. Staff has kept the Board apprised of developments related to watershed health and watershed partnerships. In September and October 2022, these concepts were discussed as part of the Revision and Restatement of Bay-Delta Policies process. In January 2023, Yuba Water Agency General Manager Willie Whittlesey presented on their North Yuba Forest Partnership Resilience Bond investments at One Water and Stewardship Committee. And in March 2023, staff provided an update at One Water and Stewardship Committee seeking direction from the Board to pursue pilot investigations in the Northern Sierra Nevada. The three proposed agreements funding pilot investigations represent a first step towards building better relationships in the upper watersheds, furthering science related to quantifying the benefits of forest management actions and valuing the potential benefits to Metropolitan of investments that promote improved forest health in the upper watersheds of the Bay-Delta.

#### ***Overview of Importance/Relevance of Watershed Health***

State Water Project supplies and water transfers from the Bay-Delta watershed are integral to implementing Metropolitan’s One Water approach. Such supplies are foundational to the One Water approach as they meet demands in Metropolitan’s service area, help ensure drought resilience in conjunction with Metropolitan’s storage portfolio and provide a high level of water quality that supports salinity management goals and the production of key local supply sources in the region. With much of the state’s water supply originating in the mountains, the

health and management of the upper watersheds are critically important to California's water quality and water supply.

Metropolitan's water supplies from the Bay-Delta watershed are already facing increasing pressures from the impacts of climate change, including reduced snowpack, increased drought severity and frequency, changing precipitation patterns, degradation of habitat and ecosystems, and sea level rise. In addition, wildfires in the Western United States are becoming more frequent, larger, and more severe due to a combination of climate change and overly dense forest conditions resulting from modern forest management and fire suppression practices. Over the last decade, major catastrophic wildfires including the Camp Fire (2018), North Complex Fire (2020), Dixie Fire (2021) and Beckwourth Complex Fire (2021) have burned more than 1.5 million acres of land in the Feather River Watershed, which is more than 65 percent of the watershed. Investments in watershed health in the Northern Sierra Nevada that reduce the risk of catastrophic wildfire may contribute to improved imported water source resilience for the State Water Project and sources of water transfers. Potential benefits of investments in watershed health include:

- Resilience to Climate Variability – Healthy forests are more resilient to climate extremes, such as droughts and heavy rains, ensuring more stable and reliable water supplies.
- Enhanced Water Supply – Forests regulate the flow of water by absorbing rainfall, reducing runoff, and increasing groundwater recharge. This helps maintain water supplies during dry periods.
- Improved Water Quality – Healthy forests filter pollutants, reduce sedimentation, and enhance water quality.
- Biodiversity and Ecosystem Services – Forests support diverse ecosystems that provide essential services, such as cold-water habitats for temperature-sensitive aquatic species.
- Carbon Sequestration – Forests act as carbon sinks, capturing CO<sub>2</sub> from the atmosphere and helping to mitigate climate change impacts.
- Fire Risk Reduction – Healthy, well-managed forests are less susceptible to catastrophic wildfires, which can damage watersheds and infrastructure, leading to costly repairs and water contamination.

### ***Metropolitan's Guiding Policies***

The proposed watershed partnerships and associated pilot investigations support several elements of Metropolitan's Bay-Delta Policy Objectives and Framework that were adopted by the Board in October 2022 include:

- Promoting a sustainable Bay-Delta within Metropolitan's One Water approach.
- Addressing the risks associated with climate change.
- Protecting and restoring aquatic species and habitats based on best available science.
- Partnering in watershed-wide approaches to develop comprehensive solutions.
- Maintaining and pursuing cost-effective financial investments.
- Fostering broad and inclusive engagement of Delta interests and beneficiaries.
- Promoting innovative and multi-benefit initiatives.

### ***Overview of Funding***

Metropolitan has the opportunity to participate in three distinct and complimentary watershed partnerships. Funding would come from Bay-Delta Initiatives' Grant/Donation Expense funds, which were approved under the current biennial budget. This budget category is intended for cost-share contributions through collaborative partnerships with other agencies and academic institutions that pursue studies that are of interest to Metropolitan.

The proposed pilot investigations would be facilitated by Blue Forest, a 501(c)(3) nonprofit and developer of the FRB. The FRB is a conservation finance model specifically designed to add new revenue streams to fund forest

restoration and finance project costs. The three partnerships would be contracted through sole-source agreements with three different FRB LLCs. Each is a separate and distinct subsidiary of Blue Forest.

- Upper Butte Creek I Forest Resilience Bond LLC – The pilot Upper Butte Creek I FRB LLC will be launched in early 2025, contingent upon a signed National Environmental Policy Act (NEPA) record of decision for the Upper Butte Creek Forest Health Initiative. Funding would be provided by Metropolitan to the Upper Butte Creek I FRB LLC to support financing of the Upper Butte Creek I FRB. Metropolitan’s maximum funding contribution would be \$400,000 over FY 2024/25 and FY 2025/26, and the Upper Butte Creek I FRB would finance up to \$5 million of initial work on the landscape. Upon success, this initial investment could unlock further opportunities within the Upper Butte Creek Watershed. A scaled FRB could finance up to \$40 million to restore and protect 20,000 acres. Other potential FRB financing partners currently include the Wildlife Conservation Board, CalFire, the National Fish and Wildlife Foundation, and the Sierra Nevada Conservancy. As the project is implemented, Metropolitan would work with Blue Forest to assess the potential water flow, water quality and aquatic ecosystem benefits and economic impacts within the Upper Butte Creek Watershed.
- North Feather I Forest Resilience Bond LLC – The pilot North Feather I FRB LLC will be launched in late 2024 or early 2025, contingent upon a signed NEPA record of decision for the North Fork Forest Recovery Project. Funding would be provided by Metropolitan to the North Feather I FRB LLC to support financing of the North Feather I FRB. Metropolitan’s maximum funding contribution would be \$400,000 over FY 2024/25 and FY 2025/26. While funding commitments are still being finalized, we expect The North Feather I FRB would leverage public and private funds to finance up to \$3.5 million of initial work on the landscape. Upon success, this initial investment could unlock further opportunities within the Feather River Watershed. A scaled FRB could finance up to \$50 million of restoration activities to restore up to 12,000 priority acres within the 167,000-acre North Fork Forest Recovery Project. Other potential FRB financing partners currently include USDA Forest Service - Plumas National Forest, Cal Fire, Sierra Institute, Pacific Gas & Electric Company (PG&E), and the California Department of Water Resources (DWR). As the project is implemented, Metropolitan would work with Blue Forest to conduct pilot investigations to assess the potential water supply and quality benefits and economic impacts within the Feather River Watershed.
- Plumas Community Protection I Forest Resilience Bond LLC– The pilot Plumas Community Protection I FRB LLC will be launched in late 2024 or early 2025, contingent upon a signed NEPA record of decision. Funding would be provided by Metropolitan to the Plumas Community Protection I FRB LLC to support financing of the Plumas Community Protection I FRB. Metropolitan’s maximum funding contribution would be \$400,000 over FY 2024/25 and FY 2025/26. Similar to the other two pilot projects, a pilot Plumas Community Protection I FRB would finance critical restoration and protection work on the landscape. While pilot footprint and funding commitments are still being finalized, it is estimated the Plumas Community Protection I FRB could finance the restoration activities to protect 9,000 to 39,000 acres within the 240,000-acre Plumas Community Protection Project. Other potential FRB financing partners currently include the USDA Forest Service Wildlife Crisis Strategy, PG&E, and DWR. As the project is implemented, Metropolitan would work with Blue Forest to conduct pilot investigations to assess the potential water supply and quality benefits and economic impacts within the Feather River Watershed.

Although there was a structured decision-making process used to select these specific partnership opportunities, these contracts would be made through sole-source agreements per Administrative Code Section 8140(1)(d). As described in Section 8140(1)(d), Metropolitan may enter sole-source agreements “[i]f competitive procurement could not produce an advantage, or it is impracticable to obtain what is required subject to the competitive procurement provisions because of the unique, exploratory, or experimental nature of the work.” Blue Forest created the FRB financing model and is the only entity currently facilitating this type of investment in the Northern Sierra Mountains.



### ***The Forest Resilience Bond Model***

To launch an FRB, Blue Forest partners with communities, land managers, governments and nonprofits to develop a finance plan and facilitate the development of an implementation team to manage the work on the ground that will ultimately improve forest and watershed health. Blue Forest also works with beneficiaries to evaluate the benefits of a potential project and uses this information to establish an economic, social and environmental case for funding. The FRB is then brought to private investors, like foundations and institutional asset managers, who provide capital to finance the project work. This means critical financing is available up-front for restoration projects, enabling them to happen at a faster pace and larger scale. The primary goals of the FRB model are to:

- Provide up-front funding needed for project work to enable faster implementation.
- Smooth cash flows to enable consistent and ongoing work.
- Blend public and private funding sources to streamline administration.
- Quantify ecosystem benefits to attract new, flexible funding streams for the implementation of forest and watershed restoration projects.
- Develop long-term contracts that support local restoration economies.
- Leverage federal and state funding sources.

The use of the FRB financing model to implement large-scale forest health initiatives has been increasing, with several projects completed, underway, and under development in California, Oregon, and Washington. For example, the Yuba I and Yuba II FRBs helped catalyze the formation of the North Yuba Forest Partnership, a partnership of nine federal, Tribal, state, local government agencies, and nonprofits focused on forest restoration across 275,000 acres of public and private lands in the North Yuba River Watershed. The Yuba I FRB was launched in 2018, and restoration work was completed in 2023. The Yuba I FRB protected and restored 15,000 acres in the upper headwaters of the North Yuba River Watershed. Building on the success of the Yuba I FRB, the Yuba II FRB was launched in 2021 and finances an additional 28,000 acres of treatment activities such as thinning, prescribed burning, hardwood regeneration, invasive species removal, and other forms of ecological restoration.

