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.

EOT Committee
D. Erdman, Chair
M. Camacho, Vice Chair
D. Alvarez
G. Bryant
B. Dennstedt
S. Faessel
L. Fong-Sakai
M. Gualtieri
R. Lefevre
J. McMillan
C. Miller
J. Morris
M. Petersen
G. Peterson
K. Seckel
T. Smith

Engineering, Operations, and Technology Committee

Meeting with Board of Directors *

March 11, 2024

9:00 a.m.

Monday, March 11, 2024 Meeting Schedule
09:00 a.m. EOT
11:30 a.m. Leg
01:00 p.m. Break
01:30 p.m. EOP
03:00 p.m. OWS

Agendas, live streaming, meeting schedules, and other board materials are available here: https://mwdh2o.legistar.com/Calendar.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: 862 4397 5848. 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 click https://us06web.zoom.us/j/81520664276pwd=a1RTQWh6V3h3ckFhNmdsUWpKR1c2Zz09

MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012
Teleconference Locations:
Princess Cruise / Emerald Princess • 3721 S.W. 30th Avenue, Fort Lauderdale, FL 33312
525 Via La Selva • Redondo Beach, CA 90277
Cedars Sinai Medical Center • 8700 Beverly Blvd • Los Angeles, CA 90048
1370 N. Brea Blvd., Suite #235 • Fullerton, CA 92835
934 16th Street • Denver, CO 80202

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* The Metropolitan Water District's meeting of this Committee is noticed as a joint committee meeting with the Board of Directors for the purpose of compliance with the Brown Act. Members of the Board who are not assigned to this Committee may participate as members of the Board, whether or not a quorum of the Board is present. In order to preserve the function of the committee as advisory to the Board, members of the Board who are not assigned to this Committee will not vote on matters before this Committee.

1. Opportunity for members of the public to address the committee on matters within the committee's jurisdiction (As required by Gov. Code Section 54954.3(a))

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

2. CONSENT CALENDAR OTHER ITEMS - ACTION

A. Approval of the Minutes of the Engineering, Operations, and Technology Committee for February 12, 2024 (Copies have been submitted to each Director, any additions, corrections, or omissions) **21-3076**

Attachments: 03112024 EOT 2A (02122024) Minutes

3. CONSENT CALENDAR ITEMS - ACTION

7-1 Award a $1,754,000 contract to Granite Construction Company for pavement rehabilitation at the F.E. Weymouth Water Treatment Plant; the General Manager has determined that the proposed action is exempt of otherwise not subject to CEQA **21-3079**

Attachments: 03122024 EOT 7-1 B-L
03122024 EOT 7-1 Presentation

7-2 Award a $892,552 procurement contract to Whipps Inc. for the fabrication and delivery of three stainless steel slide gate assemblies for the East Lake Skinner Bypass channel; the General Manager has determined that the proposed action is exempt or not subject to CEQA **21-3080**

Attachments: 03122024 EOT 7-2 B-L
03122024 EOT 7-2 Presentation

7-3 Award a $1,779,174 procurement contract to Vogt Valves, Inc. for a 132-inch diameter butterfly valve to be installed at the Foothill Pump Station Intertie as part of water supply reliability improvements in the Rialto Pipeline service area; and authorize an increase of $260,000 to an agreement with HDR Engineering Inc. for a new not-to-exceed amount of $1,560,000 for design services; 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) **21-3081**

Attachments: 03122024 EOT 7-3 B-L
03122024 EOT 7-3 Presentation

7-4 Authorize an increase of $2,700,000 to an agreement with Tetra Tech Inc. for a new not-to-exceed total amount of $3,350,000 for final design services for improvements to the Station Light and Power Electrical System at Iron Mountain Pumping Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-3082**

Attachments: 03122024 EOT 7-4 B-L
03122024 EOT 7-4 Presentation

7-5 Amend the Capital Investment Plan for fiscal years 2022/23 and 2023/24 to include two projects: (1) Sepulveda Feeder Pump Stations Stage 2, and (2) Inglewood Lateral Improvements; 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.) **21-3083**

Attachments: 03122024 EOT 7-5 B-L
03122024 EOT 7-5 Presentation

7-6 Authorize an increase of $1.3 million to an existing agreement with Helix Environmental Planning Inc. for a new not to exceed amount of $4.1 million to support the Pure Water Southern California Program environmental planning; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-3084**

Attachments: 03122024 EOT 7-6 B-L
03112024 EOT 7-6 Presentation

7-7 Authorize an increase of $320,000 to a purchase order with Total Transportation Logistics Inc. for a new not-to-exceed total amount of $540,000 for storage of filter valves for the F.E. Weymouth Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-3085**

Attachments: 03122024 EOT 7-7 B-L
03122024 EOT 7-7 Presentation

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

4. OTHER BOARD ITEMS - ACTION

NONE

5. BOARD INFORMATION ITEMS

NONE

6. COMMITTEE ITEMS

a. Capital Investment Plan quarterly report for period ending December 2023 **21-3086**

Attachments: 03112024 EOT 6a Report
03112024 EOT 6a Presentation

b. Information Technology Roadmap and Spending **21-3087**

Attachments: 03112024 EOT 6b Presentation

7. MANAGEMENT ANNOUNCEMENTS AND HIGHLIGHTS

a. Engineering Services, Information Technology, and Water System Operations activities **21-3077**

Attachments: 03112024 EOT 7a ESG Monthly Activity Report
03112024 EOT 7a IT Monthly Activity Report
03112024 EOT 7a WSO Monthly Activity Report
03112024 EOT 7a Presentation

8. SUBCOMMITTEE REPORTS AND DISCUSSION

a. Discuss and provide direction to Subcommittee on Pure Water Southern California and Regional Conveyance **21-3078**

9. FOLLOW-UP ITEMS

NONE

10. FUTURE AGENDA ITEMS

11. ADJOURNMENT

NOTE: This committee reviews items and makes a recommendation for final action to the full Board of Directors. Final action will be taken by the Board of Directors. Committee agendas may be obtained on Metropolitan's Web site https://mwdh2o.legistar.com/Calendar.aspx. This committee will not take any final action that is binding on the Board, even when a quorum of the Board is present.

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.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

ENGINEERING, OPERATIONS & TECHNOLOGY COMMITTEE

February 12, 2024

Chair Erdman called the meeting to order at 9:30 a.m.

Members present: Directors Alvarez, Bryant, Camacho, Dennstedt (entered after roll call), Erdman, Faessel, Fong-Sakai, Lefevre (teleconference location posted), McMillan, Miller, Morris, Peterson (entered after roll call), Petersen, Seckel, and Smith.

Members absent: None

Other board members present: Chair Ortega, Directors Armstrong, Cordero, Dick, Goldberg, Kurtz, and McCoy.

Committee staff present: Bednarski, Carter, Chapman, Chaudhuri, Eckstrom, Hagekhalil, Parsons, Upadhyay, and Wheeler

1. OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE COMMITTEE ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION (As required by Gov. Code Section 54954.3(a))

1. David Pedersen – Las Virgenes Municipal WD – In support of 9-2
2. Linda Krupa – Hemet Council Member – In support of 7-2

Director Dennstedt entered the meeting.

CONSENT CALENDAR ITEMS – ACTION

2. CONSENT CALENDAR OTHER ITEMS – ACTION

A. Approval of the Minutes of the Engineering, Operations, and Technology Committee for January 8, 2024 (Copies have been submitted to each Director, any additions, corrections, or omissions)

3. CONSENT CALENDAR OTHER ITEMS – ACTION

7-1 Subject: Authorize an increase of $4.34 million to an agreement with Pure Technologies U.S. Inc. for a new not-to-exceed total amount of $4.41 million to furnish and monitor an acoustic fiber optic prestressed concrete cylinder pipe monitoring system along the Foothill Feeder; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Presented by: No presentation requested

Motion: Authorize an increase of $4,340,000 to an existing agreement with Pure Technologies U.S. Inc. for a new amount not-to-exceed $4,410,000 to furnish and monitor an AFO system for the Foothill Feeder.

7-2 Subject: Award a $7,842,856 contract to Power Engineering Construction Co. for the installation of a new floating wave attenuator at Diamond Valley Lake; the General Manager has determined that the project is exempt or otherwise not subject to CEQA

Presented by: No presentation requested

Motion: Award a $7,842,856 construction contract to Power Engineering Construction Co. to install a new floating wave attenuator and to refurbish and move the existing attenuator to another location at the DVL East Marina.

The following Directors provided comments or asked questions:

1. Alvarez
2. Miller

Staff responded to the Directors questions and comments.

7-3 Subject: Authorize an agreement with Stantec Consulting Services Inc. in an amount not to exceed $1 million for preliminary design to rehabilitate the solids removal systems at the Joseph Jensen and Henry J. Mills Water Treatment Plants; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Presented by: No presentation requested

Motion: Authorize an agreement with Stantec Consulting Services Inc. in an amount not to exceed $1 million for preliminary design to rehabilitate the sedimentation basins solids removal systems at the Joseph Jensen and Henry J. Mills Water Treatment Plants

7-4 Subject: Award a $544,501 procurement contract to Electric Machinery Company – A WEG Group to furnish one brushless motor exciter system for Gene Pumping Plant Unit No. 1; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

Presented by: No presentation requested

Motion: Award a procurement contract to Electric Machinery Company – A WEG Group in an amount not to exceed $544,501 to furnish a brushless motor exciter system for Gene Pumping Plant Unit No. 1

7-5 Subject: Award a $2,375,700 contract to J.F. Shea Construction Inc. for construction of a hazardous waste handling and storage facility at the La Verne site; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Presented by: No presentation requested

Motion: Award a $2,375,700 contract to J.F. Shea Construction Inc. for construction of a hazardous waste handling and storage facility at the La Verne site

7-6 Subject: Authorize amendments to two agreements for energy and transmission services with the Arizona Electric Power Cooperative, related to the termination and credits services provisions of those agreements; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA

Presented by: No presentation requested

Motion: Authorize amendments to the Power System Operation Services Agreement and Scheduling and Trading Services Agreement, both with the Arizona Electric Power Cooperative, related to the termination and credit services provisions of those agreements.

Director Morris made a motion, seconded by Director Dennstedt, to approve the consent calendar consisting of item 2A, and items 7-1, 7-2, 7-3, 7-4, 7-5, and 7-6.

The vote was:

Ayes:	Directors Alvarez, Bryant, Camacho, Dennstedt, Erdman, Faessel, Fong-Sakai, Lefevre, McMillan, Miller, Morris, Petersen, Seckel, and Smith.
Noes:	None
Abstentions:	None
Not voting:	None
Absent:	Director Peterson

The motion for Items 2A, 7-1, 7-2, 7-3, 7-4, 7-5 and 7-6 passed by a vote of 14 ayes, 0 noes, 0 abstention, and 1 absent.

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

4. OTHER BOARD ITEMS – ACTION

8-1 Subject: Authorize increase in change order authority for three contracts to conduct urgent rehabilitation of prestressed concrete cylinder pipe on the Allen-McColloch Pipeline: (1) a $12 million increase for Contract 2002 with Northwest Pipe Company, (2) a $10.5 million increase for Contract 2026 with J.F. Shea Construction Inc., and (3) a $2 million increase for Contract 2088 with Structural Preservation Systems; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

Presented by: Cristian Ovalle – Team Manager, Program Management

Motion: Authorize increase in change order authority for three contracts to conduct urgent rehabilitation of prestressed concrete cylinder pipe on the Allen-McColloch Pipeline: (a) Authorize an increase in change order authority of $12 million to Contract 2002 with Northwest Pipe Company, (b) Authorize an increase in change order authority of $10.5 million to Contract 2026 with J.F. Shea Construction Inc., and (c) Authorize an increase in change order authority of $2 million to Contract 2088 with Structural Preservation Systems

The following Directors provided comments or asked questions:

1. Miller
2. Seckel
3. Smith

Staff responded to the Directors questions and comments.

After completion of the presentation, Director Bryant made a motion seconded by Director Morris to approve item 8-1.

The vote was:

Ayes:	Directors Alvarez, Bryant, Camacho, Dennstedt, Erdman, Faessel, Fong-Sakai, Lefevre, McMillan, Miller, Morris, Petersen, Seckel, and Smith.
Noes:	None
Abstentions	None
Not Voting	None
Absent:	Director Peterson

The motion for Item 8-1 passed by a vote of 14 ayes, 0 noes, 0 abstentions, and 1 absent.

2. **BOARD INFORMATION ITEMS**

9-2 Subject: Strategy for Implementation of Drought Mitigation Actions in Response to the August 2022 Board Resolution

Presented by: John Shamma, Section Manager, Engineering Services Group

The following Directors provided comments or asked questions:

4. Alvarez
5. Erdman
6. Lefevre
7. Miller
8. Peterson
9. Seckel
10. Smith

Staff responded to the Directors questions and comments.

Director Peterson entered the meeting.

5. COMMITTEE ITEMS

Director Erdman announced that the committee items will be taken out of order beginning with item 6b

b. Subject: Strategic Infrastructure Resilience Plan Development

Presented by: Ernie Ariza, Team Manager, Facility Planning

Mr. Ariza reported on the following:

- Purpose of Strategic Infrastructure Resilience Plan (SIRP)
- SIRP Development Road Map
- Assessment Process for Resilient Infrastructure
- Seismic Resilience Annual Update
- Measures to Enhance Resilience against Extreme Events

The following Directors provided comments or asked questions.

1. Seckel

Staff responded to the Directors questions and comments.

c. Subject: 2023 System Operations: A Year in Review

Presented by: Miluska Propersi, Sr. Engineer, WSO

Ms. Propersi reported on the following:

- Record-high storage for Metropolitan in 2023
- Adapting operations to changing hydrologic conditions
- Managing water quality issues, including turbidity, alkalinity, cyanobacterial blooms, and nitrification
- Preparing for and responding to emergencies including Tropical Storm Hilary
- Key shutdowns in 2023 to ensure system reliability.
- Preparing for future drought reliability

The following Directors provided comments or asked questions.

1. Erdman
2. Ortega
3. Peterson
4. Smith

Staff responded to the Directors questions and comments.

Director Bryant left the meeting.

Director Erdman announced that item 6d will go before item 6a

d. Subject: Source Water Protection update

Presented by: Mauricio Santos, Engineer, WSO

Mr. Santos reported on the following:

- Safeguarding the public's drinking water using a multi-barrier approach
- Water quality challenges in the State Water Project
- Diamond Valley Lake cyanotoxin bloom and Castaic Lake turbidity events
- Quagga mussel monitoring
- Colorado River water quality activities including Moab uranium mill tailings cleanup, Henderson perchlorate remediation, and Topock chromium-6 remediation
- Colorado River salinity control and salinity levels in Metropolitan supplies

a. Subject: Quarterly Cybersecurity Update

Presented by: Jake Margolis, Director of Info Tech Services

Closed session [Conference with Metropolitan Director of Info Tech Services, Information Technology, Jacob Margolis, or designated agents on threats to public services or facilities; to be heard in closed session pursuant to Gov. Code Section 54957(a)]

6. MANAGEMENT ANNOUNCEMENTS AND HIGHLIGHTS

a. Subject: Engineering Services, Information Technology, and Water System Operations Activities

Presented by: Deven Upadhyay, Executive Officer/Assistant General Manager-Water Resources
Shane Chapman, Assistant General Manager Operations

Mr. Upadhyay reported on the following:

- Rachel Carson, Metropolitan's tunnel boring machine, has been launched and is working through the Perris Valley Pipeline tunnel project.

Mr. Chapman reported on the following:

- Metropolitan's service area experienced a significant storm event followed by an earthquake. MWD employees and member agency managers received a message from the General Manager, and there were no injuries to employees or major impacts to facilities or operations.

7. SUBCOMMITTEE REPORTS AND DISCUSSION

a. Report from Subcommittee on Subcommittee on Pure Water Southern California and Regional Conveyance

Presented by: Director Morris

b. Discuss and provide direction to Subcommittee on Pure Water Southern California and Regional Conveyance

8. FOLLOW-UP ITEMS

NONE

9. FUTURE AGENDA ITEMS

NONE

10. ADJOURNMENT

The next meeting will be held on March 11, 2024.

Meeting adjourned at 12:06 p.m.

Dennis Erdman
Chair

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

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

3/12/2024 Board Meeting

7-1

Subject

Award a $1,754,000 contract to Granite Construction Company for pavement rehabilitation at the F.E. Weymouth Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Metropolitan has an ongoing program to provide timely pavement rehabilitation at facilities within Metropolitan's service areas. Over the past 80 years, the service roads and paved areas around the F.E. Weymouth Water Treatment Plant (Weymouth plant) and other support facilities on the La Verne site have received heavy use by Metropolitan forces and construction contractors. As a result, portions of these paved areas now exhibit extensive surface and sub-base deterioration that need to be rehabilitated. Design is complete, and award of a construction contract is recommended at this time. With this contract, Metropolitan will for the first time make use of asphalt paving with a Recycled Asphalt Paving (RAP) content of 40 percent or greater for a portion of the pavement project. The use of paving with an RAP at this level will enhance Metropolitan's ability to rehabilitate facilities in an environmentally sustainable manner.

This action awards a $1,754,000 construction contract to Granite Construction Company to rehabilitate approximately 300,000 square feet of existing asphalt pavement in and around the Weymouth plant. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Award a $1,754,000 contract to Granite Construction Company for the rehabilitation of asphalt pavement at the Weymouth plant.

Fiscal Impact: Expenditure of $2.66 million in capital funds. Approximately $700,000 will be incurred in the current biennium and has been previously authorized. The remaining funds for this action will be accounted for in the Capital Investment Plan budget for the next biennium following board approval of the budget.

Business Analysis: This option will protect Metropolitan's assets and sustain the operations of the Weymouth plant and other support facilities in the La Verne site.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff will continue to assess the condition of the deteriorated pavement and provide temporary localized repairs to damaged areas as needed, which may lead to increased annual repair costs.

Alternatives Considered

Staff considered issuing multiple contracts to complete the work, with each contract addressing specific regions of the Weymouth plant or the La Verne site. While this option would potentially reduce operational impacts, it would result in increased costs due to the preparation of multiple design packages, along with the advertisement and contractor mobilization efforts required.

Staff also assessed alternatives to rehabilitate pavement areas that were not significantly deteriorated but needed some improvements to extend their useful life. In these areas, a seal coat application will be used instead of pavement replacement. This approach provides a cost-effective alternative when compared to a complete pavement removal/replacement in areas where deterioration is not severe. Staff determined that the current approach to complete the pavement rehabilitation at Weymouth under one construction contract is the most cost-effective manner to comprehensively address the significant deterioration of the existing asphalt pavement at the Weymouth plant and other supporting facilities in the La Verne site.

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of $600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/23 and 2023/24.

Summary of Outreach Completed

Staff confirmed recycled asphalt best practices and implementation with Caltrans and the city of Los Angeles.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is exempt from CEQA because it involves the operation, repair, maintenance, 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).

CEQA determination for Option #2:

None required

Details and Background

Background

The Weymouth plant was placed into service in 1941 and is located in the city of La Verne, adjacent to numerous support facilities, including the Water Quality Laboratory, the La Verne Shops, and water distribution facilities. Over the past 80 years, the paved roads around the Weymouth plant and other La Verne site facilities have deteriorated due to aging and surface wear. The roads are used to perform routine operation and maintenance activities and have received heavy use by Metropolitan forces and construction contractors. The deteriorated pavement exhibits raveling caused by wear and tear under traffic loads, surface deterioration, and fatigue and edge cracking caused by saturated subgrades from poor drainage and standing water.

Metropolitan forces continuously mitigate and slow the rate of deterioration by performing patch repairs to distressed pavement areas. These types of repairs are intended to be temporary by nature, and current conditions require a more extensive and permanent restoration effort. The recommended work includes the rehabilitation of approximately 300,000 square feet of existing asphalt pavement in and around the Weymouth plant and other support facilities in the La Verne site.

Metropolitan's asphalt material standards traditionally allow the use of an asphalt mix containing up to 20 percent of RAP. To contribute to Metropolitan's goals of innovation and sustainability, staff investigated the use of higher RAP percentages in similar projects recently constructed in Los Angeles and Orange County. For the subject project, staff has increased the maximum RAP percentage allowance from 20 to 25 percent. In addition, staff concluded that an asphalt mix containing a minimum of 40 percent RAP can be used to restore areas within the project that have lower traffic loads (approximately 84,000 square feet area). The performance of the pavement in these areas will be monitored, and pending successful performance, higher RAP percentages will be specified for future projects. This strategy provides an environmentally sustainable alternative that minimizes cost without reducing quality or service life. Final design is now complete, and staff recommends the award of a construction contract at this time.

Weymouth Asphalt Pavement Rehabilitation – Construction

The scope of the construction contract work consists of the rehabilitation of approximately 300,000 square feet of asphalt pavement within the Weymouth plant and other support facilities in the La Verne site, which includes the following: removal of the existing pavement, grading, placing and recompacting of new crushed aggregate base, placing of new asphalt concrete pavement, seal coating portions of asphalt pavement, traffic striping, and concrete drainage improvements. Metropolitan forces will perform surveying, conduct soil and concrete tests, as required; establish traffic controls to reroute onsite chemical deliveries and traffic; and implement a post-construction monitoring program for the 40 percent RAP areas.

A total of $2.66 million is allocated for this work. In addition to the amount of the contract described below, other funds to be allocated include $230,000 for construction inspection; $221,000 for Metropolitan construction activities as described above; $176,000 for submittals review, technical support during construction, responding to requests for information, and preparation of record drawings; $182,000 for contract administration, environmental monitoring, and project management; and $97,000 for the remaining budget. **Attachment 1** provides the allocation of the required funds. The total estimated cost to complete the work, including the amount allocated to date and funds allocated for the work described in this action, is $2.98 million.

Award of Construction Contract (Granite Construction Company)

Specification No. 2018 to rehabilitate the asphalt pavement at the Weymouth plant and other support facilities in the La Verne site was advertised for bids on December 14, 2023. As shown in **Attachment 2**, four bids were received and opened on January 31, 2024. The low bid from Granite Construction Company in the amount of $1,754,000 complies with the requirements of the specifications. The other bids ranged from approximately $1.81 million to $3.17 million, while the engineer's estimate for this project was approximately $2.14 million. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 25 percent of the bid amount. Granite Construction Company has agreed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**.

This action awards a $1,754,000 contract to Granite Construction Company for the rehabilitation of asphalt pavement at the Weymouth plant. As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction less than $3 million is 12 to 15 percent. For this project, the performance metric goal for inspection is 11.6 percent of the total construction cost ($1,975,000), which includes the construction contract ($1,754,000) and Metropolitan force construction ($221,000).

Project Milestone

December 2024 – Completion of construction

2/20/2024

John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

2/23/2024

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# es12688298

Allocation of Funds for Weymouth Asphalt Pavement Rehabilitation

	Current Board Action (Mar. 2024)
Labor	
Studies & Investigations	$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	182,000
Submittals Review & Record Drwgs.	176,000
Construction Inspection & Support	230,000
Metropolitan Force Construction	221,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Granite Construction Company	1,754,000
Remaining Budget	97,000
Total	**$ 2,660,000**

The total amount expended to date for the pavement rehabilitation at the Weymouth plant is approximately $320,000. The total estimated cost to complete the project, including the amount appropriated to date and funds allocated for the work described in this action is $2.98 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on January 31, 2024, at 2:00 P.M.

Specifications No. 2018
Weymouth Asphalt Pavement Rehabilitation

The work includes the rehabilitation of approximately 300,000 square feet of asphalt concrete pavement, including removal of existing pavement, grading, placing and recompacting of new crushed aggregate base, placing of new asphalt concrete pavement, adding seal coat on indicated areas, traffic striping, and concrete drainage improvements.

Engineer's estimate: $2,138,000

Bidder and Location	Total	SBE $	SBE %	Met SBE[1]
Granite Construction Company Indio, CA	**$1,754,000**	**$443,118**	**25%**	**Yes**
Access General Contracting Inc. Corona, CA	$1,811,538	-	-	-
Command Performance Constructors Signal Hill, CA	$2,113,731	-	-	-
Onyx Paving Company Inc. Anaheim, CA	$3,168,000	-	-	-

[1] Small Business Enterprise (SBE) participation level established at 25percent for this contract.

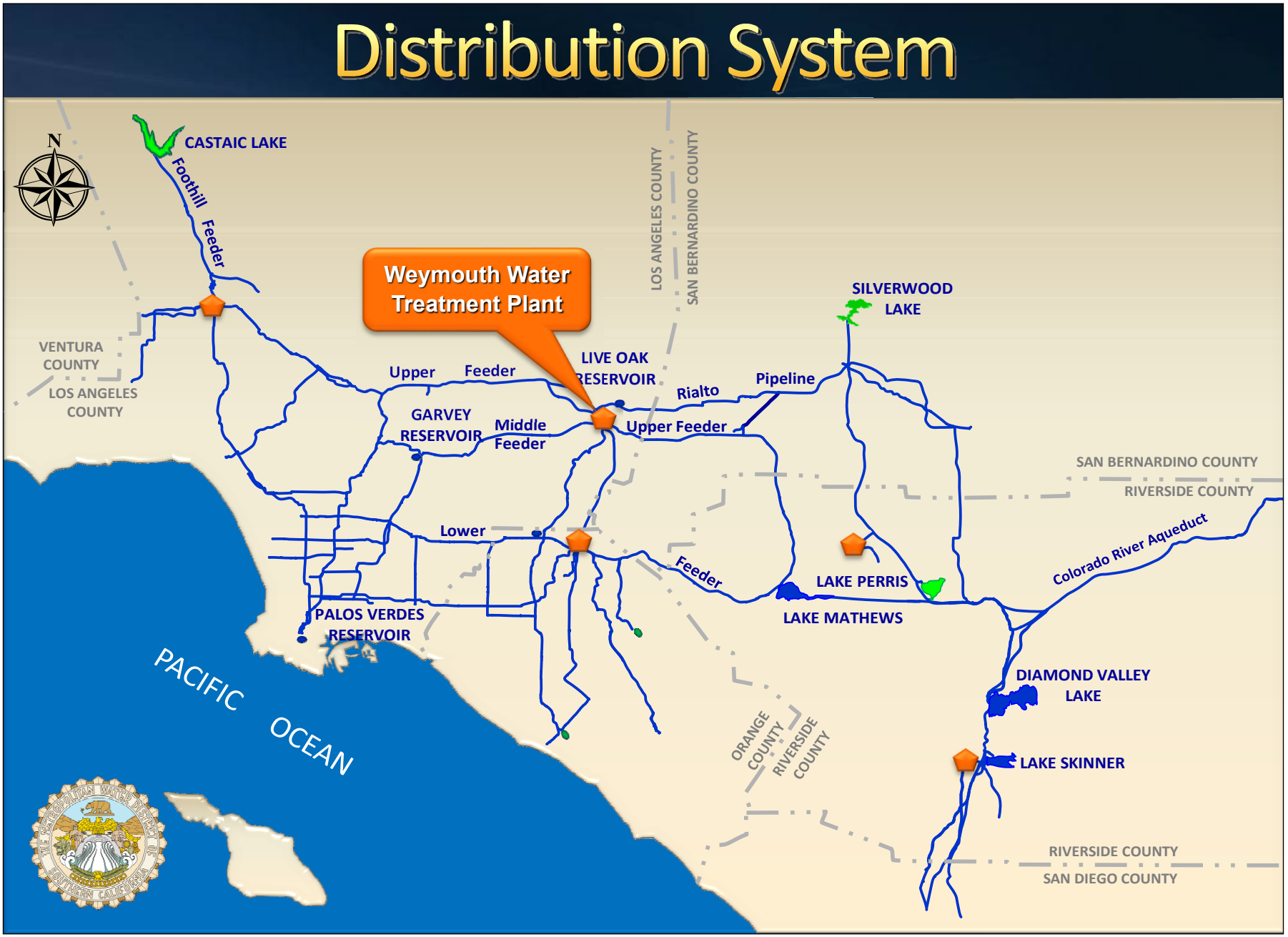
The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

Specifications No. 2018
Weymouth Asphalt Pavement Rehabilitation

Low bidder: Granite Construction Company

Subcontractor	Service Category; Specialty
Cindy Trump Inc., DBA Lindys Cold Planing La Habra, CA	Cut, load, haul, dispose asphalt pavement, sweeping
Lukkes Striping Inc. La Habra, CA	Seal coat, striping and install wheel stops


Distribution System
N
CASTAIC LAKE
Foothill Feeder
Weymouth Water Treatment Plant
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
VENTURA COUNTY
LOS ANGELES COUNTY
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Lower Feeder
Colorado River Aqueduct
LAKE PERRIS
LAKE MATHEWS
PALOS VERDES RESERVOIR
PACIFIC OCEAN
DIAMOND VALLEY LAKE
ORANGE COUNTY
RIVERSIDE COUNTY
LAKE SKINNER
RIVERSIDE COUNTY
SAN DIEGO COUNTY

Engineering, Operations, & Technology Committee

Weymouth Asphalt Paving Rehabilitation

Item 7-1

March 11, 2024

Item 7-1
Weymouth Asphalt Refurbishment

Subject

Award a $1,754,000 contract to Granite Construction Company for pavement rehabilitation at the F.E. Weymouth Water Treatment Plant

Purpose

Rehabilitate asphalt pavement in an environmentally-sustainable manner to support the operations of the Weymouth plant and other support facilities on the La Verne site

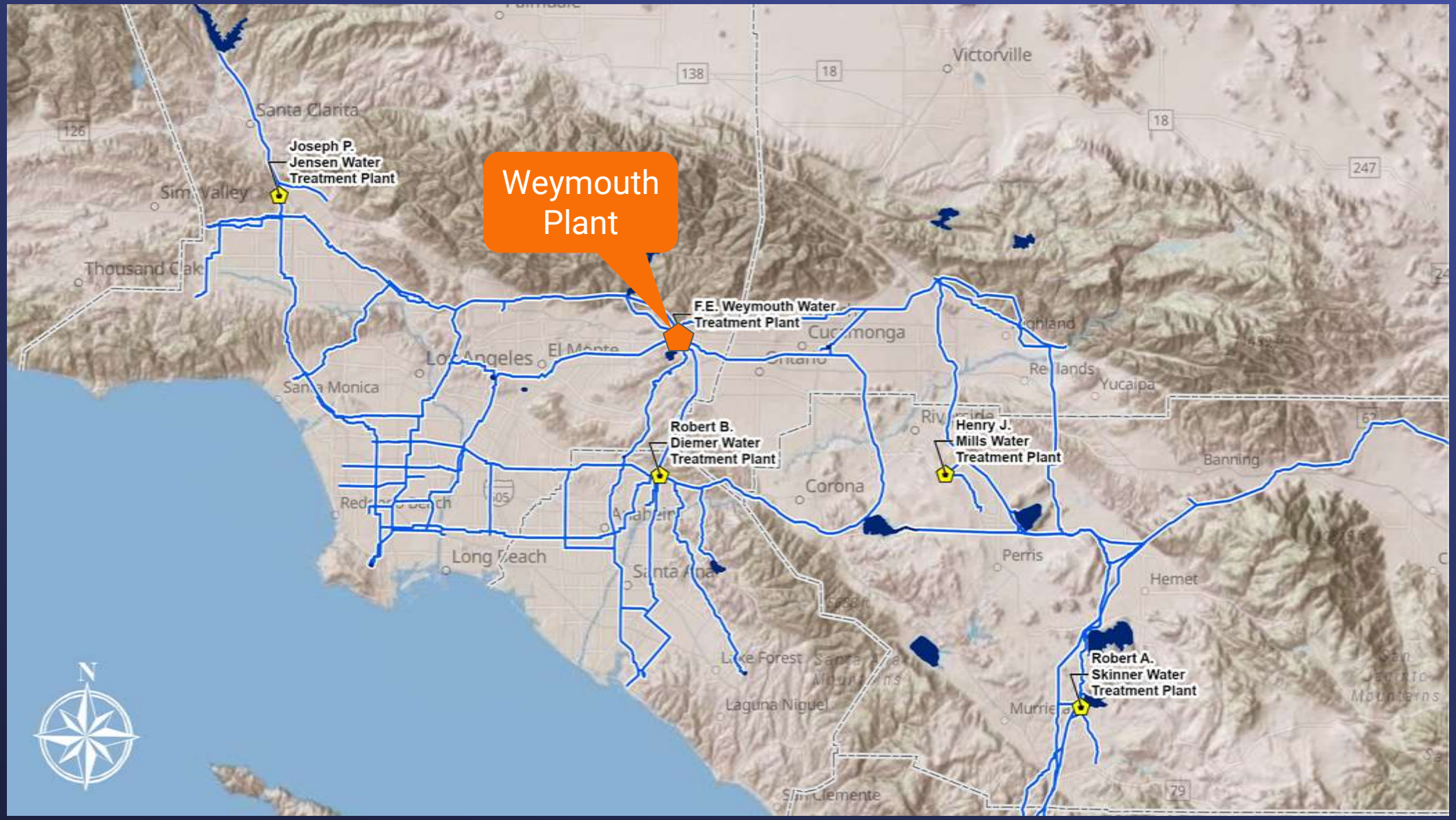
Recommendation and Fiscal Impact

Award a construction contract to Granite Construction Company to rehabilitate approximately 300,000 square feet of existing asphalt pavement in and around the Weymouth plant

Fiscal Impact of $2,660,000

Budgeted

Location Map



Background

- Service roads & paved areas at the Weymouth plant
  - Heavy use
  - Deteriorated from up to 80 yrs. of service
- Extensive surface & sub-base deterioration
- Poor drainage

Service Road - South Side of Finished Water Reservoir

Parking Lot Area – North of Finished Water Reservoir

Weymouth
Asphalt Paving
Rehabilitation

Alternatives Considered

- Issue multiple construction contracts
  - Increased costs due to multiple designs, advertisements, & contractor mobilizations
- Continuously perform patch repairs
  - Temporary repairs not suitable for current conditions
- Selected alternative – pavement rehabilitation under a single contract
  - Alternative asphalt rehabilitation method
  - Cost effective

Weymouth Asphalt Paving Rehabilitation

Innovation & Sustainability

- High reclaimed asphalt pavement (RAP) mix to be used on project
  - Environmentally-sustainable approach
  - Increased MWD's typical maximum RAP percentage allowance from 20 to 25 percent
  - 40 percent RAP mix used in lower traffic load areas as demonstration (approximately 30% of overall project area)
  - Performance of higher RAP percentage areas to be monitored
  - Optimizes costs without reducing quality or service life

Scope of Work

Weymouth
Asphalt Paving
Rehabilitation

Scope of Work - Contractor

- Removal of existing pavement
- Grading & compaction of new & existing crushed aggregate base
- Placing of new asphalt concrete pavement
  - Approximately 300,000 square feet
- Placement of sealcoat & new traffic striping
- Concrete drainage improvements

Weymouth
Asphalt Paving
Rehabilitation

Scope of Work - Metropolitan

- Perform survey
- Conduct soil & material testing
- Establish traffic control
- Implement post-construction monitoring program for 40 percent RAP areas
- Provide contract administration & project management

Bid Results
Specifications No. 2018

Bids Received	January 31, 2024
No. of Bidders	4
Lowest Responsible Bidder	Granite Construction Company
Low Bid	$1,754,000
Range of Other Bids	$1,810,000 to $3,170,000
Engineer's Estimate	$2,140,000
SBE Participation*	25%

*SBE (Small Business Enterprise) participation level set at 25%

Allocation of Funds

Weymouth Asphalt Paving Rehabilitation

Metropolitan Labor		
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	$	182,000
Construction Inspection & Support		230,000
Force Construction		221,000
Submittals Review, Tech. Support, Record Dwgs.		176,000
Contracts		
Granite Construction Company		1,754,000
Remaining Budget		97,000
	Total	$ 2,660,000

Project Schedule

Board Options

- Option #1

  Award a $1,754,000 contract to Granite Construction Company for the rehabilitation of asphalt pavement at the Weymouth plant.

- Option #2

  Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

3/12/2024 Board Meeting

7-2

Subject

Award an $892,552 procurement contract to Whipps Inc. for the fabrication and delivery of three stainless steel slide gate assemblies for the East Lake Skinner Bypass channel; the General Manager has determined that the proposed action is exempt or not subject to CEQA

Executive Summary

The East Lake Skinner Bypass channel is located on the San Diego Canal and is used to divert flows into San Diego Pipeline No. 5 (SDPL5) during water quality events at Lake Skinner. The East Lake Skinner Bypass channel flows are controlled with three carbon steel slide gates that were originally installed in 1967 and now require replacement due to heavy corrosion of major structural components. Failure of the slide gates could have operational impacts on the San Diego Canal and the Robert A. Skinner Water Treatment Plant (Skinner plant).

This action awards a $892,552 procurement contract to Whipps Inc. for three new slide gate assemblies for the East Lake Skinner Bypass channel. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Award an $892,552 procurement contract to Whipps Inc. for the fabrication of three slide gate assemblies for the East Lake Skinner Bypass channel.

Fiscal Impact: Expenditure of $1,200,000 in capital funds. Approximately $300,000 will be incurred in the current biennium and have been previously authorized. The remaining funds for this action will be accounted for in the Capital Investment Plan budget for the next biennium following board approval of the budget.
Business Analysis: This option will replace the deteriorated slide gates at the East Lake Skinner Bypass with new gates that will improve operations and have a superior service life.

Option #2

Do not proceed with the project at this time.
Fiscal Impact: None
Business Analysis: Under this option, staff will continue to assess the condition of the deteriorated slide gates and provide temporary localized repairs to damaged areas as needed, which may lead to increased annual repair costs.

Alternatives Considered

An alternative to procuring new stainless steel gate assemblies is to blast and recoat each gate assembly and continue using the existing actuators. Blasting the existing coating to bare metal would allow the existing gate assemblies to be recoated but would not remediate the metal loss due to corrosion observed during the recent inspection of the gates. Additionally, this alternative would not address the existing binding or leakage issues. The

recommended alternative will provide a corrosion-resistant gate assembly with a superior service life, reducing the need for routine maintenance and coating.

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

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

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of $600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities 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

Lake Skinner was constructed in the 1970s and is located at the San Diego Canal terminus point in the city of Winchester. Lake Skinner has a total capacity of 44,000 acre-feet and is the primary supply of raw water to the Skinner plant during normal operations.

Sudden increases in algal mass, or “algae blooms,” at Lake Skinner can cause taste and odor conditions during these water quality events in Lake Skinner. Under these conditions, the Skinner plant is supplied with water directly from the San Diego Canal via bypass inlets located on the canal upstream of the lake. These bypass flow conditions occur periodically throughout a typical year, primarily in the summer months, based on a combination of factors, including hydrology, available nutrients, sunlight, and temperature.

There are three bypass inlets: the West Lake Skinner Bypass, the East Lake Skinner Bypass, and Bypass No. 2. The East Lake Skinner Bypass inlet channel and slide gates were constructed in 1967. This inlet off the San Diego Canal was initially used for raw water supply to the Skinner plant. After the construction of Lake Skinner, the inlet channel was converted to be used as the source of untreated water for SDPL5 when the Skinner plant was in bypass flow conditions. Three slide gates provide the only method to control flows into SDPL5, and they must be closed during normal flow conditions so that water from Lake Skinner doesn’t flow back into the San Diego Canal.

These three existing slide gates are made of carbon steel. The outer gates are 48 inches by 96 inches, and the middle gate is 24 inches by 96 inches. Recent staff inspections in November 2022 identified significant corrosion of the major gate components. Additionally, these gates experience operational issues such as leakage in the closed position and binding during opening, requiring manual intervention to raise and lower the gates. Staff recommends replacement of the existing carbon steel gate assemblies with new stainless steel assemblies and new electric actuators. Gates made of stainless steel will be corrosion-resistant and have a superior service life compared to a carbon steel gate assembly with a coating system.

Metropolitan staff completed the procurement specification package and recommends awarding a procurement contract for the new stainless steel gate assemblies and actuators at this time. The new gates will be installed during a planned shutdown of SDPL5 scheduled for January 2025 under a separate installation contract to be awarded at a later date.

East Lake Skinner Bypass Slide Gates– Procurement

The procurement contract includes the fabrication and delivery of three stainless steel gate assemblies. Each gate assembly includes a gate leaf, frame, stem, stem guides, thimble, and motor actuator. Metropolitan forces will receive, offload, and place the slide gates in storage at Lake Skinner. The slide gates will be installed under an upcoming construction contract.

A total of $1.2 million is required for this work. Allocated funds for Metropolitan staff activities include $67,000 for factory fabrication inspection and functional testing; $60,000 for submittals review, technical support, and responding to manufacturer requests for information; $113,000 for project management and contract administration; and $67,448 for remaining budget.

Award of Procurement Contract (Whipps Inc.)

Specifications No. 2029 for furnishing East Lake Skinner Bypass Slide Gates was advertised for bids on November 30, 2023. As shown in **Attachment 2**, one bid was received and opened on January 30, 2024. The low bid from Whipps Inc., in the amount of $892,552, complies with the requirements of the specifications. Staff investigated the reasons for the single bid and attributed it to the limited number of vendors currently manufacturing such specialty equipment. This amount includes all sales and use taxes imposed by the state of California. As a procurement contract, there are no subcontracting opportunities, and a Small Business Enterprise participation level was not established for this contract.

Proceeding with a contract at this time will enable the installation of the slide gates in 2025 with minimal interruptions to plant operations. This action awards an $892,552 procurement contract to Whipps Inc. to furnish three slide gates for the East Lake Skinner Bypass.

Project Milestone

May 2025 – Delivery of slide gates and actuators

2/20/2024

John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

2/22/2024

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# es12695084

Allocation of Funds for East Lake Skinner Bypass Slide Gate Rehabilitation

	Current Board Action (Mar. 2024)
Labor	
Studies & Investigations	$ -
Final Design	-
Owner Costs	113,000
Submittals Review & Record Drwgs.	60,000
Construction Inspection & Support	67,000
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	
Whipps Inc.	892,552
Remaining Budget	67,448
Total	**$ 1,200,000**

The total amount expended to date to procure the replacement slide gates at the Lake Skinner Bypass is approximately $165,000. The total estimated cost to replace the slide gates and rehabilitate the other Skinner bypass lines, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $4.5 million to $5.5 million.

The Metropolitan Water District of Southern California

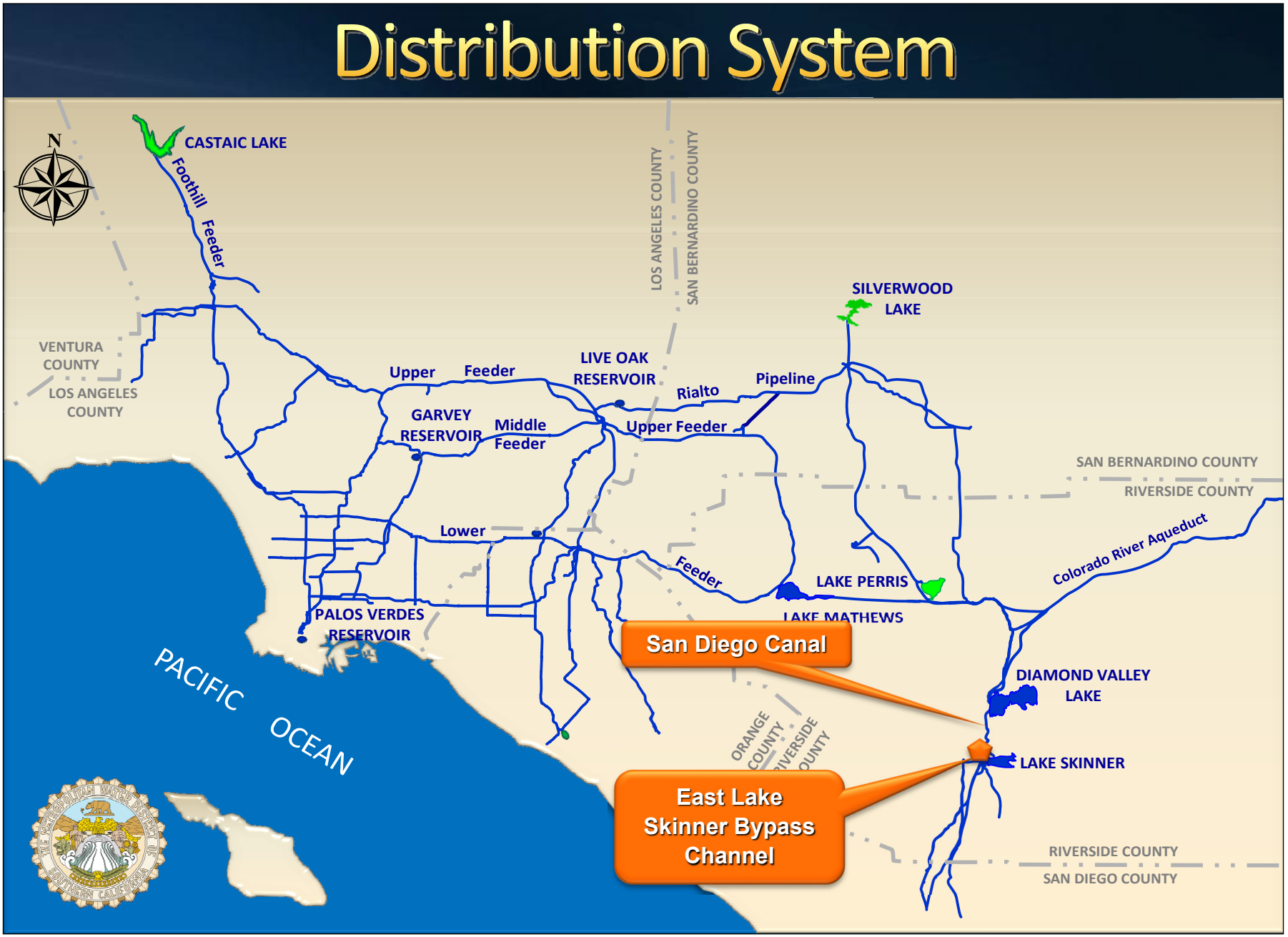
Abstract of Bids Received on January 30, 2024, at 2:00 P.M.

Specifications No. 2029
Furnishing Slide Gates and Actuators for Lake Skinner

The work includes furnishing and delivery of three stainless steel replacement slide gate assemblies and three actuators.

Bidder and Location	Base Bid Price Total[1,2]
Whipps Inc. **Athol, MA**	**$892,552**

[1] As a procurement contract, there are no subcontracting opportunities.
[2] Includes sales and use taxes of 7.75 percent imposed by the state of California


Distribution System
N
CASTAIC LAKE
Foothill Feeder
VENTURA COUNTY
LOS ANGELES COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Lower Feeder
Colorado River Aqueduct
LAKE PERRIS
LAKE MATHEWS
PALOS VERDES RESERVOIR
San Diego Canal
DIAMOND VALLEY LAKE
PACIFIC OCEAN
ORANGE COUNTY
RIVERSIDE COUNTY
LAKE SKINNER
East Lake Skinner Bypass Channel
RIVERSIDE COUNTY
SAN DIEGO COUNTY

Engineering, Operations, & Technology Committee

East Lake Skinner Bypass Slide Gate Procurement

Item 7-2

March 11, 2024

Item 7-2
East Lake Skinner Bypass Slide Gate Procurement

Subject

Award an $892,552 procurement contract to Whipps Inc. for the fabrication and delivery of three stainless steel slide gate assemblies for the East Lake Skinner Bypass channel

Purpose

Replace deteriorated gates to enhance operational reliability

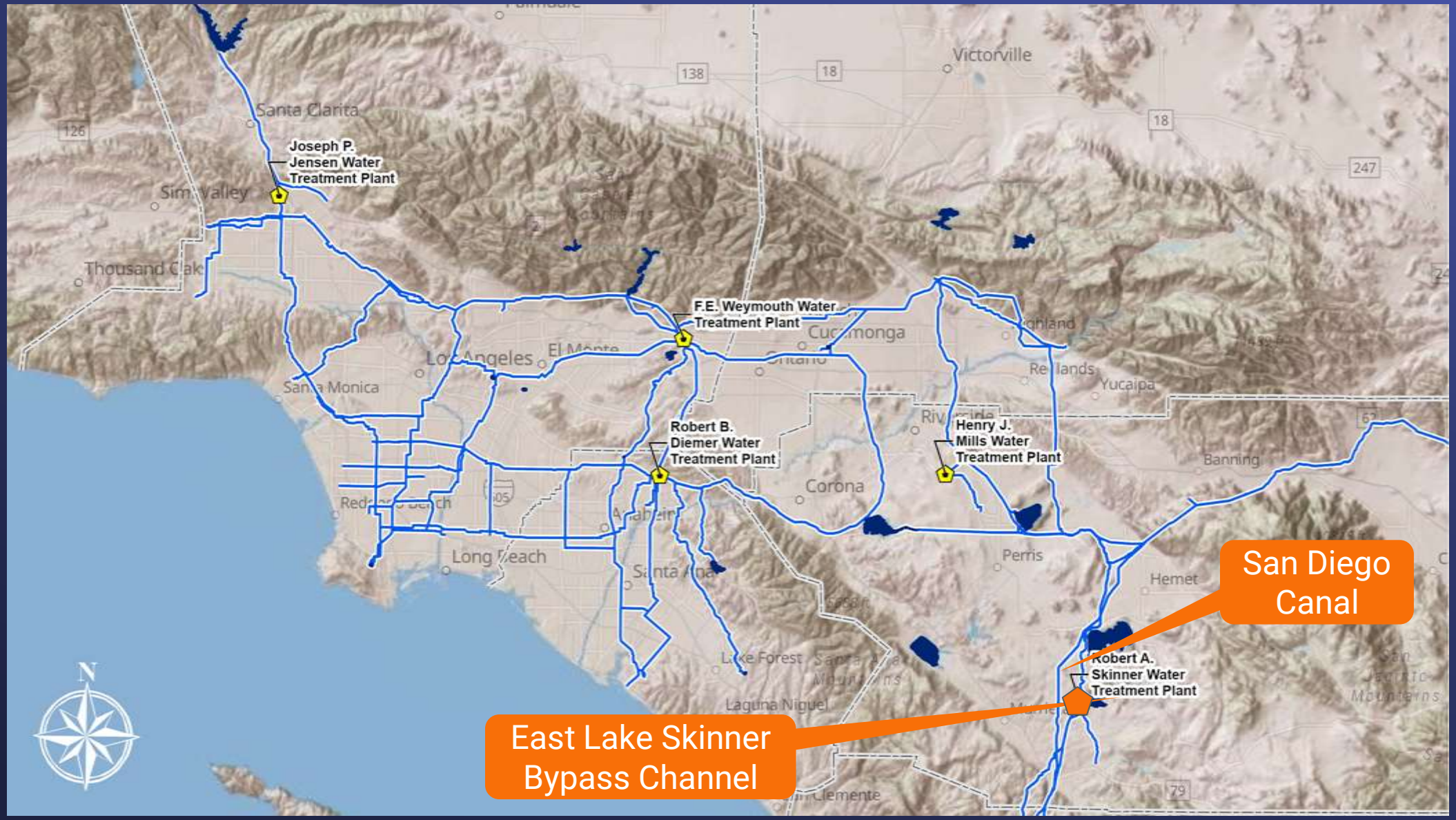
Recommendation and Fiscal Impact

Award a procurement contract to Whipps Inc.

Fiscal Impact of $1,200,000

Budgeted

Distribution System



East Lake Skinner Bypass Slide Gate Procurement

Bypass Channel Inlet

Background

- Lake Skinner constructed in 1970s
  - Terminus point of San Diego Canal
  - Supplies raw water to Skinner plant & raw water to San Diego pipelines
- Bypass flow conditions
  - Raw water delivered via bypass channels
    - During Lake Skinner water quality events
  - East Lake Skinner Bypass Channel
    - Supplies raw water to San Diego Pipeline No. 5

East Lake Skinner Bypass Slide Gate Procurement

Background

- East Lake Skinner Bypass Channel Slide Gate Assemblies
  - Inspected Nov 2022
  - Discovered significant corrosion
  - Leaking in closed position

Slide Gate Assemblies

East Lake Skinner Bypass Slide Gate Procurement

Alternatives Considered

- Alternative: remove & recoat existing gates
  - Does not remediate metal loss or correct operational issues
- Selected option: procure & install stainless steel gate assemblies
  - Corrosion resistant
  - Longer service life
  - Less maintenance

Slide Gate Assemblies

East Lake Skinner Bypass Slide Gate Procurement

Scope of Work - Procurement

- Contractor
  - Furnish three slide gates assemblies with actuators
    - One – 24-inch x 96-inch
    - Two – 48-inch x 96-inch
- Metropolitan
  - Factory fabrication inspection
  - Submittals review
  - Off-load & store gates
  - Contract administration & project management

Bid Results
Specifications No. 2029

Bids Received	January 31, 2024
No. of Bidders	1
Responsible Bidder	Whipps Inc.
Bid	$892,552*

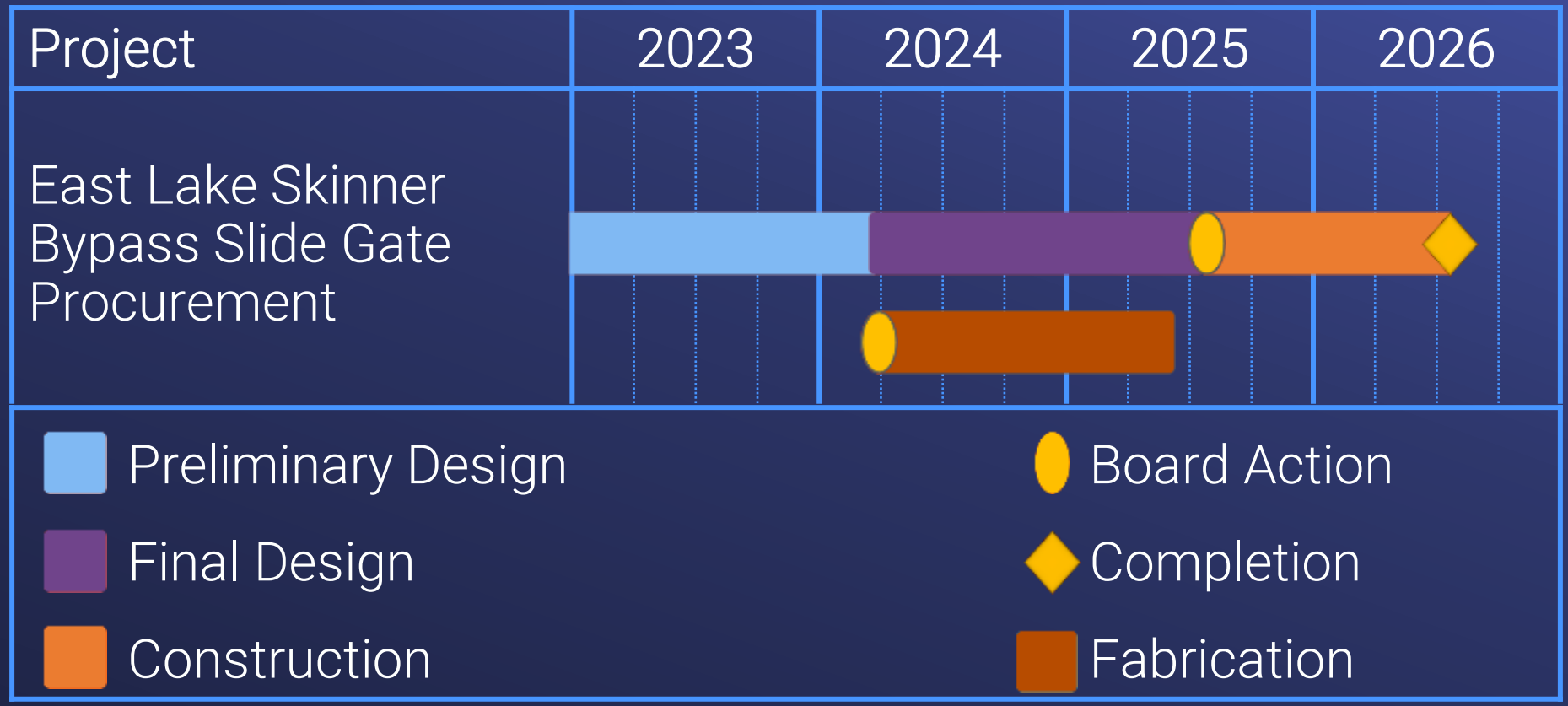
*No SBE (Small Business Enterprise) participation level set for procurement contract
Note: Includes sales and use taxes of 7.75 percent imposed by the state of California

Allocation of Funds

East Lake Skinner Bypass Slide Gate Procurement

Metropolitan Labor		
Owner Costs (Proj. Mgmt., Contract Admin., Inspection Travel)	$	113,000
Fabrication Inspection & Support		67,000
Submittals Review, Tech. Support, Record Dwgs.		60,000
Contracts		
Whipps Inc.		892,552
Remaining Budget		67,448
Total	$	1,200,000

Project Schedule



Board Options

- Option #1

  Award a $892,552 procurement contract to Whipps Inc. for the fabrication of three slide gate assemblies for the East Lake Skinner Bypass channel.

- Option #2

  Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

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

3/12/2024 Board Meeting

7-3

Subject

Award a $1,779,174 procurement contract to Vogt Valves, Inc. for a 132-inch diameter butterfly valve to be installed at the Foothill Pump Station Intertie as part of water supply reliability improvements in the Rialto Pipeline service area; and authorize an increase of $260,000 to an agreement with HDR Engineering Inc. for a new not-to-exceed amount of $1,560,000 for design services; 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 recent statewide drought and the resulting low allocation of State Water Project (SWP) supplies by the California Department of Water Resources (DWR) directly impacted Metropolitan's ability to deliver water to the Rialto Pipeline service area. Four ongoing projects will expand Metropolitan's ability to deliver supplies from Diamond Valley Lake (DVL) through the Inland Feeder to the Rialto Pipeline service area. Collectively, these projects will significantly reduce the dependency of the member agencies on the Rialto Pipeline to SWP supplies.

This action awards a $1,779,174 procurement contract to Vogt Valves Inc. for furnishing a large-diameter butterfly valve to be installed at the San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pump Station as part of water supply reliability improvements in the Rialto Pipeline service area; and authorizes an increase of $260,000 to an existing agreement with HDR Engineering Inc. for a new amount not to exceed $1,560,000 for the design of the Inland Feeder/SBVMWD Foothill Pump Station Intertie project as two separate construction contracts. See **Attachment 1** for the allocation of funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the list of subconsultants, and **Attachment 4** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

a. Award a $1,779,174 procurement contract to Vogt Valves Inc. for a 132-inch diameter butterfly valve to be installed at the Foothill Pump Station as part of water supply reliability improvements in the Rialto Pipeline service area; and
b. Authorize an increase of $260,000 to an existing agreement with HDR Engineering Inc. for a new not-to-exceed amount of $1,560,000 for design of Stage 2 for the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie.

Fiscal Impact: Expenditure of $2,950,000 in capital funds. All expenditures will be incurred in the next biennium and will be accounted for in the Capital Investment Plan (CIP) budget for the next biennium following board approval of the budget.
Business Analysis: This option will improve water supply reliability in the Rialto Pipeline service area.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forego the opportunity to improve the reliability of service to those member agencies with connections to the Rialto Feeder.

Alternatives Considered

During the planning phase of this project, staff considered using different types of valves for isolation at this location, such as conical plug and spherical ball valves. These valves are robust and have a full port opening, thereby reducing pressure losses. However, these valves are larger, more expensive, and take longer to fabricate than butterfly valves. The much larger size of either the conical plug or spherical ball valve, and the actuator needed to operate the valve, would also result in a significantly larger structure to house the valve, increasing construction costs and prolonging construction time. These types of valves are utilized in situations where the valve controls the flow, or the allowable loss of pressure across the valve is very limited. In the current application, where the valve is used solely for isolation and pressure losses are acceptable, a butterfly valve is more appropriate and cost-effective. The recommended action allows Metropolitan to procure the valve needed for isolation on the Inland Feeder in a timely and cost-effective manner.

Staff also considered using a single construction package after completion of the CEQA and permitting process for the project instead of preparing two separate packages. The biological assessment for the CEQA and permitting processes for this project are complex due to the presence of a protected species on a portion of the site. To keep all of the work in one contract would require waiting up to two years to receive all required permits for the project. This approach would delay construction. The selected option of using two construction packages expedites the overall construction schedule by completing most of the construction during Stage 1 work.

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 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.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action to enter into a procurement contract is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities 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).) The proposed action related to the existing final design agreement is exempt from CEQA because it consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes or as part of a study leading to an action that a public agency has not yet approved, adopted, or funded. (State CEQA Guidelines Section 15306.)

CEQA determination for Option #2:

None required

Details and Background

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 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 SWP via DWR's Devil Canyon Afterbay. Member agencies with service connections on the Rialto Pipeline include the Inland Empire Utilities Agency, Three Valleys Municipal Water District, and the Upper San Gabriel Valley Municipal Water District.

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

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 the Rialto Pipeline and 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 (cfs) from DVL to the Rialto Pipeline.

The planned improvement includes pipeline interties and valve installations to connect Metropolitan's Inland Feeder to the existing in-line booster pumps at the Foothill Pump Station. Specific project components include the construction of 450 feet of 54-inch bypass supply pipe; 800 feet of 54-inch bypass discharge line; isolation valves; temporary spool pieces and bulkheads; vaults to support the new valves; surge tanks to mitigate hydraulic surges; and associated electrical, instrumentation, piping system, and appurtenance to support the new equipment.

Final design of the Inland Feeder/SBVMWD Foothill Pump Station Intertie is currently underway. Due to the long lead-time needed to procure a 132-inch diameter butterfly valve, staff recommends award of a procurement contract at this time. This valve will provide isolation capabilities on the 144-inch diameter Inland Feeder when the pumping operation is in effect.

Inland Feeder/SBVMWD Foothill Pump Station Intertie – Valve Procurement

The scope of the valve procurement contract includes furnishing a 132-inch butterfly valve, associated fittings, and accessories. Metropolitan forces will receive, offload, and place the valve in storage at Metropolitan's Cone Camp Yard. The valve will be installed under an upcoming construction contract.

A total of $2,950,000 is required for this work. In addition to the amount of the valve procurement contract, allocated funds include an increase of $260,000 for final design activities by HDR as described below and $250,000 for environmental support by ESA to be performed under an existing board authorized agreement. Allocated funds for Metropolitan staff activities include $92,000 for factory fabrication inspection and functional testing; $20,000 for Metropolitan force activities described above; $118,000 for submittals review, technical support, and responding to manufacturer requests for information to support the valve procurement; $207,000 for contract administration, environmental documentation, regulatory agency coordination, shutdown planning, right-of-way support, and project management; $111,000 for design support and reorganizing instrumentation and

controls design drawings for Stage 2, technical oversight, and review of consultant's work; and $112,826 for the remaining budget. The total estimated cost to complete this project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $29 million to $33 million.

Award of Procurement Contract (Vogt Valves Inc.)

Specifications No. 2096 for furnishing a butterfly valve for the Inland Feeder/SBVMWD Foothill Pump Station Intertie was advertised for bids on September 19, 2023. As shown in **Attachment 2**, three bids were received and opened on December 19, 2023. The bid from Vogt Valves Inc. in the amount of $1,779,174 complies with the requirements of the specifications. This amount includes all sales and use taxes imposed by the state of California.

Proceeding with a contract at this time will enable completion of improvements to the Inland Feeder/SBVMWD Foothill Pump Station Intertie with minimal operational impacts and will allow for reliable water exchanges between Metropolitan and SBVMWD. This action awards a $1,779,174 procurement contract to Vogt Valves Inc. to furnish a large-diameter butterfly valve for the Inland Feeder/SBVMWD Foothill Pump Station Intertie. As a procurement contract, there are no subcontracting opportunities, and a Small Business Enterprise participation level was not established for this contract.

Inland Feeder/SBVMWD Foothill Pump Station Intertie – Stage 2 Final Design

In August 2022, Metropolitan's Board authorized a professional services agreement with HDR Engineering Inc. (HDR) for the design of the Inland Feeder/SBVMWD Foothill Pump Station Intertie project. HDR had completed final design; however, during a recent biological survey of the project site, it was determined that additional CEQA and permit work is required for the project to avoid disruption to a sensitive species, the San Bernardino Kangaroo Rat. To expedite the project's construction, the project will be advertised and constructed in two stages.

Stage 1 work is located north of the habitat area, which includes connecting pipelines to SBVMWD's Foothill Pump Station, procurement, and installation of long lead equipment such as the surge protection tanks, and associated civil, electrical, and instrumentation work necessary to support the new infrastructure. Stage 2 work will include construction of the tie-in to the Inland Feeder, a valve vault along the Inland Feeder, and connection to the piping installed under Stage 1. Stage 2 work will also include piping which crosses the habitat area. This two-staged construction approach will require two separate construction packages and an amendment to the existing agreement with HDR for the design of the separate construction package for Stage 2 construction.

Amendment to Existing Agreement (HDR Engineering Inc.)

HDR is recommended to provide engineering services for final design of Stage 2 for the Inland Feeder/ SBVMWD Foothill Pump Station Intertie. The planned activities for HDR include separating drawings and specifications into two contract packages; development of drawings and specifications for the protection of the San Bernardino Kangaroo Rat during construction; development of the engineer's estimates, and performing bid phase assistance for both Stage 1 and Stage 2 construction packages.

This action authorizes an increase of $260,000 to an existing agreement with HDR Engineering Inc. for a new not-to-exceed amount of $1,560,000 to provide engineering design services for final design of Stage 2 for the Inland Feeder/SBVMWD Foothill Pump Station Intertie. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 13 percent. HDR Engineering Inc. has agreed to meet this level of participation. The planned subconsultants for this work are listed in **Attachment 3**.

Project Milestones

May 2024 – Board action to adopt CEQA document for Inland Feeder/SBVMWD Foothill Pump Station Intertie

August 2024 – Board action to award construction contract for the Inland Feeder/SBVMWD Foothill Pump Station Intertie Stage 1

2/20/2024

John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

2/27/2024

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Listing of Subconsultants

Attachment 4 – Location Map

Ref# es12697614

Allocation of Funds for Inland Feeder - SBVMWD Foothill Pump Station Intertie

	Current Board Action (Mar. 2024)
Labor	
Studies & Investigations	$ -
Final Design (Stage 2)	111,000
Owner Costs (Program mgmt., envir. monitoring, procurement)	207,000
Submittals Review & Record Drwgs.	118,000
Construction Inspection & Support	92,000
Metropolitan Force Construction	20,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	
HDR Engineering Inc.	260,000
ESA (Environmental Services)	250,000
Right-of-Way	-
Equipment Use	-
Contracts (Vogt Valves Inc.)	1,779,174
Remaining Budget	112,826
Total	**$ 2,950,000**

The total amount expended to date on the Inland Feeder – SBVMWD Foothill Pump Station Intertie is approximately $3.8 million. The total estimated cost to complete the project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $29 million to $33 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on December 19, 2023, at 2:00 P.M.

Specifications No. 2096
Furnishing a 132" Butterfly Valve for Foothill PS Intertie

The work includes furnishing and delivery of a 132-inch butterfly valve for the Foothill Pump Station Intertie.

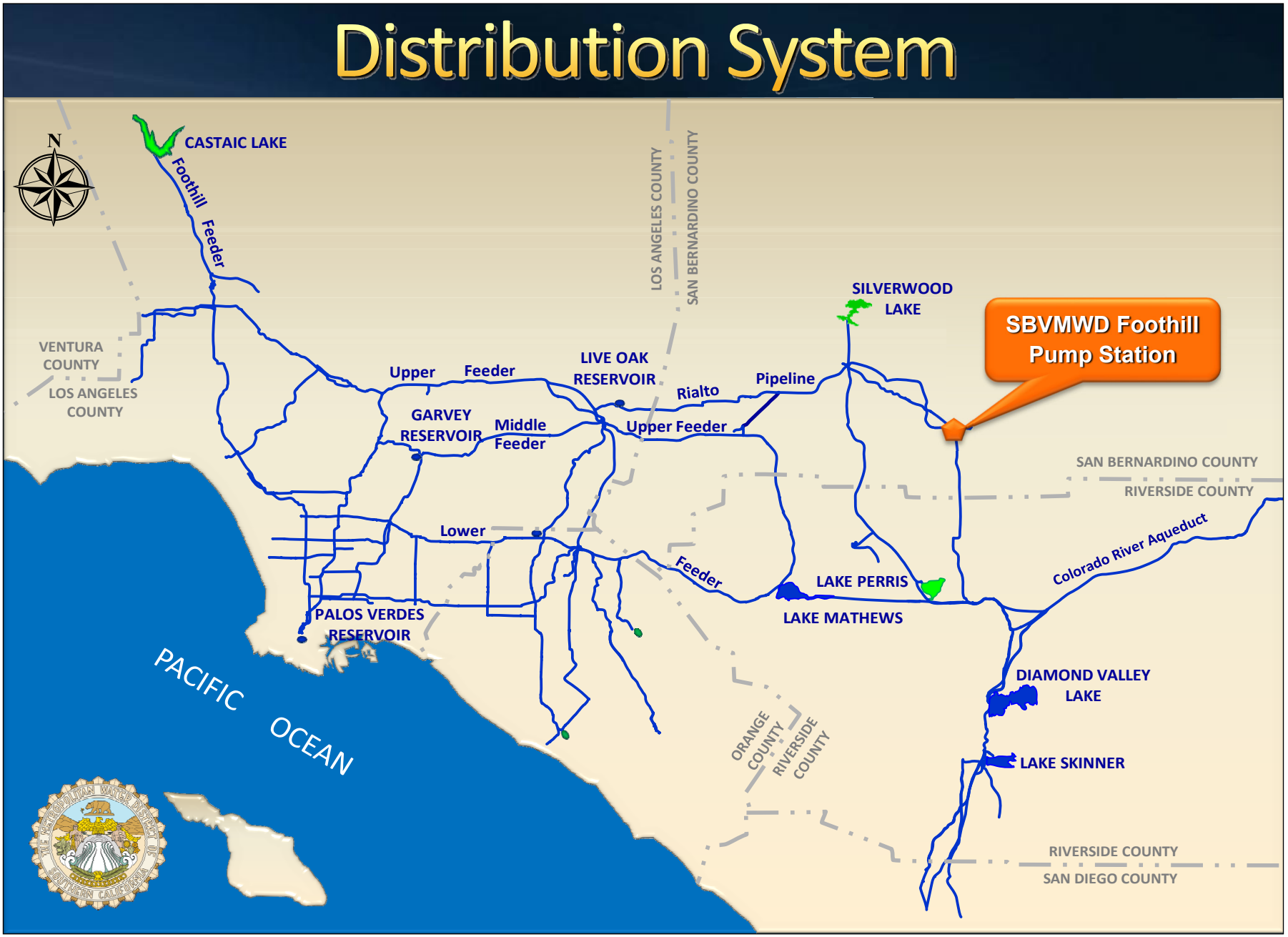
Bidder and Location	Base Bid Price Total [1,2]
Vogt Valves **Stafford, TX**	**$1,779,174**
Santa Fe Win Water Santa Fe Springs, CA	$4,799,070
Sojitz Machinery Corporation of America Farmington Hills, MI	$5,911,461

[1] As a procurement contract, there are no subcontracting opportunities.
[2] Includes sales and use taxes of 7.75 percent imposed by the state of California

The Metropolitan Water District of Southern California

Subconsultants for Agreement with HDR Engineering Inc.

Subconsultant and Location	Service Category; Specialty
DRP Engineering Inc. Alhambra, CA	CAD support


Distribution System
N
CASTAIC LAKE
Foothill Feeder
VENTURA COUNTY
LOS ANGELES COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
SBVMWD Foothill Pump Station
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Lower Feeder
Colorado River Aqueduct
LAKE PERRIS
LAKE MATHEWS
PALOS VERDES RESERVOIR
PACIFIC OCEAN
DIAMOND VALLEY LAKE
ORANGE COUNTY
RIVERSIDE COUNTY
LAKE SKINNER
RIVERSIDE COUNTY
SAN DIEGO COUNTY

Engineering, Operations, & Technology Committee

Foothill Pump Station Intertie Valve Procurement

Item 7-3

March 11, 2024

Item 7-3 Foothill Pump Station Intertie

Subject

Award a $1,779,174 procurement contract to Vogt Valves Inc. for a 132-inch diameter butterfly valve; and authorize increase of $260,000 to agreement with HDR Engineering Inc. for design services

Purpose

Procure a large diameter butterfly valve and complete final design and permitting for Foothill Pump Station Intertie project to improve supply reliability for SWP dependent member agencies

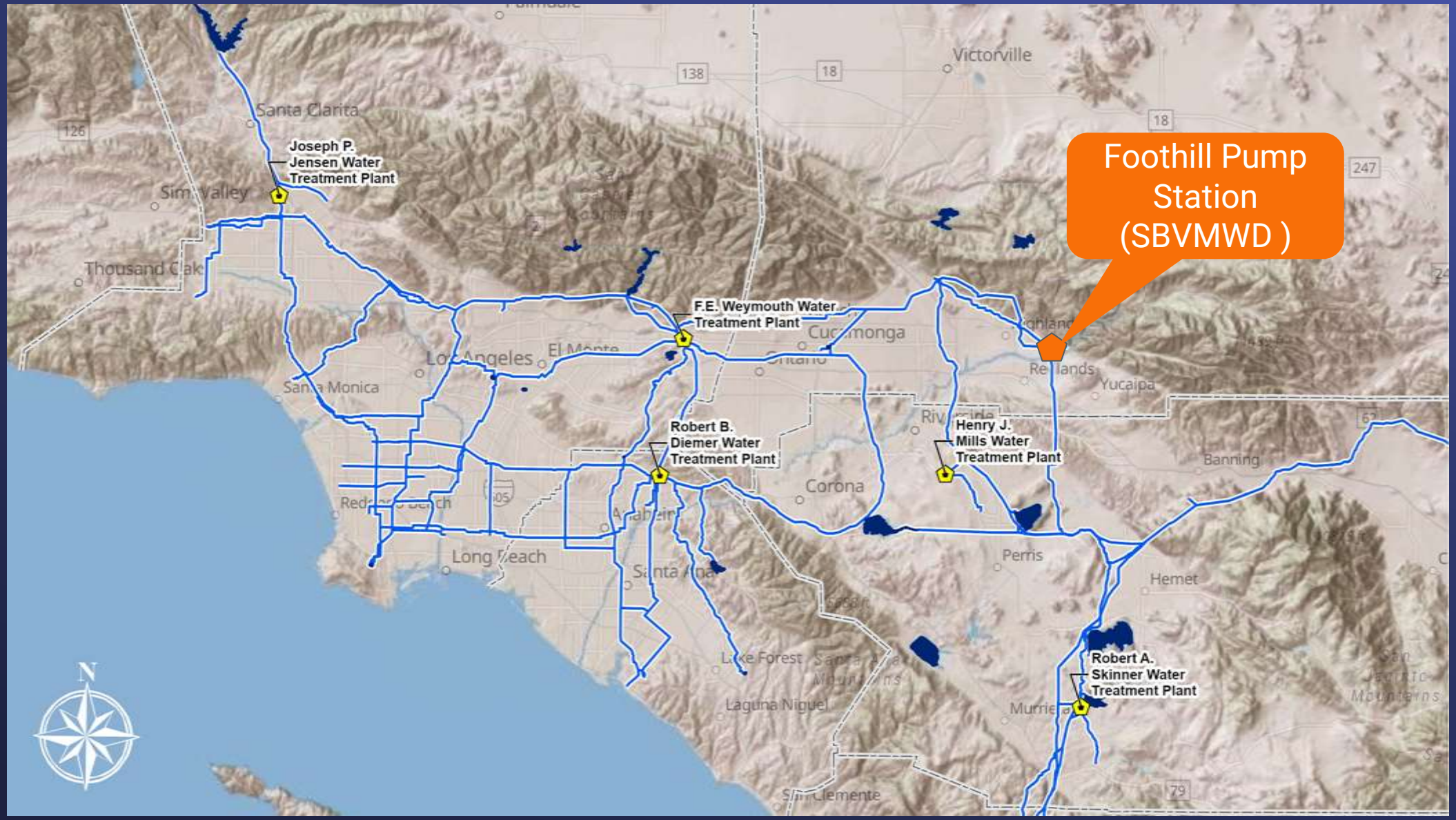
Recommendation and Fiscal Impact

Award a procurement contract for a 132-inch diameter valve; and authorize an amendment to an existing agreement for final design of Foothill Pump Station Intertie project

Fiscal Impact of $2,950,000

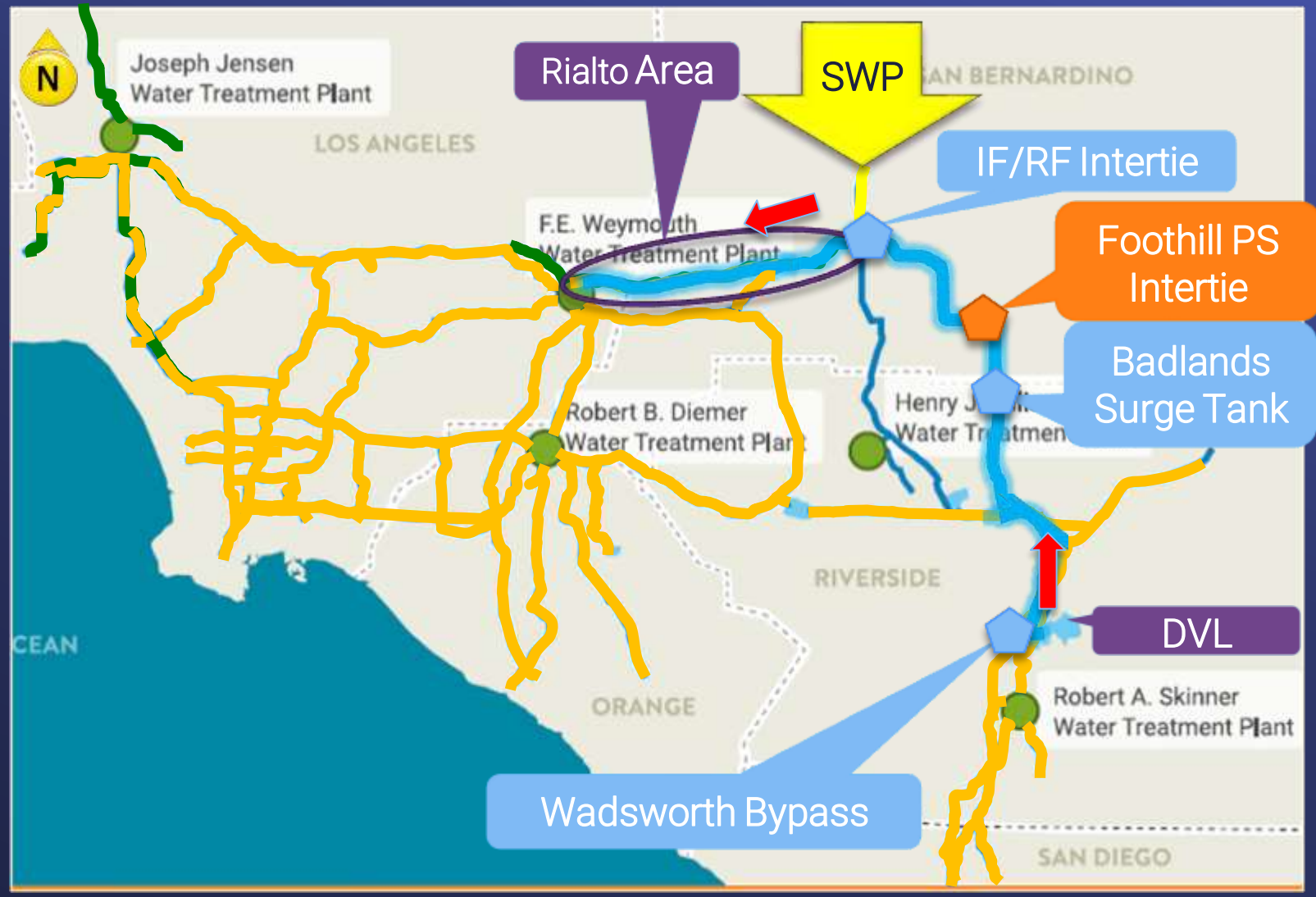
Budgeted

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 Facility
  - Foothill Pump Station Intertie
  - Inland Feeder Rialto Pipeline Intertie
- Valve procurement recommended at this time



Foothill Pump Station Intertie Valve Procurement

Typical Butterfly Valve & Actuator

Valve Procurement

- 132-inch valve isolates & directs flow during operation
- Delivery of valve scheduled for mid-2026
  - Fabrication & delivery can take up to two years
- Valve to be installed during Inland Feeder shutdown
  - Under a separate construction contract

Foothill Pump Station Intertie
Valve Procurement

Scope of Work – Valve Procurement

- Contractor
  - Furnish & deliver one 132-inch butterfly valve & hydraulic actuator
- Metropolitan
  - Factory fabrication inspection
  - Submittals review
  - Off-load & store valve
  - Contract administration & project management

Foothill Pump Station Intertie Valve Procurement

Alternatives Considered

- Valve Procurement
  - Conical, spherical & butterfly valves considered
  - Conical & spherical valves are larger, more expensive & take longer to fabricate
- Selected Alternative – Butterfly valve
  - Butterfly valves are more appropriate & cost-effective for isolation

Bid Results
Specifications No. 2096

Bids Received	December 19, 2023
No. of Bidders	3
Lowest Responsible Bidder	Vogt Valves Inc.
Low Bid*	$1,779,174
Range of Other Bids*	$1,779,174 to $5,911,000