### ***Proposed Pilot Investigations***

The selection of these watershed partnership opportunities was facilitated through a structured decision-making process (**Attachment 1 and Attachment 2**). Each partnership targets different aspects of potential watershed management activities that could improve water supply resiliency of supplies from the Bay-Delta watershed, including conditions for anadromous fish, water quality, water supply and improved forest health.

#### ***Upper Butte Creek I Forest Resilience Bond LLC***

Funding would be provided by Metropolitan to the Upper Butte Creek I FRB LLC to support financing of the Upper Butte Creek I FRB. As the project is implemented, Metropolitan would work with Blue Forest to conduct pilot investigations to assess the potential benefits of the project to Metropolitan. Butte Creek supports the largest self-sustaining, naturally spawning, wild population of spring-run Chinook salmon in the Central Valley. This investment would also complement past investments made by Metropolitan and others to improve fish passage on lower Butte Creek.

The Upper Butte Creek Forest Health Initiative will restore and protect 20,000 acres within the Upper Butte Creek Watershed. The Upper Butte Creek Watershed was specifically chosen because this area has high biodiversity values, proximity to communities, committed partnership opportunities, and risk of severe wildfire. Other potential FRB financing partners include the Wildlife Conservation Board, CalFire, the National Fish and Wildlife Foundation, and the Sierra Nevada Conservancy. Potential local partners include the Lassen National Forest, the South Lassen Watershed Group and the Butte County Resource Conservation District.

Forest health treatments planned through the Upper Butte Creek I FRB include general forest thinning, prescribed fire, meadow and aspen restoration, and trail development. A quarter of the project area will restore and reforest areas burned by the 2021 Dixie Fire. These treatments yield numerous benefits to the Lassen National Forest and nearby communities by restoring overly dense forests to a resilient state, encouraging a more natural fire return interval, protecting water supply and increasing carbon sequestration.

#### *North Feather I Forest Resilience Bond LLC*

Funding would be provided by Metropolitan to the North Feather I FRB LLC to support financing of the North Feather I FRB. As the project is implemented, Metropolitan would work with Blue Forest to conduct pilot investigations to assess the potential benefits of the project to Metropolitan.

The North Fork Recovery Project will restore and protect up to 12,000 acres as part of the 167,000-acre North Fork Forest Recovery Project. This project provides an opportunity to accelerate post-Dixie Fire recovery to build resilience for the landscape and surrounding communities. Other potential FRB financing partners include USDA Forest Service - Plumas National Forest, Cal Fire, Sierra Institute, PG&E and DWR. Potential local partners include the Sierra Institute and the Plumas National Forest.

Forest health treatments planned through the North Feather I FRB include general forest thinning, prescribed fire, fuels reduction, reforestation, invasive species management, stream restoration, and recreation improvements. These treatments yield numerous benefits to the Plumas National Forest and nearby communities by restoring overly dense forests to a resilient state, encouraging a more natural fire return interval, protecting water supply, and increasing carbon sequestration. The post-fire nature of this project makes it vital for activities to happen as quickly as possible, making funding available to speed along implementation even more critical than in some other projects.

#### *Plumas Community Protection I Forest Resilience Bond LLC*

Funding would be provided by Metropolitan to the Plumas Community Protection I FRB LLC to support financing of the Plumas Community Protection I FRB. As the project is implemented Metropolitan would work with Blue Forest to conduct pilot investigations to assess the potential benefits of the project to Metropolitan. As the source of much of State Water Project water supplies, the Feather River Watershed is of significant importance to Metropolitan's current and future water supplies.

At its full scale, the FRB would finance the restoration and protection of up to 39,000 acres within the total 240,000-acre Plumas Community Protection Project. In addition to directly supporting long-term reliability of the State Water Project, the Feather River Watershed was specifically chosen as this area has high biodiversity values, proximity to communities, committed partnership opportunities, and risk of severe wildfire. Potential FRB financing partners include PG&E and DWR. In addition, the Plumas National Forest has received Wildfire Crisis Strategy funding for the Plumas Community Protection Project, and there is \$278 million in federal funding that requires a 5 percent match to deploy. Potential local partners include the National Forest Foundation, the Feather River Resource Conservation District, the Mule Deer Foundation and the Plumas National Forest.

Forest health treatments planned through the Plumas Community Protection I FRB include general forest thinning, prescribed fire, meadow and aspen restoration, and trail development. These treatments yield numerous benefits to the Plumas National Forest and nearby communities by restoring overly dense forests to a resilient state, encouraging a more natural fire return interval, protecting water supply, and increasing carbon sequestration.

***Benefits to Metropolitan***

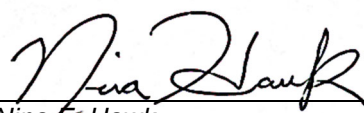
The deliverables for each cost-share agreement will be a FRB Annual Impact Report developed by Blue Forest. These Reports will summarize pilot investigation outcomes, including those associated with water supply and other key information. For each pilot investigation, Blue Forest will analyze and report in the FRB Annual Impact Report the annual and cumulative quantities of:

- Water supply protected.
- Contributions to local economic growth and job creation.
- Contributions to local community protection.
- Plant and animal species protected.
- Land area of forest, meadow, and invasive plant treatments implemented.
- Terrestrial ecosystems restored and protected.


In addition, these pilot investigations will create opportunities for additional science, foster collaborative relationships in the upper watersheds, and establish a methodology for valuing ecosystem services to help inform Metropolitan's potential future participation in upper watershed health initiatives.

***Project Milestones***

The FRB Annual Impact Report for each pilot investigation will be provided to Metropolitan annually beginning in 2025.

  
\_\_\_\_\_  
Nina E. Hawk  
Chief, Bay-Delta Resources

7/31/2024  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Deven Upadhyay  
Interim General Manager

8/7/2024  
\_\_\_\_\_  
Date

**Attachment 1 – Project Decision-Making Memo****Attachment 2 – Benefit Analysis Results**

Ref# eo12699486

## Memo: Project Decision Making Process Utilized on August 16, 2023

*Created by Blue Forest for Metropolitan Water District*

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Blue Forest developed a decision-making process to help Metropolitan Water District (Met Water) members narrow down the list of potential projects to consider funding through a Forest Resilience Bond (FRB). Seven projects were initially considered based on their proximity to the State Water Project and potential impacts on the Bay Delta. Met Water worked with Blue Forest to prioritize four projects for further consideration and analysis using a number of materials, including a spreadsheet of information about each project as well as maps depicting the wildfire hazard potential and water benefits on each project's landscape.

This memo details this process and the rationale behind the selection of the four projects about which Met Water and Blue Forest will continue discussions.

### **Step One: Determining Criteria Importance**

In the spring of 2023, Met Water and Blue Forest discussed various components of restoration projects that might make a project a funding priority for Met Water. Eight criteria were identified through these discussions: Primary Benefits to Met Water, Collaboration, Terrestrial Species Benefitted, ESA-listed Salmonids, Tributaries, Service Area Connection, Other Project Benefits, and Timeline.

The first step of the decision-making process utilized on August 16 was for Met Water members to consider the relative importance of each of these project criteria, culminating in an assignment of scores ranging from 1-3 for each criterion (with 3 being assigned to the criteria of most importance, and 1 to the criteria of least importance). Met Water staff assigned the following weights to each of the eight criteria: 3 to the Primary Benefits to Met and ESA-listed Salmonids criteria, 2.5 to Collaboration, 2 to Service Area Connection and Other Project Benefits, 1.5 to Timeline, and 1 to Terrestrial Species Benefitted. The Tributaries category was not weighted (and therefore discarded as a criterion), as the information conveyed by this criterion was already captured by the ESA-listed Salmonids criterion.

### **Step Two: Identifying Projects That Best Meet Criteria**

Each Met Water member individually considered the spreadsheet of information and maps of water benefits and wildfire hazard potential provided by Blue Forest for each project area to narrow down the top two projects that they believed best met each criterion.

These decisions were visually depicted through colored-coded sticky notes: each Met Water member received 14 sticky notes, with two of each color according to the seven criterion (again, Tributaries was no longer being used as a criterion). In each color pair, one sticky note had a "1" on it (indicating best), and the other had a "2" on it (indicating second-best). Eight sticky notes, each with a project name on it, had been set up by Blue Forest on a wall of the conference room, and Met Water members put sticky notes under the projects corresponding to what they believed were the best and second-best project for

meeting each of the seven criteria. A picture of this process can be seen in *Appendix A: Sticky Note Activity*.

Four projects (West Lassen Headwaters, Upper Butte Creek Forest Health Initiative, West Shore Community Protection Project, and Plumas National Forest Community Protection Project) dominated in terms of the numbers of sticky notes corresponding with them — meaning that these four were the most preferred according to the seven criterion.

Met Water members discussed their choices for each project criterion. Following this discussion, it was unanimously agreed that the three projects that had *not* received the majority of sticky note votes would no longer be considered. The few votes cast for these projects were then reassigned to the top four projects (for example, the “1” that the Texas Vegetation Management/Nyack project received in the “Other Project Benefits” category was reassigned to a different project, in this case the Plumas National Forest Community Protection Project). The completion of this vote reassignment resulted in six votes *per criterion* across the top four projects, with three votes designating projects that best met the criterion, and three votes designating projects that second best met the criterion. This can be seen in *Appendix B: Results of Sticky Note Activity*.