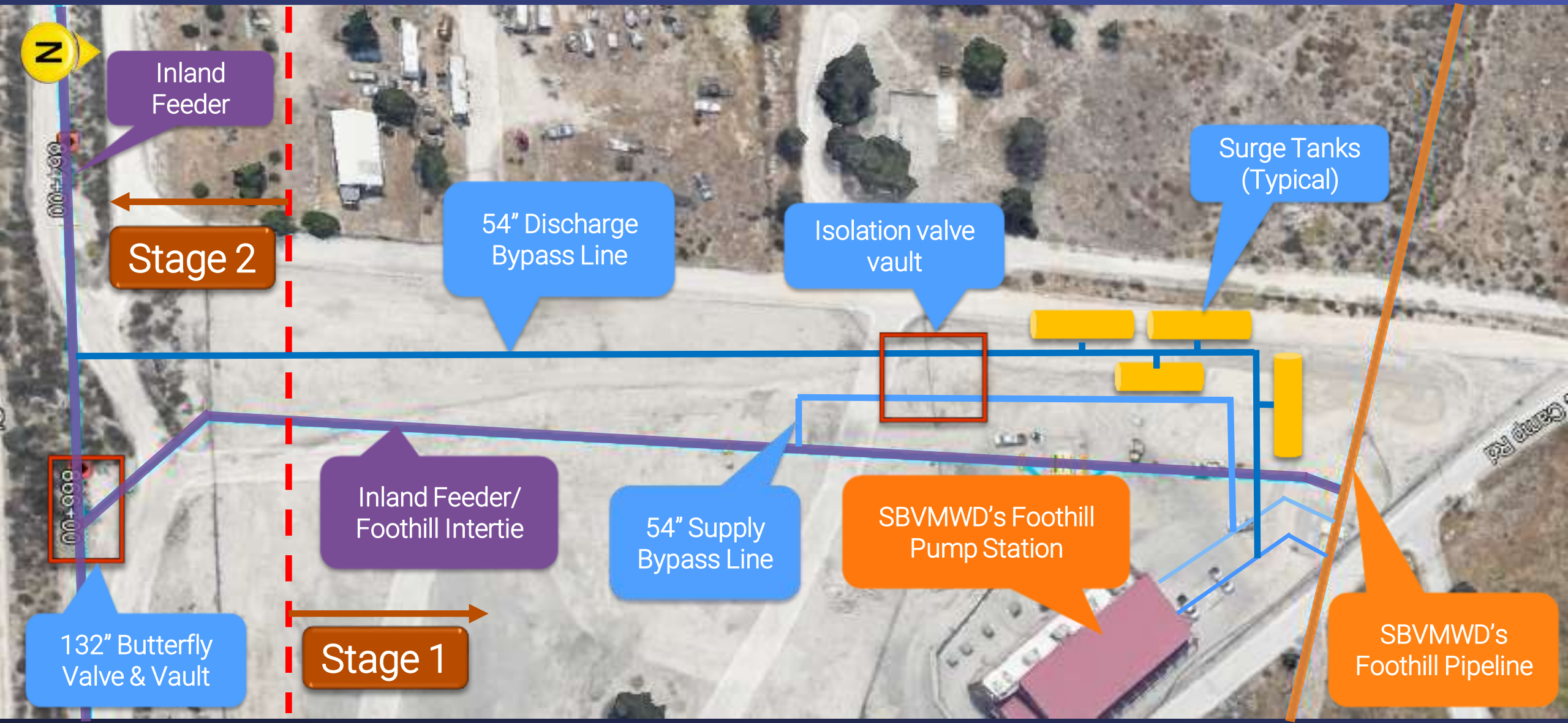
*No SBE (Small Business Enterprise) participation level set for procurement contract
Note: Includes sales and use taxes of 7.75 percent imposed by the state of California

Foothill Pump Station Intertie
Final Design

Project Staging

- Sensitive species discovered at construction site
  - Requires Mitigated Negative Declaration (MND) & environmental permits to complete work
  - Board adoption of MND planned for May 2024
- Project to be completed in two stages
  - Stage 1 – Area outside sensitive species habitat
    - Contract award planned for Aug. 2024
  - Stage 2 – Area within sensitive species habitat
    - Obtain environmental permits
    - Award construction contract

Project Staging



Foothill Pump Station Intertie
Final Design

HDR – Agreement Amendment

- Agreement authorized in August 2022
- Selected through RFP No. 1305
- Scope of Work
  - Produce plans & specifications
  - Develop engineer's estimate
  - Perform bid phase assistance
  - Increase of $260,000
- New NTE amount: $1,560,000
- SBE participation level: 13%

Scope of Work – Stage 2 Final Design

- Metropolitan
  - Prepare design of instrumentation & control systems
  - Review consultant design
  - Provide consultant oversight, environmental support & project management
  - Prepare environmental documents & apply for permits

SBVMWD's Foothill Pump Station

SBVMWD's Surge Mitigation System

Foothill Pump Station Intertie
Final Design

Alternatives Considered

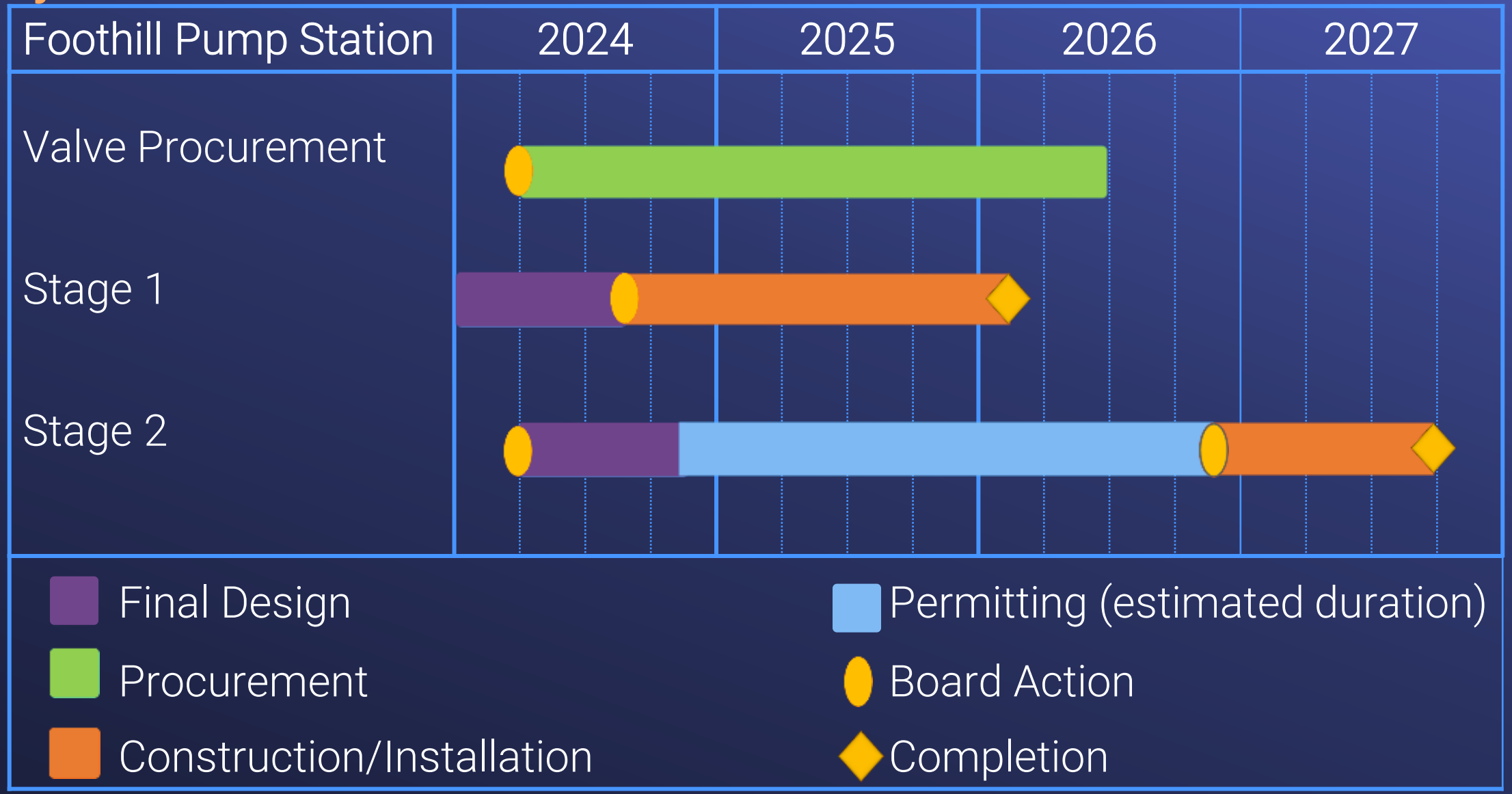
- Single Construction
  - One constructing package after CEQA & permit completion
  - Up to two years delay to obtain permit
- Selected Alternative – Two construction packages
  - Expedited schedule
  - Improves drought resiliency for Rialto pipeline service area

Allocation of Funds

Foothill Pump Station Intertie

Metropolitan Labor	
Final Design (Stage 2)	$ 111,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	207,000
Submittals Review, Tech. Support, Record Dwgs.	118,000
Fabrication Inspection & Support	92,000
Force Construction	20,000
Professional/Technical Services	
HDR Engineering Inc.	260,000
ESA (Environmental Services)	250,000
Contracts	
Vogt Valves Inc.	1,779,174
Remaining Budget	112,826
Total	$ 2,950,000

Project Schedule



Board Options

- Option #1
  a. Award a $1,779,174 procurement contract to Vogt Valves Inc. for a 132-inch diameter butterfly valve to be installed at the Foothill Pump Station as part of water supply reliability improvements in the Rialto Pipeline service area; and
  b. Authorize an increase of $260,000 to an existing agreement with HDR Engineering Inc. for a new not-to-exceed amount of $1,560,000 for design of Stage 2 for the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie.

- Option #2
  Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

3/12/2024 Board Meeting

7-4

Subject

Authorize an increase of $2,700,000 to an agreement with Tetra Tech Inc. for a new not-to-exceed total amount of $3,350,000 for final design services for improvements to the Station Light and Power Electrical System at Iron Mountain Pumping Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The 2.4 kV Station Light and Power (SL&P) system provides power to critical pumping plant equipment such as cooling water pumps, lubricating oil systems, general station lighting, microwave communications systems, and village housing. The existing SL&P switchrack and the medium- and low-voltage distribution system were part of the original pump plant construction more than 80 years ago. This system requires replacement to ensure reliable operation of the pump plant and to maintain reliable Colorado River Aqueduct (CRA) water deliveries.

This action authorizes an increase to an existing agreement with Tetra Tech Inc. for final design to replace the SL&P system at the Iron Mountain Pumping Plant. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Listing of Subconsultants, and **Attachment 3** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Authorize an increase to an existing agreement with Tetra Tech Inc. for a new not-to-exceed amount of $3,350,000 for design services for the Iron Mountain SL&P Electrical Improvements project.

Fiscal Impact: Expenditure of $4.2 million in capital funds. Approximately $100,000 in capital funds will be incurred in the current biennium and have been previously authorized. The remaining capital expenditures will be funded from future Capital Investment Plan (CIP) budgets following board approval of those budgets.
Business Analysis: This option will improve the reliability and flexibility of the electrical system, enhance operational safety, and upgrade the power distribution system to meet future load requirements of the CRA.

Option #2

Do not proceed with the project at this time.
Fiscal Impact: None
Business Analysis: This option would forego an opportunity to improve reliability, flexibility, and safety of the electrical system in the CRA.

Alternatives Considered

Alternatives considered for completing final design activities for the Iron Mountain SL&P Electrical Improvements project 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) 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 the relative priority of this project, staff recommends the use of a professional services agreement to complete the subject project. This approach will allow for the completion of not only this program, but also other budgeted capital projects within their current schedules.

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

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

By Minute Item 52701, dated February 8, 2022, the Board authorized preliminary design for the Iron Mountain SL&P Electrical Improvements.

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of $600 million for projects identified in the CIP for Fiscal Year 2022/2023 and 2023/2024.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not subject to CEQA because the overall activities involve data collection, research, resource evaluation, and feasibility and planning studies for possible future actions that do not require the preparation of an Environmental Impact Report or Negative Declaration, and which do not result in serious or major disturbance to an environmental resource. Accordingly, the proposed action qualifies under Class 6 (Section 15306) and Section 15262 of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Details and Background

Background

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews. It consists of five pumping plants; 124 miles of tunnels, siphons, and reservoirs; 63 miles of canals; and 55 miles of cut-and-cover conduits. The aqueduct was constructed in the late 1930s and was placed into service in 1941.

At the Iron Mountain Pumping Plant, incoming high-voltage power is stepped down to 6.9 kV for the main pump's operation and then down to 2.4 kV to supply the SL&P switchrack. This switchrack serves as the central power distribution center for the pumping plant's critical auxiliary systems, such as the cooling water pumps, lubricating oil systems, general station lighting and computer systems, microwave communications systems, and village housing. The switchrack includes vacuum circuit breakers and transformers connected through overhead copper busses and disconnect switches. These components are supported by a steel lattice frame and are situated outdoors within a fenced-in yard exposed to the elements. In the event of an unanticipated power outage to the pumping plant, power systems are kept operational by the operation of a standby diesel generator that is interconnected to the SL&P switchrack.

Power from the SL&P switchrack is delivered through an auxiliary power system that was installed in the 1930s and expanded in the 1950s. The auxiliary power distribution system consists of transformers to step down the voltage; dozens of distribution panels and hundreds of circuit breakers; thousands of feet of conduits and cable trays; and many miles of electrical wiring. Over the decades, additional electrical loads have been added at the pumping plant without upgrading the capacity of the auxiliary power systems. Additionally, the standby generator that provides emergency power is outdated and requires replacement.

The 1930s design and current condition of the SL&P switchrack has a number of deficiencies that affect the overall reliability of the switchracks, including obsolete equipment, such as vacuum circuit breakers; lack of modern safety features, such as a means to lock switches in the open state when required; and outdoor equipment with switches, breakers, and busses that are exposed to the elements and difficult to repair or maintain under adverse weather conditions.

An effort to rehabilitate and upgrade the electrical infrastructure at Metropolitan's five CRA pumping plants is underway. The upgrade of the CRA's main pump switchracks at all five plants was completed in 2017. The Board authorized a consultant agreement for the preliminary design of the Iron Mountain SL&P switchrack improvements in February 2022. Preliminary design for the improvements of the SL&P switchrack is complete, and staff recommends proceeding to final design. Staff plans to initiate design of upgrades for the remaining CRA pumping plants upon completion of design for the Iron Mountain Pumping Plant. This approach will allow staff to apply lessons learned from the Iron Mountain Pumping Plant design to the other four pumping facilities.

Iron Mountain Station Light & Power Electrical Improvements – Final Design

Planned work includes constructing a new cast-in-place concrete building, which will house new switchgear and a 4.16 kV generator. Double-stacked circuit breakers will be used to reduce the building size. The new building will extend the service life of the electrical equipment and will facilitate maintenance. The new switchgear will be upgraded from 2.3 kV to 4.16 kV to align with modern equipment voltages and will be double ended to provide redundancy and enhance reliability. A new medium- and low-voltage distribution system will be constructed that includes transformers, distribution panels, and duct banks. Finally, a new 4.16 kV standby generator will also be provided that will supply emergency power in the event of power loss from the primary electrical system.

Planned final design activities will include: (1) preparing drawings and specifications, which will include the design of the switchgear building, establishing electrical duct bank routes; finalizing equipment selections; identification of outage requirements; and the development of a construction sequencing scheme to maintain operations and establishing a cutover sequencing plan to the new equipment; (2) developing the engineer's cost estimate; and (3) advertising and receiving competitive bids.

A total of $4.2 million is required for this work. Allocated funds for professional services include $2.7 million for the final design activities by Tetra Tech Inc. (Tetra Tech) as described below; and $80,000 for constructability review. A specialty firm will perform the constructability review under contracts planned to be executed under the General Manager's Administrative Code authority to award contracts of $250,000 or less. Allocated funds for Metropolitan staff activities include $830,000 for preparing instrumentation and controls design drawings, technical oversight, and review of consultant's work; $390,000 for shutdown planning, environmental support, and project management; and $200,000 for the remaining budget. **Attachment 1** provides the allocation of the required funds.

As described above, the final design will be performed by Tetra Tech and Metropolitan staff. Engineering Services' performance metric target range for final design with a construction cost of more than $3 million is 9 to 12 percent. For this project, the performance metric goal for final design is 9.3 percent of the total construction cost. The total estimated cost for design is $3.53 million, which includes $2.7 million for Tetra Tech and $830,000 for Metropolitan staff design and consultant review. The estimated cost of construction for the replacement of the Iron Mountain SL&P Electrical Improvements project is anticipated to range from $38 million to $42 million.

Engineering Service (Tetra Tech Inc.) – Amendment of Existing Agreement

Tetra Tech is recommended to provide engineering services for the design of Iron Mountain SL&P switchracks improvements. The planned activities for Tetra Tech include: (1) development of final design drawings and specifications as detailed above; (2) technical assistance through bidding; (3) participation in a constructability review; and (4) preparation of an engineer's cost estimate. Tetra Tech was prequalified for this type of work via Request for Qualifications No. 1305 and previously completed the preliminary design.

This action authorizes an increase of $2.7 million to the existing agreement with Tetra Tech for a new not-to-exceed amount of $3.35 million to provide engineering design services for the Iron Mountain SL&P Switchrack Electrical Improvements. For this agreement, Metropolitan has established a Small Business

Enterprise participation level of 15 percent. Tetra Tech has agreed to meet this level of participation. The planned subconsultants for this work are listed in **Attachment 2**.

Project Milestone

March 2025 – Completion of final design & advertisement for construction bids

2/20/2024

John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

2/23/2024

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Planned Subconsultants

Attachment 3 – Location Map

Ref# es12697253

Allocation of Funds for Iron Mountain Station Light & Power Electrical Improvements

	Current Board Action (Mar. 2024)
Labor	
Studies & Investigations	$ -
Final Design	830,000
Owner Costs (Program mgmt., envir. monitoring)	390,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	
Tetra Tech Inc.	2,700,000
Constructability Review Consultant	80,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	200,000
Total	**$ 4,200,000**

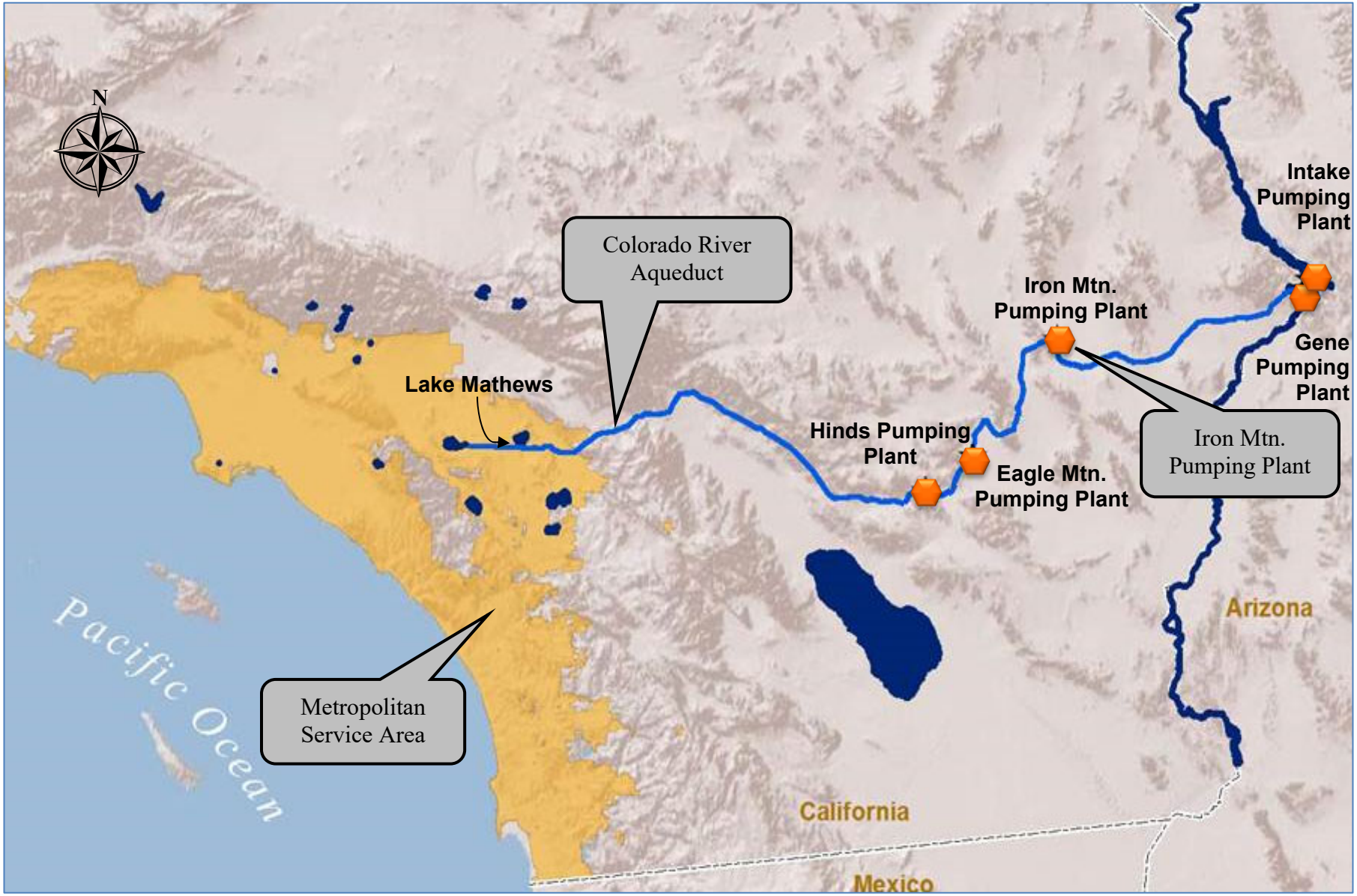
The total amount expended to date is approximately $1.7 million. The total estimated cost to complete the electrical improvements for the Station Light & Power at Iron Mountain pumping plant, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $44.5 million to $52 million.

The Metropolitan Water District of Southern California

Subconsultants for Agreement with Tetra Tech Inc.

Subconsultant and Location	Service Category; Specialty
DRP Engineering Inc. Alhambra, CA	CAD Services
Citadel EHS Glendale, CA	Environmental Regulatory Compliance

Location Map



Engineering, Operations, & Technology Committee

Iron Mountain Station Light & Power Electrical Improvements

Item 7-4

March 11, 2024

Item 7-4
Iron Mountain Station Light & Power Electrical Improvements

Subject

Authorize an increase of $2,700,000 to an agreement with Tetra Tech Inc. for a new not-to-exceed total amount of $3,350,000 for final design services for improvements to the Station Light and Power Electrical System at Iron Mountain Pumping Plant

Purpose

Upgrade the power distribution system to improve electrical reliability and flexibility and enhance operational safety to maintain reliable CRA water deliveries

Recommendation and Fiscal Impact

Authorize an increase to an existing agreement for final design of improvements to Station Light and Power Electrical System at Iron Mountain Pumping Plant

Fiscal impact of $4.2 M

Budgeted

Location Map

Iron Mountain Station Light & Power Electrical Improvements

Station Light & Power Switchrack

Background

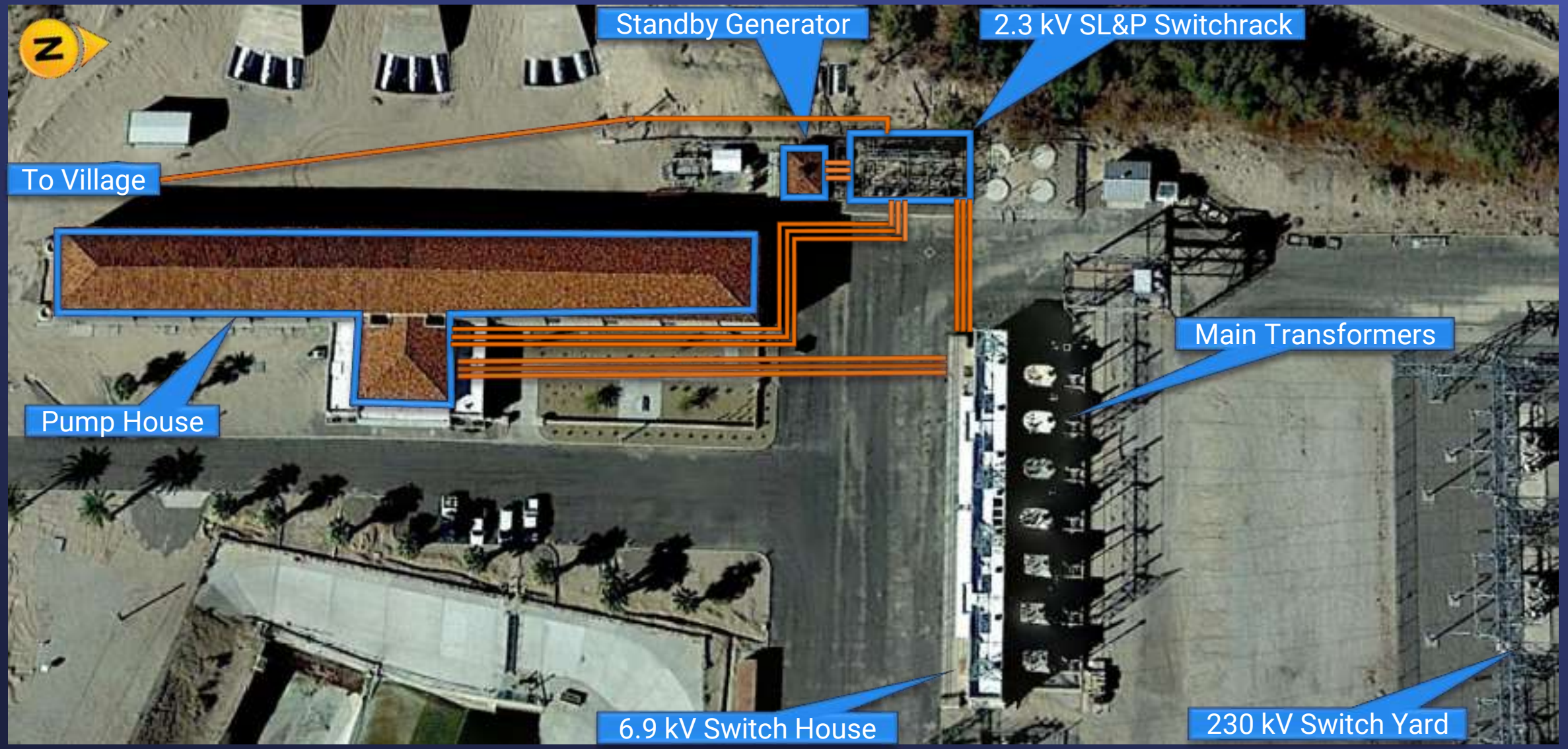
- Iron Mtn. electrical systems built in 1939
- Station Light & Power electrical system
  - Provides power for critical equipment & village housing
  - Equipment lacks modern safety features
  - Obsolete distribution system
  - Distribution panels at full capacity
  - Spare parts not available
- Preliminary design for electrical system improvements is complete

Background

Existing 2.3 kV SL&P Switchrack

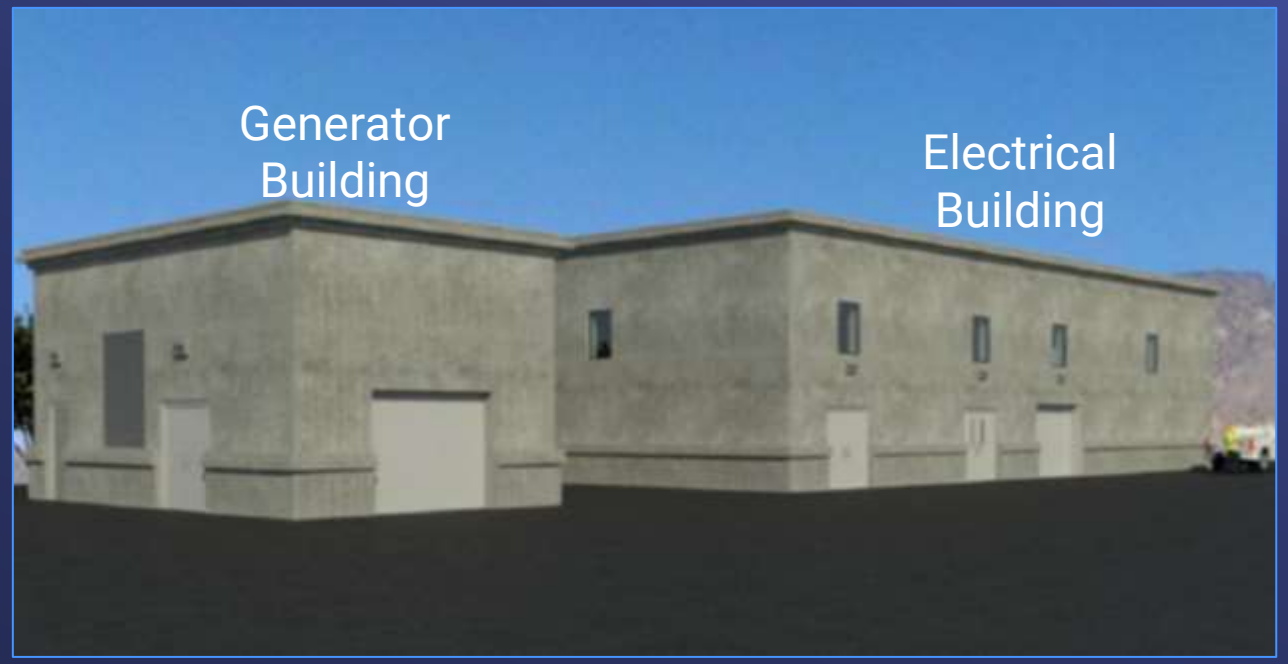
Proposed Indoor 4.16 kV Switchgear

Iron Mtn. Pumping Plant



Planned Work

- New 4.16 kV Generator & Electrical Buildings (cast-in-place)
  - Double-ended 4.16 kV & 480 V Switchgears
  - Battery Distribution System
  - Protection Relay Room
  - New Generator
  - Climate controlled environment
- New 4.16 kV & 480 V Transformers
- Upgrade Auxiliary Distribution System
  - New distribution panels, circuit breakers, cables, & conduits
- New duct banks



Proposed Generator & Electrical Buildings

Iron Mountain
Station
Light & Power
Electrical
Improvements

Alternative Considered

- Assess Metropolitan staff availability
  - Staff workload exceeds available resources
  - Specialized technical expertise required
- Selected Alternative
  - Professional services agreement for the subject project
  - Consultant & staff work as a hybrid team

Iron Mountain
Station
Light & Power
Electrical
Improvements

Tetra Tech Inc. Agreement

- Prequalified under RFQ 1305
  - Completed preliminary design
- Scope of Work:
  - Develop final design drawings & specifications
  - Prepare cost estimate
  - Participate in constructability review
  - Technical assistance during bidding
- Amendment amount: $2,700,000
- NTE amount: $3,350,000
- SBE participation level: 15%

Iron Mountain
Station
Light & Power
Electrical
Improvements

Metropolitan - Scope of Work

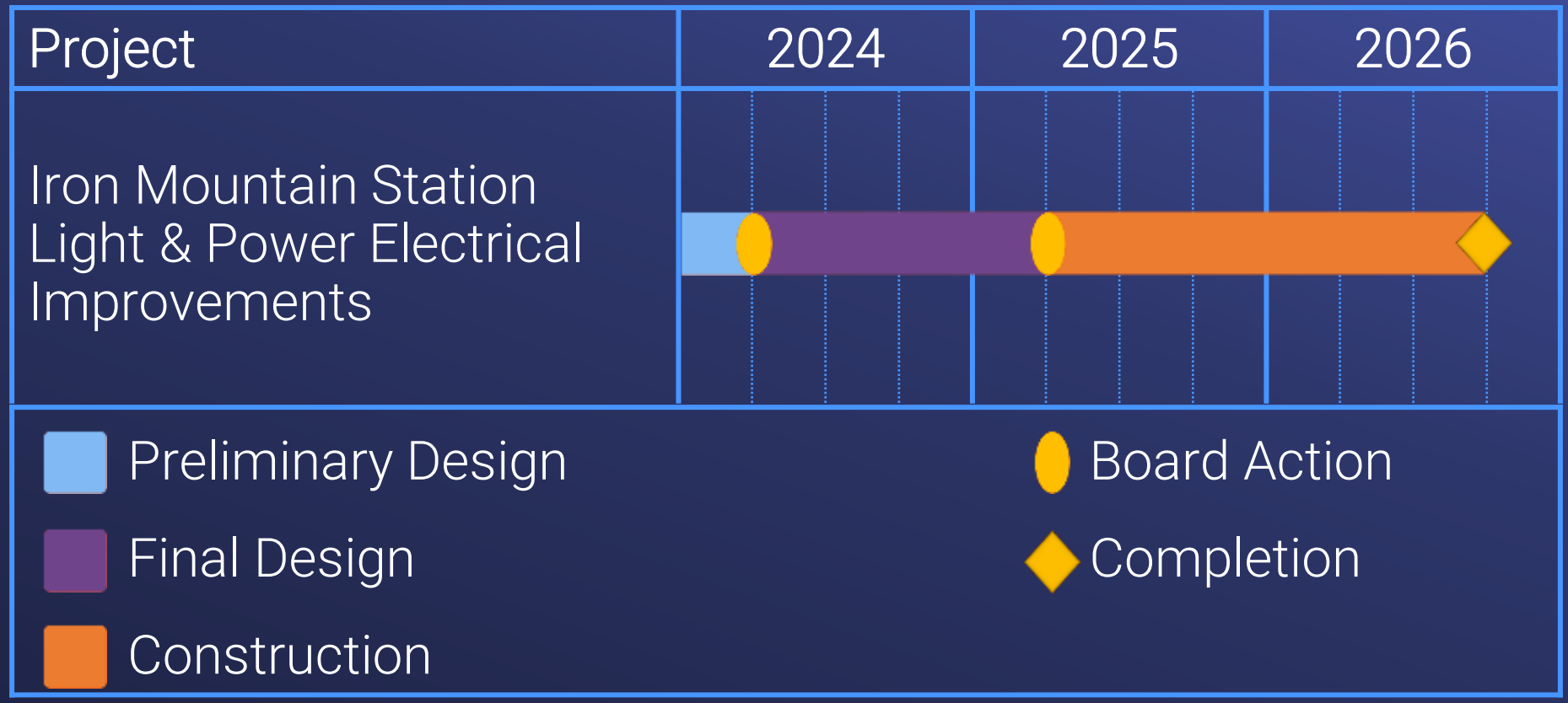
- Prepare instrumentation & controls design drawings
- Conduct constructability review & support activities
- Provide technical input & review consultant design work
- Perform shutdown planning, environmental support & project management

Allocation of Funds

Iron Mountain Station Light & Power Electrical Improvements

Metropolitan Labor	
Final Design	$ 830,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	390,000
Professional/Technical Services	
Tetra Tech Inc.	2,700,000
Constructability Review Consultant	80,000
Remaining Budget	200,000
Total	$ 4,200,000

Project Schedule



Board Options

- Option #1

  Authorize an increase to an existing agreement with Tetra Tech Inc. for a new not-to-exceed amount of $3,350,000 for design services for the Iron Mountain SL&P Electrical Improvements project.

- Option #2

  Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

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

3/12/2024 Board Meeting

7-5

Subject

Amend the Capital Investment Plan for fiscal years 2022/23 and 2023/24 to include two projects: (1) Sepulveda Feeder Pump Stations Stage 2, and (2) Inglewood Lateral Improvements; 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 recent state-wide drought resulted in low allocations of State Water Project (SWP) supplies by the California Department of Water Resources, which had a direct impact on Metropolitan's ability to deliver water to member agencies that are highly dependent on SWP supplies. Providing increased access to Colorado River water and stored water within Diamond Valley Lake will benefit these areas by reducing the likelihood of area-specific conservation mandates like the one imposed during the recent drought.

This action amends the Capital Investment Plan (CIP) to include two infrastructure improvement projects that will enhance water delivery capabilities to member agencies that are heavily dependent on SWP supplies. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the February 2024 Informational Item 9-2, and **Attachment 3** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include the Sepulveda Feeder Pump Stations Stage 2 and the Inglewood Lateral Improvements projects.

Fiscal Impact: Expenditure of $1,400,000 in capital funds. Approximately $200,000 will be incurred in the current biennium. The remaining funds for this action will be accounted for in the Capital Investment Plan budget for the next biennium following board approval of the budget.
Business Analysis: This option will improve the operational reliability of water deliveries to member agencies with connections to the State Water Project.

Option #2

Do not proceed with the projects at this time.
Fiscal Impact: None
Business Analysis: This option will forego an opportunity to begin implementation of two Drought Mitigation Action Portfolio projects to improve the supply reliability for State Water Project-dependent areas.

Alternatives Considered

Implementation of the Drought Mitigation Action Portfolio is designed to achieve immediate gains towards improved reliability for the SWP-dependent areas while allowing for a balanced and thorough analysis of potential pathways to achieve long-term equitable reliability for all member agencies. The near-term projects in

the portfolio take advantage of existing system capacity and provide timely relief to the SWP-dependent areas by adding pumping facilities and interconnectivity. The next group of projects takes advantage of the planned upgrade of the existing system to expand the system capacity and deliver additional flow to the SWP-dependent areas by adding companion conveyance components. These projects can provide enhanced drought resilience in the mid-term to the SWP-dependent areas before long-term projects are in place to achieve overall supply reliability.

The Board previously approved near-term projects, including four projects to connect Diamond Valley Lake (DVL) supplies to the Rialto Pipeline projects, three of which are currently in construction, and the Sepulveda Feeder Pump Stations Project Stage 1, currently in design. These projects will significantly improve Metropolitan's ability to deliver Colorado River water (CRW) or DVL water into the SWP-dependent areas. This action brings to the Board, for inclusion in the current CIP, projects from the second grouping, which will upgrade the existing distribution system conveyance capacity and further improve reliability to SWP-dependent areas. The recommended projects include the Sepulveda Feeder Pump Stations Project Stage 2 and the Inglewood Lateral improvements projects.

Applicable Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

Future board actions are planned for the award of consulting agreements for design and construction contracts for the subject projects.

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of $600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

Summary of Outreach Completed

Acting on the Board's direction, Metropolitan staff, in conjunction with member agencies, began several activities to collaboratively develop a plan to mitigate the risk for future geographically specific allocations. These activities included regular meetings with the SWP-dependent area member agency managers, SWP-dependent area drought mitigation workshops, focused group meetings, and regular updates to the Board.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA (Public Resources Code Section 21065, State CEQA Guidelines Section 15378(b)(5)) because the amendment involves organizational or administrative activities and general policy and procedure making that would not result in a direct or indirect physical change to the environment. The study and design associated with the Sepulveda Feeder Pump Stations Stage 2 and Inglewood Lateral Improvements are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed actions consist of basic data collection and resource evaluation activities, which 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 for a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Details and Background

Background

Extreme drought in Northern California and the Sierra Mountains between 2020 and 2022 resulted in consecutive low allocations from the SWP. Metropolitan addressed the supply shortage through storage withdrawals in 2020

and 2021 but had largely depleted those reserves by the end of 2021. A third consecutive extreme dry year in 2022 impacted Metropolitan's ability to deliver water to parts of the service area that are highly dependent on SWP supplies and resulted in having to impose area-specific mandatory conservation in the SWP-dependent areas for the first time in Metropolitan's history.

In response to these impacts, Metropolitan's Board directed staff to investigate and develop a portfolio of projects and programs that could mitigate the potential of future similar occurrences. Staff conducted a comprehensive process over the past 18 months that included facilitated workshops with the member agencies and regular board updates. **Attachment 2** describes the water-supply background, the portfolio development process, and a recommended Drought Mitigation Action Portfolio, which will provide timely relief to the SWP-dependent areas, while also allowing for a comprehensive and fiscally responsible approach to achieve long-term supply reliability.

Attachment 2 also identifies two drought mitigation projects that are recommended to be added to the CIP at this time. The expansion of the Sepulveda Feeder Pump Stations Project, Stage 2 of the existing project, will provide water delivery capacity improvements for the western SWP-dependent area, while the Inglewood Lateral Improvement Project will remove constraints in delivery of water to the western SWP-dependent area.

In April 2022, the Board appropriated funds and authorized the General Manager to initiate or proceed with work on all capital projects identified in the CIP, subject to any limits on the General Manager's authority and CEQA requirements. Board authorization is required to commence work on new projects that were not originally included in the board-authorized CIP. This action amends the CIP to include the Sepulveda Feeder Pump Stations Stage 2 and the Inglewood Lateral Improvements projects. It is not anticipated that the addition of these projects to the CIP will increase CIP expenditures in the current biennium beyond the amount appropriated by the Board. Funds required for work to be performed pursuant to the subject projects after fiscal year 2023/24 will be budgeted within the Capital Investment Plan Appropriation for Fiscal Years 2024/25 and 2025/26. These projects have been reviewed in accordance with Metropolitan's CIP prioritization criteria and were approved by Metropolitan's CIP Evaluation Team to be included in the System Reliability Program. Following approval of the next CIP for 2024/25 and 2025/26, these projects will be moved to a new Drought Mitigation Program within the CIP.

Project No. 1 - Sepulveda Feeder Pump Stations Stage 2 –Technical Investigations

The Sepulveda Feeder, constructed in 1970, delivers SWP supplies treated at the Joseph Jensen Water Treatment Plant (Jensen plant) to the Central Pool area. Member agencies within the Jensen plant's service area include the Las Virgenes Municipal Water District, Calleguas Municipal Water District, and portions of the Los Angeles Department of Water and Power. These areas can only receive limited supplies of CRW and are dependent on SWP supplies from the plant to meet their service area demands.

During low SWP operations, Metropolitan can currently supply the western SWP-dependent area with approximately 50 cubic feet per second (cfs) of treated CRW supplies using the Greg Avenue Pump Station. During the recent drought, Metropolitan operated the pump station continuously from June 2021 to December 2022. As part of the continued effort to mitigate the vulnerability of the SWP-dependent area during droughts, Metropolitan's Board in September 2023 approved a progressive design-build contract for the Sepulveda Feeder Pumping Project Stage 1. The project will construct two pump stations on the Sepulveda Feeder to reverse flow in the pipeline and deliver water from the Common Pool to the SWP-dependent agencies within the Jensen exclusive area. Due to current system constraints, the current capacity of the Sepulveda Feeder Pump Stations Stage 1 Project is limited to a maximum of 30 cfs. The estimated completion for the first stage of the project is 2026, bringing the cumulative alternative drought supplies to the western SWP-dependent area to approximately 80 cfs.

The pump station sites are planned so that additional pumping capacity, up to a potential maximum capacity of approximately 160 cfs, could be added in future stages within Metropolitan's current property holdings. This expansion, referred to as Stage 2 of the project, will take place after prestressed concrete cylinder pipe (PCCP) portions of the Sepulveda Feeder are relined with welded steel pipe. The pump stations will not only enhance reliability of water supplies in the west area in times of reduced SWP supplies but will increase overall system flexibility by enabling facilities in the Jensen exclusive area to be more easily removed from service for

maintenance and rehabilitation. During the upcoming rehabilitation of PCCP portions of the Sepulveda Feeder, the pump stations will aid in minimizing delivery impacts to member agencies as the PCCP lining work proceeds.

Planned improvements when Stage 2 is complete include the installation of pumps, surge protection equipment, and appurtenant equipment to enable pumping up to 160 cfs from the Common Pool to the western SWP-dependent area. Stage 1 of the project is currently in design. Approval of Stage 2 of this project with this Board action will allow the project team to consider the proposed expansion by providing space for additional pumps and surge equipment and flow capacity within the main pipelines to minimize cost for its possible expansion during the early portions of the Stage 1 design efforts. Staff will return to the Board at a future date to authorize commencing work on Stage 2 of this project beyond those activities described above.

The planned investigation work for Stage 2 includes reviewing existing facilities; identifying equipment alternatives; and developing a design criteria, cost estimate, and construction schedule. A total of $500,000 is required for these activities. Allocated funds include $330,000 for technical investigation activities, $100,000 for project management and project controls; and $70,000 for remaining budget. **Attachment 1** provides the allocation of the required funds.

Project No. 2 - Inglewood Lateral Improvements – Technical Investigations

The Inglewood Lateral is approximately 2.5 miles long and was constructed in 1955. It is located within the Central Pool portion of the system and connects the Middle Cross Feeder to the Sepulveda Feeder. The Middle Cross Feeder is 78 inches in diameter, but the Inglewood Lateral is only 36 inches in diameter.

Hydraulic modeling has shown that the Inglewood Lateral is a choke point within the system due to its small diameter. Removing the bottleneck created by the existing Inglewood Lateral is needed to provide the 160 cfs capacity for the Sepulveda Feeder Pump Stations Stage 2 expansion. The project would also increase operational flexibility in high SWP years by enabling increased deliveries from the Jensen plant into the Common Pool area. The project will increase the flow of the Inglewood Lateral by either increasing the size of the existing pipeline or constructing a parallel pipeline.

The work to be performed includes investigations of alternative alignments to increase the capacity of the existing Inglewood Lateral. Activities will be conducted by Metropolitan staff and include the identification of preliminary pipeline route alternatives, utility investigations, hydraulics analyses, development of design criteria, cost estimates, and construction sequencing.

A total of $900,000 is required for these activities. Allocated funds include $620,000 for technical investigation activities; $150,000 for project management and project controls; and $130,000 for the remaining budget. **Attachment 1** provides the allocation of the required funds.

Project Milestone

December 2024 – Completion of technical investigations for the Sepulveda Feeder Pump Stations Stage 2 expansion and Inglewood Lateral Improvements projects.

2/20/2024

John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

2/27/2024

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Board Informational Item 9-2, dated 2/13/2024

Attachment 3 – Location Map

Ref# es12694261

Allocation of Funds for Sepulveda Feeder Pump Stations Stage 2

	Current Board Action (Mar. 2024)
Labor	
Studies & Investigations	$ 330,000
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	100,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	70,000
Total	**$ 500,000**

This is the initial action for the expansion of the Sepulveda Feeder Pump Stations Stage 2.

Allocation of Funds for Inglewood Lateral Improvements

	Current Board Action (Mar. 2024)
Labor	
Studies & Investigations	$ 620,000
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	150,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	130,000
Total	**$ 900,000**

This is the initial action for the improvements to the Inglewood Lateral Improvements.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Information

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

2/13/2024 Board Meeting

9-2

Subject

Strategy for Implementation of Drought Mitigation Actions in Response to the August 2022 Board Resolution

Executive Summary

Extreme drought in Northern California and the Sierra Mountains between 2020 and 2022 resulted in consecutive low allocations from the State Water Project (SWP). Metropolitan addressed the supply shortage through storage withdrawals in 2020 and 2021 and had largely depleted those reserves by the end of 2021. A third consecutive extreme dry year in 2022 severely impacted Metropolitan's ability to deliver water to parts of the service area that are highly dependent on SWP supplies and resulted in having to impose area-specific mandatory conservation in the SWP-dependent areas for the first time in Metropolitan's history. In response to the impacts, Metropolitan's Board directed staff to investigate and develop a portfolio of projects and programs that will provide the agencies in the SWP-dependent areas with equitable access to water supplies and storage assets. Staff conducted a comprehensive process over the past 18 months that included facilitated workshops with the member agencies and comprehensive updates to the Board. A recommended Drought Mitigation Action Portfolio has been developed that will help provide timely relief to the SWP-dependent areas while also allowing for a comprehensive and fiscally responsible approach to achieve long-term supply reliability.

Fiscal Impact

None

Applicable Policy

Not applicable

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

By Minute Item 52481, dated August 17, 2021, the Board adopted a resolution which declared a "Condition 2 – Water Supply Alert."

By Minute Item 52581, dated November 9, 2021, the Board adopted a resolution which declared specified emergency conditions within the Metropolitan service area.

By Minute Item 52626, dated December 14, 2021, the Board amended the Capital Investment Plan to include water supply reliability improvements in the Rialto Pipeline service area.

By Minute Item 52703, dated February 8, 2022, the Board amended the CIP to include water supply reliability for the western service area.

By Minute Item 52802, dated April 12, 2022, the Board declared a Water Shortage Emergency Condition, adopted an Emergency Water Conservation Program, and expressed support for the Governor's Executive Order N-7-22.

By Minute Item 52946, dated August 16, 2022, the Board adopted a resolution affirming Metropolitan's call to action and commitment to regional reliability for all member agencies.

By Minute Item 53377, dated September 12, 2023, the Board awarded an agreement for Phase 1 design-build services for the Sepulveda Feeder Pump Stations Project.

Details and Background

Background

Extreme drought between 2020 and 2022 resulted in the lowest cumulative 3-year total water supply allocation from the SWP. The low allocations required that Metropolitan and member agencies adjust operations and implement measures developed during the previous drought on the SWP, including start-up of the Greg Avenue Pump Station, Diamond Valley Lake deliveries to the Mills Water Treatment Plant, and the implementation of the Operational Shift Cost Offset Program. These actions allowed Metropolitan to preserve water for areas in the system that were solely dependent on SWP supplies. Despite the efforts to conserve SWP supplies, in April 2022, Metropolitan's Board approved a resolution declaring a water shortage emergency within the SWP-dependent areas and mandated an emergency water conservation program within those areas. Member agencies within the SWP-dependent areas include the Inland Empire Utilities Agency, Three Valleys Municipal Water District, and Upper San Gabriel Water District, which are supplied from the California Aqueduct East Branch; and the City of Los Angeles, Calleguas Municipal Water District, and Las Virgenes Municipal Water District, which are supplied from of the California Aqueduct West Branch.

Before implementing the mandatory conservation, in November 2021, the Board adopted a resolution declaring a regional drought emergency and directing staff to implement measures to "ensure all portions of the service area attain a high level of reliability against multi-year, severe droughts, such as system improvements, local water supply development, new water storage opportunities, and water efficiency gains." This commitment was reaffirmed in August 2022 with a second resolution and call to action. This resolution noted that with its existing infrastructure, Metropolitan cannot provide member agencies in the SWP-dependent area with equitable access to water supply and storage assets during severe droughts. To address this problem, the Board committed to the following actions:

- Metropolitan will reconfigure and expand: (1) its existing infrastructure portfolio to provide sufficient access to the integrated system of water sources, conveyance and distribution, and storage; and (2) programs to achieve equivalent levels of reliability to all member agencies.
- In coordination with the member agencies, identify a portfolio of projects and programs to address the problem statement in the resolution. The selected portfolio must include infrastructure improvements to deliver available water supplies to the SWP-dependent areas. The portfolio must also be balanced through new storage and supply programs and local supply development and management.

Following the Board's direction, staff has developed a Drought Mitigation Action Portfolio. The portfolio includes infrastructure improvements to provide the SWP-dependent areas greater access to existing Colorado River and stored Diamond Valley Lake supplies, new supply opportunities, and options for increased storage.

Drought Mitigation Action Portfolio

The Drought Mitigation Action Portfolio was developed through 11 workshops held between April 2022 and December 2023. Analysis conducted during the workshop process found that enhanced system flexibility can improve supply reliability in the near term; however, long-term reliability will require the development of additional infrastructure, supplies, and storage to meet increased demand and offset deterioration of existing supplies due to climate change. The portfolio recommends projects for implementation to provide greater reliability to the SWP-dependent areas in the near term that can be completed within the constraints of the existing system and identifies potential mid-term projects that can be implemented after the removal of system constraints through projects currently in development. The portfolio also provides alternative pathways to achieve long-term equitable reliability for the region through a balanced approach of infrastructure improvements, new storage and supply programs, and local supply development and management as directed by the Board. The

recommended drought portfolio is divided into two categories: Category 1 – Cost-Effective Projects for Timely Relief and Category 2 – Projects for Further Consideration.

Category 1 projects provide a baseline of improved reliability for the SWP-dependent areas via improved access to existing storage and Colorado River supplies. Category 1 projects are further divided into two subcategories: Projects Under Implementation and Projects Prepared for Implementation. Projects Under Implementation are those projects that have been previously approved by the Board and are in design or construction. Projects Prepared for Implementation are proposed for inclusion in the CIP so that more detailed studies or design work can commence.

Category 2, Projects for Further Consideration, have the potential to provide broader drought relief and greater region-wide benefits but would require larger investments, longer implementation periods, and higher implementation risk. These potential projects include options for new conveyance in Metropolitan's system to deliver existing and potential new supplies to the western SWP-dependent area, in-region and out-of-region storage, and opportunities for groundwater storage. Staff plans to continue to develop these concepts and identify critical attributes for evaluation under the Climate Adaptation Master Plan for Water (CAMP4W) process.

The Drought Mitigation Action Portfolio helps provide timely drought relief to the SWP-dependent areas while also allowing for a comprehensive and fiscally responsible approach to achieve long-term supply reliability. A description of each project included in the portfolio is listed below.

Cost-Effective Projects Providing Timely Relief – Category 1

Eastern State Water Project Dependent Area

Diamond Valley Lake (DVL) to Rialto Pipeline Interconnection – This series of projects was first added to the CIP by the Board in December 2021 and consists of four projects that will enable Metropolitan to deliver up to 120 cfs of previously stored SWP from DVL to the Rialto Pipeline utilizing the existing Wadsworth Pump Station and San Bernardino Valley Municipal Water District's Foothill Pump Station. The projects would also enable Metropolitan to deliver Colorado River supplies to the area if necessary. The projects include a new bypass pipeline at DVL's Wadsworth Facility, a surge protection system on the Inland Feeder, a new intertie between the Inland Feeder and the Rialto Pipeline, and a new connection between the Foothill Pump Station and the Inland Feeder. The Board has awarded construction contracts for the first three project components. The last component is currently in design.

Three Valleys Municipal Water District (TVMWD) Miramar Pumpback System Upgrades – The TVMWD Miramar system normally takes water from the Rialto Pipeline and treats it at its Miramar Water Treatment Plant before delivery into its distribution system. The Miramar Pumpback System can take treated water from the F.E. Weymouth Water Treatment Plant (Weymouth plant) and deliver those supplies to the Miramar system through a series of pumps, offsetting the need for SWP deliveries from the Rialto Pipeline. The Miramar Pumpback System Upgrades project would increase the capacity of the existing system from 15 cfs to 30 cfs. Under this project, TVMWD would shift the operation to the Miramar Pumpback System when supplies are constrained on the SWP.

Western State Water Project Dependent Area

Sepulveda Feeder Pumping Project, Stage 1 – This project was added to the CIP by the Board in February 2022 and installs two pump stations on the Sepulveda Feeder to allow for delivery of water from the Common Pool into the western SWP-dependent area. The pump stations would be sized to deliver 30 cubic feet per second (cfs) of water; however, the actual state project water savings would be approximately 60 cfs due to the savings of normal operational flows into the Common Pool from the Sepulveda Feeder to maintain water quality. A progressive design-build process is being used to construct the project, which is expected to shorten the project implementation time. The design-build contract was awarded in September 2023, and the estimated online date for the facilities is in 2026.

Service Connection B-5 to Service Connection B-5A Shift Project – During normal operation, Burbank Water and Power (Burbank) receives SWP supplies from the Joseph Jensen Water Treatment Plant. The water is then delivered to Burbank's Valley Blending Facility to mix with local groundwater. When SWP supplies are

constrained, Burbank takes water that is treated at the Weymouth plant through the B-5 service connection located on the discharge side of the Greg Avenue Pump Station. This project would construct a pump station at the Valley Blending Facility to enable Burbank to blend water from the supply side of the Greg Avenue Pump Station called the B-5A connection. The shift from the B-5 to B-5A connection would (1) enable Metropolitan to deliver additional water from the Colorado River that is treated at the Weymouth plant to the western SWP-dependent area from Greg Ave Pump Station; and (2) alleviate the need for Burbank to take water from SWP-dependent only areas. Burbank could rely on Colorado River water year-round without the operation of Greg Ave Pump Station if SWP supplies were constrained. This modification will allow delivery of up to 12 cfs to Burbank through the B-5A service connection and is anticipated to provide approximately 5 TAFY of additional supplies to the western SWP-dependent area.

Sepulveda Feeder Pumping Project, Stage 2 – This project would expand the Sepulveda Feeder Pumping Project to an ultimate capacity of 160 cfs. Stage 1 of the project is being designed to accommodate a future expansion under Stage 2. The estimated online date for Stage 2 is 2032, coinciding with the completion of the Sepulveda Feeder PCCP Rehabilitation Project and the proposed Inglewood Lateral Improvement Project, which would allow a high pumped flow through the Sepulveda Feeder.

Projects for Further Consideration – Category 2

Antelope Valley East Kern (AVEK) High Desert Water Bank to West Branch – The AVEK High Desert Water Bank (HDWB) is a Metropolitan-funded project that allows for the storage and recovery of up to 70 thousand acre-feet (TAF) of water in a single year with a maximum storage capacity of up to 280 TAF in the Antelope Valley Groundwater Basin. The HDWB is under construction and is expected to be completed in 2025. As currently designed, the HDWB would recover stored SWP supplies from the Antelope Valley Groundwater Basin and return those supplies to the California Aqueduct East Branch, which can serve the eastern portion of the SWP-dependent areas on the Rialto Pipeline. Importantly, the HDWB was included in the 2020 Integrated Resource Plan (IRP) modeling and the recent simulations. With the planned ability to move stored supplies from DVL to the Rialto Pipeline, the HDWB stored water would provide additional benefit if it can be conveyed to the western SWP-dependent areas. Options to deliver HDWB supplies to the West Branch are currently being evaluated, along with options to increase the amount of storage beyond 280 TAF and the recovery beyond 70 TAF per year. Deliveries of this water to the West Branch would have direct and immediate benefits to the west side SWP-dependent agencies.

East Valley Feeder Parallel Pipeline – This project would increase the conveyance capacity of treated water from the Weymouth plant to the western SWP-dependent area. The project would also require increasing the capacity of the Greg Avenue Pump Station and building a second in-line pump station to convey up to an additional 135 cfs.

East-West Raw Water Conveyance – This project would construct a new pipeline to convey up to 300 cfs of raw water upstream of the Jensen plant to the western SWP-dependent area. The project would also require the construction of multiple pump stations along the pipeline to move the water from east to west. The pipeline would be able to convey untreated Colorado River water; stored water from DVL, AVEK, or Lake Mathews; and future Pure Water Southern California (PWSC) supplies.

New Surface Storage – An initial study identifying potential locations for new surface storage has been completed. The study identified locations that are in-region and can provide a direct benefit to the western SWP-dependent area, as well as locations within the west San Joaquin Valley that can provide a benefit to the whole service area. A second phase of the analysis is currently ongoing. The study will refine the evaluation criteria and create a short list of sites for a more detailed evaluation.

Flexible Storage – The study would identify opportunities to increase Metropolitan's storage capacity within existing SWP reservoirs.

Groundwater Storage – Groundwater storage opportunities include new or expanded groundwater banking programs, programs to augment local groundwater basins, and exchange of banked groundwater supplies that can provide additional SWP supplies to the SWP-dependent areas. Staff has held a series of workshops with member agencies to identify groundwater storage project opportunities within the region.

Recycled Water – Opportunities exist to enhance the potential for the PWSC program to benefit SWP-dependent areas with infrastructure improvement projects identified in the Drought Mitigation Action Portfolio. Staff is actively working with the Los Angeles Department of Water and Power to explore opportunities to integrate their reuse program, Operation NEXT, with Metropolitan's PWSC program. Such integration has the potential to expand the availability of purified water from these two sources benefitting the entire region.

Desalination – The desalination study will identify the potential for the development of additional potable water supplies through both brackish and seawater desalination. The study will also assess the opportunity for integration in adjacent water distribution systems and regional water systems. Project implementation options, including alternative project delivery methods and partnerships for design, construction, and operation, will be reviewed as part of the study and will be consistent with the State Water Resources Control Board's Draft Siting Report. Staff has collaborated with member agencies to develop the scope and approach of this study.

Portfolio Implementation Strategy

Implementation of the Drought Mitigation Action Portfolio is designed to achieve timely gains toward improved reliability for the SWP-dependent areas while allowing for a balanced and thorough analysis of potential pathways to achieve long-term equitable reliability. Specifically, the Category 1 projects identified in this letter will provide significant near- and mid-term benefits. However, additional supplies from one or more Category 2 projects will be required to achieve long-term equitable reliability for all member agencies and the SWP-dependent areas.

The near-term projects in the portfolio take advantage of existing system capacity and provide timely relief to the SWP-dependent areas by adding pumping facilities and interconnectivity. The next group of projects takes advantage of the planned upgrade of the existing system to expand the system capacity and deliver additional flow to the SWP-dependent areas by adding companion conveyance components. These projects can provide enhanced drought resilience in the mid-term to the SWP-dependent areas before long-term projects are in place to achieve overall supply reliability. As stated above, the Projects for Further Consideration group will be analyzed as part of the CAMP4W process. Certain potential projects within the group have been defined to the point that inclusion in Metropolitan's Capital Improvement Plan is warranted. Still, other potential projects lack the required definition to allow for inclusion in the CIP. In both cases, staff will continue to evaluate the potential projects to provide necessary information for the CAMP4W evaluative process. The strategy for implementation and continued evaluation of projects is described below.

2022/23 to 2023/24 Capital Improvement Plan – The Board previously approved the DVL to Rialto projects, currently in construction, and the Sepulveda Feeder Pump Project Stage 1, currently in design. These two groups of projects will significantly improve Metropolitan's ability to deliver CRW or DVL water into the SWP-dependent areas. Staff intends to bring to the Board for inclusion in the current CIP the Sepulveda Feeder Stage 2 Project and a second project to increase the capacity of the existing Inglewood Lateral. The Sepulveda Feeder Pump Project Stage 1 is being constructed with consideration of future expansion, which will allow for increased capacity with smaller future investment. Expansion of the pump station is reliant on the completion of the Sepulveda Feeder PCCP Rehabilitation Project, which is already in the CIP. Maximizing capacity of the pump station also requires increasing the capacity of the Inglewood Lateral, which acts as a bottleneck in the system, constricting flow in and out of the Common Pool. If the two projects are approved for inclusion in the CIP, along with the Sepulveda Feeder PCCP rehabilitation Project, additional reliability can be provided to the western SWP-dependent area in the mid-term. Accelerated design development of the Sepulveda Pumping Stage 2 will ensure an effective and efficient Stage 1 design and minimize the cost of future expansion, while allowing its evaluation under the CAPM4W process.

2024/25 to 2025/26 Capital Improvement Plan – Beginning with the next CIP Biennium, staff intends to create a new major CIP program for drought mitigation projects. Creation of the program will also allow for improved tracking and forecast spending on drought resilience relative to other major programs and ensure adequate oversight of the execution of the set policies. Creation of the program also provides Metropolitan greater transparency in its commitment to improving the region's drought resilience. Drought projects currently included in the 2022/23 to 2023/24 CIP Biennium will be moved into the new program at the start of the next biennium. Additional portfolio projects proposed for inclusion in the next biennium include TVMWD Miramar Pumpback

System Upgrades, Burbank B-5 to B-5A Shift Project, and a series of East-West Conveyance improvement projects (East/West Raw Water Conveyance Line, AVEK to West Branch Conveyance Line, and East Valley Feeder Parallel Pipeline).

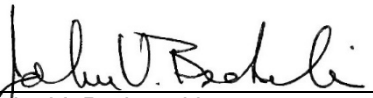
Projects not currently recommended for inclusion in the CIP will be studied utilizing Operations and Maintenance funding. Based on the findings of the studies and the recommendations of the CAMP4W analysis, those projects may be recommended for inclusion in the CIP at a later date when their feasibility is verified, and the scope better defined.

Drought Portfolio Implementation and Nexus to CAMP4W

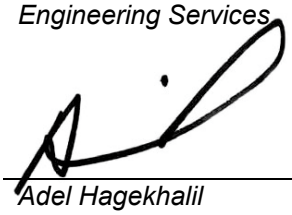
The increasing climatic variability and water supply uncertainty have prompted Metropolitan's Board to pursue the integration of climate and water resource planning with its financial plans. The Board charged the leadership and staff of Metropolitan to expand the focus of water resource and financial planning to include climate adaptation strategies and to develop a Climate Adaptation Master Plan for Water (CAMP4W). The effort focuses on strengthening the resilience and reliability of Metropolitan and its individual member agencies in the face of a changing climate and the associated risks to our economic and environmental stability. As such, the information developed in the 2020 IRP Needs Assessment will be a key input to the CAMP4W, as will the ongoing vulnerability assessments and drought portfolio-related studies. The outcome of this process will be a collaborative decision-making process for setting investment plans to ensure the continued ability to fulfill Metropolitan's mission to provide the service area with an adequate and reliable supply of high-quality water.

The IRP identified the risk to the SWP-dependent agencies from extended drought on the SWP system. The Drought Mitigation Action Portfolio provides the CAMP4W with the building blocks to develop solutions to mitigate that risk. The Category 1 projects will inform the CAMP4W process by applying them as existing system components in simulation models to quantify the demand/supply gaps under the different IRP scenarios.

The Category 2 projects require greater time and investment for implementation and demand a thorough and collaborative assessment of their effectiveness, benefits, and risks. It is not expected that all projects identified within the Drought Mitigation Action Portfolio will be included in the recommended CAMP4W strategy. However, the recommended CAMP4W strategy is expected to meet the supply reliability needs of the SWP-dependent areas. Implementation of different Category 2 projects will be simulated within the IRP analysis so that the CAMP4W team can assess the effectiveness of the different projects in mitigating the long-term supply and demand gaps. This process will allow for a thorough evaluation considering both the risks and rewards of future investments and apply the adaptive management framework to adjust the implementation plan of drought mitigation actions based on changing conditions.

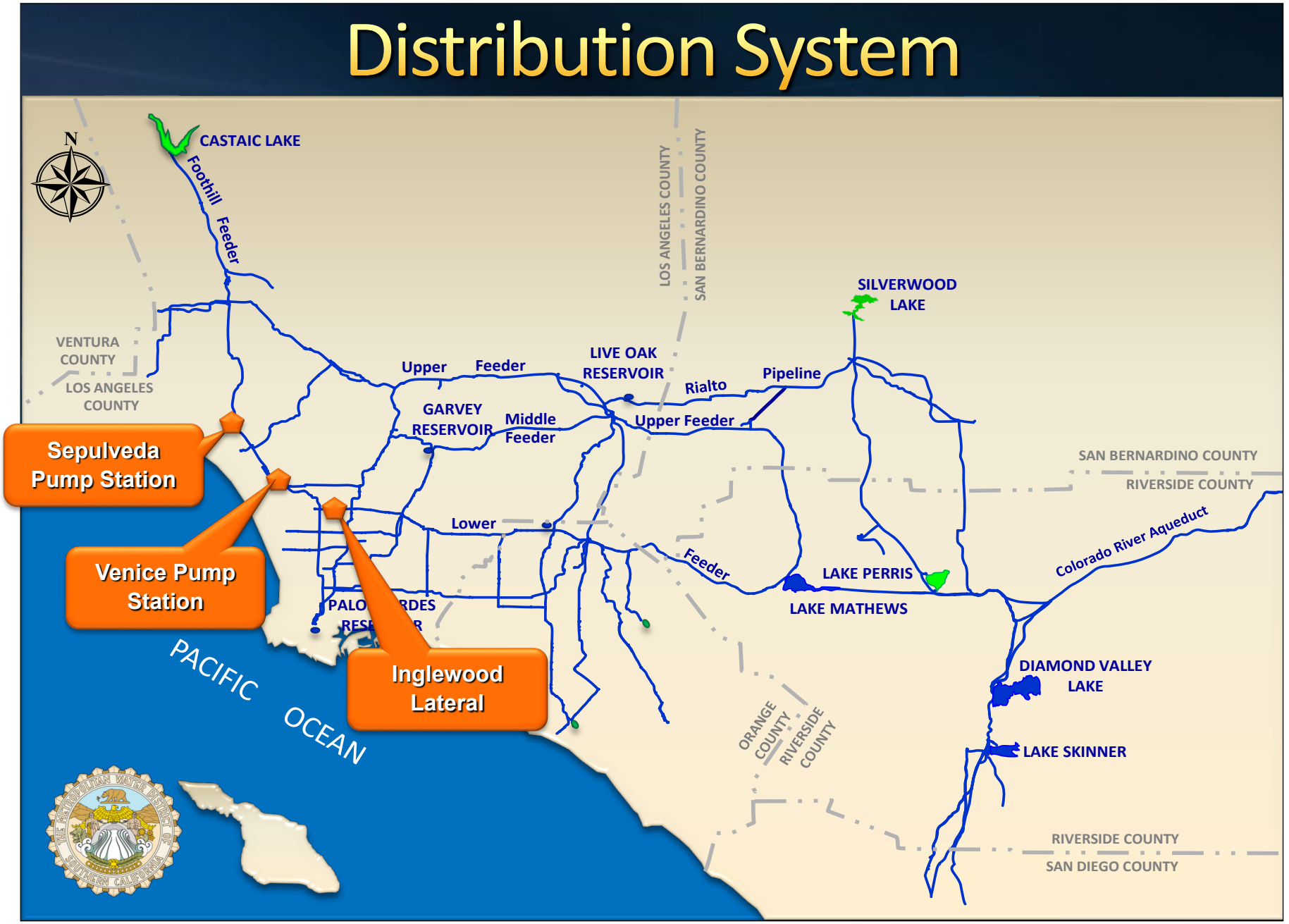


2/7/2024
John V. Bednarski *Date*
Manager/ Chief Engineer
Engineering Services



2/7/2024
Adel Hagekhalil *Date*
General Manager

Ref# es12700284


Distribution System
N
CASTAIC LAKE
Foothill Feeder
VENTURA COUNTY
LOS ANGELES COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
LIVE OAK RESERVOIR
Upper Feeder
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
Sepulveda Pump Station
Venice Pump Station
Inglewood Lateral
Lower Feeder
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Colorado River Aqueduct
LAKE PERRIS
LAKE MATHEWS
PACIFIC OCEAN
DIAMOND VALLEY LAKE
ORANGE COUNTY
RIVERSIDE COUNTY
LAKE SKINNER
RIVERSIDE COUNTY
SAN DIEGO COUNTY

Engineering, Operations, & Technology Committee

Amend FY 2022-24 CIP to Include Two New Projects

Item 7-5

March 11, 2024

Item 7-5

Add Two New Projects for SWP-Dependent Areas Supply Reliability

Subject

Amend the Capital Investment Plan for fiscal years 2022/23 and 2023/24 to include two projects: (1) Sepulveda Feeder Pump Stations Stage 2, and (2) Inglewood Lateral Improvements

Purpose

Part of a series of projects to improve supply reliability for SWP-dependent member agencies

Recommendation and Fiscal Impact

Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include two projects

Fiscal Impact of $1,400,000

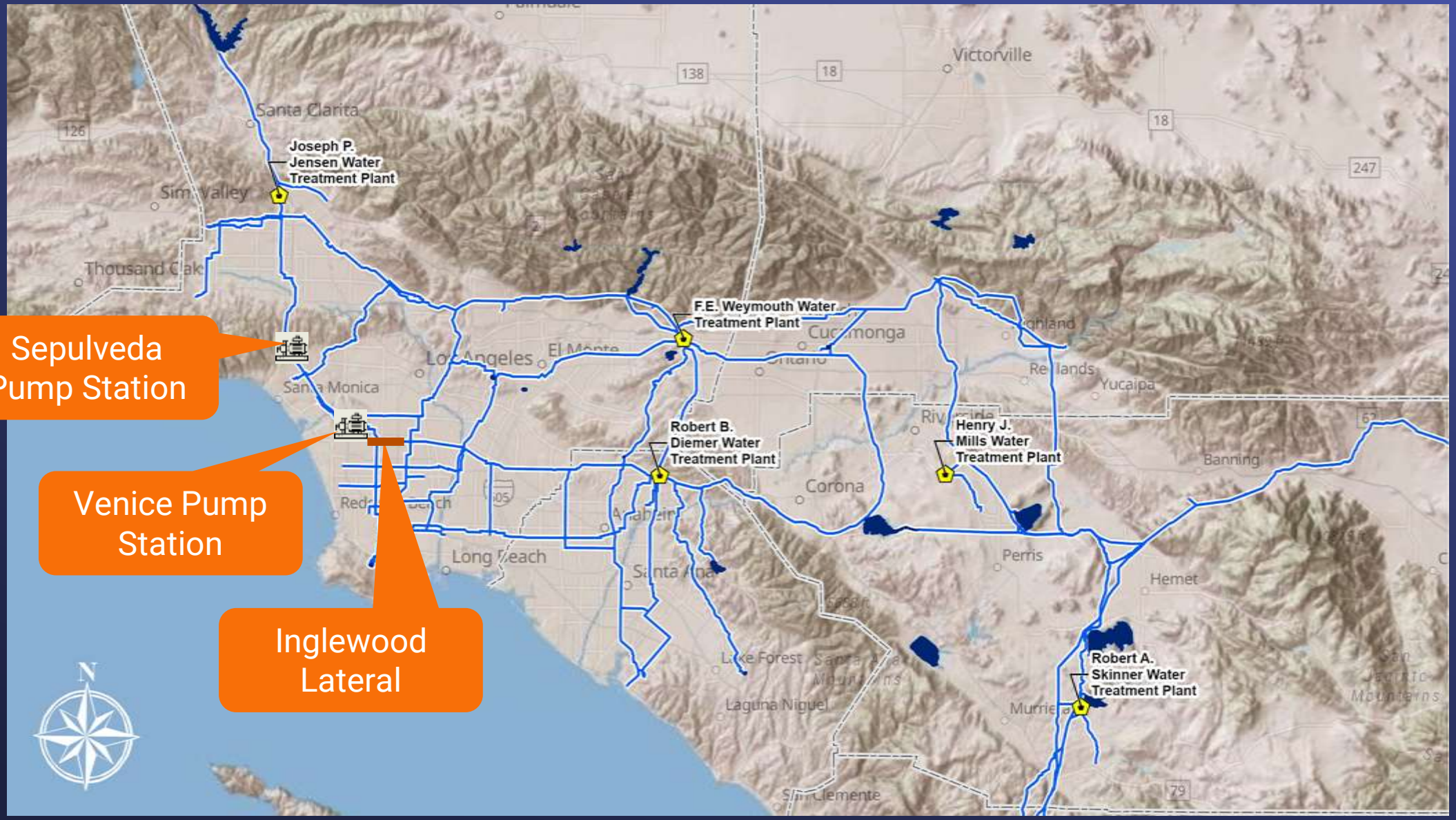
Budgeted

Capital Investment Plan Background

Add Two New Projects for SWP-Dependent Areas Supply Reliability

- April 2022 board action
  - Appropriated $600 M
  - Authorized the GM to proceed with all projects in the CIP
- Board action needed for:
  - New projects
  - Minor capital projects that will exceed $400k
  - Contract awards & consultant agreements over $250k

Location Map

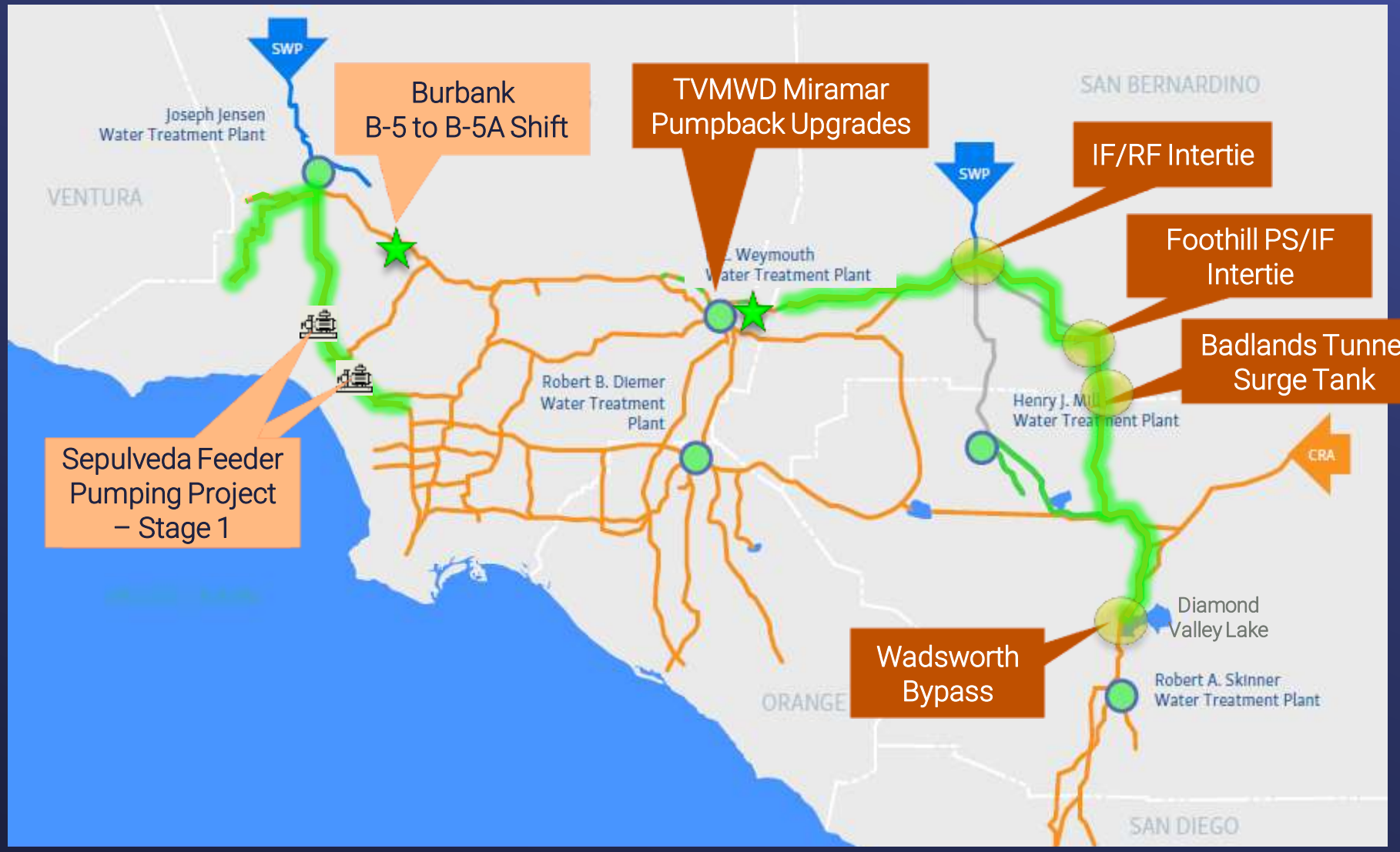


Add Two New Projects for SWP-Dependent Areas Supply Reliability

Background

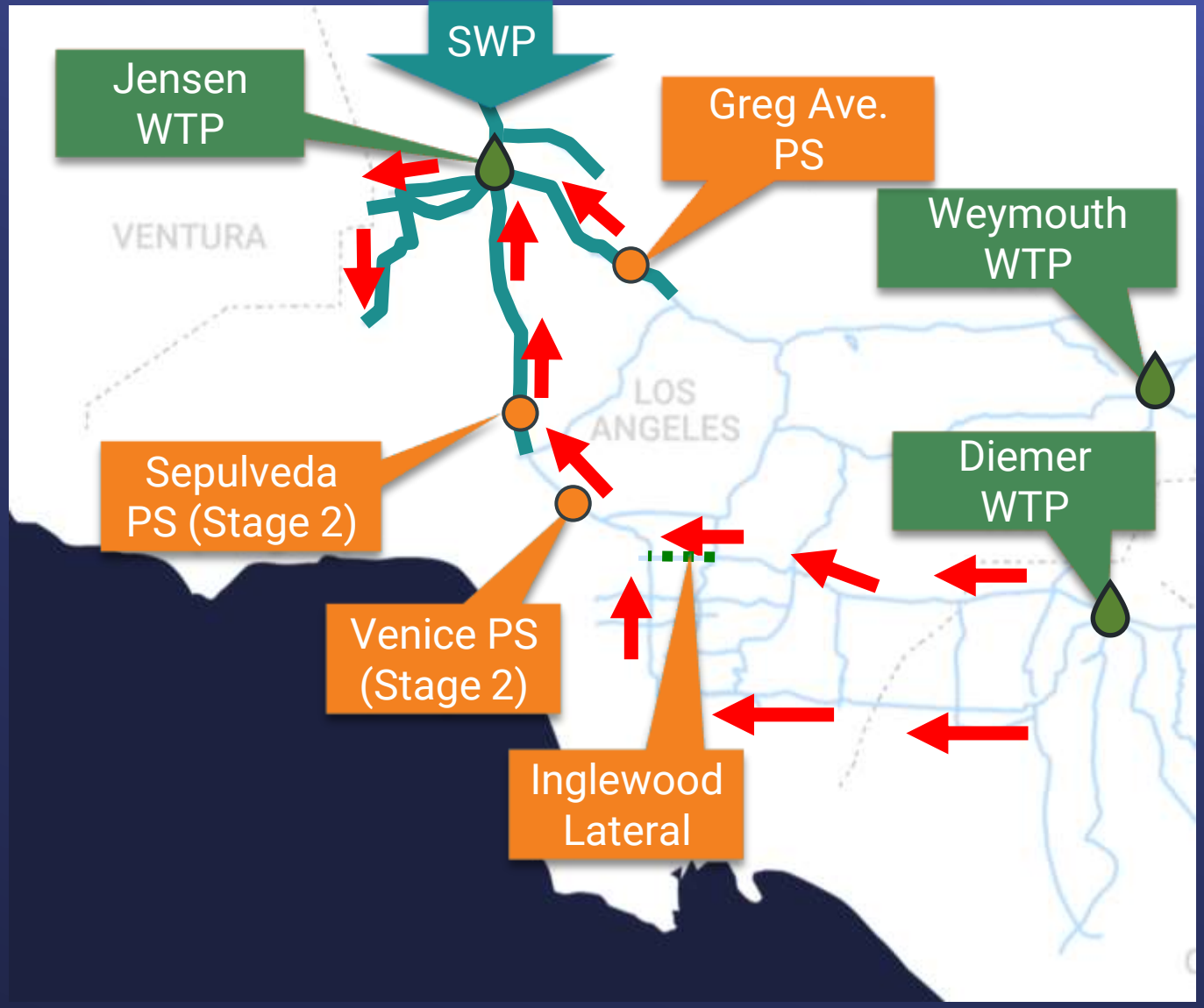
- Extreme drought from 2020 to 2022 in California
- Disproportionate impact on member agencies highly dependent on State Water Project (SWP) supply
- Metropolitan Board passed resolution in August 2022 – call to action
- Drought Mitigation Actions Portfolio presented in February 2024