### **Step Three: Scorecard Ranking Activity**

Each of the voting assignments were converted into a score. Votes of 1 (best) were assigned a score of 2, and votes of 2 (second-best) were assigned a score of 1, such that higher scores indicated better-ranked projects. Following this conversion, the scores in each box of the matrix were added up (for example, three sticky notes labeled “1” would translate to a combined score of 6), resulting in a matrix in which each of the four projects was given a score for how well it met each criterion, with higher scores indicating a project that better met a certain criterion.

These scores were then multiplied by the criterion weighting assigned in step 1, and these products were summed, to determine a final score for each of the projects, again with higher scores indicating better projects. As shown in *Appendix C: Final Scores Matrix*, Upper Butte Creek Forest Health Initiative scored the highest, with Plumas National Forest Community Protection Project coming in second, West Lassen Headwaters a close third, and West Shore Community Protection Project coming in a rather distant fourth.

### **Step Four: Final Scores Discussion**

Met Water members agreed with the scores and project rankings given their thinking around how well each project met the different criteria. To get a better sense of how criterion weighting affected these scores, the criterion weights were toggled to perform a sensitivity analysis (for example, Service Area Connection being bumped from a 2 to a 3), and results consistently indicated that the Plumas Community Protection Project, Upper Butte Creek, and West Lassen Headwaters were all the most-preferred, although toggling the scores sometimes switched the order of first, second, and third place ranking among these projects.

The initial intention of the exercise was to determine the top two or three projects for Met Water to consider for contributing funding. However, although the West Shore Community Protection Project was ranked lower than all the others, after some discussion it was decided that this project would continue to be considered as well as the other three. This decision was made for three reasons:

1. The project performed well in meeting some of the most important criteria, as evidenced by the fact that toggling of criteria importance decreased the gap in scores between this project and the other projects.
2. Given the smaller size of the project, Met Water's potential funding contribution to the project could close a larger portion of the funding gap compared to some of the other larger projects.
3. The project is already in implementation whereas the other three projects won't begin implementation until late 2024 or early 2025.

The decision-making activities resulted in four projects that Met Water will further consider for potential funding contributions. With this narrowed-down list, Blue Forest will now provide Met Water with more detailed scientific and economic analyses to help determine which one or two of these projects might best meet Met Water's financial, ecological, and other organization goals.

## Appendix

### Appendix A: Sticky Note Activity



**Appendix B: Results of Sticky Note Activity (Screenshot)**

	A	B	C	D	E	F	G	H
1	<i>Weighting</i>	2	3	2.5	1	3	2	1.5
2		<b>Other Project Benefits</b>	<b>Primary Benefits to Met</b>	<b>Collaboration</b>	<b>Species Benefitted</b>	<b>ESA-Listed Salmonids</b>	<b>Service Area Connection</b>	<b>Timeline</b>
3	<b>West Lassen Headwaters</b>	2,2	1,2	2,2	2,2,2	1,2,2	2	
4	<b>Upper Butte Creek Forest Health Initiative</b>	2		1,1	1,1,1	1,1,2		1 2,2
5	<b>West Shore Community Protection Project</b>		1, 2	2			1,1	1,1
6	<b>Community Protection Project</b>	1,1,1	1,2	1			1 2,2	2

**Appendix C: Final Scores Matrix (Screenshot)**

	A	B	C	D	E	F	G	H	I
1	<i>Weighting</i>	2	3	2.5	1	3	2	1.5	
2		<b>Other Project Benefits</b>	<b>Primary Benefits to Met</b>	<b>Collaboration</b>	<b>Species Benefitted</b>	<b>ESA-Listed Salmonids</b>	<b>Service Area Connection</b>	<b>Timeline</b>	<b>Score</b>
3	<b>West Lassen Headwaters</b>	2	3	2	3	4	1		<b>35</b>
4	<b>Upper Butte Creek Forest Health Initiative</b>	1		4	6	5		4	<b>39</b>
5	<b>West Shore Community Protection Project</b>		3	1			4	4	<b>25.5</b>
6	<b>Community Protection Project</b>	6	3	2			4	1	<b>35.5</b>



# Benefit Analysis Results

*Created by Blue Forest for Metropolitan Water District*

*July 2024*

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## Overview of Modeling and Analysis

Blue Forest's analysis focused on three benefits associated with the planned activities of each project: water volume (via reduced evapotranspiration), water quality (via reduced sedimentation risk), and decreased risk of high-severity wildfire. Analysis activities were completed using the Natural Climate Solutions (NCS) Toolbox developed by the [Center for Ecosystem Climate Solutions](#) (CECS). See Appendix 1 for more information about the NCS Toolbox.

The tables in the following section summarize contextual information about each project and benefit analysis results. Please note that, while the models used are built on sophisticated and rigorous research, the actual benefit values that result from project implementation may vary from the values presented in this document.

### Summary of Benefits Analyzed:

- **Water Volume:** increased water yield as measured by decreased evapotranspiration.
- **Water Quality:** the decrease in sediment deposition in bodies of water, which in turn affects infrastructure that processes and intakes water. The tool has some limitations and these numbers should only be used as a comparative metric between projects. See Appendix 1 for more information.
- **Flame Length:** a metric that informs the wildfire hazard potential (WHP) and rate of spread from a potential wildfire. Decreased flame length indicates a lower WHP and rate of spread.

## Project Profiles and Analysis Results

Upper Butte Creek Forest Health Initiative (Lassen National Forest)		
Basic information	<ul style="list-style-type: none"><li>20,079 acres in the Lassen NF</li><li>Forest thinning, prescribed fire, meadow/aspen restoration, trail development</li><li>A quarter of the project area will restore and reforest areas burned by the 2021 Dixie Fire</li><li>NEPA decision expected spring 2025, implementation can begin soon thereafter</li></ul>	
Notable details	<ul style="list-style-type: none"><li>This project scored the highest during the August 16, 2023 Met prioritization exercise</li></ul>	
Funding and collaboration	<ul style="list-style-type: none"><li><u>Current funder(s)</u>: Wildlife Conservation Board Forest Conservation Program, Dept of Conservation Forest Health Watershed Coordinator funding, private foundations, National Fish and Wildlife Foundation CA Forests &amp; Watersheds Program, seeking additional funding from Sierra Nevada Conservancy</li><li><u>Local partners</u>: South Lassen Watershed Group, Butte County RCD</li></ul>	
Salmonids & habitat impact	<ul style="list-style-type: none"><li>Additional water flows and water quality protection for ecological purposes (largest self-sustaining, naturally spawning, wild population of spring-run Chinook salmon in the Central Valley)</li><li><a href="#">TNC's Salmonscape map</a> shows that the Butte Creek watershed is a high priority for salmonid conservation, particularly the northeastern portion of the watershed (adjacent to the Lower Feather watershed)</li><li>Protected spotted owl and goshawk habitat</li></ul>	
Estimate of Benefits		
Wildfire Benefits	Average Flame Length Reduction (percent): 77%	
Water Benefits	Volume: 2,500 acre feet (AF) of reduced evapotranspiration (0.12 AF/acre)	Quality: 37% decrease in post-fire sedimentation risk

North Fork Forest Recovery Project (Plumas National Forest)	
Basic information	<ul style="list-style-type: none"> <li>• 166,889 acres in the Plumas NF</li> <li>• Post-fire restoration activities: prescribed fire, thinning, hazard tree removal, reforestation, invasive species management, and hydrological improvements</li> <li>• Within the Feather River Watershed</li> <li>• NEPA decision expected in spring 2025, implementation to begin soon thereafter</li> </ul>
Notable details	<ul style="list-style-type: none"> <li>• This project is almost entirely comprised of post-fire restoration activities, following the 2021 Dixie Fire</li> </ul>
Funding and collaboration	<ul style="list-style-type: none"> <li>• <u>Current funders</u>: FS Wildfire Crisis Strategy funding, CALFIRE</li> <li>• <u>Local partners</u>: Sierra Institute</li> <li>• Other potential beneficiaries have expressed interest in this project, including PG&amp;E and CA DWR</li> </ul>
Salmonids & habitat impact	<ul style="list-style-type: none"> <li>• <a href="#">TNC's Salmonscape map</a> shows a portion of the Lower Feather watershed along the Sacramento River as high priority for salmonid conservation</li> </ul>
Estimate of Benefits	
Wildfire Benefits	Average Flame Length Reduction: 9.18%
Water Benefits	Volume: 26,317 AF of reduced evapotranspiration (0.16 AF/acre)

Plumas Community Protection Project (Plumas National Forest)		
Basic information	<ul style="list-style-type: none"><li>250,000 acres in the Plumas NF</li><li>Focused on reducing the potential for extreme fire behavior in the wildland urban interface and improving road systems for community egress</li><li>Implementation will begin in 2025</li></ul>	
Notable details	<ul style="list-style-type: none"><li>Acreage will be further refined over time, likely larger than 250k when the Forest finalizes planning</li></ul>	
Funding and collaboration	<ul style="list-style-type: none"><li><u>Current Funders</u>: Plumas NF has \$278M in federal funds that will require a 5% match to deploy</li><li>PG&amp;E is also considering funding contributions on this landscape</li><li>Adding resources would help leverage an already well-funded project</li></ul>	
Salmonids & habitat impact	<ul style="list-style-type: none"><li><a href="#">TNC's Salmonscape map</a> shows portions of the Lower Feather, Battle, Paynes, Singer, and Big Chico watersheds as high priority for salmonid conservation (steelhead and Chinook salmon)</li></ul>	
Estimate of Benefits		
Wildfire Benefits	Average Flame Length Reduction: 80%	
Water Benefits	Volume: 36,400 AF of reduced evapotranspiration (0.48 AF/acre)	Quality: 4% decrease in post-fire sedimentation risk

## Appendix 1: Information and Resources about the CECS Tool<sup>1</sup>

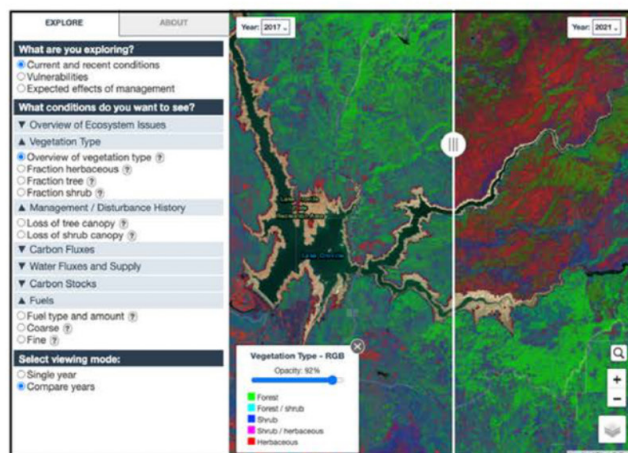


Figure 2: The DataAtlas tool visualizes CECS-original data.