Drought Mitigation Projects Providing Timely Relief to SWP-Dependent Areas



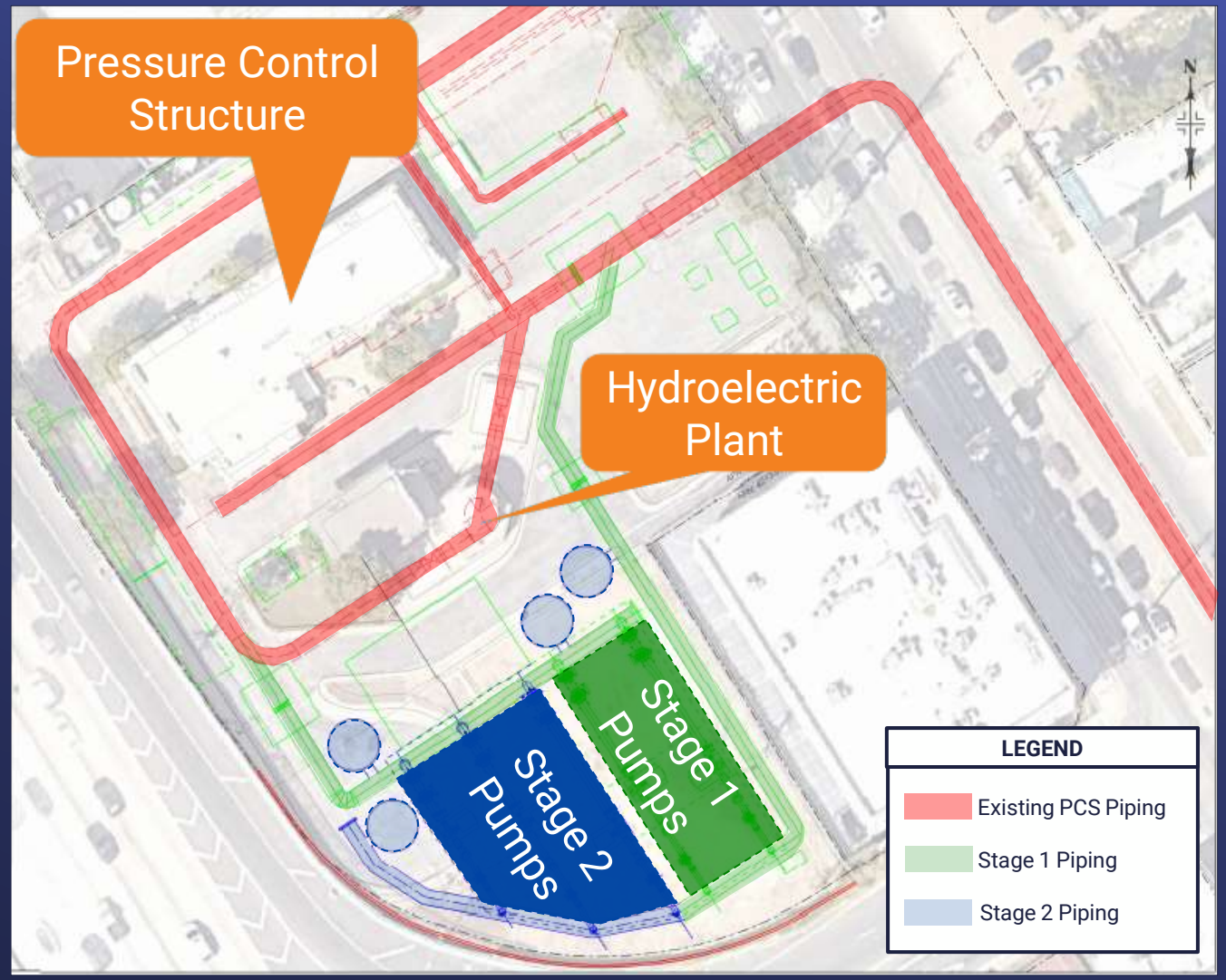
Enhancing Western SWP-Dependent Areas Drought Resilience

- Sepulveda Feeder Pump Stations
  - Stage 1 – 30 cfs
  - Stage 2 – 160 cfs (subject of this action)
- Other upgrades needed for Stage 2
  - North reach of Sepulveda Feeder PCCP Rehabilitation (design is ongoing)
  - Inglewood Lateral Improvements (subject of this action)



1. Sepulveda Feeder Pump Stations, Stage 2 - Scope of Work

- Additional pumps, valves, & piping
- Supporting electrical system upgrades
- SCADA integration
- Local surge protection
- Central Pool surge protection
- Cost - $200 M to $300 M



Venice Facility Potential Layout

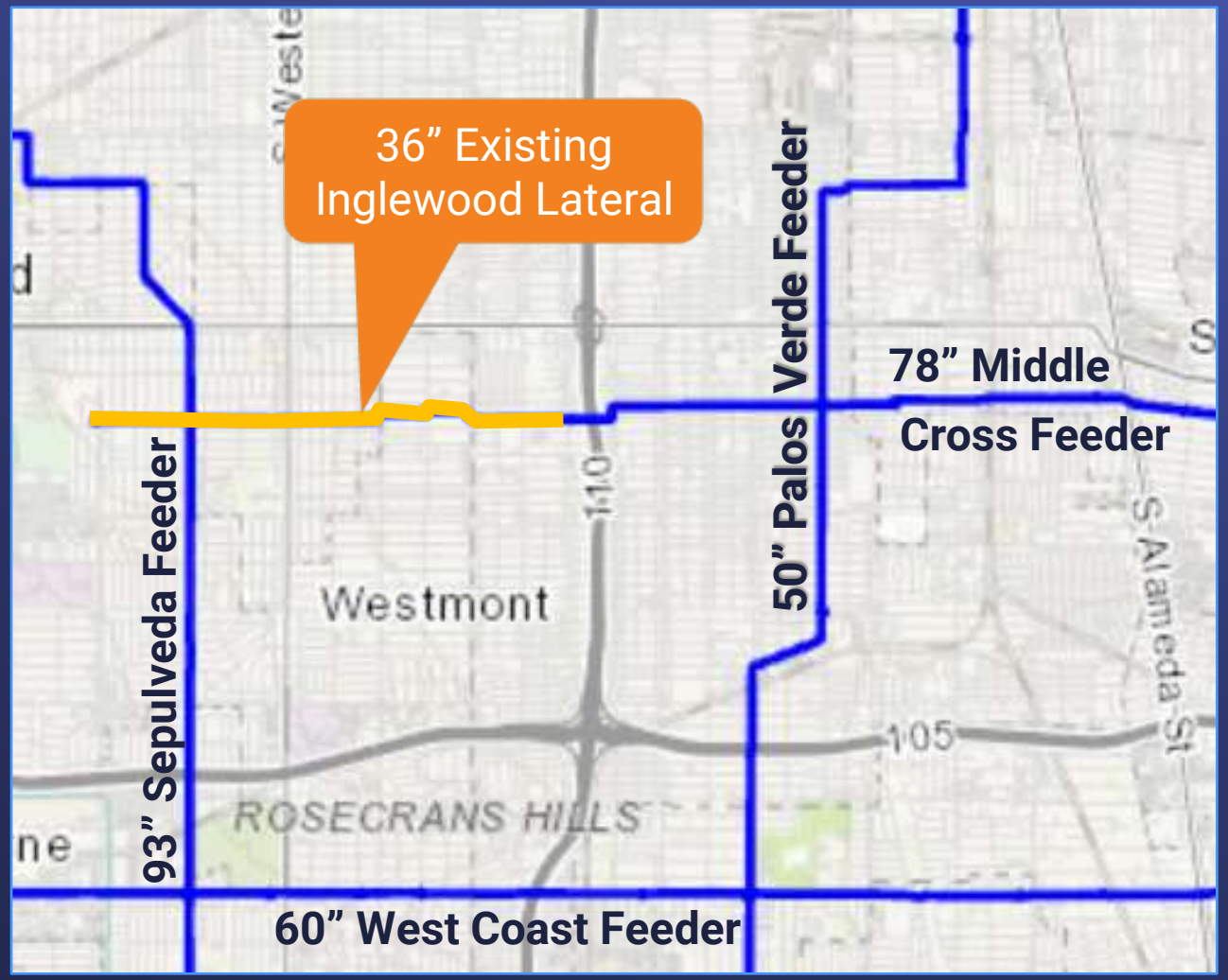
1. Sepulveda Feeder Pump Stations, Stage 2 - Planned Work

- Develop conceptual design
- Optimize strategy to harden existing infrastructure
- Identify alternatives
- Develop cost estimate & schedule
- Provide findings to CAMP4W for implementation consideration

Venice Hydroelectric Plant

2. Inglewood Lateral Improvements Project

- Upgrade capacity of existing 36-inch Inglewood Lateral
  - Increase supply availability for Sepulveda Feeder Pump Stations Stage 2
  - Maximize deliveries to Central Pool in high SWP years
  - Offset hydraulic impacts from PCCP relining
- Project Components
  - Construct 2-miles new pipeline
    - 72-inch to 78-inch diameter
  - Isolation valves & vaults
  - Bypass pipes & valves
  - SCADA Monitoring
- Cost - $70 M to $80 M



Inglewood Lateral & Adjacent Pipelines

2. Inglewood Lateral Improvements – Planned Work

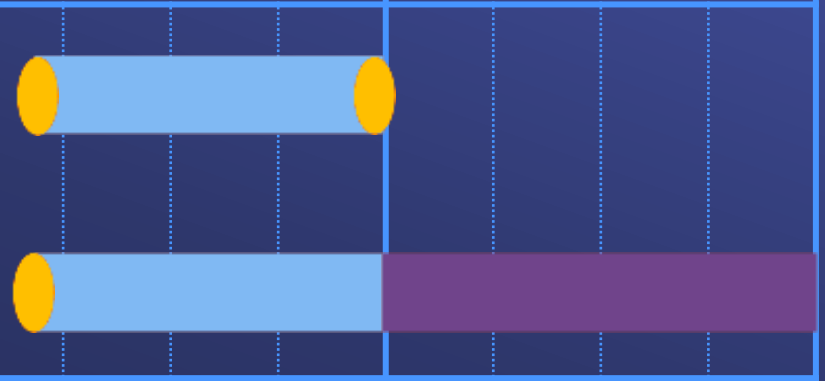
- Alignment alternatives analysis
- Utility investigations
- Hydraulic analysis
- Develop cost estimate, construction sequencing plan & schedule

Middle Cross Feeder Construction - 1955

Allocation of Funds

	1. Sepulveda Pump Stations	2. Inglewood Lateral
Metropolitan Labor		
Preliminary Investigations	$ 330,000	$ 620,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	100,000	150,000
Remaining Budget	70,000	130,000
Total	$ 500,000	$ 900,000

Project Schedule

Project	2024	2025
1. Sepulveda Feeder Pump Stations Stage 2		
2. Inglewood Lateral Improvements		

Preliminary Investigations

Preliminary Design

Board Action

Completion

Board Options

- Option #1

  Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include the Sepulveda Feeder Pump Stations Stage 2 and the Inglewood Lateral Improvements projects.

- Option #2

  Do not proceed with the projects at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

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

3/12/2024 Board Meeting

7-6

Subject

Authorize an increase of $1.3 million to an existing agreement with Helix Environmental Planning Inc. for a new not-to-exceed amount of $4.1 million to support the Pure Water Southern California Program environmental planning; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

In October 2021, Metropolitan's Board authorized a professional service agreement with Helix Environmental Planning Inc. (Helix) to prepare environmental documentation for the Pure Water Southern California Program (Program) in accordance with the California Environmental Quality Act (CEQA). Helix requires additional work scope to address modifications to the Program beyond that which had been originally identified. In mid-2023, significant additional environmental impact analyses were required to assess the impacts of upsizing approximately 14 miles of the conveyance backbone pipeline to accommodate potential future flows from the Los Angeles Department of Water and Power Operation NEXT Program. Finally, staff anticipates that additional work by Helix will be required to support the potential preparation of supplemental CEQA or National Environmental Policy Act (NEPA) documentation for the Program. Collectively, these additions to Helix's original scope of work require an amendment to their existing agreement.

Staff recommends this action to authorize an amendment to the existing professional service agreement with Helix so that ongoing environmental planning work on the Program can be completed while taking into account the scope changes described above. See **Attachment 1** for the Listing of Subconsultants and **Attachment 2** for the preliminary configuration of the Pure Water Southern California Program**.**

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

Staff Recommendation: Option #1

Option #1

Authorize an increase of $1.3 million to an existing agreement with Helix Environmental Planning Inc. for a new not-to-exceed amount of $4.1 million to continue preparing environmental documentation for the Pure Water Southern California Program.

Fiscal Impact: None; the environmental documentation is still planned to be completed within the original $30 million Operations and Maintenance (O&M) budget.
Business Analysis: This option would allow for the completion of environmental documentation required for the Pure Water Southern California Program to address the upsized conveyance backbone pipeline and other modifications to the Program, as well as the potential preparation of supplemental CEQA or NEPA documentation. This effort will advance the development of a significant new local water supply for Southern California to address supply uncertainties associated with droughts, climate change, seismic risks, and other emergencies.

Option #2

Do not proceed with the additional environmental planning activities and agreement amendment.
Fiscal Impact: None
Business Analysis: This option would risk the completion of the current CEQA documentation and delay the development of recycled water resources to meet the region's water supply needs.

Alternatives Considered

Staff considered not incorporating the upsized conveyance backbone pipeline at this time and potentially addressing this change later through supplemental environmental documentation. Staff also considered not amending the existing agreement with Helix to continue environmental planning activities, which could jeopardize the completion of environmental documentation. However, both alternatives would significantly delay Program implementation and the development of a new water supply for the region. To reduce the overall impact on the Program schedule, staff recommends incorporating the upsized conveyance backbone pipeline and amending the existing agreement with Helix to complete the environmental documentation currently being prepared for the Program.

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 51962, dated April 14, 2020, the Board appropriated a total of $2,810.9 million for miscellaneous Metropolitan O&M costs, including costs associated with supply programs, for Fiscal Years 2020/21 and 2021/22.

By Minute Item 52174, dated November 10, 2020, the Board authorized preparation of environmental documentation and technical studies, and public outreach activities for the Regional Recycled Water Program.

By Minute Item 52543, dated October 12, 2021, the Board authorized an agreement with Helix Environmental Planning Inc., for preparation of environmental documentation for the Regional Recycled Water Program; and authorized an agreement with Stantec Consulting Services Inc., for engineering and technical studies to support environmental planning phase activities of the Regional Recycled Water Program.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

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. (State CEQA Guidelines Section 15262.) Additionally, the proposed action is exempt from CEQA because it consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information-gathering purposes or as part of a study leading to an action that a public agency has not yet approved, adopted, or funded. (State CEQA Guidelines Section 15306.)

CEQA determination for Option #2:

None required

Details and Background

Background

The Pure Water Southern California Program would reuse treated wastewater currently being discharged to the Pacific Ocean from the Los Angeles County Sanitation Districts' A. K. Warren Water Resource Facility (Warren Facility) in the city of Carson. The treated wastewater would be further purified at a new advanced water purification facility (AWPF) at the Warren Facility to produce approximately 150 million gallons per day (mgd) of purified water at full build-out. Purified water could recharge regional groundwater basins through spreading facilities and injection wells, satisfy non-potable demands currently relying on imported water, and augment existing water supplies at two of Metropolitan's existing water treatment plants. In addition to the treatment facilities, a new backbone conveyance system would extend from the city of Carson as far north as the city of Azusa and east to the city of La Verne to connect with Metropolitan's existing water treatment and distribution facilities.

In November 2020, Metropolitan's Board authorized the initiation of the environmental planning phase of the Program and an amendment to the existing agreement with the Los Angeles County Sanitation Districts to support further development and evaluation of the Program. Agreements were authorized in June 2021 and August 2021 for engineering and technical services related to the Program's backbone conveyance system and the Grace F. Napolitano Pure Water Southern California Innovation Center (Napolitano Innovation Center, formerly known as Advanced Water Purification Center), respectively. In October 2021, agreements were authorized for engineering and technical services related to the AWPF and preparation of environmental documentation in accordance with CEQA.

In accordance with the April 2020 action on the biennial budget for fiscal years 2020/21 and 2021/22 and the November 2020 action to initiate the environmental planning phase of the Program, the General Manager authorized staff to proceed with planning phase activities for the Program using budgeted O&M funds for this purpose. The agreement amendment that is the subject of this action will be utilized to complete the Program's technical studies and environmental planning efforts. The estimated cost to complete the required environmental phase activities, including this agreement amendment, is $30 million. Funds for these planning activities for the Program that are the subject of this action are included in the O&M budget for fiscal years 2023/24, 2024/25, and 2025/26.

Pure Water Southern California – Environmental Planning Agreement Amendment (Helix Environmental Planning Inc.)

In October 2021, Metropolitan's Board authorized an agreement with Helix for a not-to-exceed amount of $2.8 million to prepare environmental documentation for the Program. Helix was selected through a competitive process via Request for Proposals No. 1285 based on the firm's specific experience in analyzing and addressing impacts and in preparing environmental documents of similar scope for large-scale and complex projects within California on behalf of public agencies. Helix is currently preparing the CEQA documentation for the Program and is recommended to continue performing extended environmental analysis and document preparation under the amended agreement.

The additional work added to the Helix agreement stems from several changes made to the Program scope since the agreement was initially executed. In July 2023, staff was directed to incorporate upsizing a portion of the Program's backbone conveyance system into the Program's environmental planning effort to allow for the potential interconnection of large-scale regional water reuse programs. The proposed plan involves increasing approximately 14 miles of pipeline diameter from 84 inches to as much as 108 inches from the Whittier Narrows area to the San Gabriel Canyon Spreading Grounds. Other Program modifications include: (1) conveyance alignment refinements to address comments received from the United States Army Corps of Engineers, the Los Angeles County Flood Control District, and various cities along the alignment; (2) AWPF modifications to accommodate updated treatment and operational requirements; (3) incorporation of direct potable reuse through raw water augmentation in Phase 1 of the Program; (4) power infrastructure needs; (5) new workforce training center in the city of Carson; (6) revisions to the construction and operation schedules; and (7) additional biological studies requested by the California Department of Fish and Wildlife. Collectively, these additional

evaluations require environmental impact analysis similar to other completed Program components. This additional work necessitates an amendment to Helix's existing agreement.

Metropolitan is pursuing potential United States Bureau of Reclamation (USBR) funding opportunities for the construction of large water recycling projects. This will require Metropolitan to perform additional environmental planning studies for the preparation of environmental documentation in compliance with USBR's NEPA requirements. The recommended agreement amendment includes sufficient funding capacity to allow Helix to conduct the NEPA environmental assessments if required to participate in the federal funding opportunities.

Overall, the extended environmental planning services include: (1) additional technical studies and analyses for the upsized portion of the backbone conveyance system, including a review of construction methodologies, excavation totals, and checking for utility interferences; (2) additional technical studies for various modifications to the Program components identified above; and (3) preparation of supplemental CEQA documentation or environmental documentation in compliance with NEPA requirements.

This action authorizes an increase of $1.3 million to the existing agreement with Helix Environmental Planning Inc. for a new not-to-exceed amount of $4.1 million for additional environmental analysis and work to complete the preparation of environmental documentation for the Program. This additional cost has been included under the biennial budget for fiscal years 2024/25 and 2025/26 using Metropolitan's O&M funds. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 25 percent. Helix has agreed to meet this level of participation.

Project Milestone

October 2025 – Board to consider certification of environmental documentation for the Program

2/20/2024

John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

2/22/2024

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Listing of Subconsultants

Attachment 2 – Pure Water Southern California Preliminary Configuration

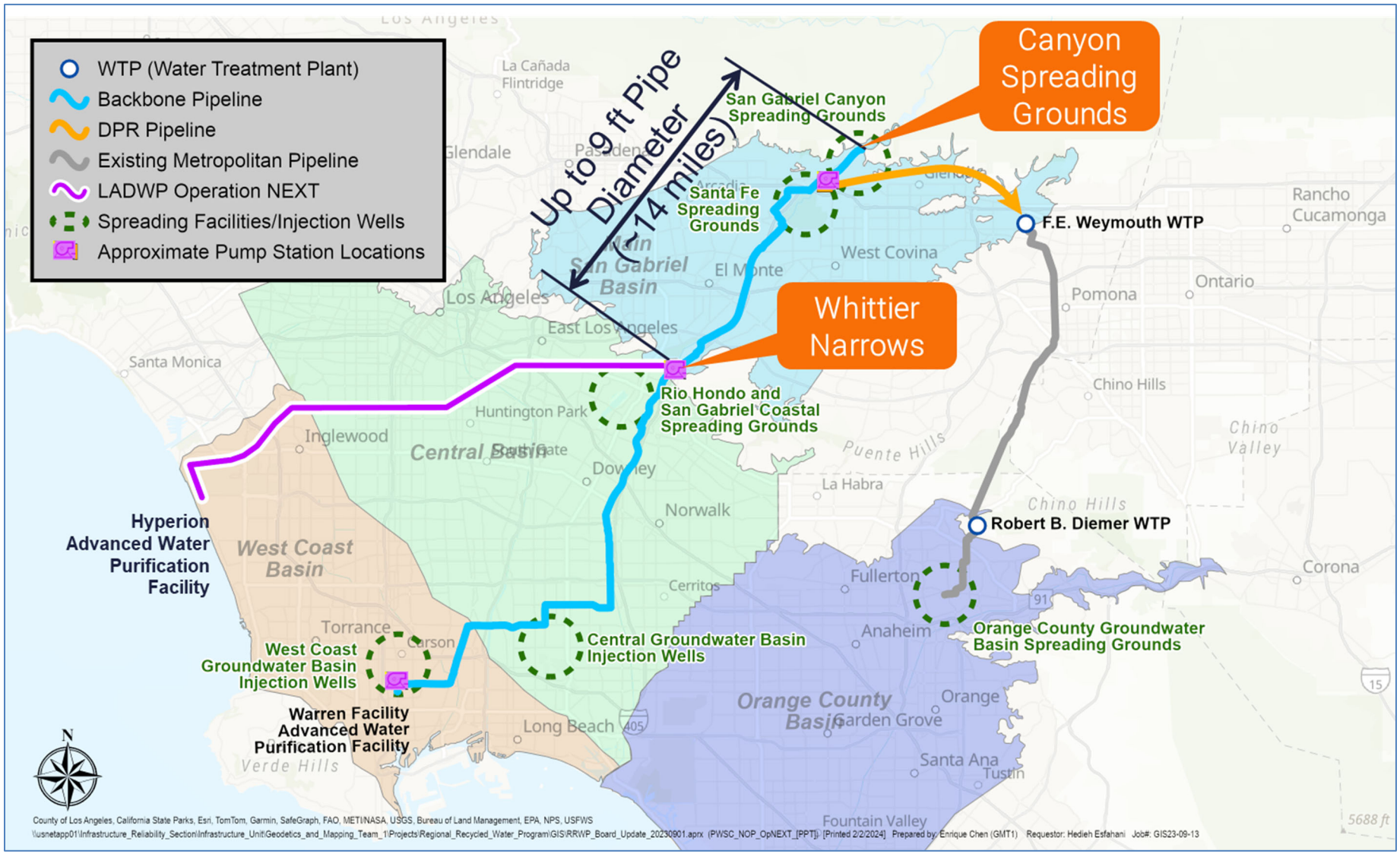
Ref# es12700337

The Metropolitan Water District of Southern California

Subconsultants for Agreement with Helix Environmental Planning Inc.

Subconsultant and Location	Service Category; Specialty
Stantec Consulting Services Inc. Monrovia, CA	Paleontology
Ninyo & Moore San Diego, CA	Hazards/Hazardous Materials
Rick Engineering Company San Diego, CA	Hydrology
Iteris Inc. Los Angeles, CA	Traffic/Transportation

Pure Water Southern California – Preliminary Configuration



Engineering, Operations, & Technology Committee

Pure Water Southern California Environmental Planning Agreement Amendment

Item 7-6

March 11, 2024

Item 7-6
Pure Water Southern California Environmental Planning Agreement Amendment

Subject

Authorize an increase of $1.3 million to an existing agreement with Helix Environmental Planning Inc. for a new not-to-exceed amount of $4.1 million to support Pure Water Southern California

Purpose

To complete ongoing environmental planning work

Recommendation and Fiscal Impact

Authorize an increase to an existing agreement to continue preparing environmental documentation

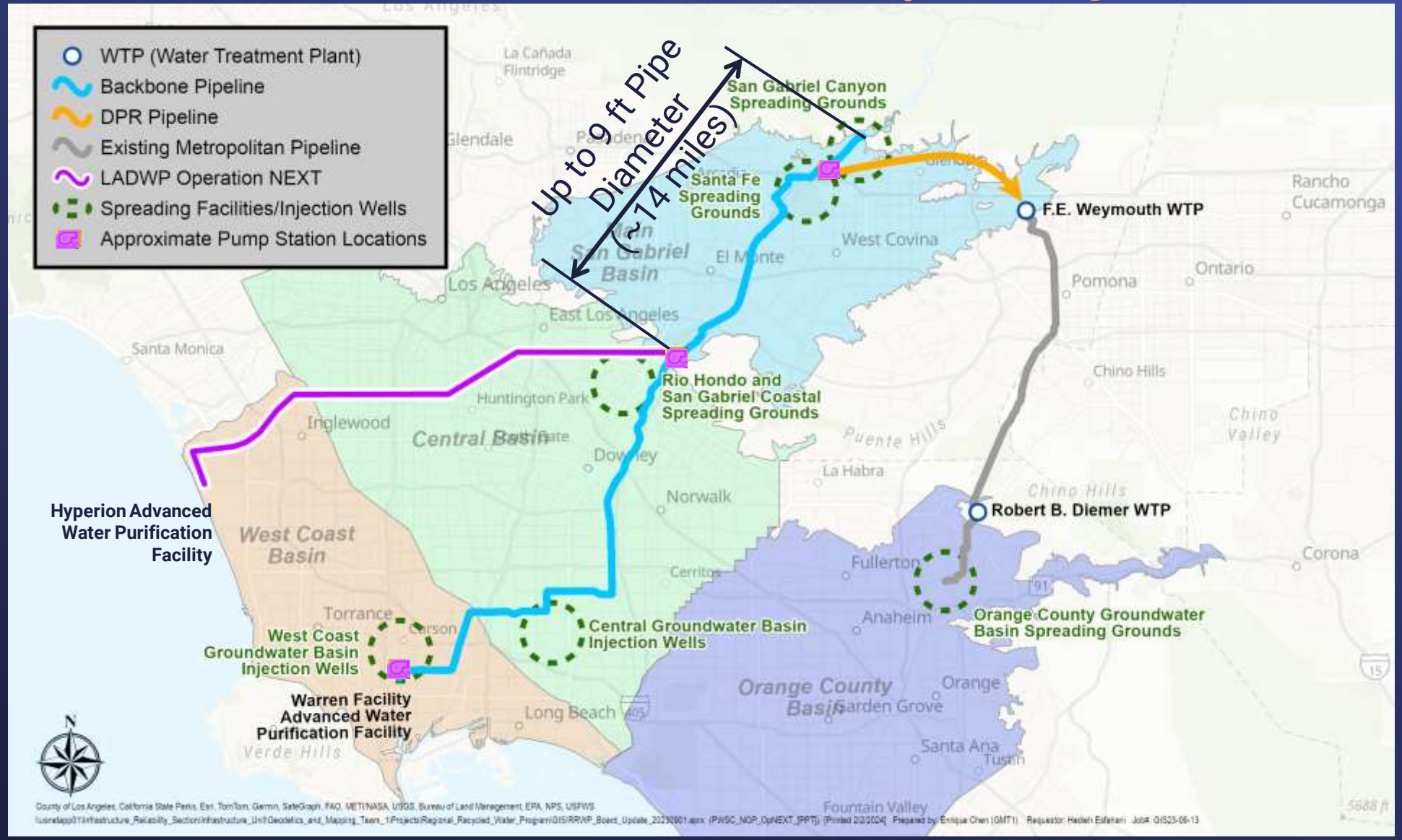
Budgeted

Pure Water Southern California Environmental Planning Agreement Amendment

Background

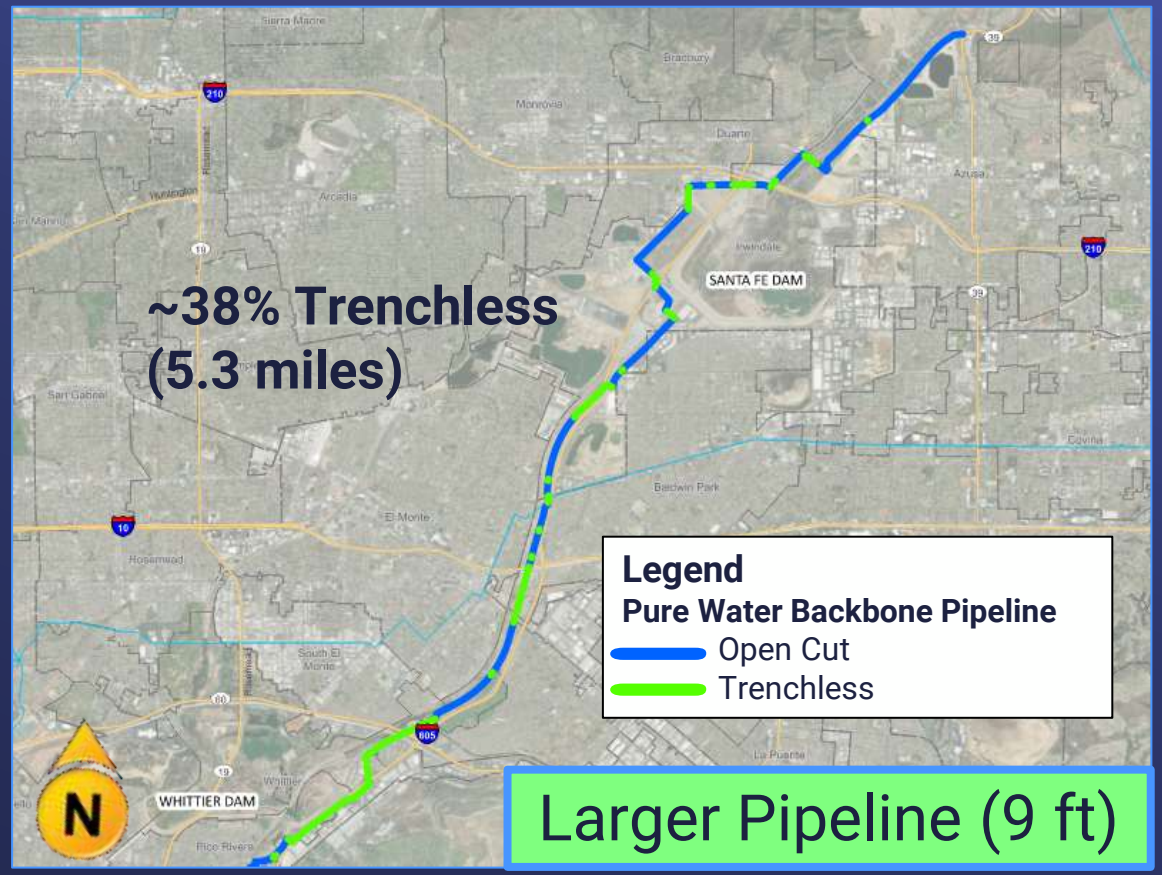
- October 2021 – Board authorized agreement with Helix Environmental Planning Inc. for preparation of environmental documentation
- Additional analyses required to assess changes to program since start of environmental planning process (e.g. inclusion of DPR in Phase 1 of program, modifications to pipeline alignments and advanced treatment process)
- Additional analysis required to assess impacts of upsizing 14 miles of pipeline for potential future flows from Operation NEXT & other Program modifications
- Federal funding opportunities will require additional environmental planning studies for NEPA documentation

Pure Water Southern California Preliminary Configuration



Upsizing the Pipeline for Operation NEXT

Original Concept (7 ft)



Larger Pipeline (9 ft)

Pure Water Southern California
Environmental Planning Agreement Amendment

Additional CEQA Work for Upsized Pipeline

- Changes in construction methodology will require:
  - Additional construction footprint
  - Updated construction quantities & schedule
  - Revised transportation & air quality modeling
  - Updated technical reports

Pure Water Southern California Environmental Planning Agreement Amendment

Other Program Modifications

- Refine conveyance alignment to address comments from permitting agencies
- Increase capacity of Program's Phase 1 to 115 MGD to include DPR at Weymouth plant
- Incorporate updated treatment & operational requirements
- Address power infrastructure needs
- Add a new workforce training center in partnership with LACSD
- Prepare additional biological studies
- Prepare environmental documentation needed for federal funding opportunities

Pure Water Southern California Environmental Planning Agreement Amendment

Alternatives Considered

- Do not incorporate changes in initial CEQA document development
  - Address changes later with supplemental environmental document(s)
  - Significantly delays overall Program schedule
  - Forgoes federal funding opportunities
- Selected Alternative
  - Incorporate changes in initial CEQA document & amend existing agreement with Helix to complete CEQA & prepare environmental documentation required for federal funding

Pure Water Southern California
Environmental Planning Agreement Amendment

Helix Environmental Planning Inc. – Agreement Amendment

- $2.8 M agreement authorized in October 2021
- Selected through RFP No. 1285
- Scope of Work
  - Perform technical studies & analysis
  - Prepare environmental documentation
- Amendment amount: $1.3 million
- New NTE amount: $4.1 million
- SBE participation level: 25%

Pure Water Southern California - Environmental Planning Schedule

Board Options

- Option #1

  Authorize an increase of $1.3 million to an existing agreement with Helix Environmental Planning Inc. for a new not-to-exceed amount of $4.1 million to continue preparing environmental documentation for the Pure Water Southern California Program.

- Option #2

  Do not proceed with the additional environmental planning activities and agreement amendment.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
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1928

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

3/12/2024 Board Meeting

7-7

Subject

Authorize an increase of $320,000 to a purchase order with Total Transportation Logistics Inc. for a new not-to-exceed total amount of $540,000 for storage of filter valves for the F.E. Weymouth Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Due to the long lead times required to procure specialized equipment, staff often secure critical items before construction. This approach is intended to prevent potential manufacturing or logistical delays from impacting future installation construction contracts. To date, a total of 236 butterfly valves to replace the existing filter valves and actuators at the F.E. Weymouth Water Treatment Plant (Weymouth plant) have been manufactured and delivered to a bonded warehouse owned by Total Transportation Logistics Inc. (TTL) in Mira Loma, California. A purchase order between Metropolitan and TTL for the use of this warehouse was authorized under the General Manager's authority in November 2020. The first 127 units are being installed in Filter Building No. 2 under the ongoing contract to rehabilitate Weymouth Basins Nos. 5-8. The remaining 109 units will replace the filter valves in Filter Building No. 1 under a second contract scheduled to start in fiscal year 2025/26.

Staff recommends increasing the total purchase order amount with Total Transportation Logistics Inc. by $320,000 for a new not-to-exceed amount of $540,000 so the new valves can be properly stored until they are needed for the future contract. See **Attachment 1** for the Financial Statement and **Attachment 2** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Authorize an increase of $320,000 to a purchase order with Total Transportation Logistics Inc. for a new not-to-exceed total amount of $540,000 for storage of filter valves for the F.E. Weymouth Water Treatment Plant.

Fiscal Impact: Expenditure of up to $320,000 in capital funds. Approximately $25,000 will be incurred in the current biennium and has been previously authorized. The remaining capital expenditures will be funded from future Capital Investment Plan budgets following board approval of the budgets.
Business Analysis: This option will allow the new valves to be safely stored and then furnished to the contractors without the additional cost and risk associated with repeatedly moving the valves before the start of the next contract.

Option #2

Do not authorize an increase to the existing purchase order.
Fiscal Impact: Unknown
Business Analysis: Under this option, staff will relocate equipment to a similar facility. Additional costs would likely be incurred to relocate the equipment and reduce the risk of equipment damage during relocation.

Alternatives Considered

Staff considered relocating the new Weymouth replacement valves to the recently constructed warehouse at the Lake Mathews site, which will store thirteen 54-inch conical plug valves for the ongoing prestressed concrete cylinder pipe (PCCP) rehabilitation projects. However, there is inadequate space in the Lake Mathews facility to store and access both 109 filter valves for Filter Building No. 1 and 13 PCCP valves over the next five years. The 13 PCCP valves are scheduled to be delivered sequentially through 2025 and installed during shutdowns of the Second Lower Feeder and Sepulveda Feeder through the mid-2030s. Staff also considered storing the Weymouth valves at the existing warehouse space at the La Verne site. However, significant modifications are necessary to permit the stacking of equipment to create more storage space. Design is underway to improve the warehouse space at the La Verne site, but it will not be completed in time to store the Weymouth replacement valves. In addition, relocating the new Weymouth valves would result in increased costs from transportation and special protection measures required to reduce the risk of equipment damage during relocation. The selected alternative to amend the existing purchase order with the TTL storage location in Mira Loma, California, provides the best value to Metropolitan with minimum risk of equipment damage and reduced overall project costs. As shutdowns for these two projects are scheduled and the projects progress, staff will consider moving the Weymouth valves to the Lake Mathews site if space becomes available.

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 51014, dated November 14, 2017, the Board awarded two procurement contracts for rubber-lined butterfly valves and actuators and high-performance butterfly valves and actuators for the F.E. Weymouth Water Treatment Plant.

By Minute Item 21997, dated April 11, 2022, the Board appropriated a total of $600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/23 and 2023/24.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

On November 10, 2020, the Board approved the Weymouth Filter Valves and Actuators Procurement Contract. The General Manager determined the project to be exempt from CEQA pursuant to State CEQA Guidelines Section 15301. The current board action does not result in any substantial changes to the project. Accordingly, no further CEQA determinations or documentation are necessary.

CEQA determination for Option #2:

None required

Details and Background

Background

The Weymouth plant was placed into service in 1941 with an initial capacity of 100 million gallons per day (mgd) and was expanded twice to its current capacity of 520 mgd. The plant delivers a blend of waters from the Colorado River Aqueduct and the State Water Project to Metropolitan's Central Pool portion of the distribution system and an exclusive service area. The plant is located in the city of La Verne.

The Weymouth plant has 48 filters distributed in two filter buildings. Filters are operated by opening and closing a series of valves, which allow water to flow in and out of the filter beds during filtration and backwashing. Each filter contains five valves, ranging in diameter from 16 inches to 48 inches, which operate in conjunction with several large-diameter isolation valves in the backwash and surface wash systems to control and clean the filters. The existing filter valves and actuators have completed their service life after 55 to 65 years of continuous operation, and their replacement is underway as part of a staged project which will be completed in fiscal year 2028/29.

In November 2017, Metropolitan's Board awarded two procurement contracts to provide 179 steel-body, rubber-lined butterfly integrated valve/actuator units and 57 high-performance butterfly valves. All these valves have been manufactured and delivered to a warehouse near the Weymouth plant. The new valves will be furnished to the contractors responsible for their installation under two contracts. The first 127 units are being installed in Filter Building No. 2 under the ongoing construction contract for the rehabilitation of Weymouth Basins Nos. 5-8. The remaining 109 units will be used to replace the filter valves and actuators in Filter Building No. 1 under a second contract scheduled to start in fiscal year 2025/26.

Valve Storage Services (Total Transportation Logistics Inc.) – Amendment to Purchase Order

Purchase Order No. 199355 with TTL to provide warehouse storage services for the Weymouth filter valves was executed in November 2020 under the General Manager's Administrative Code authority. The existing purchase order is for a not-to-exceed amount of $220,000 and expires in October 2024. The manufacturer delivered the new valves to a TTL bonded warehouse in Mira Loma, California, approximately 22 miles from the Weymouth plant. Metropolitan pays monthly invoices for the actual square feet occupied by the stored equipment during the billing month. The monthly storage costs have risen as the fabrication of the valves has been completed and storage needs increased. The total amount paid to date for the storage of the Weymouth valves is $210,000, and an amendment to the purchase order is needed to continue the storage of the valves.

Replacement of the Weymouth filter valves and actuators requires multiple plant shutdowns, which need coordination with member agencies and other construction projects at the Weymouth plant. Due to the staging strategy required to install the new valves, staff anticipates that storage services will be needed until June 2029, which will require an amendment to the storage purchase order that exceeds the General Manager's Administrative Code authority.

This action authorizes an increase of $320,000 to the existing purchase order with Total Transportation Logistics Inc. for a new not-to-exceed total amount of $540,000. It is anticipated that the new purchase order amount will be sufficient for storage services for the Weymouth filter valves through June 2029. Due to the specialized nature of the service provided, no Small Business Enterprise participation level was established for this purchase order.

Project Milestone

June 2029 – Completion of filter valve replacement at the Weymouth plant

2/20/2024
John V. Bednarski *Date*
Manager/Chief Engineer

2/23/2024
Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

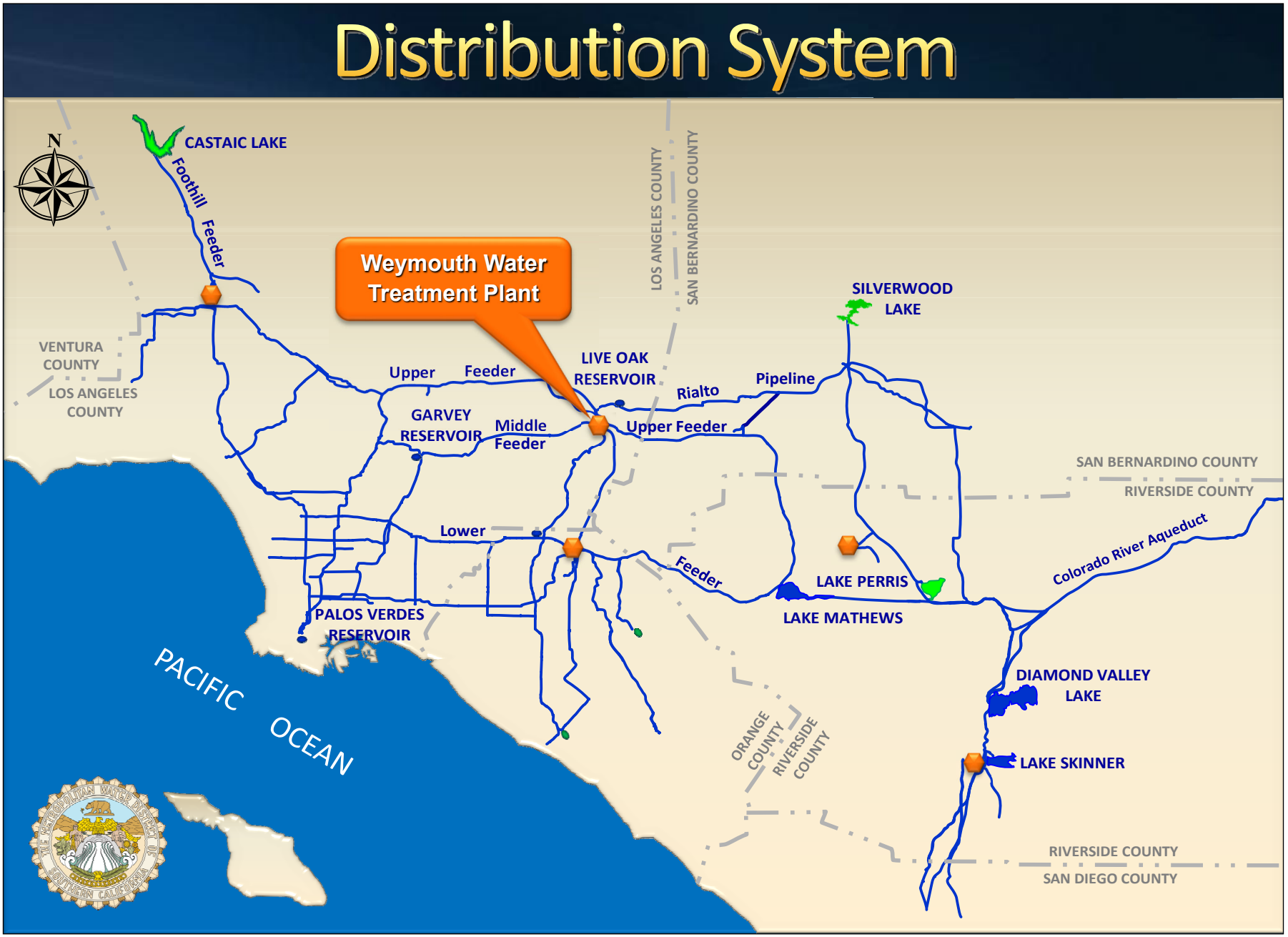
Attachment 2 – Location Map

Ref# es12696141

Allocation of Funds for Weymouth Filter Valve Replacement

	Current Board Action (Mar. 2024)
Labor	
Studies & Investigations	$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	-
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses (valve storage)	-
Total Transportation Logistics Inc.	320,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	-
Total	**$ 320,000**

The amount expended to date on the filter valve replacement at Weymouth is approximately $7.7 million. The total estimated cost to complete the replacement of filter valves and actuators, including the amount appropriated to date, funds described in this action, and all future design and construction costs, is anticipated to range from $16 million to $18 million.


Distribution System
N
CASTAIC LAKE
Foothill Feeder
Weymouth Water Treatment Plant
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
VENTURA COUNTY
LOS ANGELES COUNTY
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Lower Feeder
Colorado River Aqueduct
LAKE PERRIS
LAKE MATHEWS
PALOS VERDES RESERVOIR
PACIFIC OCEAN
DIAMOND VALLEY LAKE
ORANGE COUNTY
RIVERSIDE COUNTY
LAKE SKINNER
RIVERSIDE COUNTY
SAN DIEGO COUNTY

Engineering, Operations, & Technology Committee

Weymouth Filter Valve Storage

Item 7-7

March 11, 2024

Item 7-7
Weymouth Filter Valve Storage

Subject

Authorize an increase of $320,000 to a purchase order with Total Transportation Logistics Inc. for a new not-to-exceed total amount of $540,000 for storage of filter valves

Purpose

Protect Metropolitan's assets by securely storing filter valves until they are needed for installation at the Weymouth plant

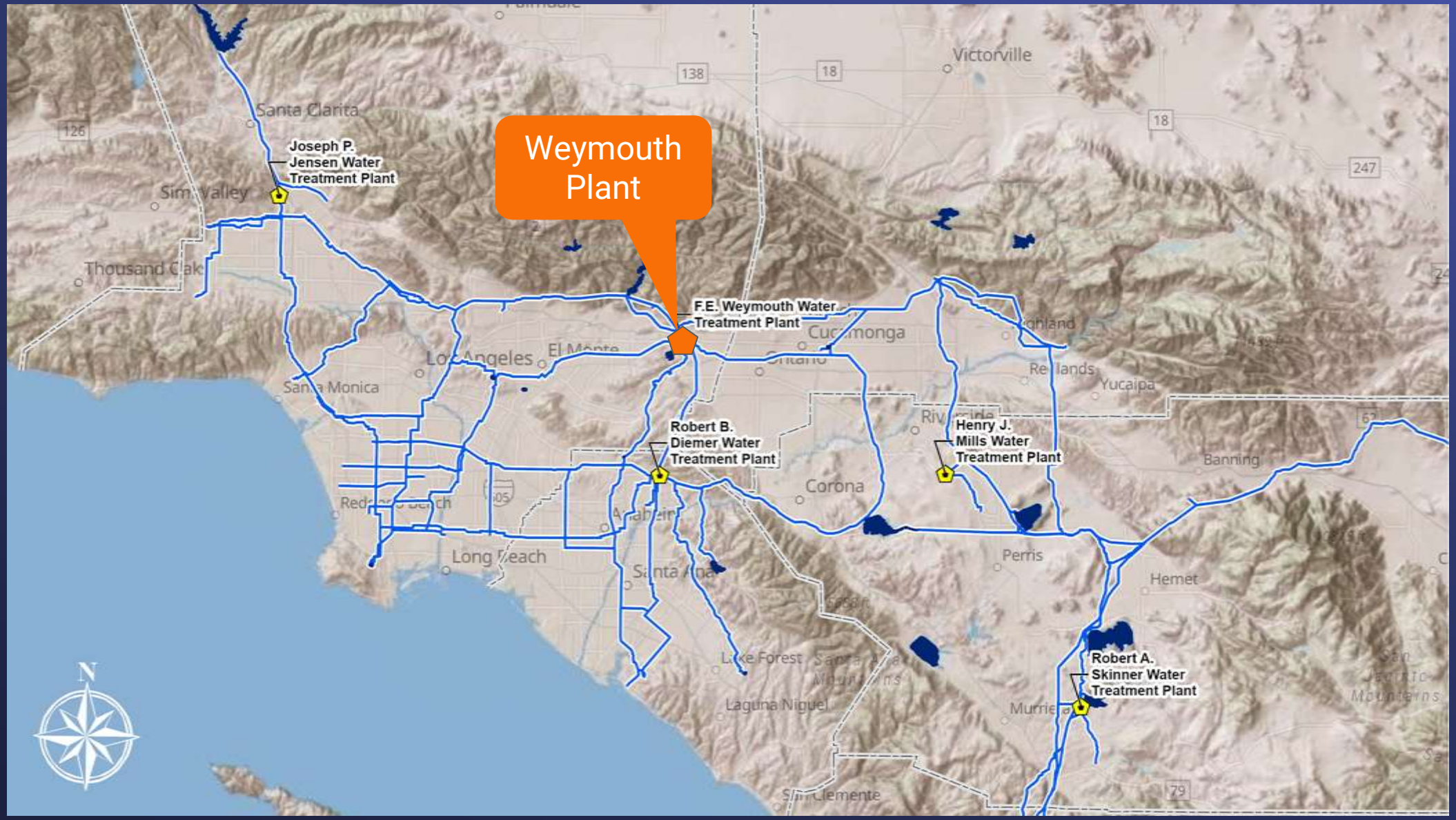
Recommendation and Fiscal Impact

Amend existing purchase order with Total Transportation Logistics Inc.

Fiscal Impact of $320,000

Budgeted

Location Map



Background – Weymouth Filter Valve Storage

- 236 filter valves procured for the Weymouth plant
  - 127 filter valves currently being installed in Filter Building No. 2
  - 109 filter valves remaining for Filter Building No. 1

Weymouth Filter Building No. 2

Background – Weymouth Filter Valve Storage

- Total Transportation Logistics (TTL) Warehouse
  - Bonded, climate controlled, secured
  - Located approximately 22 miles from Weymouth Plant

Weymouth filter valves in storage warehouse

Weymouth
Filter Valve
Storage

Filter Valve Storage Purchase Order

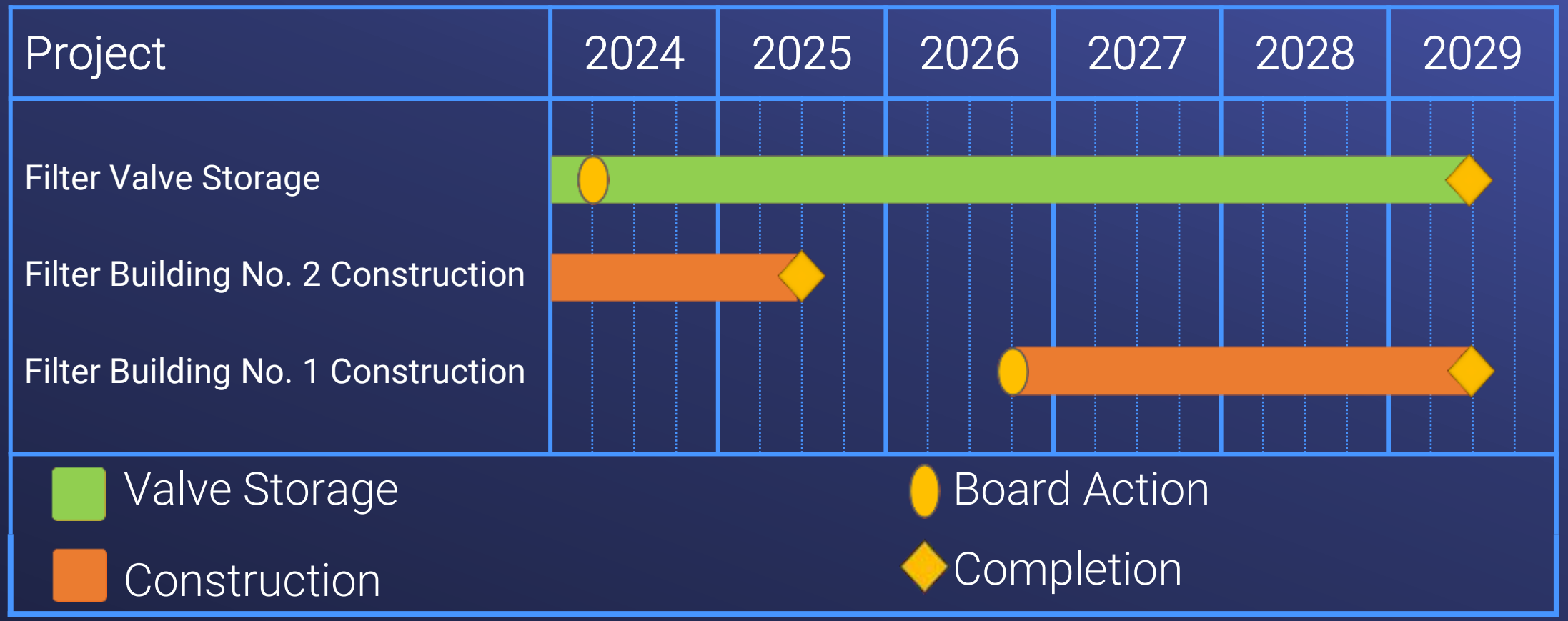
- Existing purchase order with TTL
  - Not-to-exceed amount of $220,000
  - Executed - November 2020
- Proposed amendment
  - Increase by $320,000
  - Not-to-exceed amount of $540,000
  - Expiration date - June 2029
- Storage fees based on actual square footage

Alternatives Considered

- Relocate filter valves to Lake Mathews Storage Building
  - Inadequate space to store large prestressed concrete cylinder pipe (PCCP) valves & 109 filter valves
  - Increased transportation costs & risk of valve damage
- Relocate filter valves to Weymouth/ La Verne site
  - Significant modifications are necessary to create more storage space

54-inch Conical Plug Valves for PCCP

Project Schedule



Board Options

- Option #1

  Authorize an increase of $320,000 to a purchase order with Total Transportation Logistics Inc. for a new not-to-exceed total amount of $540,000 for storage of filter valves for the F.E. Weymouth Water Treatment Plant.

- Option #2

  Do not authorize an increase to the existing purchase order.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering Services

- **Capital Investment Plan Quarterly Report for Period Ending December 2023**

Summary

The attached report provides a summary of actions and accomplishments on the Capital Investment Plan (CIP) during the second quarter of fiscal year 2023/24. It also provides updates on the status of capital projects and capital expenditures to date, and information regarding service connections and relocations authorized by the General Manager during the reporting period of October to December 2023, the second quarter of fiscal year 2023/24, and the sixth quarter of the fiscal years 2022/23 and 2023/24 biennium.

Purpose

Administrative Code Requirement Section 2720(a)(1): General Manager's Quarterly Reports

Section 2720 of Metropolitan's Administrative Code requires the General Manager to report quarterly to the Engineering and Operations Committee on the Capital Investment Plan.

Sections 4700-4708 of Metropolitan's Administrative Code requires the General Manager to report on service connections approved by the General Manager with the estimated cost and approximate location of each.

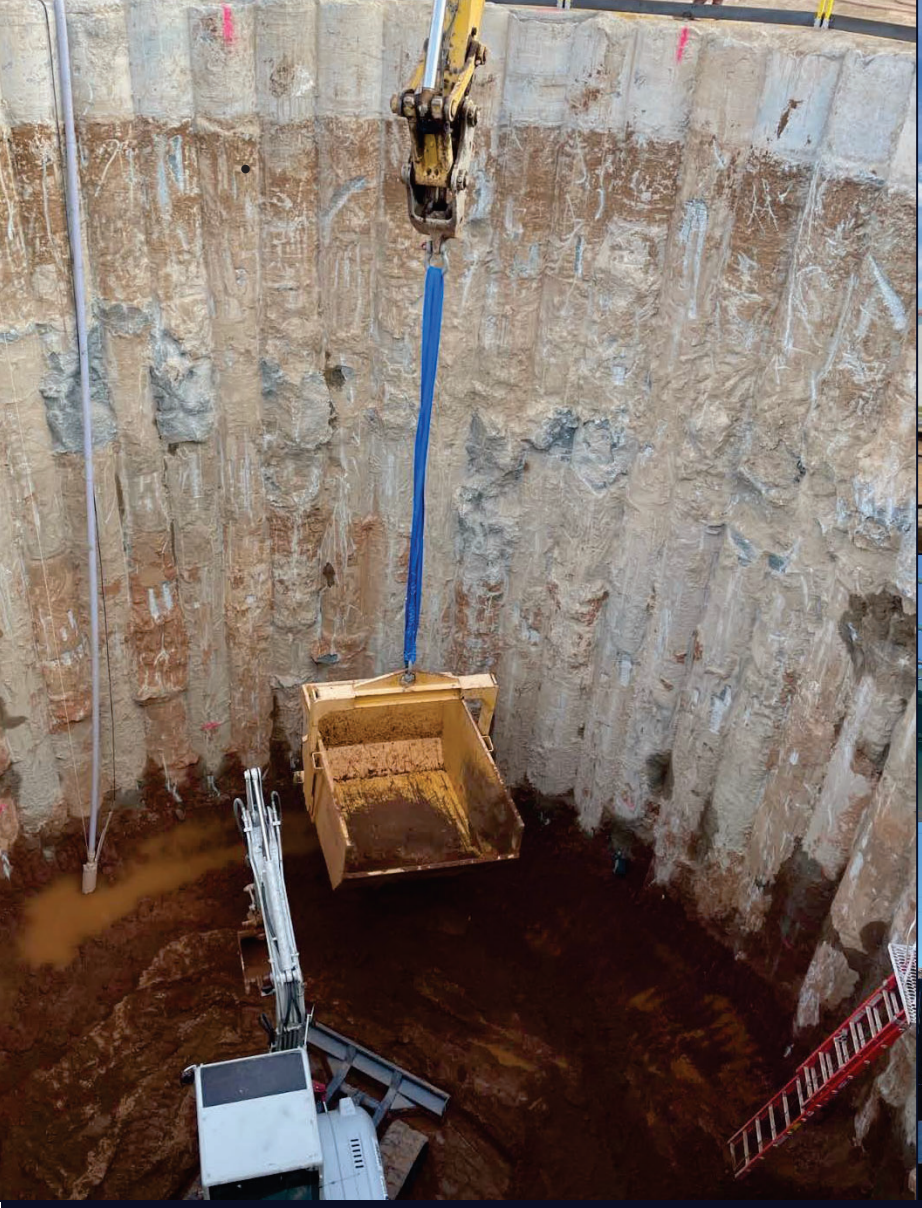
Section 8122(c) of Metropolitan's Administrative Code requires the General Manager to report on the execution of any relocation agreement under the General Manager's authority involving an amount in excess of $100,000.

Highlights of progress and major milestones on selected projects are presented in the attached report grouped by CIP program.

Attachments

Capital Investment Plan quarterly report for period ending December 2023

Date of Report: March 12, 2024



The Metropolitan Water District of Southern California

Capital Investment Plan
Quarterly Report

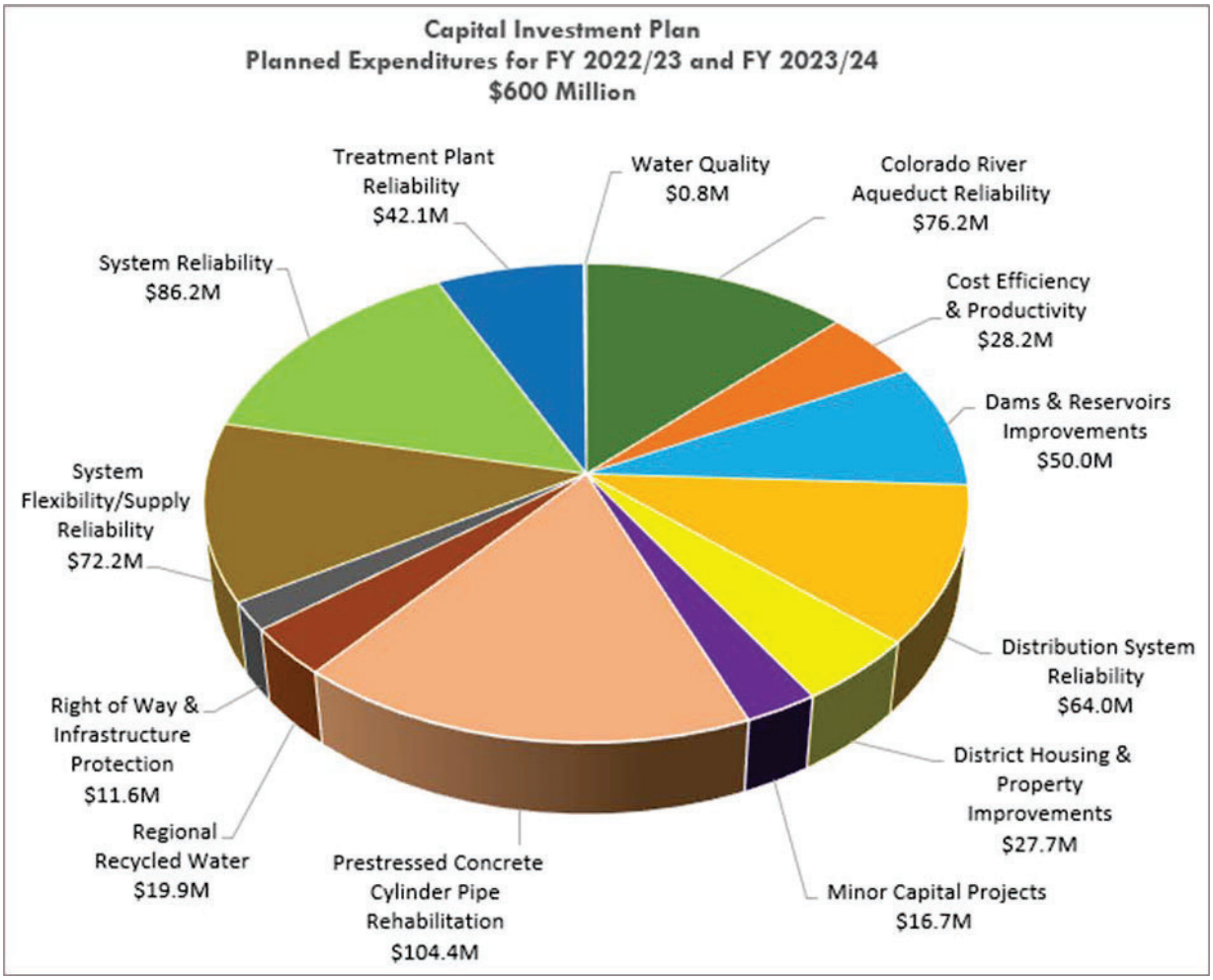
October - December 2023

Table of Contents

Capital Investment Plan for Fiscal Years 2022/23 & 2023/24

Metropolitan's total planned capital expenditures for Fiscal Years (FYs) 2022/23 and 2023/24 are $600 million. Figure 1 below shows the planned expenditures by program. In April 2022, the Board appropriated $600 million and delegated authority to the General Manager, subject to both CEQA requirements and the General Manager's authority as addressed in Metropolitan's Administrative Code, to initiate or proceed with work on all planned capital projects identified in the Capital Investment Plan (CIP) for FYs 2022/23 and 2023/24.

Figure 1: CIP for FY 2022/23 and FY 2023/24 by Program



[Cover photos: (left to right; top to bottom): *Perris Valley Pipeline I-215 Tunnel Crossing* – Excavation of Shaft No. 6; *Second Lower Feeder PCCP Rehabilitation - Reach 3B* – Drilling for a shoring pile at maintenance hole excavation; *CRA Pumping Plants Overhead Cranes Replacement* – Installation of overhead crane girder at Eagle Mountain Pumping Plant]

Executive Summary

This report provides a summary of the Capital Investment Plan (CIP) activities and accomplishments during the 2nd Quarter of Fiscal Year (FY) 2023/24, which ended in December 2023. CIP expenditures through the 2nd Quarter totaled $418.4 million and the expenditures are projected to stay near the planned expenditures through the end of the biennium. The CIP funds allocated to specific projects through the reporting quarter totaled $582.4 million, leaving approximately $17.6 million available to be allocated during the remainder of the current biennium.

During the quarter, nine project-specific board actions were heard in open sessions. Four construction contracts and two procurement contracts were awarded by the Board during the reporting period with a total contract amount of approximately $41.5 million. During the same time, a total of approximately $41.6 million in contract payments was authorized, reflecting construction progress on projects such as Colorado River Aqueduct (CRA) Conduit Structural Protection, CRA Pumping Plants -Overhead Crane Replacement, Foothill Hydroelectric Power Plant Seismic Upgrade, La Verne Shops Building Completion - Stage 5, Metropolitan Headquarters Building Level P-1 Fire Protection Piping Replacement, Orange County Feeder Relining - Reach 3, Perris Valley Pipeline Interstate 215 Tunnel Crossing, Second Lower Feeder PCCP Rehabilitation - Reach 3B, Wadsworth Pumping Plant Bypass Pipeline, and Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation.

Board Action Summary

During the 2nd Quarter, board actions heard in open session included nine project-specific actions summarized in Table 1 below. These actions awarded six contracts totaling approximately $41.5 million, authorized four new professional/technical services agreements for a not-to-exceed amount of approximately $9.8 million, and authorized an increase to one professional/technical services agreement for an amount not-to-exceed approximately $0.2 million. Information on the awarded contracts can be found in Table 9 of this report. The table below excludes information on board items heard in closed session.

Table 1: 2nd Quarter Board Actions

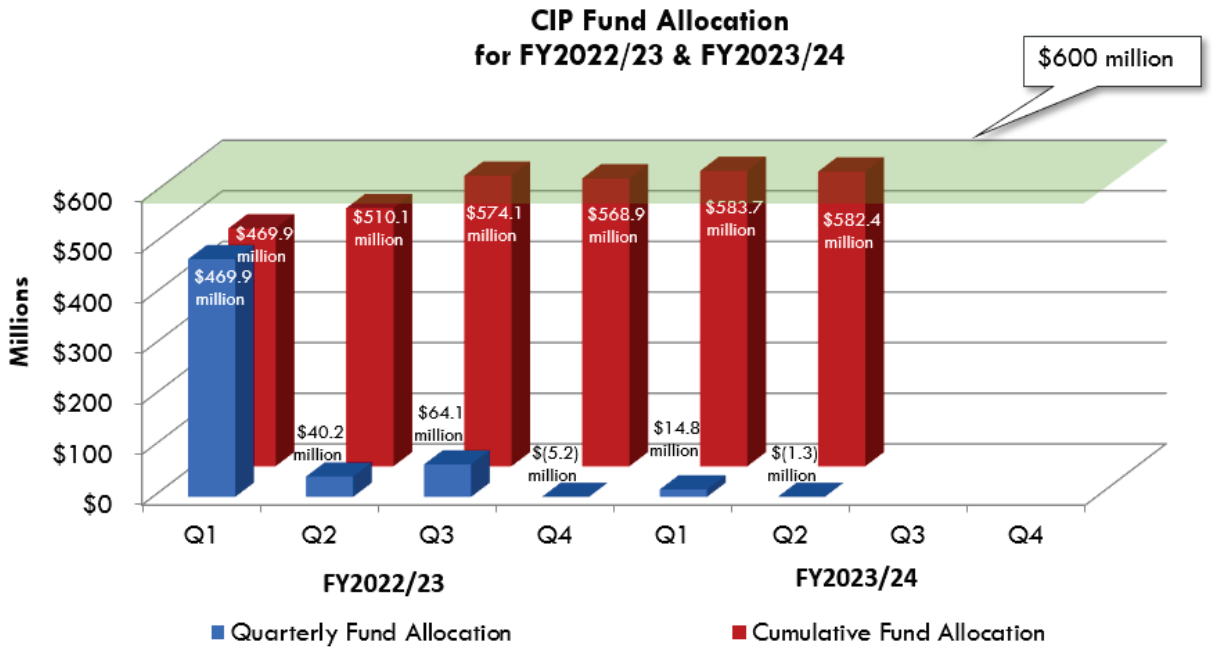
Month	Board Letter Item No.	Project	Action taken
October	7-1	Webb Tract Multi-Benefit Landscape Project	Authorized an unplanned project and authorized two agreements: (1) not-to-exceed $1,500,000 and (2) not-to-exceed $980,000
October	7-2	CRA Pumping Plants Main Pump Access Improvements	Authorized an agreement not-to-exceed $750.000
October	7-3	San Diego Canal Concrete Liner Rehabilitation	Awarded a $4,400,000 construction contract
November	7-2	Enterprise Content Management Phase II	Authorized an agreement not-to-exceed $6,609,900
November	7-4	Gene Communication System Upgrade	Awarded a $1,244,935 construction contract and authorized an increase of $176,000 to an existing agreement
November	8-1	Badlands Tunnel Surge Protection Facility	Awarded a $18,840,000 construction contract

Month	Board Letter Item No.	Project	Action taken
November	8-2	Lakeview Pipeline Relining, Stage 2	Awarded a $16,055,500 procurement contract
December	7-2	Metropolitan Headquarters Courtyard Improvements	Awarded a $250,974 construction contract
December	7-3	Orange County Area Pressure Control Structures Globe Valve Replacement	Awarded a $698,000 procurement contract

The previously referenced April 2022 board action appropriated $600 million to perform work on planned CIP projects through the current biennium. To be considered a planned project, the project must be identified and described in the Capital Investment Plan Appendix for the two-year budget cycle. Consistent with this action, all requests to allocate funds and proceed with planned CIP projects are reviewed and approved by the Chief Engineer acting under the General Manager's authority. Unplanned projects, those which are not already identified in the CIP Appendix, require a separate board authorization. During the 2nd Quarter, the board amended the CIP to include one new CIP project. This was the Webb Tract Multi-Benefit Landscape project.

Figure 2 shows the allocation of the funds from Appropriation No. 15525 for this quarter and total for the current biennium through the quarter, which is approximately $582.4 million, leaving approximately $17.6 million available to be allocated during the remainder of the current biennium. This amount includes allocation of $15 million to the Minor Capital Projects Program, approximately $26.4 million for work authorized during the 2nd Quarter, $300,000 for work authorized previously[1], and approximately $28.0 million reallocated back to the CIP Appropriation 15525. Details of the allocations for work authorized during the reporting quarter and from the prior biennium can be found in the **Project Actions** section.

Figure 2: CIP Fund Allocation from Appropriation No. 15525 – FY 2022/23 and FY 2023/24



*Numbers may not sum due to rounding

Information on construction and procurement contracts activities for the 2nd Quarter of FY 2023/24 is presented in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the 2nd Quarter totaled approximately $41.6 million and primarily reflect construction progress on Colorado River Aqueduct (CRA) Conduit Structural Protection, CRA Pumping Plants – Overhead Crane Replacement, Foothill Hydroelectric Power Plant Seismic Upgrade, La Verne Shops Building Completion – Stage 5, Metropolitan Headquarters Building Level P-1 Fire Protection Piping Replacement, Orange County Feeder Relining – Reach 3, Perris Valley Pipeline Interstate 215 Tunnel Crossing, Second Lower Feeder PCCP Rehabilitation – Reach 3B, Wadsworth Pumping Plant Bypass Pipeline, and Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation.

[1] The CIP Quarterly Report for the 4th Quarter of FY 2021/22 reported the allocation of $300,000 in CIP funds from Appropriation 15517 to CRA 6.9 kV Power Cables Replacement but this allocation did not transpire. The allocation took place in this reporting quarter with CIP funds from Appropriation 15525.

Planned Expenditure and Budget

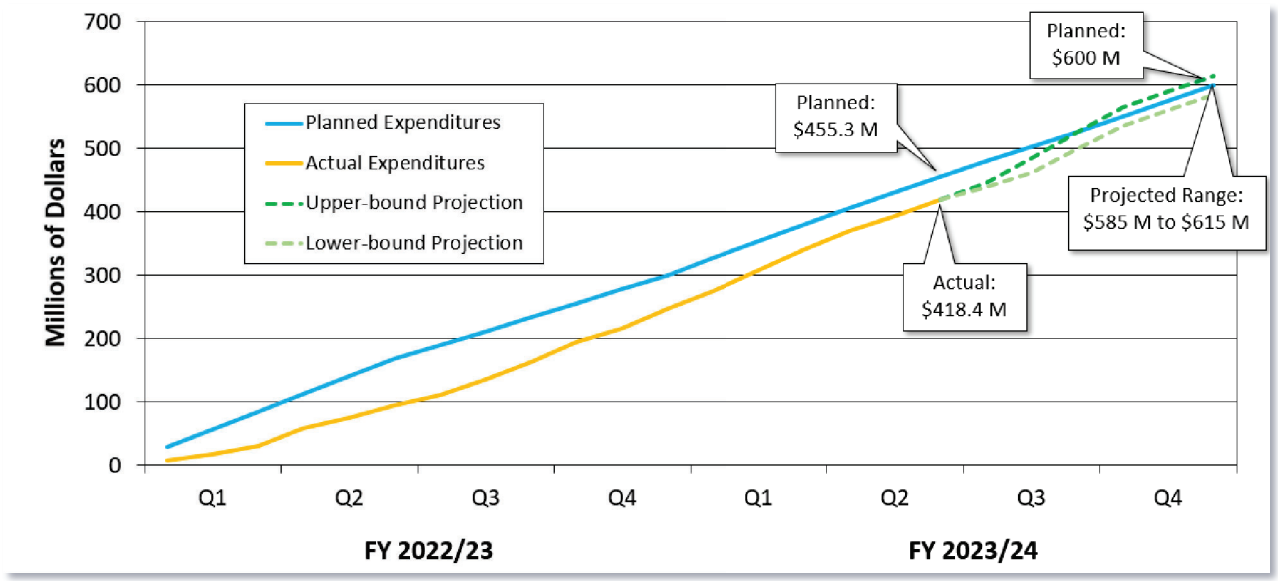
Table 2 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 2nd Quarter of FY 2023/24, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 2nd Quarter of FY 2023/24 were approximately 92% of planned expenditures.

Table 2: Planned & Actual Expenditures for FYs 2022/23 & 2023/24

Quarter	Planned Expenditures (millions)	Actual Expenditures (millions)
FY 2022/23, Q1	$85.3	$30.4
FY 2022/23, Q2	$82.8	$63.4
FY 2022/23, Q3	$64.9	$70.2
FY 2022/23, Q4	$67.0	$83.7
FY 2023/24, Q1	$80.2	$93.2
FY 2023/24, Q2	$75.1	$77.5
Totals	**$455.3**	**$418.4**

* Numbers may not sum due to rounding.

Figure 3: Current Biennium – Planned, Actual & Forecasted Expenditures



As shown in Figure 3, the total planned expenditures in the current biennium are $600 million. The projected expenditures for the biennium are currently projected to be between $585 million and $615 million with the actual expenditures 3% higher than the planned expenditures during the 2nd Quarter of FY 2023/24. The negative variance below the planned expenditures for the first two quarters of the biennium is mainly due to a concerted effort during the last quarter of FY 2021/22 to accelerate the work that was planned for the 1st Quarter of FY 2022/23, including the O&M work on the drought projects; staff redeployment to work on non-CIP projects such as Pure Water Southern California; and shift in the timing of the contract awards and delays in completing some construction and procurement contracts due to difficulties in obtaining permits within the planned timeline, equipment/materials delivery delays due to manufacturing and supply chain issues. Since then, the actual expenditures for each of the quarters have exceeded the planned expenditures with the rate of the expenditures projected to keep rising, ending the biennium at or near the planned expenditures of $600 million.

Funding of Infrastructure Projects with Outside Sources

This section provides information on select grants and other outside sources of funds that Metropolitan receives to support infrastructure projects. The expenditures related to these outside funding sources will be reported in subsequent quarters as the funds are received and expenditures are recorded.

Pure Water Southern California

In December 2022, Metropolitan's Board authorized the General Manager to use $80 million in project funding from the State Water Resources Control Board (SWRCB) to commence activities related to the initiation of the Pure Water Southern California program. Metropolitan has received the $80 million funding in one lump sum payment on May 24, 2023, to support the design activities for the program. Funds are available for expenditure until June 30, 2026. The use of these funds is not considered as part of Metropolitan's CIP expenditures. During the reporting quarter, State funds were used to support program management tasks, including the preparation of various plans for program implementation, and preliminary design of the initial two reaches of the conveyance pipelines.

Drought Mitigation Projects

In December 2022, Metropolitan's Board adopted a resolution to accept $50 million in state funding from the California Department of Water Resources to support Metropolitan's drought mitigation projects. The Board also designated the Group Manager of Engineering Services to be the signatory to execute actions related to the funds. The California Department of Water Resources (DWR) will administer the funds and release the reimbursement after Metropolitan invoices expenses. The $50 million fund is available for reimbursement through June 30, 2026, and five percent of this amount may be used for administrative costs by DWR. From the state-allocated amount, it allocated to Metropolitan $47.5 million to improve and expand its infrastructure so that it will be more resilient and flexible to respond to fluctuating water supplies from each of its imported water sources and to enhance the ability to convey water throughout all its service area. Unlike the funds received for Pure Water discussed above, under this grant, staff will be required to submit invoices to DWR in order to receive reimbursement of expenditures that comply with the grant requirements. To date, three projects on the east side of Metropolitan's system are covered under this grant, and each of the three projects is in construction as part of an overall scheme to connect DVL supplies to the Rialto Pipeline. During the reporting quarter, a first invoice with a progress report that covers a period between September 2022 and June 2023 has been submitted and is pending DWR's approval.

Battery Energy Storage System Projects

In October 2020, Metropolitan's Board authorized amending the CIP Appendix to add unplanned battery energy storage system (BESS) projects to enhance the efficiency of Metropolitan's long-term power use, provide a hedge against projected electricity price increases, and improve the resiliency of electric supply at the Jensen, Skinner, and Weymouth Water Treatment Plants. This decision was aided by the California Public Utilities Commission's enhanced incentives for microgrid-capable BESS at critical facilities, which are expected to reimburse Metropolitan for $10.3 million of project costs. Construction of the BESS systems is underway with Weymouth BESS construction estimated to be completed in the second half of FY 2023/24 and Jensen & Skinner BESS construction estimated to be completed in FY 2024/25. Unlike the funds received for Pure Water discussed above, the incentive will be paid to Metropolitan in phases: 50 percent at project completion, with the remaining 50 percent paid equally over five years upon annual proof of a 5 kg CO_2/kWh reduction in greenhouse gas emissions.

Major Capital Programs Overview

Metropolitan's CIP is structured into three levels. In descending order, they are:

- Program
- Project Group/Appropriation
- Project

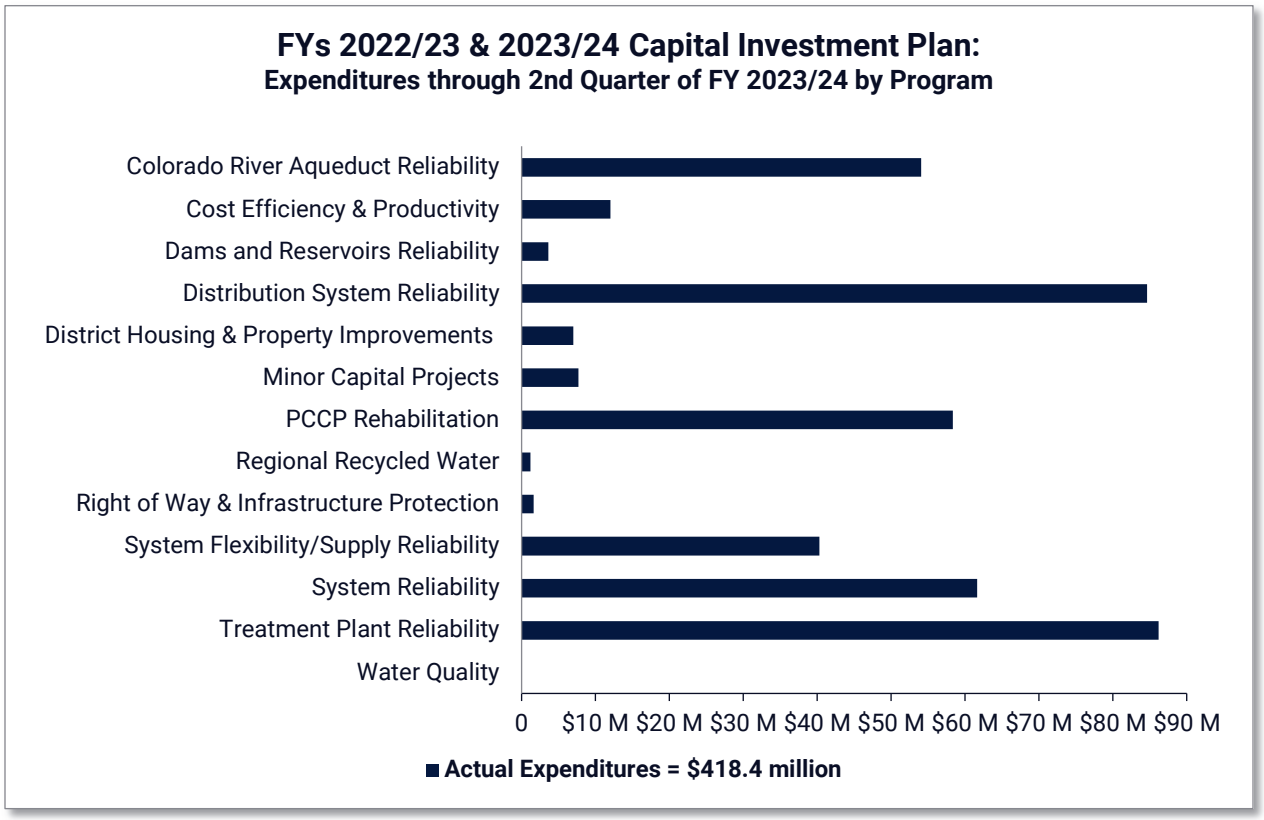
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more project groups/appropriations, and project group/appropriations are comprised of one or more projects. The status of each of the programs is provided later in this section of the report.

- Colorado River Aqueduct (CRA) Reliability
- Cost Efficiency & Productivity
- Dams & Reservoirs Improvements
- Distribution System Reliability
- District Housing & Property Improvements
- Minor Capital Projects
- Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation
- Regional Recycled Water Supply
- Right-of-Way and Infrastructure Protection
- System Flexibility/Supply Reliability
- System Reliability
- Treatment Plant Reliability
- Water Quality

For the current biennium, the CIP includes over 37 project groups, 60 planned appropriations, and 447 planned projects (excluding Minor Capital Projects). The list of appropriations that make up each of the programs, along with planned expenditures and actual costs to date for those appropriations, are provided in Table 15 at the end of this report.