The **DataAtlas** is an online visualization tool that displays select ecosystem data at 30-m resolution statewide. Every data layer within this tool is an original CECS product, and was created using the DataEngine. The DataAtlas allows users to get an overview of ecosystem conditions, compare years, forecast general outcomes of potential management, and identify areas of interest for further analysis using the DataBridge.



View the DataAtlas here:  
<https://cecs.ess.uci.edu/data-atlas/>

The **DataBridge** tools allow a user to select and export ecosystem data from the DataEngine to a user's preferred analysis software. Users select data based on their needs, including for planning, prioritization, or monitoring. Data files can be statewide or for a specific area. The DataBridge creates formatted tables, time series, or shapefiles that can be imported into software such as ArcGIS, QGIS, Excel, R, or ForSys. This tool is best for advanced users with working knowledge of one of these software tools, as well as experience in landscape. Contact CECS for more information.

Figure 3: The DataBridge tool extracts data based on a user's needs.



**We'd like to collaborate!**

**Please reach out with your input and ideas.**

Contact: [ecosystemclimate@ess.uci.edu](mailto:ecosystemclimate@ess.uci.edu)

Director: Michael Goulden, UC Irvine, [mgoulden@uci.edu](mailto:mgoulden@uci.edu)

Co-Director: Roger Bales, UC Merced, [rbales@ucmerced.edu](mailto:rbales@ucmerced.edu)



<https://california-ecosystem-climate.solutions/>



@CA CECS



Center for Ecosystem  
Climate Solutions

CECS is supported by the California Strategic Growth Council's Climate Change Research Program with funds from California Climate Investments—Cap-and-Trade Dollars at Work.



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STRATEGIC  
GROWTH  
COUNCIL



Rev. August 2022

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## One Water and Stewardship Committee

Update on proposed agreements with the Plumas Community Protection I Forest Resilience Bond LLC, North Feather I Forest Resilience Bond LLC, and Upper Butte Creek I Forest Resilience Bond LLC to establish watershed partnerships and forest health pilot investigations in the Northern Sierra Nevada; each agreement will not exceed \$200,000 per year for a maximum of two years

Item 9-2

August 19, 2024

## Item 9-2

### Update on Proposed Watershed Agreements

#### Subject

Update on proposed agreements with the Plumas Community Protection I Forest Resilience Bond LLC, North Feather I Forest Resilience Bond LLC, and Upper Butte Creek I Forest Resilience Bond LLC to establish watershed partnerships and forest health pilot investigations in the Northern Sierra Nevada; each agreement will not exceed \$200,000 per year for a maximum of two years.

#### Purpose

The proposed watershed agreements would help Metropolitan assess the potential benefits and value of investments in watershed health through pilot investigations, while advancing the relevant science and building relationships within the watersheds.

#### Next Steps

Staff will return to the One Water and Stewardship Committee in September with an Action letter and oral report.



# Overview

- Three proposed Pilot Investigations at a maximum of \$200,000 each in FY's 2024/25 and 2025/26
  - Upper Butte Creek I Forest Resilience Bond LLC
  - North Feather I Forest Resilience Bond LLC
  - Plumas Community Protection I Forest Resilience Bond LLC
- Funding would come from approved Bay-Delta science budget
- Objectives are to evaluate potential benefits to Metropolitan, advance science, and develop watershed partnerships

## Update on Proposed Watershed Agreements

# Watersheds Provide Valuable Ecosystem Services



**Water  
Quality**



**Water  
Supply**



**Fire  
Protection**

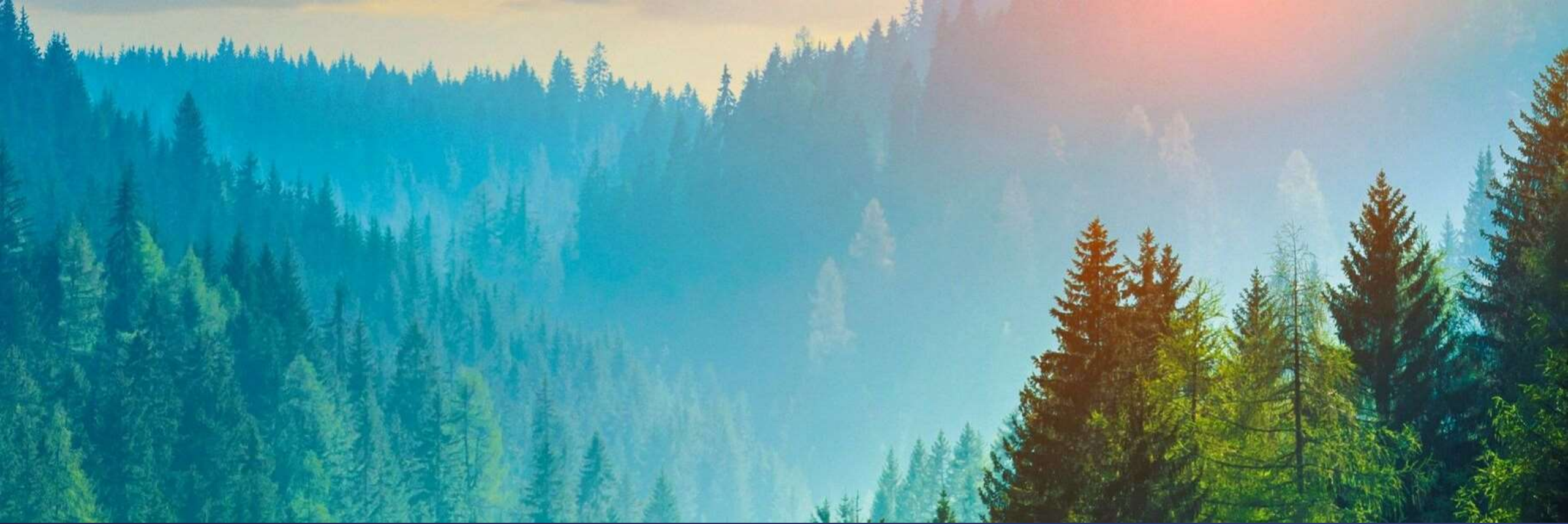


**Carbon  
Security**



**Habitat &  
Biodiversity**

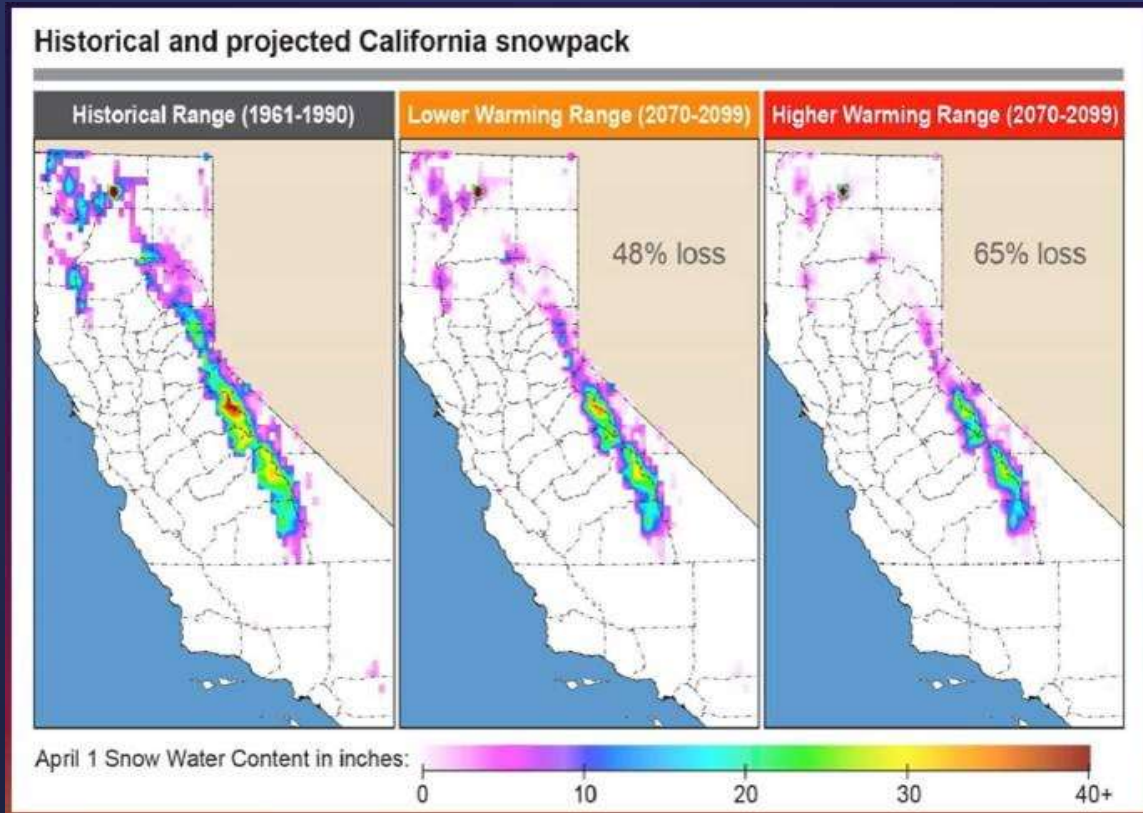




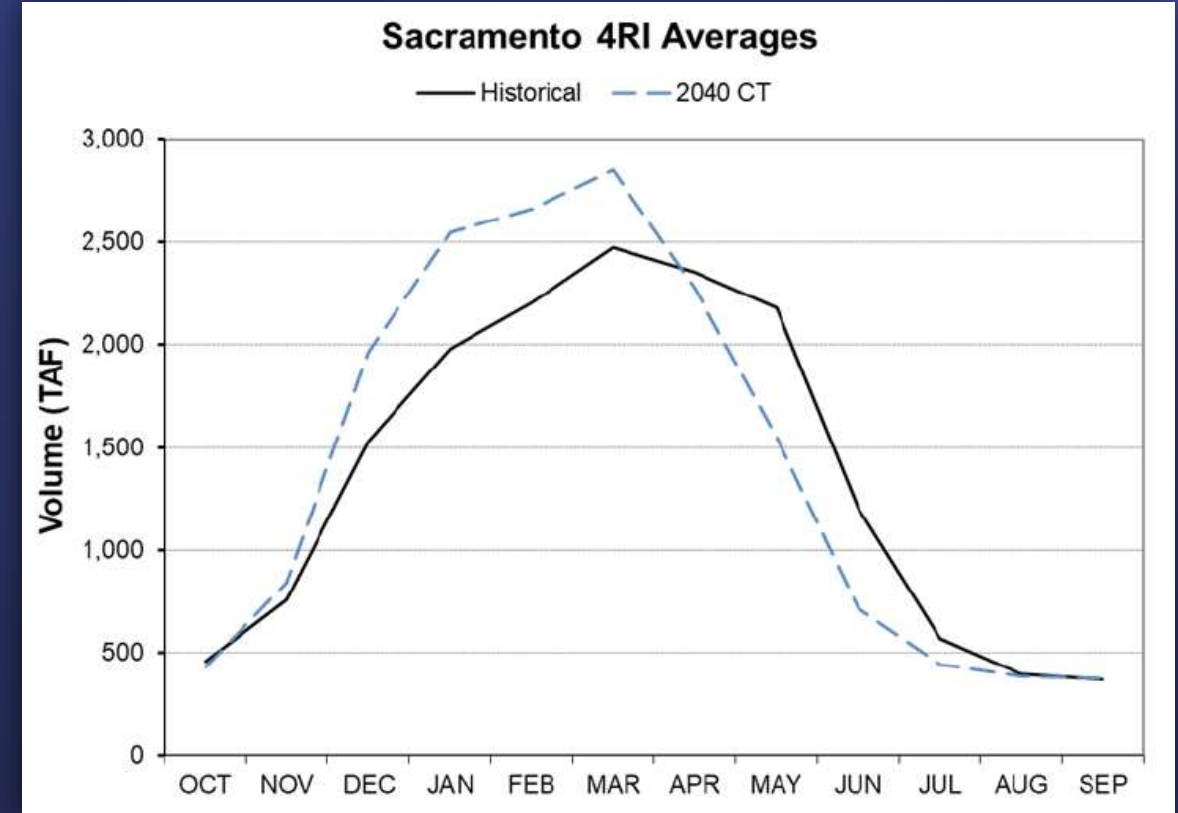
# Background

# Modeling California's Water Supply

Significant Changes in Snowpack and Runoff Timing and Quantity are Projected



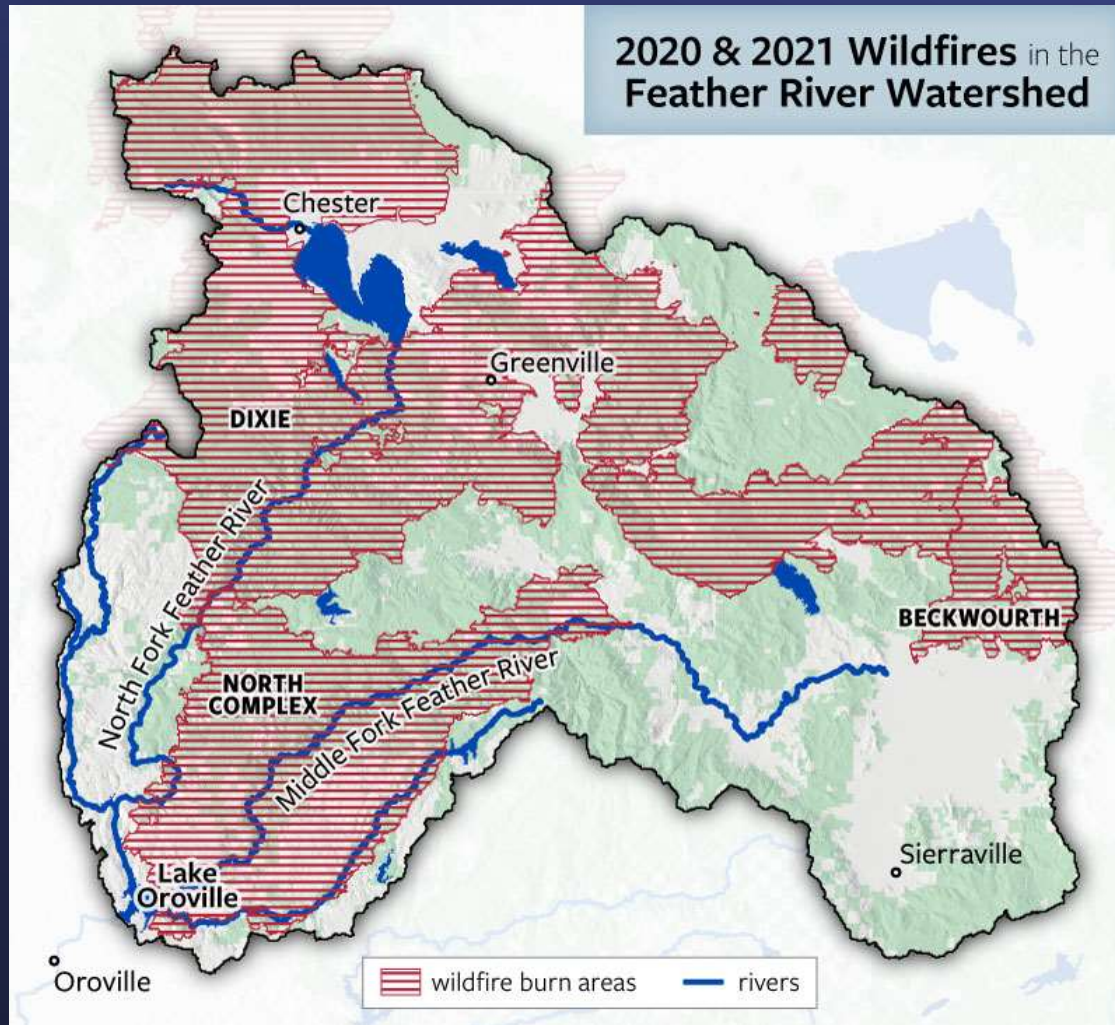
Source: CA Department of Water Resources



Source: Delta Conveyance Project EIR

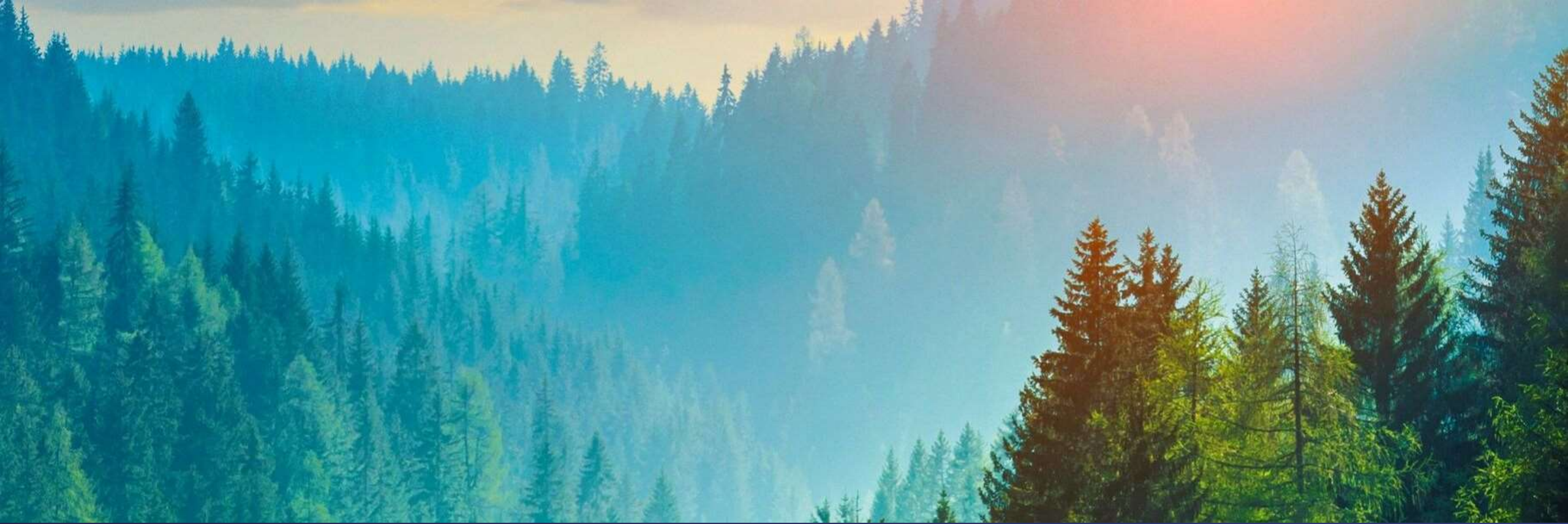


# Feather River Watershed Forest Health



Source: Sierra Nevada Conservancy

- The frequency, size, and severity of wildfire in California has increased
  - Past fire suppression practices have led to dense forests with high fuel loads
  - Severe heat and drought resulting from climate change have increased aridity of forest fuels