Figure 4 below shows actual expenditures for the 13 capital programs for 2nd Quarter of FY 2023/24.

Figure 4: Biennium-to-date Actual Expenditures through 2nd Quarter FY 2023/24



Major Capital Project Programs – Highlights

This section provides 2nd Quarter highlights for the 12 Major Capital Projects Programs; the Minor Capital Projects Program is highlighted in its own section of this report. Status is provided for selected projects within each Major Capital Projects Program. The selected projects typically achieved major milestones during the 2nd Quarter of FY 2023/24 or are scheduled to achieve major milestones in the next quarter.

Table 3: Major Capital Projects Programs

Program	Project
Colorado River Aqueduct (CRA) Reliability	CRA Pumping Plants Overhead Cranes Replacement
Cost Efficiency & Productivity	WINS Water Billing System Upgrade
Dams and Reservoirs Improvements	Program highlights only
Distribution System Reliability	Foothill Hydroelectric Power Plant Seismic Upgrade
District Housing & Property Improvements	Program highlights only
Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation	Second Lower Feeder PCCP Rehabilitation - Reach 3B
Regional Recycled Water	Program highlights only
Right-of-Way & Infrastructure Protection	Program highlights only
System Flexibility/Supply Reliability	Wadsworth Pumping Plant Bypass Pipeline
System Reliability	Gene Communication System Upgrade
Treatment Plant Reliability	Mills Electrical Upgrades – Stage 2
Water Quality	Program highlights only

Colorado River Aqueduct (CRA) Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $54.05 million

Program Information: The CRA Reliability Program is composed of projects to replace or refurbish facilities and components of the CRA system to reliably convey water to Southern California.

Program Highlights (2nd Quarter)

Accomplishments

- Completed construction of the following construction contract:
  - Hinds Pumping Plant Village Paving Replacement
- Continued construction activities for the following contracts:
  - CRA 6.9 kV Power Cable Terminations
  - CRA Conduit Structural Protection
  - CRA Conveyance System Flow Level Sensor Installation
  - CRA Domestic Water Treatment System Upgrades at all five pumping plants
  - CRA Freda Siphon Internal Seal Installation
  - CRA Pumping Plants Overhead Cranes Replacement
  - Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings
- Awarded construction contracts for the following projects:
  - Gene Communication Reliability Upgrades
- Advertised and opened bids for procurement package for the following project:
  - Brushless exciter system for Gene Pumping Plant
- Continued final design of the following projects:
  - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
  - CRA Desert Region Security Improvements – Stage 1
  - CRA Pumping Plant Sump System Rehabilitation
  - CRA Pumping Plant Village Utility Replacement
- Initiated final design of the following project:
  - CRA Pumping Plants Main Pump Access Improvements
- Continued preliminary design of the following projects:
  - Black Metal Mountain 2.4 kV Electrical Power Upgrades
  - CRA Desert Region Security Improvements - Stage 2
  - CRA Erosion Control Protection
  - Hinds Pumping Plant Discharge Valve Platform Replacement
- Completed preliminary design of the following projects:
  - CRA Pumping Plants 2.3 kV Switchrack Rehabilitation – Iron Mountain Pumping Plant
- CRA Main Pump Motor Rehabilitation:
  - Continued study to install variable frequency drive pumps at Gene and Intake Pumping Plants

Upcoming Activities

Upcoming work for the next quarter will include:

- Award the following procurement contract:
  - Brushless exciter system for Gene Pumping Plant
- Advertise the following procurement contract:
  - CRA 69 kV & 230 kV Transformers
- Continue construction activities planned for the following contracts:
  - CRA 6.9 kV Power Cable Terminations
  - CRA Conduits Structural Protection
  - CRA Conveyance System Flow Level Sensor Installation
  - CRA Domestic Water Treatment System Upgrades at all five CRA pumping plants
  - CRA Freda Siphon Internal Seal Installation
  - CRA Pumping Plants Overhead Cranes Replacement
  - Gene Communication Reliability Upgrades
  - Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings
- Continue final design of the following projects:
  - Cabazon Radial Gates Facility Improvements
  - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
  - CRA Desert Region Security Improvements - Stage 1
  - CRA Pumping Plants Main Pump Access Improvements
  - CRA Pumping Plant Sump System Rehabilitation
  - CRA Pumping Plant Village Utility Replacement
- Initiate final design for the following projects:
  - Black Metal Mountain 2.4 kV Electrical Power Upgrades
  - CRA Pumping Plants 2.3 kV Switchrack Rehabilitation – Iron Mountain Pumping Plant
- Complete preliminary design of the following project:
  - CRA Erosion Control Protection
- Continue preliminary design of the following projects:
  - CRA Desert Region Security Improvements - Stage 2
  - Hinds Pumping Plant Discharge Valve Platform Replacement
- CRA Main Pump Motor Rehabilitation:
  - Complete study to install variable frequency drive pumps at Gene and Intake Pumping Plants

CRA Pumping Plants Overhead Cranes Replacement

Total Project Estimate:
$19.7 million

Total Project Cost to Date:
$14.5 million

This project replaces the overhead bridge crane at all five pumping plants. It also makes improvements to the electrical system, abates hazardous materials, and performs seismic retrofit of the below-grade pump bays.

Phase	Construction
% Complete for Construction	73%
Construction Contract Award Date	September 2020
Estimated Construction Completion Date	June 2024
Contract Number	1946

The contractor completed installation of the Eagle Mountain overhead crane. In the upcoming quarter, the contractor will complete installation of the Hinds overhead crane.

Installing the overhead crane girder at Eagle Mountain Pumping Plant

Cost Efficiency and Productivity Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $12.04 million

Program Information: The Cost Efficiency and Productivity Program is composed of projects to upgrade, replace, or provide new facilities, software applications, or technology, which will provide economic savings that outweigh project costs through enhanced business and operating processes.

Program Highlights (2nd Quarter)

Accomplishments

- Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2
  - Completed final design and advertised for construction bids
- Diamond Valley Lake to Lake Skinner Trail
  - Continued final design
- Enterprise Content Management Phase II
  - Executed agreement with consultant for design, development, and deployment
- Oracle Database Upgrade
  - Continued execution of the migration plan
- Payroll-Timekeeping Reimplementation
  - Continued design
- Real Property Group Business System Replacement
  - Completed GIS integration
- WIFI Implementation
  - Conducted job walks for several facilities

Upcoming Activities

Upcoming work for the next quarter will include:

- Battery Energy Storage Systems at Jensen, Weymouth, and Skinner Plants
  - Continue construction
- Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2
  - Award construction contract
- Oracle Database Upgrade
  - Continue database migration
- Payroll-Timekeeping Reimplementation
  - Continue design
- Real Property Group Business System Replacement
  - Complete financial system integration
- WINS Water Billing System Upgrade
  - Continue system upgrade

WINS Water Billing System Upgrade

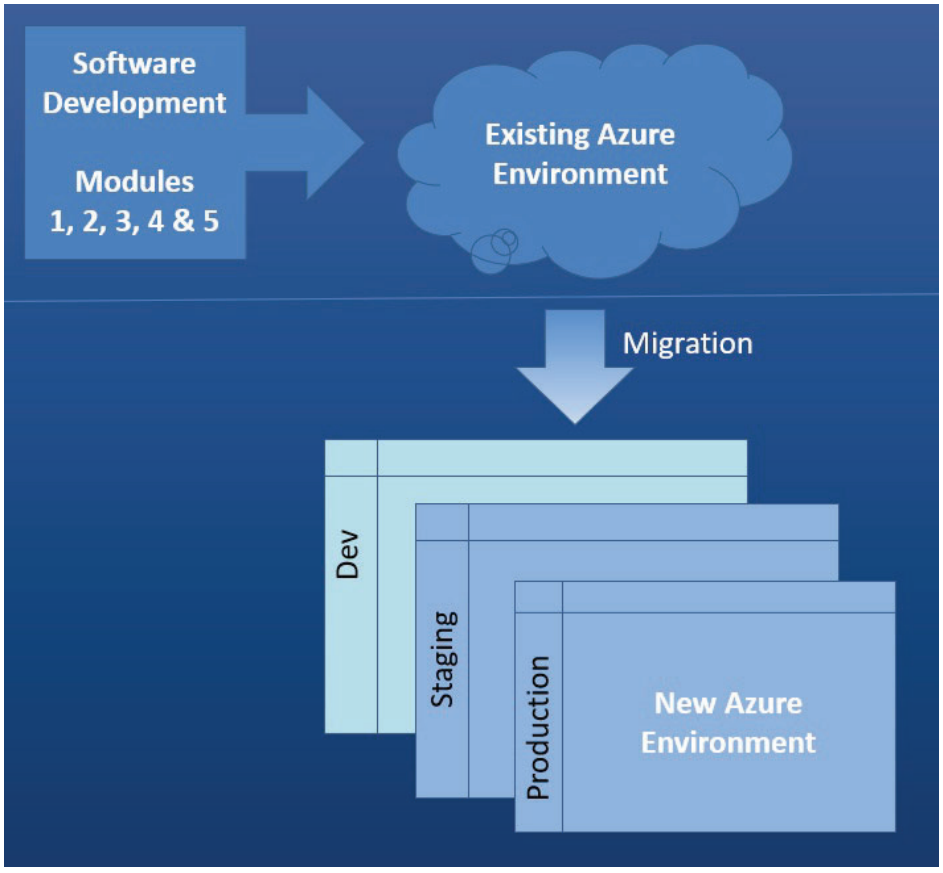
Total Project Estimate:
$3.6 million

Total Project Cost to Date:
$1.5 million

This project will update the current Water Information System (WINS) billing application. The upgrade will add needed enhancements including billing logic, wizard interface, self-service capabilities, invoice preview, automation of annual calendar rate change setup, and web services to enhance ad hoc reporting.

Phase	Development
% Complete for Current Phase	33%
Current Phase Authorized	May 2021
Estimated Completion Date of Current Phase	January 2025

Completed development for Modules 3 and 4 and testing for Module 1. In the upcoming quarter, development and testing will continue in an iterative methodology for the next 2 modules.



Conceptual software migration plan

Dams and Reservoirs Improvements Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $3.61 million

Program Information: The Dams and Reservoirs Improvements Program is composed of projects to upgrade or refurbish Metropolitan's dams, reservoirs, and appurtenant facilities to reliably meet water storage needs and regulatory compliance.

Program Highlights (2nd Quarter)

Accomplishments

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Continued final design of the new system
- Garvey Reservoir Dam Monitoring System Upgrades
  - Continued final design of the new system
- Garvey Reservoir Rehabilitation
  - Initiated final design
- Lake Skinner Outlet Tower Butterfly Valve Replacement
  - Continued valve fabrication
- Lake Skinner Outlet Tower Seismic Upgrade
  - Initiated detailed seismic evaluation of outlet tower

Upcoming Activities

Upcoming work for the next quarter will include:

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Continue final design
- Garvey Reservoir Dam Monitoring System Upgrades
  - Complete final design and authorize procurement of new equipment
- Garvey Reservoir Rehabilitation
  - Continue final design
- Lake Skinner Outlet Tower Butterfly Valve Replacement
  - Continue valve fabrication
- Lake Skinner Outlet Tower Seismic Upgrade
  - Continue detailed seismic evaluation of outlet tower

Distribution System Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $84.64 million

Program Information: The Distribution System Reliability Program is comprised of projects to replace or refurbish existing facilities within Metropolitan's distribution system, including reservoirs, pressure control structures, hydroelectric power plants, and pipelines, to reliably meet water demands.

Program Highlights (2nd Quarter)

Accomplishments

- Awarded a construction contract for the following project:
  - San Diego Canal Concrete Liner Rehabilitation
- Awarded a procurement contract for the following project:
  - Lakeview Pipeline Relining - Stage 2
  - Orange County Area Pressure Control Structure Globe Valve Replacement

Upcoming Activities

Upcoming work for the next quarter will include:

- Complete construction for the following project:
  - Orange County Feeder Relining - Stage 3
- Continue construction activities planned for the following projects:
  - Foothill Hydroelectric Power Plant Seismic Upgrade
  - OC-88 Pump Station Chiller Replacement
  - San Diego Canal Concrete Liner Rehabilitation
  - Sepulveda, West Valley, and East Valley Feeders Interconnection Electrical Upgrades
- Continue design for the following projects:
  - Auld Valley and Red Mountain Pressure Control Structures Upgrades
  - Hollywood Tunnel North Portal
- Continue procurement for the following project:
  - Lakeview Pipeline Relining - Stage 2
  - Orange County Area Pressure Control Structure Globe Valve Replacement
  - Rialto Pipeline Rehabilitation at STA 2986+30
  - San Jacinto Diversion Structure Slide Gates V-01, V-02, V-03, and V-04 Rehabilitation

Foothill Hydroelectric Power Plant Seismic Upgrade

Total Project Estimate:
$32.0 million

Total Project Cost to Date:
$20.3 million

This project will strengthen the Foothill Hydroelectric Plant and Control Building to withstand a significant earthquake by removing and replacing the roofing system, adding encasements to enlarge and strengthen concrete columns, and reinforcing shallow foundations.

Phase	Construction
% Complete for Construction	31%
Construction Contract Award Date	April 2023
Estimated Construction Completion Date	September 2024
Contract Number	1999

Completed automatic entrance gate upgrade and continued drilling holes and installing the steel roof reinforcement plates for the hydroelectric plant building. In the upcoming quarter, the contractor will continue to install the roof reinforcement and begin the column reinforcement efforts.

Installation of steel reinforcement plates on roof of the Foothill Hydroelectric Power Plant building

District Housing & Property Improvements Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $7.01 million

Program Information: The District Housing & Property Improvements Program is composed of projects to refurbish or upgrade workforce housing at Metropolitan to enhance living conditions to attract and retain skilled employees.

Program Highlights (2nd Quarter)

Accomplishments

- Completed preparation of initial options for various housing typologies at four CRA pumping plants (Hinds, Eagle Mountain, Iron Mountain, and Gene)

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue with the alternative housing analysis report to provide multiple options with the most optimal recommendation for the housing, recreational amenities and the lodges and kitchens with associated costs at four pumping plants (Hinds, Eagle Mountain, Iron Mountain and Gene)

Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $58.36 million

Program Information: The PCCP Rehabilitation Program is composed of projects to refurbish or upgrade Metropolitan's PCCP feeders to maintain water deliveries without unplanned shutdowns.

Program Highlights (2nd Quarter)

Accomplishments

- PCCP Rehabilitation Valve and Equipment Storage Building
  - Continued construction
- Second Lower Feeder
  - Reach 3B – Initiated operation of an HDPE bypass pipeline for the Palos Verdes Reservoir and continued fabrication of steel pipe liners. Started the planned shutdown to perform the relining work. This project will reline approximately 3.6 miles of Second Lower Feeder PCCP pipeline from the intertie with Sepulveda Feeder south to Oak Street PCS, through the cities of Torrance, Los Angeles, and Lomita, and replace three 48-inch diameter sectionalizing valves at the intertie with Sepulveda Feeder.
  - Isolation Valve Procurement – Continued fabrication and inspection of the remaining six 54-inch valves. To date, Metropolitan has received seven of thirteen large-diameter conical plug valves and actuators, including three 48-inch and four 54-inch valves.
- Sepulveda Feeder
  - Reach 1 – Continued final design to rehabilitate approximately three miles of Sepulveda Feeder PCCP pipeline, from just north of the Inglewood Lateral south to the West Coast Feeder, through the cities of Inglewood and Hawthorne, and unincorporated Los Angeles County
  - Reach 2 – Continued final design and permitting to rehabilitate approximately 3.8 miles of Sepulveda Feeder PCCP pipeline, from the Dominguez Gap Channel south to the intertie with Second Lower Feeder, through the cities of Torrance and Los Angeles
  - North Reach – Continued preliminary design of the northern 20-mile portion of the Sepulveda Feeder, including both steel and PCCP portions of the pipeline and appurtenances
  - Urgent Relining at Stations 569+40, 760+33, and 921+69 – Continued construction for urgent carbon fiber relining at three locations. Shifted the planned shutdown from December 2023 to March 2024 to allow time to secure needed permits for traffic control
- Allen McColloch Pipeline
  - Completed pipeline inspection and evaluation of findings

Upcoming Activities

Upcoming work for the next quarter will include:

- PCCP Rehabilitation Valve and Equipment Storage Building
  - Complete construction of the pre-engineered metal building at the Lake Mathews site
- Second Lower Feeder
  - Reach 3B - Continue installation of new steel liner during the shutdown period
  - Isolation Valve Procurement - Continue fabrication of remaining valves

- Sepulveda Feeder
    - Reach 1 - Continue final design and permitting process for long-lead permits from Caltrans, City of Los Angeles, and City of Torrance
    - Reach 2 - Continue final design and permitting process
    - North Reach – Continue preliminary design
    - Urgent Carbon Fiber Lining – Obtain all necessary permits and prepare for relining during a planned shutdown
- Allen McColloch Pipeline
    - Develop a plan for urgent rehabilitation of the pipeline

Second Lower Feeder PCCP Rehabilitation - Reach 3B

Total Project Estimate:
$105.6 million

Total Project Cost to Date:
$39.2 million

This project will reline approximately 3.6 miles of the Second Lower Feeder PCCP pipeline with steel liner from the intertie with the Sepulveda Feeder south to Oak Street Pressure Control Structure, through the cities of Torrance, Los Angeles, and Lomita, and replace three 48-inch diameter sectionalizing valves at the intertie with the Sepulveda Feeder.

Phase	Construction
% Complete for Construction	36%
Construction Contract Award Date	January 2023
Estimated Construction Completion Date	September 2025
Contract Number	2026

Construction of a high density polyethylene (HDPE) bypass pipeline at the Palos Verdes Reservoir was completed, operational testing was performed, a portion of the Second Lower Feeder was shut down for rehabilitation work, and fabrication of steel pipe liners continued. Major construction activities were initiated including installation of temporary traffic control, maintenance hole additions and modifications, and excavation of pipe access shafts. In the upcoming quarter, review of contractor submittals will continue. The contractor will install temporary traffic control, perform maintenance hole additions and modifications, and excavate pipe access shafts.

Completed 28-inch HDPE bypass at Palos Verdes Reservoir

Regional Recycled Water Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $1.19 million

Program Information: The Regional Recycled Water Program includes the design and construction of the Advanced Water Treatment (AWT) Demonstration Plant, which represents the initial step in development of a potential regional recycled water system for recharge of groundwater basins within Southern California.

Program Highlights (2nd Quarter)

Accomplishments

- Advanced Water Treatment Demonstration Facility
  - Completed demo plant shutdown event to support future testing
  - Continued updating record drawings to incorporate recent improvements
- Direct Potable Reuse (DPR) Demonstration Facility
  - Completed desktop modeling and bench-scale testing
  - Reviewed updated draft DPR regulation for pilot testing and full-scale implementation

Upcoming Activities

Upcoming work for the next quarter will include:

- Advanced Water Treatment Demonstration Facility
  - Initiate tertiary MBR optimization testing to support the planning and design of a full-scale advanced purification facility
  - Continue updating record drawings to incorporate recent improvements
- Direct Potable Reuse Demonstration Facility
  - Complete bench-scale test analysis
  - Initiate preparation of a bench-scale testing report
  - Initiate development of a DPR pilot test plan
  - Initiate site improvements planning to support DPR testing

Right-Of-Way and Infrastructure Protection Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $1.62 million

Program Information: The Right of Way Infrastructure Protection Program (RWIPP) is comprised of projects to refurbish or upgrade above-ground facilities and right-of-way along Metropolitan's pipelines to address access limitations, erosion-related issues, and security needs.

Program Highlights (2nd Quarter)

Accomplishments

- Los Angeles County Region – Stage 1
  - Initiated final design

Upcoming Activities

Upcoming work for the next quarter will include:

- Los Angeles County Region – Stage 1
  - Continue final design
- Riverside and San Diego County Region – Stage 1
  - Continue final design for urgent rehabilitation of one site along San Diego Pipeline No. 4

System Flexibility/Supply Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $40.29 million

Program Information: The System Flexibility/Supply Reliability Program is comprised of projects to increase the capacity and flexibility of Metropolitan's water supply and delivery infrastructure to meet service demands. Projects under this program address climate change affecting water supply, regional drought, and alternative water sources for areas dependent on State Project Water.

Program Highlights (2nd Quarter)

Accomplishments

- Badlands Tunnel Surge Protection Facility
  - Awarded a construction contract
- Inland Feeder/Rialto Pipeline Intertie
  - Continued construction
- Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pump Station Intertie
  - Continued final design, right-of-way acquisition, CEQA, and permitting activities
  - Continued procurement of two 54-inch diameter butterfly valves
  - Opened bids for procurement of a 132-inch diameter butterfly valve
- Perris Valley Pipeline I-215 Tunnel Crossing
  - Began excavation for the tunnel shafts
- Sepulveda Feeder Pump Stations
  - Initiated Phase 1 design under a progressive design-build services agreement
- Wadsworth Pumping Plant Bypass Pipeline
  - Continued construction
- West Area Supply and Delivery Alternatives
  - Continued a series of workshops with member agencies to further develop and evaluate alternatives for a potential east-west regional conveyance

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue progress on four individual projects to allow the delivery of water from Diamond Valley Lake to the Rialto Pipeline
  - Badlands Tunnel Surge Tank Facility: Continue construction
  - Inland Feeder/Rialto Pipeline Intertie: Continue construction
  - Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pump Station Intertie: Continue valve procurement and complete permit and right-of-way acquisition
  - Wadsworth Pumping Plant Bypass Pipeline: Continue construction
- Perris Valley Pipeline I-215 Tunnel Crossing
  - Continue construction
- Sepulveda Feeder Pump Stations
  - Continue Phase 1 progressive design-build

Wadsworth Pumping Plant Bypass Pipeline

Total Project Estimate:
$21.2 million

Total Project Cost to Date:
$7.6 million

This project will construct a bypass pipeline between the Wadsworth Pumphouse Conduit and the Eastside Pipeline to allow continuous pumping of water from DVL Forebay into the Eastside Pipeline while filling the forebay with water from DVL at the same time. This project is part of the Rialto Pipeline Water Supply Reliability Improvements, a series of drought response projects.

Phase	Construction
% Complete for Construction	30%
Construction Contract Award Date	January 2023
Estimated Construction Completion Date	June 2024
Contract Number	2020

The contractor continued submittals, continued installation of the 18-inch diameter reinforced concrete pipe drain, continued rerouting of existing utilities, and completed placing mass concrete for 96-inch diameter bypass pipeline encasement. In the upcoming quarter, the contractor will complete installation of the 18-inch diameter reinforced concrete pipe drain and place concrete for 96-inch pipe.

Placing concrete pipeline encasement for 96-inch diameter bypass pipeline

System Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Sep. 2023) $61.67 million

Program Information: The System Reliability Program is comprised of projects to improve or modify facilities located throughout Metropolitan's service area to utilize new processes and/or technologies and improve facility safety and overall reliability. These include projects related to Metropolitan's Supervisory Control and Data Acquisition (SCADA) system and other Information Technology projects.

Program Highlights (2nd Quarter)

Accomplishments

- Control System Upgrade – Phase 3
  - Completed equipment installation for pilot control cabinet testing at Mills Water Treatment Plant
  - Conducted functional testing
- Datacenter Backup Infrastructure Upgrade
  - Initiated design
- Desert Microwave Site Tower Upgrades
  - Continued receiving equipment
- Enterprise Data Analytics
  - Completed vendor selection
- Headquarters Building Fire Sprinkler Level P1 Replacement
  - Continued construction
- Headquarters Building Physical Security Improvements - Stage 3
  - Continued construction
- Headquarters Network Switch Replacement
  - Began equipment installation
- Headquarters Video Room Upgrades
  - Continued construction

Upcoming Activities

Upcoming work for the next quarter will include:

- Control System Upgrade – Phase 3
  - Complete functional testing
  - Review pilot test results
- Applications-Servers Upgrade
  - Plan board action to authorize purchase agreement to continue migration and upgrade applications in batches
- Desert Microwave Site Tower Upgrades
  - Begin planning hardware installation
- Headquarters Building Fire Sprinkler Level P1 Replacement
  - Complete construction
- Headquarters Building Physical Security Improvements - Stage 3
  - Continue construction

- Headquarters Fire Alarm & Smoke Control Upgrades
    - Obtain final sign-off by fire department and building department of new fire alarm and smoke control system upgrades
- Headquarters Network Switch Replacement
    - Continue equipment installation
- Headquarters Video Room Upgrades
    - Continue construction
- Security Operations Center MWD Cyber Security Upgrade – Stage 1
    - Continue software configuration

Gene Communication System Upgrade

Total Project Estimate:
$2.89 million

Total Project Cost to Date:
$0.62 million

This project will install a two-mile-long fiber optic line connecting Parker Dam to the Gene Pumping Plant. This includes the addition of twenty-two new wooden poles and the placement of 1,400 linear feet of buried electrical duct bank of which 600 feet will be directionally bored to minimize traffic impacts as the alignment crosses a public street.

Phase	Construction
% Complete for Construction	5%
Construction Contract Award Date	November 2023
Estimated Construction Completion Date	September 2024
Contract Number	1976

A construction contract was awarded in December. In the upcoming quarter, the contractor will begin mobilization and prepare submittals.

Existing communication line on wooden poles

Treatment Plant Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $86.18 million

Program Information: The Treatment Plant Reliability Program is comprised of projects to replace or refurbish facilities and components of Metropolitan's five water treatment plants to continue to reliably meet treated water demands.

Program Highlights (2nd Quarter)

Accomplishments

- Completed construction for the following project:
  - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades
- Continued construction for the following projects:
  - Jensen Ozone PSU Replacement – Stage 1
  - Mills Electrical Upgrades – Stage 2
  - Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation
- Continued equipment procurement for the following project:
  - Diemer Power and Distribution Panel Upgrade
- Continued final design for the following project:
  - Weymouth Administration Building Upgrades
- Continued preliminary design of the following projects:
  - Diemer Filter Rehabilitation
  - Diemer Washwater Reclamation Plant Improvements & Slope Stabilization
  - Jensen Finished Water Reservoir Rehabilitation
  - Jensen Reservoir Bypass Gate Replacement
  - Jensen Solids Mechanical Dewatering Facility
  - La Verne Water Quality Laboratory Building Upgrades
  - Mills Finished Water Reservoir Rehabilitation
  - Mills Perimeter Security & Erosion Control Improvements

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue construction of the following projects:
  - Jensen Ozone PSU Replacement – Stage 1
  - Mills Electrical Upgrades – Stage 2
  - Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation
- Continue equipment procurement for the following project:
  - Diemer Power and Distribution Panel Upgrade
- Continue final design for the following project:
  - Weymouth Administration Building Upgrades

- Continue preliminary design of the following projects:
    - Diemer Filter Rehabilitation
    - Diemer Washwater Reclamation Plant Improvements & Slope Stabilization
    - Jensen Finished Water Reservoir Rehabilitation
    - Jensen Reservoir Bypass Gate Replacement
    - Jensen Solids Mechanical Dewatering Facility
    - La Verne Water Quality Laboratory Building Upgrades
    - Mills Finished Water Reservoir Rehabilitation
    - Mills Perimeter Security & Erosion Control Improvements

Mills Electrical Upgrades – Stage 2

Total Project Estimate:
$18.5 million

Total Project Cost to Date:
$8.5 million

This project will add a second incoming 12kV service from the Riverside Public Utilities, upgrade the plant's main medium voltage switchgear, and replace the standby generator switchgear and the emergency generator programmable logic controller.

Phase	Construction
% Complete for Construction	45%
Construction Contract Award Date	November 2021
Estimated Construction Completion Date	March 2025
Contract Number	1990

The contractor completed installation of underground site work, expansion of Riverside Public Utility switchyard, and expansion of the ozone switchgear building. In the upcoming quarter, the contractor will begin installing the new HVAC and electrical conduits inside the ozone switchgear building and the Riverside Public Utility will begin installing the transformer inside the Riverside Public Utility switchyard.

Expanded Riverside Public Utility switchyard for the second utility service for the Mills plant

Water Quality Program

Actual Biennium Expenditures (Jul. 2022 through Dec. 2023) $0.00 million

Program Information: The Water Quality Program is comprised of projects to add new facilities to ensure compliance with water quality regulations for treated water, located at Metropolitan's treatment plants and throughout the distribution system.

Program Highlights (2nd Quarter)

Accomplishments

- Mills Enhanced Bromate Control Facilities
  - Continued final design

Upcoming Activities

Upcoming work for the next quarter will include:

- Mills Enhanced Bromate Control Facilities
  - Continue final design

Minor Capital Projects Program

The Minor Capital Projects (Minor Cap) Program is authorized biennially to enable staff to expedite small capital projects. At the commencement of each biennium, the Board had appropriated the entire two-year budget for the program. For the current and the last biennia, the minor cap budget was included in the CIP appropriation. To be considered for inclusion in the Minor Cap Program, a project must have a planned budget of less than $400,000. The $400,000 project budget cap was first established by the June 2018 board action Item 8-3 and the same cap is applied for the new minor caps that are approved for the current biennium. Prior to that action, the budget cap for minor cap projects was $250,000.

The duration of minor capital projects typically ranges from a few months to three years. Since many of these projects require rapid response to address unanticipated failures, safety, or regulatory compliance concerns, or to take advantage of shutdown opportunities, the Minor Cap Program authorizes the General Manager to execute projects that meet defined criteria without seeking additional board approval.

For the past three biennia the two-year budgets for the Minor Cap Program have been $10 million, $15.5 million, and $20 million respectively. In April 2022, the Board appropriated funds for the projects identified in the CIP appendix for the current biennium, FYs 2022/23–2023/24, including the Minor Cap Program. A total of $15 million has been allocated for the current biennium to date, including $5 million allocated during the 1st Quarter of FY 2023/24.

Minor Cap Program Historical Summary

The following table provides the overall status of the Minor Cap appropriations for the fiscal years 2016/17–2017/18 through fiscal years 2022/23–2023/24.

Table 4: Minor Capital Projects Program

	Fiscal Year				Totals*
	2016/17–2017/18	2018/19–2019/20	2020/21–2021/22	2022/23–2023/24	
Amount Appropriated	$10M	$15.5M	$20M	$15M	$60.5M
Expenditures (through December 2023)	$7.2M	$12.4M	$9.1M	$4.3M	$33.0M
Number of Projects Approved	41	48	52	40	181
Number of Projects Completed (through December 2023)	41	42	13	0	96
Number of Projects with Durations of Over 3 Years	0	6	8	0	14

* Numbers may not sum due to rounding.

Through December 2023, 96 of the 181 projects have been completed, and 14 active projects have exceeded three years in duration, as described below.

- Central Basin CNB-48 Service Connection Access Improvement was impacted by ongoing supply chain delays. Procurement of the valves is underway. The project is scheduled to be completed by March 2024.
- CRA SCADA Network Switch Replacement has been experiencing delays due to longer lead time on network switches than anticipated resulting from supply chain issues. Construction has been completed. Additional time is required to pay vendor invoices and complete project closure documents. The project is scheduled to be completed by January 2024.
- Dominguez Channel Pressure Release Structure Rehabilitation has been experiencing delays due to longer than anticipated lead time for valve manufacturing and delivery. The project is scheduled to be completed by June 2024.
- Eagle Mountain CRA Employee Housing experienced delays due to delivery of materials. Construction has since been completed. Additional time is required to pay vendor invoices and complete project closure documents. The project is scheduled to be completed by January 2024.
- East Valley Feeder Vaults Upgrades has been experiencing delays due to additional time required to acquire permits from an external agency. The project is scheduled to be completed by March 2024.
- F-01 Service Connection Check Valve Replacement has been experiencing delays due to shutdown rescheduling. The project is scheduled to be completed by June 2024.
- Garvey Reservoir Sodium Hypochlorite Tank Replacement experienced delays due to the Texas deep freeze event of 2021, which caused power and resin supply chain disruptions, and delivery of the new tank was delayed. The tank has been installed and is now in service. Additional time is required to complete record drawings and project closure documents. The project is scheduled to be completed by February 2024.
- Gene Inlet Surge Chamber Access Improvement has experienced delays due to re-scheduling of the installation of a recently fabricated hatch cover, which can only occur when Gene Wash Reservoir water level is lowered. Metropolitan forces plan to complete the installation during the 2026 CRA shutdown. The project is now scheduled to be completed by April 2026.
- Lake Mathews Lighting Improvements experienced delays due to camera procurement. All lights and cameras have since been installed. Additional time is required to pay the vendor invoice and complete project closure documents. The project is scheduled to be completed by January 2024.
- OC-89 and OC-90 Flow Meter Replacement experienced related to equipment procurement. Procurement has been completed. Additional time is required to complete installation and project closure documents. The project is scheduled to be completed by April 2024.
- Rialto Feeder Valve Replacement experienced related to equipment procurement. Construction is underway. Additional time is required to perform testing, pay vendor invoices and complete project closure documents. The project is scheduled to be completed by April 2024.
- San Fernando Railroad Crossing Rehabilitation has experienced delays due to required analyses of the extent of the improvements required. As a result, the scope would be larger than expected and the project will be implemented as a regular capital project. This project is scheduled to be cancelled and closed by February 2024, upon completion of the project closing documents.
- Sepulveda Feeder Stray Current Drain Station Installation & Rehabilitation has experienced delays due to longer than anticipated time for review/approval of permit applications by the City of Los Angeles and Los Angeles Department of Transportation. The project is scheduled to be completed by March 2024.
- Weymouth Middle Feeder Chlorination Structure Rehabilitation has experienced delays due to longer than anticipated time for delivery of materials and re-scheduling of the equipment installation. Construction is complete and the project is scheduled to be completed by January 2024 after the completion of project closeout activities.

Minor Cap Projects, 2nd Quarter

Authorized Projects

Seven projects were authorized under the Minor Cap Program during the 2nd Quarter of fiscal year 2023/24 (October through December 2023). The total amount authorized for these projects was $1,900,000.

- Distribution System Enhancements to Address Nitrification – This project will enhance Metropolitan's treated water distribution system to mitigate nitrification events by installing chemical injection points and supporting equipment and infrastructure at three locations including one on Allen-McColloch Pipeline, one at Coastal Junction Pressure Control Structure on the East Orange County Feeder No. 2, and one on Palos Verdes Feeder. The project budget is $380,000.
- Lake Skinner Bottom Outlet Structure Refurbishment – This project will refurbish an existing 36-inch diameter Howell-Bunger valve at Lake Skinner's bottom outlet structure, replace the seal for a 96-inch diameter butterfly valve, and reline other components for the structure. The project budget is $325,000.
- Metropolitan Headquarters Courtyard Improvements – This project will provide improvements to Metropolitan Headquarters courtyard including replacement of deteriorated grout, joint sealant, and decorative stones in an around the courtyard and courtyard fountain. The project budget is $225,000.
- Skinner Chlorine Building UPS Replacement – This project will replace an obsolete uninterruptable power supply (UPS) system and associated hardware inside the Skinner plant's chlorine building to enhance chlorine system reliability. The project budget is $95,000.
- Skinner Plant Eyewash Stations Rehabilitation – This project will install new safety hardware and accessories for all safety shower and eyewash stations at Skinner Plant and adjacent property. The project will also replace one pressure regulating valve upstream of eyewash stations at the plant ozone building. The project budget is $210,000.
- Upper Feeder Station 762+50 Dewatering Location Upgrade – This project will place a concrete pad for dewatering equipment at the Upper Feeder station 762+45 to improve the dewatering process and station maintenance. The project budget is $300,000.
- Weymouth Filter Building No. 2 and CFE Turbidimeters Replacement – This project will replace existing obsolete turbidimeters, turbidity controllers, and appurtenant equipment for Filter Building No. 2 and the Combined Filter Effluent (CFE) at the Weymouth plant to enhance water quality monitoring reliability. The project budget is $365,000.

Completed Projects

Two projects were completed under the Minor Cap Program during the 2nd Quarter of fiscal year 2023/24 (October through December 2023):

- Gene Pool Refurbishment
- Skinner Plant 1 Traveling Bridge Control System Upgrade

Canceled Projects

None

Expenditures

Actual biennium expenditures to date (July 2022 through December 2023) for the Minor Capital Projects Program were $7.70 million.

Project Actions

Table 5 lists capital project actions authorized by the General Manager along with funding allocation amounts during the 2nd Quarter of FY 2023/24, through the authority delegated by the Board in April 2022. The total funding amount authorized during the 2nd Quarter is $56,517,000 through twenty-four management actions. In some case listed below, the Total Amount Authorized may differ from the Amount Authorized for Current Biennium when the work authorized is scheduled to extend beyond the current biennium. In these cases, it is anticipated that staff will request sufficient funds to be allocated from the CIP Appropriation for the next biennium to cover the planned remaining future-year costs of the project. When the Amount Authorized for Current Biennium is equal to the Total Amount Authorized, the authorized work is planned to be completed within the current biennium. Table 5 excludes any board items heard in closed session and minor cap authorizations. Minor cap authorizations can be found in the Minor Capital Projects Program section of this report.

Table 5: Capital Projects Funded in 2nd Quarter

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Auld Valley and Red Mountain Control Structure Upgrades	Study to Rehabilitate a 42-inch Sleeve Valve for Auld Valley Control Structure	$400,000	$915,000
CIP Budget System Improvements[2]	Additional Design, Development, and Deployment	$134,000	$134,000
CRA Pumping Plants 6.9 kV Power Cable Replacement[3]	Additional Legal Services	$700,000	$1,000,000
CRA Pumping Plants Lower Guide Access Improvements	Preliminary and Final Design	$500,000	$1,220,000
Diemer Basin 8 Slope Toe Improvement	Final Design	$300,000	$1,400,000
Diemer Filter Rehabilitation	Final Design and Procurement	$200,000	$3,020,000
Distribution System Online Analyzers Replacement	Final Design	$150,000	$150,000
Freda Siphon Barrel No. 1 Internal Seal Installation	Construction	$5,050,000	$5,300,000
Gene Communications System Upgrade	Construction	$1,200,000	$2,280,000
Jensen Administration Building Column Panel Replacement	Design and Construction	$488,900	$530,000

[2] Additional funds were required for the enhancement of InVizion CIP Planning software for more efficient and expeditious budget analysis.

[3] Additional funds were required for legal services authorized per September 2023 Board letter Item 8-5 heard in closed session.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Jensen Plant Site Security Upgrades[4]	Procurement and Additional Final Design	$900,000	$960,000
La Verne Water Quality Laboratory Building Upgrades[5]	Procurement and Additional Preliminary Design	$0	$2,300,000
LA-17A and LA-17C Venturi Flowmeter Replacement	Final Design	$250,000	$557,000
Lake Skinner Outlet Tower Butterfly Valve Replacement	Procurement and Construction	$340,000	$2,170,000
Lake Skinner Outlet Tower Seismic Upgrade[6]	Additional Study	$1,229,000	$1,290,000
Orange & Riverside / San Diego County Operating Regions Valve Replacement	Stage 1- Procurement	$464,000	$860,000
San Diego Canal Concrete Liner Rehabilitation	Construction	$2,500,000	$5,400,000
San Gabriel Tower Seismic Upgrade[7]	Inlet Gate Frame Restoration and Additional Preliminary Design	$1,300,000	$3,211,000
Sepulveda Feeder Pump Stations	Phase 1 Progressive Design-Build	$7,457,000	$15,800,000
Service Connection EM-24 Meter Replacement	Procurement and Construction	$220,000	$220,000
Skinner Chemical Storage Tanks Replacement	Design and Procurement	$45,000	$600,000
Upper Feeder Exp Joint Upgrade	Inspection and Structural Methodology Development	$225,000	$245,000
Webb Tract Multi-Benefit Landscape Project	Design, Environmental Documentation, Permitting, and Monitoring Equipment Procurement	$2,160,000	$6,735,000

[4] Additional final design funds were required to incorporate additional cameras and security equipment recommended at a recent security stakeholders workshop to enhance security at the Jensen plant.

[5] Additional preliminary design funds were required to perform additional structural analysis, and update the latest building layouts and equipment requirements per the outcome of a recent layout options evaluation.

[6] Additional study funds were required to conduct a detailed structural analysis of the outlet tower to better characterize tower performance under a major earthquake using current seismic evaluation tools.

[7] Additional funds were required for additional investigation, inspection, condition assessment, value engineering, environmental documentation, preliminary design, and cost estimating to complete the preliminary design.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Zero Emissions Fleet Pilot Infrastructure	Study, Design, and Construction	$168,000	$220,000
Total		**$26,380,900**	**$56,517,000**

Due to changes to the project implementation schedules or completion of projects under budget, $28,000,000 was reallocated back to the CIP Appropriation (Appropriation No. 15525) from the previously authorized projects listed in Table 6 below. The reallocated funds were used to fund the projects listed in Table 5 and will be used to support the upcoming projects in the current biennium.

Table 6: General Manager Actions to Reallocate Capital Project Funds

Project Authorized (Title)	Amount Authorized for Reallocation to CIP Appropriation
Arc Flash Model Development	($2,000,000)
Foothill Hydroelectric Plant Rehabilitation	($3,000,000)
La Verne Water Quality Laboratory Building Upgrades	($3,000,000)
Mills Plant Control System Upgrade	($8,000,000)
Mills Electrical Upgrades - Stage 2	($5,000,000)
Payroll and Timekeeping System Upgrade	$1,000,000
Weymouth Treatment Basins Nos. 5-8 and Filter Building No.2 Rehabilitation	($8,000,000)
Total:	**($28,000,000)**

CEQA Determinations

Table 7 lists CEQA exemption determinations made by the General Manager during the 2nd Quarter. Consistent with CEQA, the Board delegated this authority to the General Manager in April 2022. Adoption of Negative Declarations, Mitigated Negative Declarations, and certification of Environmental Impact Reports will continue to require action by Metropolitan's Board. This table excludes information on board items.