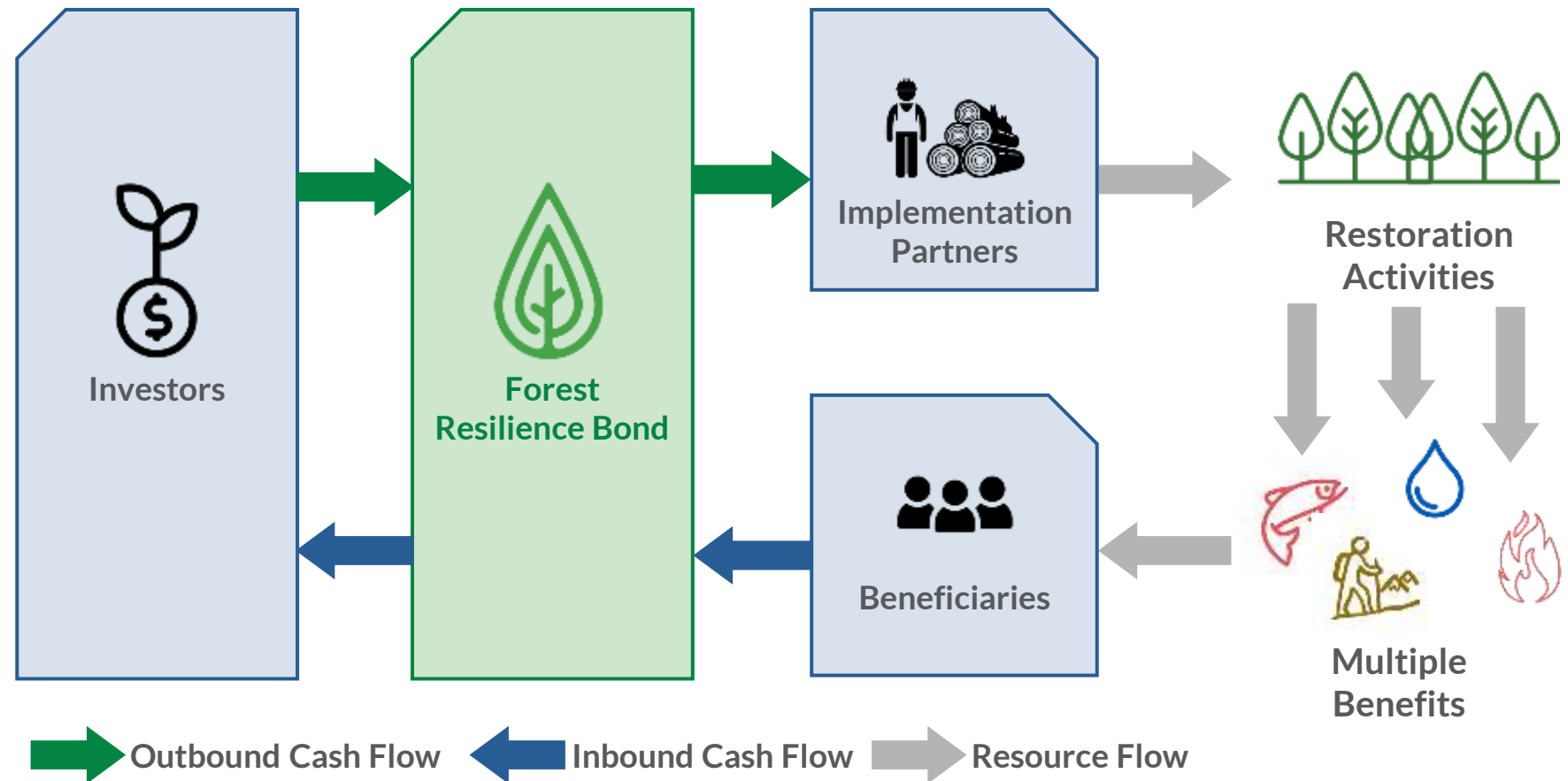
# Proposed Watershed Agreements



# Blue Forest



## Forest Resilience Bond





Full Project  
20,000 acres

Initial FRB  
~\$5 million

Potential FRB  
Partners

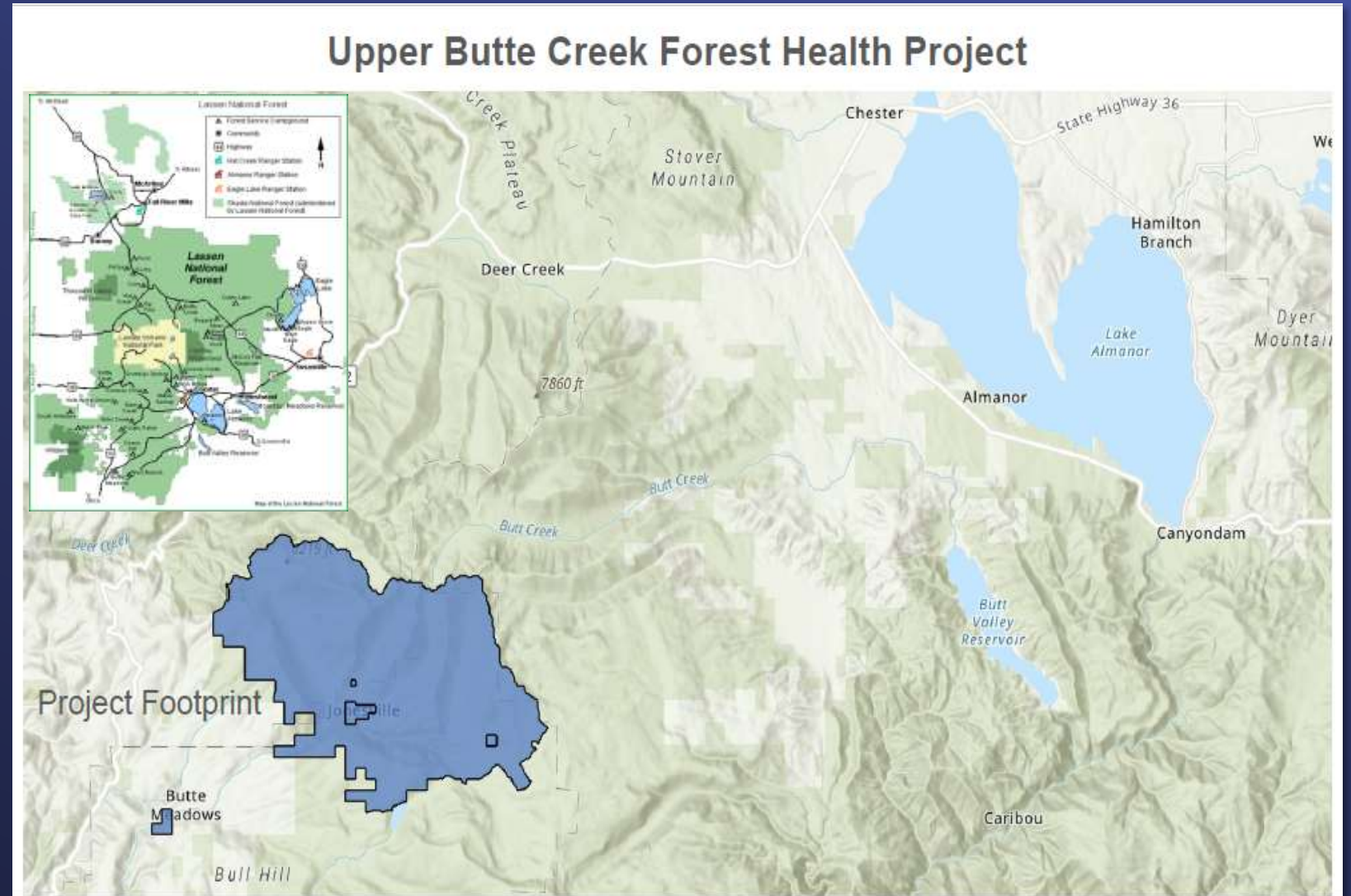
CalFire, NFWF,  
Wildlife Conservation  
Board, Sierra Nevada  
Conservancy

Local Partners

Lassen NF, South  
Lassen Watershed  
Group, Butte County  
RCD

August 19, 2024

# Upper Butte Creek I Forest Resilience Bond



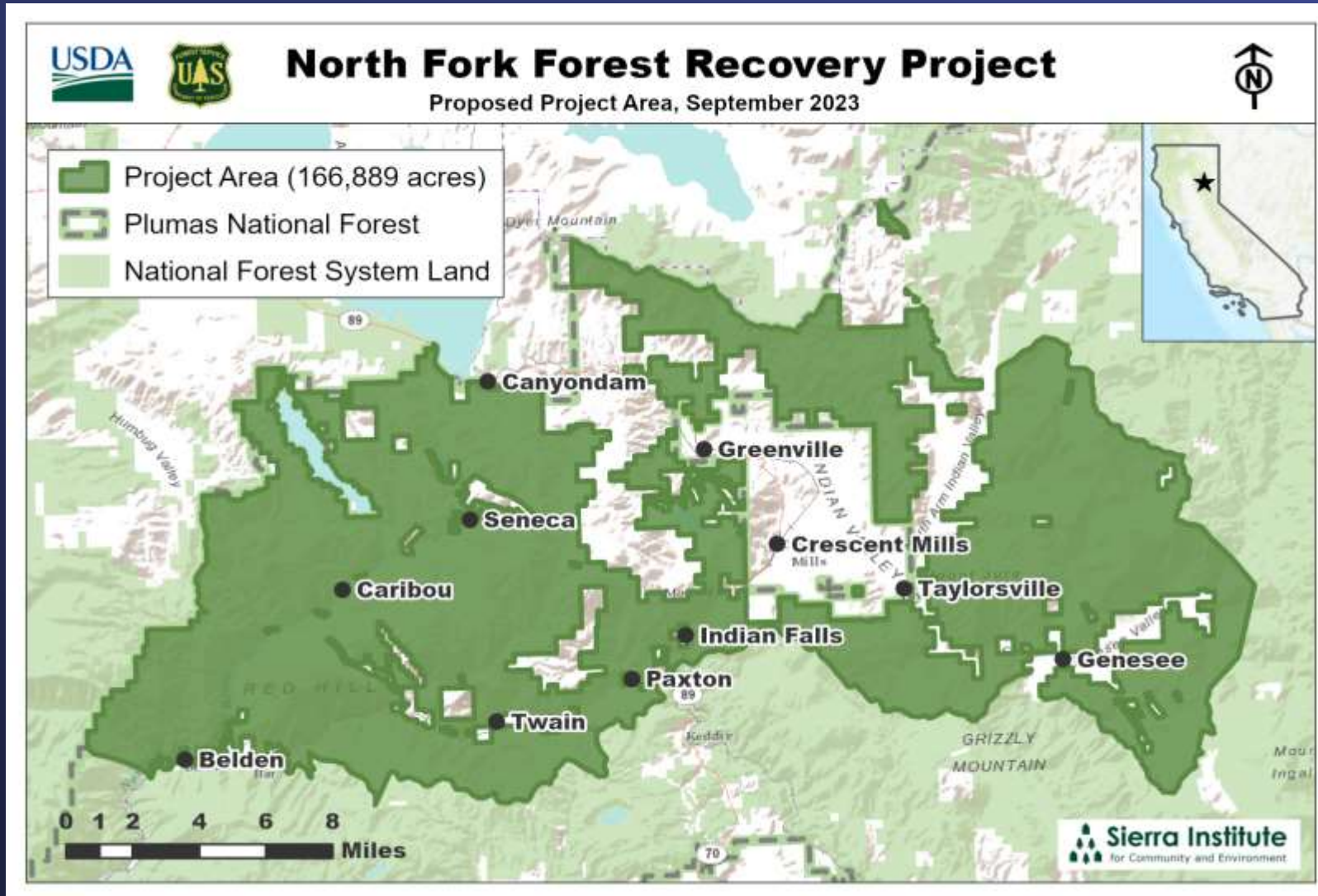
# North Feather I Forest Resilience Bond

Full Project  
167,000 acres

Initial FRB  
~\$3.5 million

Potential FRB  
Partners  
Plumas NF, CalFire,  
Sierra Institute,  
PG&E, DWR

Local Partners  
Sierra Institute,  
Plumas NF





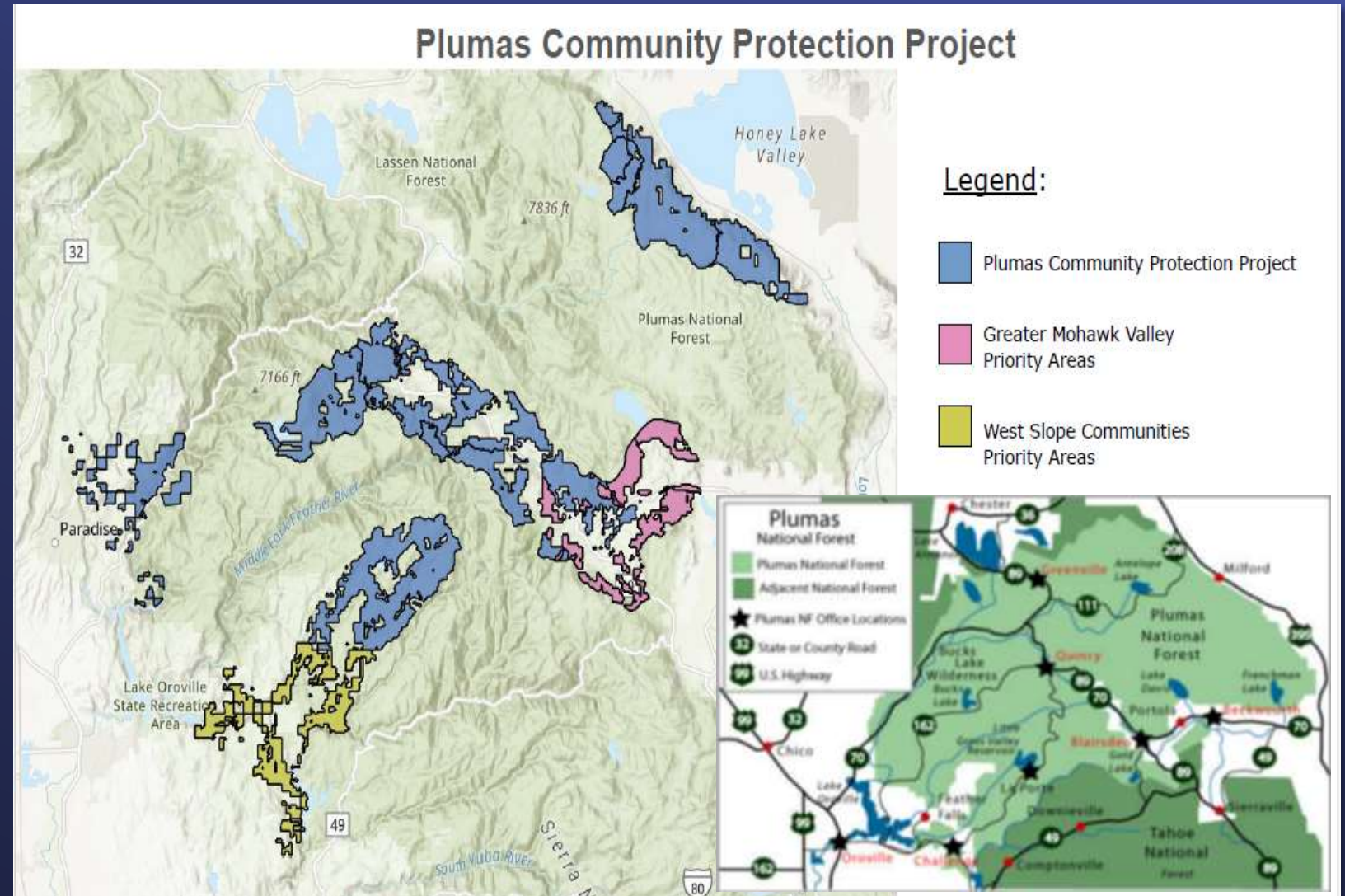
Full Project  
240,000 acres

Initial FRB  
Up to 39,000 acres

Potential FRB  
Partners  
PG&E, DWR

Local Partners  
National Forest  
Foundation, Feather  
River RCD, Mule  
Deer Foundation,  
Plumas NF

# Plumas Community Protection I FRB



# Key Takeaways

- Improvements in watershed health could help
  - protect water supply, quality, and aquatic ecosystems
  - lessen some impacts of climate change longer-term
- Pilot investigations would help assess the potential benefits and value
- Participation would help build relationships and advance supporting science
- Investments would help larger projects proceed at a faster pace

Update on  
Proposed  
Watershed  
Agreements

# Next Steps

- September One Water and Stewardship action letter and oral report
- Future updates on progress and Pilot Investigation findings

Update on  
Proposed  
Watershed  
Agreements







Board of Directors

# Report on Department Head 2024 Salary Survey

Board Meeting  
Item 10-1  
August 20, 2024



## Overview

# Department Head Salary Survey

- Review of process
- Market survey information
- Compensation options
- Board discussion and potential action

# Background

## Review of Process

- Determine job matches on the basis of:
  - Comparable work responsibilities and scope
  - Direct reporting relationship
  - Education and Experience requirements
  - Organization structure
- Valid comparison requires at least (3) matches

## Background

# Market Survey Information

- Annual Direct Report salary survey
  - General Manager
  - General Counsel
  - General Auditor
  - Ethics Officer
- Compares actual base salaries of incumbents
  - Bargaining unit comparisons measure salary range maximums
- Salaries measured against 75<sup>th</sup> percentile (+/-10%)

## Background

# MWD Uses Nine Comparator Agencies

Per Administrative Code, Section 6208(h)(2):

- County of Los Angeles
- East Bay Municipal Utility District
- Los Angeles Department of Water and Power
- Los Angeles Metropolitan Transportation Authority
- Orange County Water District
- San Diego County Water Authority
- San Francisco Public Utilities Commission
- Sanitation Districts of Los Angeles County
- State Department of Water Resources

# Background

## Additional Comparator Agencies

Additional agencies considered for the General Manager, General Counsel, and General Auditor:

- Alameda County Water District
- Central Arizona Project
- Contra Costa Water District
- Las Vegas Valley Water District & Southern Nevada Water Authority
- Municipal Water District of Orange County
- Santa Clara Valley Water District
- Zone 7 Water Agency

# Background

## Additional Comparator Agencies

Additional agencies considered for the Ethics Officer

- County of San Diego
- Oakland City Ethics Commission
- San Diego City Ethics Commission
- San Francisco City Ethics Commission

# Market Data

## General Manager

Rank	Agency	Classification Title	Agency Actual Annual Salary	Percentage Differential
1	Los Angeles Department of Water and Power	General Manager	\$750,010	-48.83%
2	County of Los Angeles	Chief Executive Officer	\$593,162	-17.70%
3	<b>Metropolitan Water District of Southern California</b>	<b>General Manager</b>	<b>\$503,942</b>	
4	<b><u>Santa Clara Valley Water District</u></b>	Chief Executive Officer	\$497,952	1.19%
5	Los Angeles Metropolitan Transportation Authority	Chief Executive Officer	\$457,808	9.15%
6	San Francisco Public Utilities Commission	General Manager	\$453,388	10.03%
7	<b><u>Central Arizona Project</u></b>	General Manager	\$450,000	10.70%
8	Sanitation Districts of Los Angeles County	Chief Engineer & General Manager	\$427,380	15.19%
9	East Bay Municipal Utility District	General Manager	\$408,396	18.96%
10	San Diego County Water Authority	General Manager	\$390,000	22.61%
11	<b><u>Zone 7 Water Agency</u></b>	General Manager	\$352,810	29.99%
12	<b><u>Contra Costa Water District</u></b>	General Manager	\$326,144	35.28%
13	<b><u>Municipal Water District of Orange County</u></b>	General Manager	\$325,000	35.51%
14	<b><u>Alameda County Water District</u></b>	General Manager	\$323,186	35.87%
15	Orange County Water District	General Manager	\$320,361	36.43%
16	<b><u>Las Vegas Valley Water District &amp; Southern Nevada Water Authority Combined Services and Management</u></b>	General Manager	\$215,512	57.23%
	State Department of Water Resources	No Response		



# Market Data Percentiles

## General Manager

	Comparator Agency Actual Salary	MWD Actual Salary	Differential as Dollar Amount	Percentage Differential
25th Percentile	\$325,572	\$503,942	\$178,370	35.39%
50th Percentile/ Median	\$408,396	\$503,942	\$95,546	18.96%
<b>75th Percentile</b>	<b>\$455,598</b>	<b>\$503,942</b>	<b>\$48,344</b>	<b>9.59%</b>
99th Percentile	\$750,010	\$503,942	-\$246,068	-48.83%

# Market Data

## General Counsel

Rank	Agency	Classification Title	Agency Actual Annual Salary	Percentage Differential
1	County of Los Angeles	County Counsel	\$461,115	-15.51%
2	<b>Metropolitan Water District of Southern California</b>	<b>General Counsel</b>	<b>\$399,194</b>	
3	<u>Santa Clara Valley Water District</u>	District Counsel	\$395,678	0.88%
4	<u>Central Arizona Project</u>	General Counsel	\$349,400	12.47%
5	San Diego County Water Authority	General Counsel	\$320,812	19.63%
6	<u>Zone 7 Water Agency</u>	General Counsel	\$317,562	20.45%
7	East Bay Municipal Utility District	General Counsel	\$314,676	21.17%
8	Los Angeles Department of Water and Power	General Counsel	\$302,947	24.11%
9	<u>Las Vegas Valley Water District &amp; Southern Nevada Water Authority Combined Services and Management</u>	General Counsel	\$215,512	46.01%
	State Department of Water Resources	No Response		
	Los Angeles Metropolitan Transportation Authority	No Comparable Match		
	Orange County Water District	No Comparable Match		
	San Francisco Public Utilities Commission	No Comparable Match		
	Sanitation Districts of Los Angeles County	No Comparable Match		
	<u>Alameda County Water District</u>	No Comparable Match		
	<u>Contra Costa Water District</u>	No Comparable Match		
	<u>Municipal Water District of Orange County</u>	No Comparable Match		

# General Counsel

## Market Data Percentiles

	Comparator Agency Actual Salary	MWD Actual Salary	Differential as Dollar Amount	Percentage Differential
25th Percentile	\$311,744	\$399,194	\$87,450	21.91%
50th Percentile/ Median	\$319,187	\$399,194	\$80,007	20.04%
<b>75th Percentile</b>	<b>\$360,970</b>	<b>\$399,194</b>	<b>\$38,224</b>	<b>9.58%</b>
99th Percentile	\$461,115	\$399,194	-\$61,921	-15.51%

# Market Data

## General Auditor

Rank	Agency	Classification Title	Agency Actual Annual Salary	Percentage Differential
1	County of Los Angeles	Auditor-Controller	\$345,196	-19.69%
2	<b>Metropolitan Water District of Southern California</b>	<b>General Auditor</b>	<b>\$288,413</b>	
3	Los Angeles Department of Water and Power	Principal Utility Accountant "A"	\$283,321	1.77%
4	East Bay Municipal Utility District	Internal Auditor Supervisor	\$212,616	26.28%
5	Los Angeles Metropolitan Transportation Authority	Executive Officer, Administration	\$210,122	27.15%
6	<b><u>Central Arizona Project</u></b>	Manager Internal Audit	\$181,600	37.03%
7	Sanitation Districts of Los Angeles County	Supervising Internal Auditor	\$160,980	44.18%
8	<b><u>Las Vegas Valley Water District &amp; Southern Nevada Water Authority Combined Services and Management</u></b>	Principal Auditor	\$150,567	47.79%
	State Department of Water Resources	No Response		
	Orange County Water District	No Comparable Match		
	San Diego County Water Authority	No Comparable Match		
	San Francisco Public Utilities Commission	No Comparable Match		
	<b><u>Alameda County Water District</u></b>	No Comparable Match		
	<b><u>Contra Costa Water District</u></b>	No Comparable Match		
	<b><u>Municipal Water District of Orange County</u></b>	No Comparable Match		
	<b><u>Santa Clara Valley Water District</u></b>	No Comparable Match		
	<b><u>Zone 7 Water Agency</u></b>	No Comparable Match		

# General Auditor

## Market Data Percentiles

	Comparator Agency Actual Salary	MWD Actual Salary	Differential as Dollar Amount	Percentage Differential
25th Percentile	\$210,122	\$288,413	\$78,291	27.15%
50th Percentile/ Median	\$212,616	\$288,413	\$75,797	26.28%
<b>75th Percentile</b>	<b>\$283,321</b>	<b>\$288,413</b>	<b>\$5,092</b>	<b>1.77%</b>
99th Percentile	\$345,196	\$288,413	-\$56,783	-19.69%

# Market Data

## Ethics Officer

Rank	Agency	Classification Title	Agency Actual Annual Salary	Percentage Differential
1	Metropolitan Water District of Southern California	Ethics Officer	\$313,643	
2	<u>County of San Diego</u>	Director, Office of Ethics, Compliance & Labor Standards	\$288,850	7.90%
3	Los Angeles Metropolitan Transportation Authority	Chief Ethics Officer	\$278,221	11.29%
4	<u>San Francisco City Ethics Commission</u>	Executive Director, Ethics Commission (Department Head II classification)	\$250,744	20.05%
5	<u>San Diego City Ethics Commission</u>	Executive Director, Ethics Commission	\$241,520	23.00%
6	<u>Oakland City Ethics Commission</u>	Executive Director, Public Ethics Commission	\$234,322	25.29%
7	County of Los Angeles	Executive Director, Countywide Equity Oversight Panel	\$225,083	28.24%
	East Bay Municipal Utility District	No Comparable Match		
	Los Angeles Department of Water and Power	No Comparable Match		
	Orange County Water District	No Comparable Match		
	San Diego County Water Authority	No Comparable Match		
	San Francisco Public Utilities Commission	No Comparable Match		
	Sanitation Districts of Los Angeles County	No Comparable Match		
	State Department of Water Resources	No Comparable Match		

# Ethics Officer

## Market Data Percentiles

	Comparator Agency Actual Salary	MWD Actual Salary	Differential as Dollar Amount	Percentage Differential
25th Percentile	\$236,122	\$313,643	\$77,522	24.72%
50th Percentile/ Median	\$246,132	\$313,643	\$67,511	21.52%
<b>75th Percentile</b>	<b>\$271,352</b>	<b>\$313,643</b>	<b>\$42,291</b>	<b>13.48%</b>
99th Percentile	\$288,850	\$313,643	\$24,793	7.90%



# Salary History

## Department Head Salary History

- Department Heads historically receive same COLA as bargaining unit employees

Classification Title	2019 Increase	2020 Increase	2021 Increase	2022 Increase	2023 Increase	2024 Increase
General Manager			Hired in 2021	3% + 8.75% adjustment	3%	TBD
General Counsel	3%	0%	3%	3%	3%	TBD
General Auditor				Hired 2023	3%	TBD
Ethics Officer	Hired in 2019	0%	3%	3% + 14% adjustment	3%	TBD
Bargaining Unit Employees	3%	3%	3%	3%	3%	3%

- At times, Department Heads have received merit increases and/or lump sum payments in addition to cost-of-living adjustment

# Salary History

# Department Head Merit Increase History

Classification Title	2019 Increase	2020 Increase	2021 Increase	2022 Increase	2023 Increase
General Manager			Hired 2021	4%	5%
General Counsel	3.5%	0%	7%	0%	5%
General Auditor				Hired 2023	0%
Ethics Officer	Hired 2019	0%	10%	0%	5%

# Board Discussion

## Compensation Options:

- Based on a completed evaluation, Board has the authority to provide:
  - Cost of living adjustment
  - % Merit increase based on performance
  - Lump sum based on performance

*Changes are retroactive to first pay period of July 2024.*