Table 7: CEQA Exemption Determinations

Projects
Diemer Helicopter Hydrant Facility
Gene Security Improvements

Construction and Procurement Contracts

The table below summarizes the status of all construction and procurement contracts that were awarded by the Board and active during the reporting quarter. These contracts are listed in Table 10 and Table 11. Total contract earnings for the 2nd Quarter were approximately $41.59 million.

Table 8: 2nd Quarter Contract Action

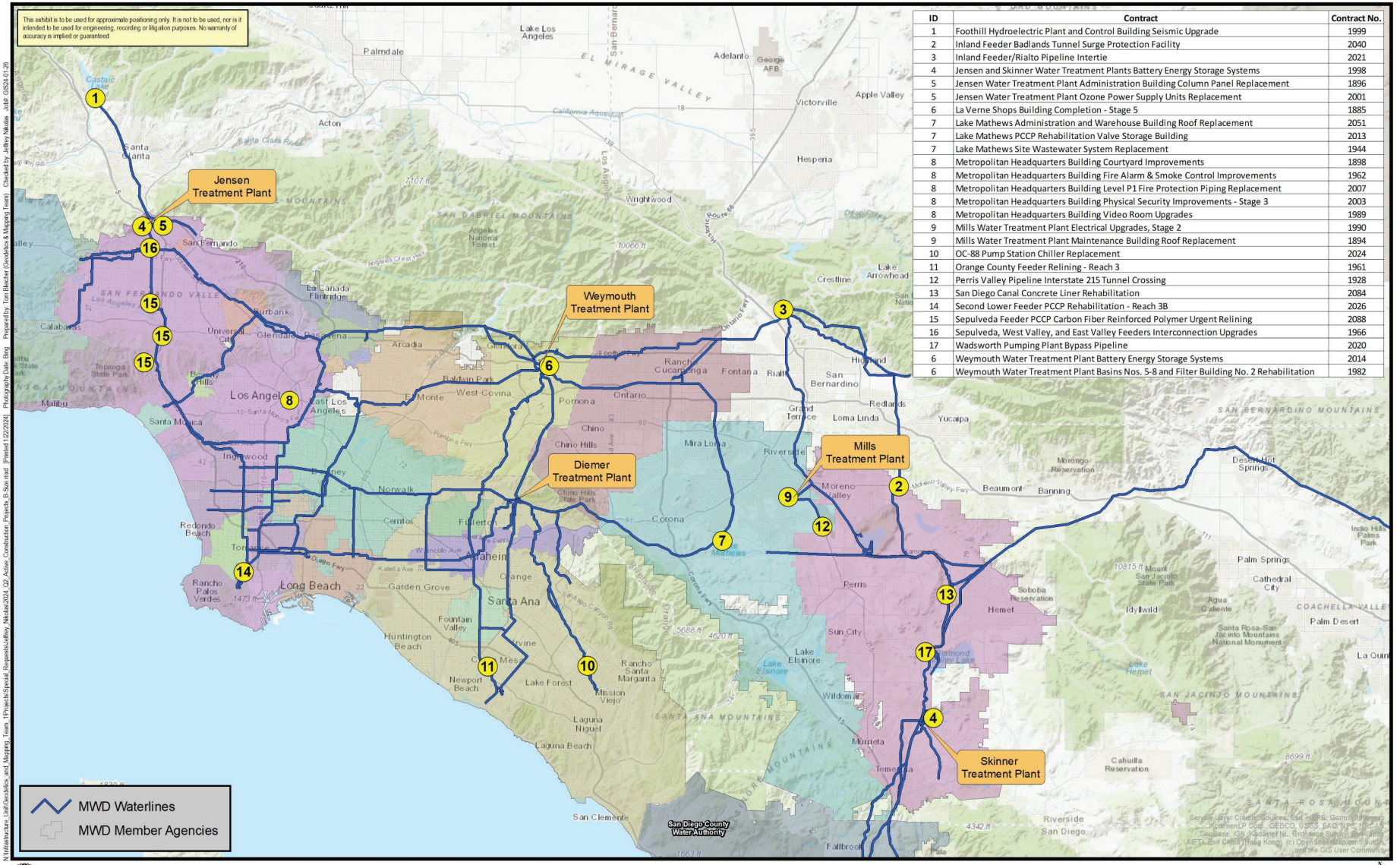
Contract Actions during Q2 for FY 2022/2023, October 2023 through December 2023	
Contracts Awarded by Board	4 construction contracts totaling $24.74 million (Table 9) 2 procurement contracts totaling $16.75 million (Table 9)
Total Payments Authorized	$41.59 million
Construction Contracts Completed	No Notices of Completions were filed
Procurement Contracts Delivery Completed	Delivery of all items completed for 1 procurement contract[8]
Active Contracts at end of Q2[9]	34 construction contracts, totaling $470.04 million (Table 10) 19 procurement contracts, totaling $72.52 million (Table 11) $542.55 million total value*

*Numbers may not sum due to rounding.

The figures on the next two pages show the locations of the thirty-four construction contracts that were active through the end of the 2nd Quarter.

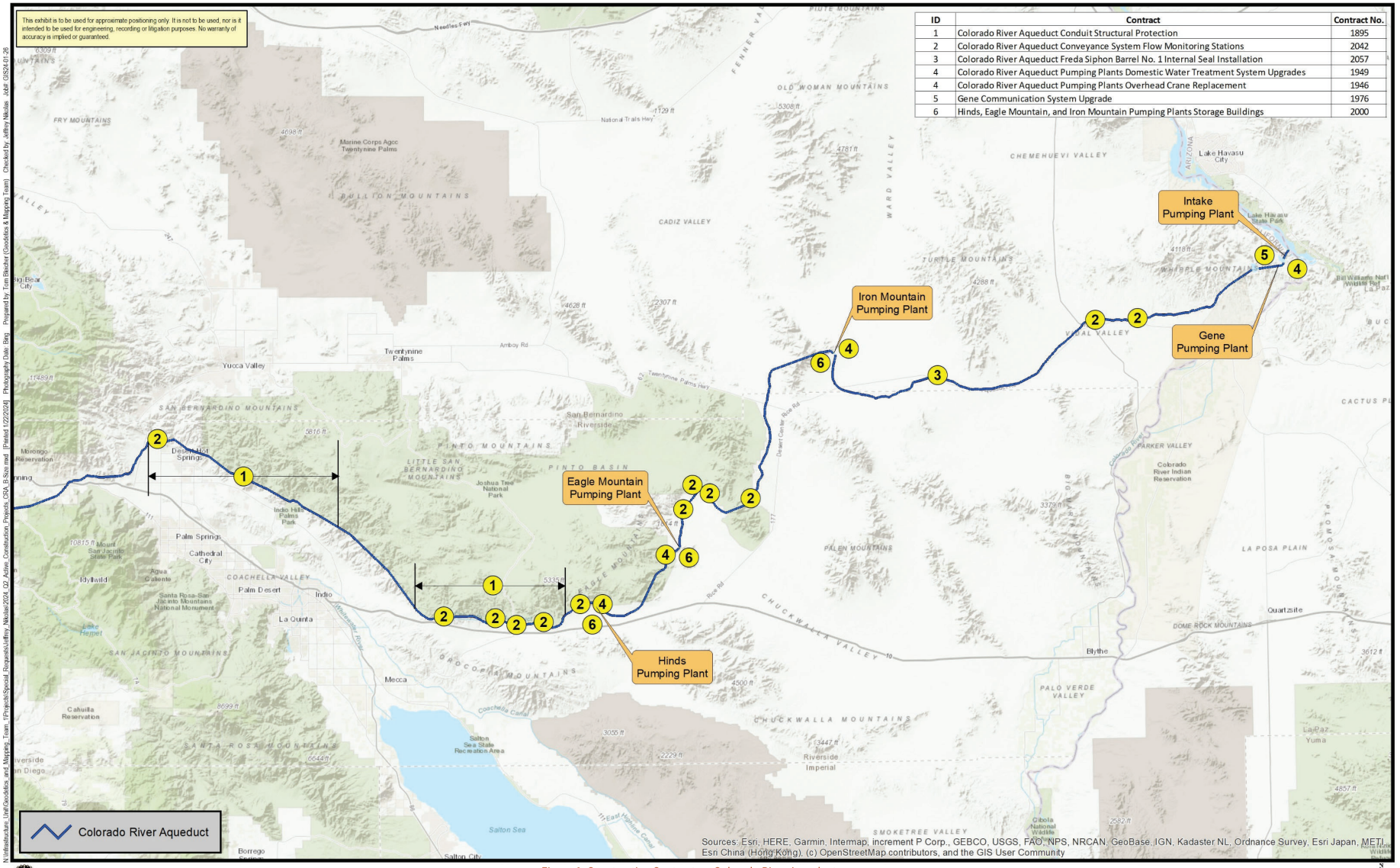
[8] Contract 2012 – Furnishing Electrical Panels for Diemer Treatment Plant was completed during the reporting quarter

[9] Active contracts at the end of the 2nd Quarter are those that are ongoing at the end of December 2023 and have not filed Notice of Completion with the county where the work was performed.



ID	Contract	Contract No.
1	Foothill Hydroelectric Plant and Control Building Seismic Upgrade	1999
2	Inland Feeder Badlands Tunnel Surge Protection Facility	2040
3	Inland Feeder/Rialto Pipeline Intertie	2021
4	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	1998
5	Jensen Water Treatment Plant Administration Building Column Panel Replacement	1896
5	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	2001
6	La Verne Shops Building Completion - Stage 5	1885
7	Lake Mathews Administration and Warehouse Building Roof Replacement	2051
7	Lake Mathews PCCP Rehabilitation Valve Storage Building	2013
7	Lake Mathews Site Wastewater System Replacement	1944
8	Metropolitan Headquarters Building Courtyard Improvements	1898
8	Metropolitan Headquarters Building Fire Alarm & Smoke Control Improvements	1962
8	Metropolitan Headquarters Building Level P1 Fire Protection Piping Replacement	2007
8	Metropolitan Headquarters Building Physical Security Improvements - Stage 3	2003
8	Metropolitan Headquarters Building Video Room Upgrades	1989
9	Mills Water Treatment Plant Electrical Upgrades, Stage 2	1990
9	Mills Water Treatment Plant Maintenance Building Roof Replacement	1894
10	OC-88 Pump Station Chiller Replacement	2024
11	Orange County Feeder Relining - Reach 3	1961
12	Perris Valley Pipeline Interstate 215 Tunnel Crossing	1928
13	San Diego Canal Concrete Liner Rehabilitation	2084
14	Second Lower Feeder PCCP Rehabilitation - Reach 3B	2026
15	Sepulveda Feeder PCCP Carbon Fiber Reinforced Polymer Urgent Relining	2088
16	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	1966
17	Wadsworth Pumping Plant Bypass Pipeline	2020
6	Weymouth Water Treatment Plant Battery Energy Storage Systems	2014
6	Weymouth Water Treatment Plant Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation	1982

Figure 5: Construction Contracts – Greater Los Angeles Region



ID	Contract	Contract No.
1	Colorado River Aqueduct Conduit Structural Protection	1895
2	Colorado River Aqueduct Conveyance System Flow Monitoring Stations	2042
3	Colorado River Aqueduct Freda Siphon Barrel No. 1 Internal Seal Installation	2057
4	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Upgrades	1949
4	Colorado River Aqueduct Pumping Plants Overhead Crane Replacement	1946
5	Gene Communication System Upgrade	1976
6	Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings	2000

The Metropolitan Water District of Southern California
Engineering Services Group

Figure 6: Construction Contracts – Colorado River Aqueduct

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 original 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 the Board is required. In addition, the General Manager is authorized to execute change orders on procurement contracts in an amount not to exceed $250,000. In the 2nd Quarter, the Board authorized an increase of $3,100,000 in change order authority for construction Contract No. 1946 to replace the overhead bridge cranes at the five Colorado River Aqueduct pumping plants. The increase will support the work to abate lead-containing materials encountered in the construction area. The expenditures for the abatement work will be funded by Metropolitan's operations and maintenance funds instead of the CIP funds per the provisions of Governmental Accounting Standards Board.

Notices of Completion during 2nd Quarter:

During the 2nd Quarter of FY 2023/24, no board-awarded construction contracts were accepted as completed and filed a Notice of Completion (NOC) with the county where the work was performed. In accordance with Section 9204 of the Civil Code of the State of California, an NOC is filed within 15 days of acceptance by Metropolitan of completion of construction by the contractor.

The final contract costs can differ from the original bid amount due to change orders and actual costs incurred on unit price or other various bid items. The rolling average of change orders on completed construction contracts during the preceding 12-month period (January 2023 through December 2023) is –0.16 percent[10].

Contracts Awarded by the Board during 2nd Quarter:

During the period of October through December 2023, four construction contracts totaling $24,735,909 and two procurement contracts totaling $16,753,500 were awarded by the Board.

Table 9: Construction and Procurement Contracts Awarded This Quarter

Construction Contracts	
Gene Communication System Upgrade	
Contract Number	1976
Contractor	HP Communications, Inc.
Amount	$1,244,935
Inland Feeder Badlands Tunnel Surge Protection Facility	
Contract Number	2040
Contractor	Steve P. Rados, Inc.
Amount	$18,840,000
Metropolitan Headquarters Courtyard Improvements	
Contract Number	1898
Contractor	Access General Contracting Inc.
Amount	$250,974
San Diego Canal Concrete Liner Rehabilitation	
Contract Number	2084
Contractor	Bosco Constructors, Inc.
Amount	$4,400,000

[10] Original amount of construction contracts completed (Jan. 2023 through Dec. 2023) = $ 53,184,341
Change orders for completed construction contracts (Jan. 2023 through Dec. 2023) = ($ 84,963)
Change order percentage (Jan. 2023 through Dec. 2023) = (0.16%)

Note that this rolling average of change orders excludes Contract 1905–Metropolitan Headquarters Building Improvements and Contract 1908-CRA Pumping Plants – Sump Rehabilitation since each contract had significant owner-directed additive and deductive change orders (+16% and -49%, respectively) that would skew the 12-month rolling average.

Procurement Contracts	
Furnishing Steel Liner for Lakeview Pipeline	
Contract Number	2002
Contractor	Northwest Pipe Company
Amount	$16,055,500
Furnishing Five Globe Valves for the Orange County Region	
Purchase Order Number	219501
Contractor	B&K Valves and Equipment, Inc.
Amount	$698,000

The table on this page lists the 34 ongoing construction contracts through the end of the 2nd Quarter. This list contains construction contracts awarded by the Board.

Table 10: Active Construction Contracts at the End of 2nd Quarter

	Cont. No.	Contract Title	Contractor	Contract Amount[11]	Earnings Through December 2023[12]	Start Date	Est. Completion Date	Est. Percent Complete
1	1885	La Verne Shops Building Completion – Stage 5	Woodcliff Corporation, Inc.	$18,930,000	$15,408,200	6/10/22	6/24	81%
2	1894	Mills Plant Maintenance Building Roof Replacement	Bishop, Inc.	$456,979	$441,479	10/12/22	1/24	96%
3	1895	Colorado River Aqueduct Conduit Structural Protection	Granite Construction Company	$8,656,568	$3,126,648	5/11/23	1/25	36%
4	1896	Jensen Admin. Bldg. Entrance Glass Fiber Reinforced Concrete Panels Replacement	MMJ Contracting, Inc.	$281,900	$105,898	7/14/23	4/24	38%
5	1898	Metropolitan Headquarters Courtyard Improvements	Access General Contracting	$250,974	$0	1/25/24	7/24	0%
6	1928	Perris Valley Pipeline Interstate 215 Tunnel Crossing	James W. Fowler, Company	$59,489,720	$18,766,948	2/13/23	2/25	32%
7	1944	Lake Mathews Reservoir Wastewater System Replacement	Creative Home dba CHI Construction	$4,010,000	$3,867,133	12/13/21	3/24	96%
8	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	$13,889,204	$10,483,766	10/14/20	6/24	75%
9	1949	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement	J.F. Shea Construction, Inc.	$32,869,737	$11,706,439	1/20/22	3/25	36%

[11] The Contract Amount may differ from the original bid amount due to periodic change orders approved by the General Manager or, if required, by the Board.

[12] Earnings reported in this table are the total contract earnings as they are known to be at the end of the reporting quarter.

	Cont. No.	Contract Title	Contractor	Contract Amount[11]	Earnings Through December 2023[12]	Start Date	Est. Completion Date	Est. Percent Complete
10	1961	Orange County Feeder Relining – Reach 3[13]	Spiniello Infrastructure West, Inc.	$17,226,250	$16,414,851	5/11/22	2/24	95%
11	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements[13]	Bernards Bros. Inc.	$14,270,565	$13,074,205	9/24/20	4/24	94%
12	1966	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	Blois Construction, Inc.	$3,143,592	$2,219,861	7/7/22	3/24	71%
13	1976	Gene Communication System Upgrade	HP Communications, Inc.	$1,244,935	$0	12/14/23	8/24	0%
14	1982	Weymouth Water Treatment Plant Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation	J. F. Shea Construction, Inc.	$94,843,411	$57,084,794	6/10/22	5/25	60%
15	1989	Metropolitan Headquarters Building First Floor Video Suite Renovation	Acro Constructors	$637,520	$403,215	6/15/23	6/24	63%
16	1990	Henry J. Mills Water Treatment Plant Electrical Upgrades, Stage 2	CSI Electrical Contractors, Inc.	$9,371,064	$4,203,961	12/13/21	3/25	45%
17	1998	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems[13]	Ameresco, Inc.	$11,604,521	$4,293,193	10/7/21	11/24	37%
18	1999	Foothill Hydroelectric Power Plant Seismic Upgrade	West Valley Investment Group, Inc.	$6,174,000	$1,894,280	4/27/23	9/24	31%
19	2000	Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings	J. F. Shea Construction, Inc.	$16,490,000	$120,000	7/31/23	4/26	1%
20	2001	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	Leed Electric, Inc.	$2,257,897	$1,225,050	7/20/22	6/24	54%

[13] Granting of additional working days to complete construction is being considered.

	Cont. No.	Contract Title	Contractor	Contract Amount[11]	Earnings Through December 2023[12]	Start Date	Est. Completion Date	Est. Percent Complete
21	2003	Metropolitan Headquarters Building Exterior Physical Security Improvements[13]	Caltec, Corp.	$2,165,000	$1,207,140	1/12/23	5/24	56%
22	2007	Metropolitan Headquarters Building Level P1 Fire Protection Piping Replacement	M.S. Construction Management Group Inc.	$3,740,792	$3,453,810	7/31/23	5/24	92%
23	2013	Lake Mathews PCCP Rehabilitation Valve Storage Building[13]	Facility Builders & Erectors, Inc.	$4,784,022	$4,654,774	3/10/22	4/24	97%
24	2014	Weymouth Plant Battery Energy Storage System[13]	Siemens Industry, Inc.	$6,176,521	$2,647,731	7/18/22	6/24	43%
25	2020	Wadsworth Pumping Plant Bypass Pipeline	Steve P. Rados, Inc.	$14,820,500	$4,057,107	2/2/23	6/24	27%
26	2021	Inland Feeder/Rialto Pipeline Intertie	Steve P. Rados, Inc.	$15,681,000	$310,000	10/16/23	6/25	2%
27	2024	OC-88 Pump Station Chiller Replacement[13]	Mehta Mechanical Co., Inc. dba MMC Inc.	$2,654,000	$1,339,600	6/6/22	6/24	50%
28	2026	Second Lower Feeder PCCP Rehabilitation - Reach 3B	J.F. Shea Construction, Inc.	$68,847,000	$24,138,515	2/13/23	9/25	35%
29	2040	Inland Feeder Badlands Tunnel Surge Protection Facility	Steve P. Rados, Inc.	$18,840,000	$0	12/11/23	5/25	0%
30	2042	CRA Conveyance System Solar Level Sensor Installation	LEED Electric, Inc.	$5,266,000	$342,782	6/15/23	8/24	7%
31	2051	Lake Mathews Administration and Warehouse Building Roof Replacement	Best Contracting Services, Inc.	$452,886	$8,528	8/10/23	4/24	2%
32	2057	CRA Freda Siphon Barrel No.1 Internal Seal Installation	Miller Pipeline, LLC	$3,895,000	$60,000	10/9/23	5/24	2%

	Cont. No.	Contract Title	Contractor	Contract Amount[11]	Earnings Through December 2023[12]	Start Date	Est. Completion Date	Est. Percent Complete
33	2084	San Diego Canal Concrete Liner Rehabilitation	Bosco Constructors, Inc.	$4,400,000	$0	11/2/23	5/24	0%
34	2088	Sepulveda Feeder PCCP Carbon Fiber Reinforced Polymer Urgent Relining	Structural Preservation Systems	$1,962,691	$0	9/14/23	5/24	0%
Total contract value for active construction contracts:				**$470,035,223**				

The following table lists the 19 ongoing procurement contracts at the end of the 2nd Quarter.

Table 11: Active Procurement Contracts at the End of 2nd Quarter

	Cont. No.	Contract	Contractor	Contract Amount[14]	Earnings Through December 2023[15]	Start Date	Est. Delivery Completion Date	Est. Percent Complete[16]
1	1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	$2,380,909	$2,362,968	9/11/17	D[17]	99%
2	1867[18]	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1	Crispin Valve, LLC	$5,066,975	$3,185,531	12/18/17	4/24	63%
3	1868	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2	DeZurick, Inc.	$771,984	$765,184	12/18/17	D[17]	99%
4	1873	Furnishing One Hydraulic Shear System for the La Verne Maintenance Shops	Landmark Solutions, LLC	$151,870	$146,970	3/21/18	D[17]	97%
5	1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	$23,750,060	$17,562,939	12/24/18	1/25	74%
6	1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	$2,193,356	$2,170,295	9/17/18	D[17]	99%
7	1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limitorque	$3,370,402	$3,370,402	2/16/19	9/24	99%
8	1955	Furnishing Membrane Filtration Systems for the CRA Domestic Water Treatment Systems	Wigen Water Technologies	$1,244,535	$599,970	5/28/20	7/25	48%

[14] The Contract Amount may differ from the original bid amount due to periodic change orders approved by the General Manager or, if required, by the Board.

[15] Earnings reported in this table are the total contract earnings as they are known to be at the end of the reporting quarter.

[16] Estimated Percent Complete is based on contract payments and may not reflect actual progress of fabrication. The contract will be 100% complete upon delivery of fabricated items and field services.

[17] All items were delivered prior to this reporting quarter but contract remains open pending use of manufacturer field services.

[18] Contract 1867 includes tariff and work on Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1 per extra work directed in the November 2020 Board Letter, Item 7-1.

	Cont. No.	Contract	Contractor	Contract Amount[14]	Earnings Through December 2023[15]	Start Date	Est. Delivery Completion Date	Est. Percent Complete[16]
9	1965	Furnishing Equipment for the Jensen Ozone Power Supply Units Upgrades	Suez Treatment Solutions, Inc.	$4,141,194	$3,229,976	3/30/20	D[17]	78%
10	1969	Furnishing Inlet Valve Gearboxes for Skinner Module No. 7	R&B Automation, Inc.	$224,510	$207,035	4/29/20	2/24	92%
11	2002	Furnishing Steel Liner for Lakeview Pipeline	Northwest Pipe Company	$16,055,500	$0	12/14/23	6/24	0%
12	2022	Furnishing Butterfly Valves for the Wadsworth Bypass Pipeline, Inland Feeder-Rialto Pipeline Intertie, and Badlands Tunnel Isolation Surge Tanks	Sojitz Machinery Corp. of America	$5,647,405	$0	10/3/22	9/25	0%
13	2028	Furnishing Slide Gates for the San Jacinto Diversion Structure	Whipps, Inc.	$820,853	$0	12/8/22	6/24	0%
14	2046	Furnishing a 20-inch Triple Offset Ball Valve for Service Connection CB-11	Cascade Consultants, LLC	$407,800	$0	3/8/23	8/24	0%
15	2048	Furnishing Butterfly Valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie - Schedule 1	Sojitz Machinery Corp. of America	$2,601,437	$0	6/15/23	5/26	0%
16	PO 214904	Furnishing Two Butterfly Valves for the Lake Skinner Outlet Tower Valve Replacement	B&K Valves and Equipment, Inc.	$1,174,475	$0	6/13/23	4/24	0%
17	PO 214941	Furnishing Air Release and Vacuum Valves for San Diego Pipeline Nos. 3 and 5	B&K Valves and Equipment, Inc.	$1,466,665	$0	6/13/23	9/24	0%
18	PO 217257	Furnishing 50 Magnetic Flowmeters for Metropolitan's Delta Island Properties	TechnoFlo Systems, Inc.	$349,528	$0	7/1/23	1/24	0%
19	PO 219501	Furnishing of five globe valves to be installed at four pressure control structures in the Orange County region.	B&K Valves and Equipment, Inc.	$698,000	$0	12/5/23	11/24	0%
Total contract value for active procurement contracts:				**$72,517,457**				

Project Labor Agreement

Project Labor Agreement

Metropolitan's Board of Directors adopted a Project Labor Agreement (PLA) in October 2022. PLAs require all contractors – union and non-union – to follow certain labor requirements such as payment of prevailing wages, ensuring worker training and workforce development, supporting apprenticeship programs, and hiring local and transitional workers. PLAs promote the hiring of a skilled and trained workforce, and help avoid labor disputes and work stoppages, to ensure that projects are done on-time, safely, and within budget.

Major Provisions of Metropolitan's Project Labor Agreement

Metropolitan's PLA covers 33 projects over the five-year term of the agreement, including all construction contracts under the Pure Water Southern California Program. These projects equate to approximately 90% of the CIP covered by the PLA, on a cost-basis for the next five years. Major provisions and tenets of the PLA include:

- A 60 percent goal for employment of local workers. The local worker provision covers the entirety of Metropolitan's service area, although the PLA can also be customized on a contract-by-contract basis using first-tier zip codes, which would benefit those who are near the project sites.
- A 15 percent goal for employment of transitional workers (e.g., veterans, recently homeless, those living below poverty line).
- Metropolitan's PLA strikes an important balance with Metropolitan's Business Outreach Program – ensuring PLA coverage of a substantial portion of Metropolitan's public works construction contracts, while preserving the integrity of the Small Business Program.
- A unique core employee carveout, which allows three core employees per craft for non-union prime contrators, providing flexibility for non-union, small, or micro-small businesses with 25 or fewer employees.
- Workforce development benefits including the required use of the nationally recognized Helmets to Hardhats Program, Construction Career Pipeline Program, and the Multi-Core Craft Apprenticeship Readiness Programs.
- Ability to add projects in the future, upon agreement by the Board and the associated trade councils.

Active PLA Contracts

As of December 2023, nine construction contracts totaling approximately $219 million were awarded by the Board which are covered by the PLA.

Table 12: Active PLA Contracts

Contract Number	Contract Title	Contractor	Contract Amount ($ million)	Board Award Date
1928	Perris Valley Pipeline Interstate 215 Crossing	James W. Fowler Company	$59.49	01/23
2026	Second Lower Feeder PCCP Rehabilitation – Reach 3B	J.F. Shea Construction, Inc.	$68.85	01/23
2020	Wadsworth Pumping Plant Bypass Pipeline	Steve P. Rados, Inc.	$14.82	01/23
1895	Colorado River Aqueduct Conduit Structural Protection	Granite Construction Company	$8.66	04/23

Contract Number	Contract Title	Contractor	Contract Amount ($ million)	Board Award Date
1999	Foothill Hydroelectric Power Plant Seismic Upgrade	West Valley Investment Group, Inc.	$6.17	4/23
2000	Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings	J.F. Shea Construction, Inc.	$16.49	7/23
2021	Inland Feeder – Rialto Pipeline Intertie	Steve P. Rados, Inc.	$15.68	9/23
2060	Sepulveda Pump Stations (Phase 1 Progressive Design Build)	J.F. Shea Construction, Inc.	$9.80	9/23
2040	Inland Feeder Badlands Tunnel Surge Protection Facility	Steve P. Rados, Inc.	$18.84	11/23
		Total value of contracts under PLA:	**$222.70**	

At the end of this reporting quarter, PLA administration costs have totaled 1.2% of the total contract costs incurred to date. These administrative costs include both Metropolitan staff and consultants that routinely work with the contractors on the PLA. This percentage includes initial costs associated with the PLA over its first year, to set up project templates and conduct initial training. This percentage is not necessarily indicative of long-term PLA administration costs; it will vary as more projects are awarded under the PLA. Staff continuously monitors the costs for PLA administration, as well as any impacts to biddability of projects, and will update the Board annually in a stand-alone PLA Annual Report.

Major Achievements of the PLA

Since its adoption in October 2022, the PLA has allowed Metropolitan to better engage with the broader contracting community to assist in meeting the requirements of the PLA. The landmark PLA includes labor compliance and wage monitoring requirements, local and transitional hiring goals, use of union-approved apprentices, and a Construction Careers Pipeline Program. Major achievements in this reporting quarter include:

- Performed reoccurring contractor training on contracts subject to the PLA
- Monitored labor compliance and prevailing wage requirements
- Conducted various outreach events, providing information and education on Metropolitan's upcoming PLA projects and business practices:
    - October 4, 2023: Small Contractor Academy Seminar in Moreno Valley
        - This was the last of four seminars training small contractors on various public works contract topics such as PLA and how to bid work.
    - October 10, 2023: Small Contractor Bootcamp at Los Angeles Community College
        - This was a training for small contractors on how to do business with Metropolitan and how small contractors can use the PLA to grow their company.
    - November 13, 2023: Inaugural PLA Labor Agreement Annual Report presented at Metropolitan's Engineering, Operations, and Technology Committee

Performance Metrics

To measure project performance efficiency and to identify areas for continuous improvements, Metropolitan's Engineering Services Group has established two primary performance metrics for projects that will result in construction activities. These metrics serve as performance targets for Metropolitan staff for both final design and inspection activities. The inspection metric includes fabrication and construction inspection, as well as construction management services.

Separate performance targets have been established for two categories of project size: those with projected construction costs greater than $3 million, and those with projected construction costs less than $3 million.

Metropolitan's **performance metric targets** for the two categories of construction projects are listed below:

Project Category	Final Design, % of Construction	Inspection % of Construction
Projects with Construction Costs > $3 Million	9% to 12%	9% to 12%
Projects with Construction Costs < $3 Million	9% to 15%	9% to 15%

Prior to proceeding with final design or construction, budgets are established for design and inspection that best provide a quality and timely product. Efforts are made to optimize staff and consultant hours based on project complexity and location. The calculated values for the design and inspection costs, as a percentage of total construction costs, in most cases lie within or below the metric target ranges. In select cases, the calculated values may exceed the metric target ranges.

Once a project phase is complete, either final design or construction, staff's performance against these metrics is then calculated and compared to the target metrics. Table 13 and Table 14 on the following page summarize the comparison between the target metrics and the actual performance metrics for each project category for the current reporting period. In cases where the actual performance exceeded the target metric, explanations for the variance are provided. Actual performances are reported for the Board awarded construction contract projects.

Table 13: Performance Metric Actuals, Construction Costs > $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
San Diego Canals Concrete Liner Repair	Final Design	$224,362	$4,490,000	9% to 12%	5.0%
Badlands Tunnel Surge Protection Facility	Final Design	$1,525,848	$21,508,000	9% to 12%	7.1%

Table 14: Performance Metric Actuals, Construction Costs < $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Gene Communications System Upgrade	Final Design	$238,618	$1,428,935	9% to 15%	16.7%[19]
Metropolitan HQ Facility Courtyard Improvements	Final Design	$10,000	$266,000	9% to 15%	3.8%

[19] Additional design was necessary as the tie-in to the service provider changed from an overhead pole connection to an underground buried conduit. Extra efforts were expended to investigate nearby utilities, and determine conduit layouts and elevation of tie-in.

Service Connections and Relocations

Service Connections

No new agreements for service connections were approved by the General Manager pursuant to Sections 4700-4708 during the reporting period (October through December 2023).

Relocations

No new relocation agreements involving an amount in excess of $100,000 were approved under the authority of Section 8122(c) during the reporting period.

Projects Expensed to Overhead

There are no expensed projects to report during the 2nd Quarter of FY 2023/24 (October through December 2023).

Program/Appropriation Status

The following table provides the program and appropriation level budget versus cost-to-date and biennium planned expenditures versus actuals-to-date.

Table 15: Program and Appropriation Budget vs. Cost and Planned Expenditures vs. Actuals

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru December 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Colorado River Aqueduct Reliability Program	**Total**	**$554,665**	**$479,586**	**$59,490**	**$54,049**
Cabazon Radial Gate Facility Improvements	15320	$2,456	$1,143	$0	$438
White Water Siphon Protection	15341	$15,585	$14,508	$2,654	$25
CRA - Conveyance Reliability	15373	$117,828	$117,617	$1,916	$1,240
CRA Pumping Plant Reliability	15374	$24,467	$24,012	$0	$9
CRA - Electrical/Power Systems Reliability	15384	$60,465	$55,740	$4,407	$7,250
CRA – Discharge Containment	15385	$8,129	$7,977	$0	$2
CRA - Reliability for FY2006/07 through FY2011/12	15438	$134,194	$124,680	$19,765	$5,209
CRA Main Pump Reliability	15481	$75,500	$67,192	$12,460	$14,135
CRA - Reliability for FY2012/13 through FY2017/18	15483	$88,805	$56,294	$16,182	$20,413
CRA - Reliability for FY2018/19 through FY2023/24	15507	$27,236	$10,422	$2,106	$5,328
Cost Efficiency & Productivity Program	**Total**	**$162,688**	**$115,710**	**$25,085**	**$12,041**
DVL Recreation Facilities	15334	$87,004	$60,236	$3,949	$852
Yorba Linda Power Plant Modifications	15446	$17,125	$17,115	$0	$23
Business Operations Improvement	15484	$18,716	$13,190	$1,926	$2,953
Project Controls and Reporting System	15490	$6,440	$6,292	$0	-$10

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru December 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Enterprise Content Management	15500	$3,600	$3,595	$4,450	$0
DVL Recreation Rehabilitation & Refurbishment	15515	$1,898	$1,382	$150	$470
Energy Sustainability Improvements	15521	$27,905	$13,899	$14,610	$7,755
Dams and Reservoirs Improvements Program	**Total**	**$92,752**	**$72,596**	**$25,450**	**$3,608**
Reservoir Cover and Replacement	15417	$76,830	$62,196	$740	$2,828
Dam Rehabilitation & Safety Improvements	15419	$15,922	$10,400	$24,710	$780
Distribution System Reliability Program	**Total**	**$499,098**	**$452,769**	**$58,450**	**$84,641**
Conveyance and Distribution System - Rehabilitation	15377	$126,196	$122,641	$9,680	$20,897
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12	15441	$155,712	$148,576	$170	$33,088
Hydroelectric Power Plant Improvements	15458	$31,976	$20,406	$5,210	$3,130
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	$139,406	$127,501	$34,710	$13,849
Pipeline Rehabilitation and Replacement	15482	$1,143	$1,089	$310	$56
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	$44,666	$32,554	$8,370	$13,621
District Housing & Property Improvements Program	**Total**	**$12,285**	**$13,557**	**$19,200**	**$7,007**
Employee Village Enhancement	15513	$12,285	$13,557	$19,200	$7,007

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru December 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Minor Capital Projects Program	**Total**	**$60,500**	**$33,001**	**$12,900**	**$7,702**
Capital Program for Projects Costing Less Than $400,000 For Fiscal Years 2016/17 And 2017/18	15498	$10,000	$7,193	$0	$21
Capital Program for Projects Costing Less Than $400,000 for FY2018/19 through FY2019/20	15504	$15,500	$12,430	$2,050	$1,006
Capital Program for Projects Costing Less Than $400,000 for FY2020/21 through FY2021/22	15518	$20,000	$9,127	$6,380	$2,424
Capital Program for Projects Costing Less Than $400,000 for FY2022/23 through FY2023/24	15526	$15,000	$4,250	$4,470	$4,250
Prestressed Concrete Cylinder Pipe Rehabilitation Program	**Total**	**$370,384**	**$326,025**	**$77,940**	**$58,358**
PCCP Rehabilitation and Replacement	15471	$26,966	$24,763	$510	$2,090
Sepulveda Feeder PCCP Rehabilitation	15496	$42,806	$32,844	$4,280	$4,921
Second Lower Feeder PCCP Rehabilitation	15497	$284,927	$254,773	$66,900	$48,408
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	$15,685	$13,645	$6,250	$2,939
Regional Recycled Water Program	**Total**	**$24,350**	**$21,494**	**$7,570**	**$1,194**
Demonstration-Scale Recycled Water Treatment Plant	15493	$24,350	$21,494	$7,570	$1,194
Right of Way & Infrastructure Protection Program	**Total**	**$31,715**	**$28,678**	**$9,765**	**$1,618**
Right of Way & Infrastructure Protection	15474	$31,715	$28,678	$9,765	$1,618

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru December 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
System Flexibility/Supply Reliability Program	**Total**	**$746,448**	**$681,836**	**$51,180**	**$40,288**
Hayfield and Lake Perris Groundwater Recovery	15402	$1,500	$1,132	$1,230	$19
Perris Valley Pipeline	15425	$166,500	$152,453	$21,528	$21,336
Water Delivery System Improvements	15488	$113,877	$87,813	$24,921	$18,208
Verbena Property Acquisition	15492	$264,000	$262,148	$3,450	$200
Delta Wetlands Properties (Delta Islands)	15494	$200,570	$178,290	$51	$525
System Reliability Program	**Total**	**$447,790**	**$368,597**	**$74,150**	**$61,666**
Information Technology System - Infrastructure	15376	$51,306	$47,815	$70	$97
Information Technology System - Security	15378	$12,351	$11,701	$0	$886
La Verne Shop Facilities Upgrade	15395	$67,348	$63,737	$7,450	$16,417
Water Operations Control	15467	$59,441	$46,692	$14,890	$4,610
Union Station Headquarters Improvements	15473	$114,855	$97,603	$9,400	$11,377
IT Infrastructure Reliability	15487	$57,867	$45,159	$9,380	$8,366
Operations Support Facilities Improvement	15495	$32,889	$25,857	$14,020	$6,315
Metropolitan Security System Enhancements	15499	$24,516	$14,367	$6,685	$3,315
Infrastructure Reliability Information System	15501	$15,505	$8,934	$145	$6,068
System-Wide Paving & Roof Replacements for FY 2018/19 through FY 2019/20	15516	$4,791	$4,216	$6,440	$2,622

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru December 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	$3,231	$2,437	$4,580	$1,518
Enterprise Data Analytics	15522	$3,690	$80	$1,090	$75
Treatment Plant Reliability Program	**Total**	**$886,364**	**$834,264**	**$33,690**	**$86,180**
Weymouth Water Treatment Plant Improvements	15369	$195,711	$191,016	$6,530	$2,875
Jensen Water Treatment Plant Improvements	15371	$47,062	$46,752	$310	$114
Diemer Water Treatment Plant Improvements	15380	$216,907	$209,246	$3,530	$916
Mills Water Treatment Plant Improvements	15381	$5,525	$5,286	$0	$9
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15436	$74,207	$68,351	$3,660	$2,680
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	$93,332	$83,966	$7,219	$56,450
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	$91,376	$86,196	$3,820	$1,500
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	$34,852	$30,117	$92	$5,525
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	$77,539	$77,353	$39	$395
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15478	$3,255	$2,208	$120	$773

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru December 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	$2,664	$1,204	$0	$357
Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15486	$8,339	$7,531	$0	$47
Weymouth Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15505	$915	$940	$0	$637
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	$21,151	$13,834	$6,600	$8,628
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	$4,891	$3,076	$0	$2,321
Skinner Water Treatment Plant, Improvements for FY 2020/21 Through FY 2023/24	15512	$5,319	$4,744	$1,710	$1,107
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	$2,631	$1,873	$60	$1,276
Chlorine System Improvements	15523	$690	$572	$0	$572
Water Quality Program	**Total**	**$10,240**	**$9,615**	**$400**	**$0**
Enhanced Bromate Control	15472	$10,240	$9,615	$400	$0
Total CIP		**$3,899,278**	**$3,437,728**	**$455,270**	**$418,354**

Notes on the above table:

- Numbers may not sum due to rounding.
- Numbers are based on the general ledger information downloaded on 01/12/2024.
- $0 under Planned Expenditures indicates that while no expenditures are planned during the reporting period, expenditures may be planned during upcoming periods.
- Negative actual expenditures indicate the result of cost transfers, write-offs, or credits greater than actual costs for this biennium through the reporting quarter.

List of Tables

List of Figures

Engineering, Operations, & Technology Committee

Capital Investment Plan Quarterly Report for Period Ending December 2023

Item 6a

March 11, 2024

Item 6a

Capital Investment Plan Quarterly Report for Period Ending December 2023

Subject

Capital Investment Plan Quarterly Report for the Second Quarter of FY 2023/24 which covers October 2023 through December 2023

Purpose

Informational summary of report that was provided in the board packet

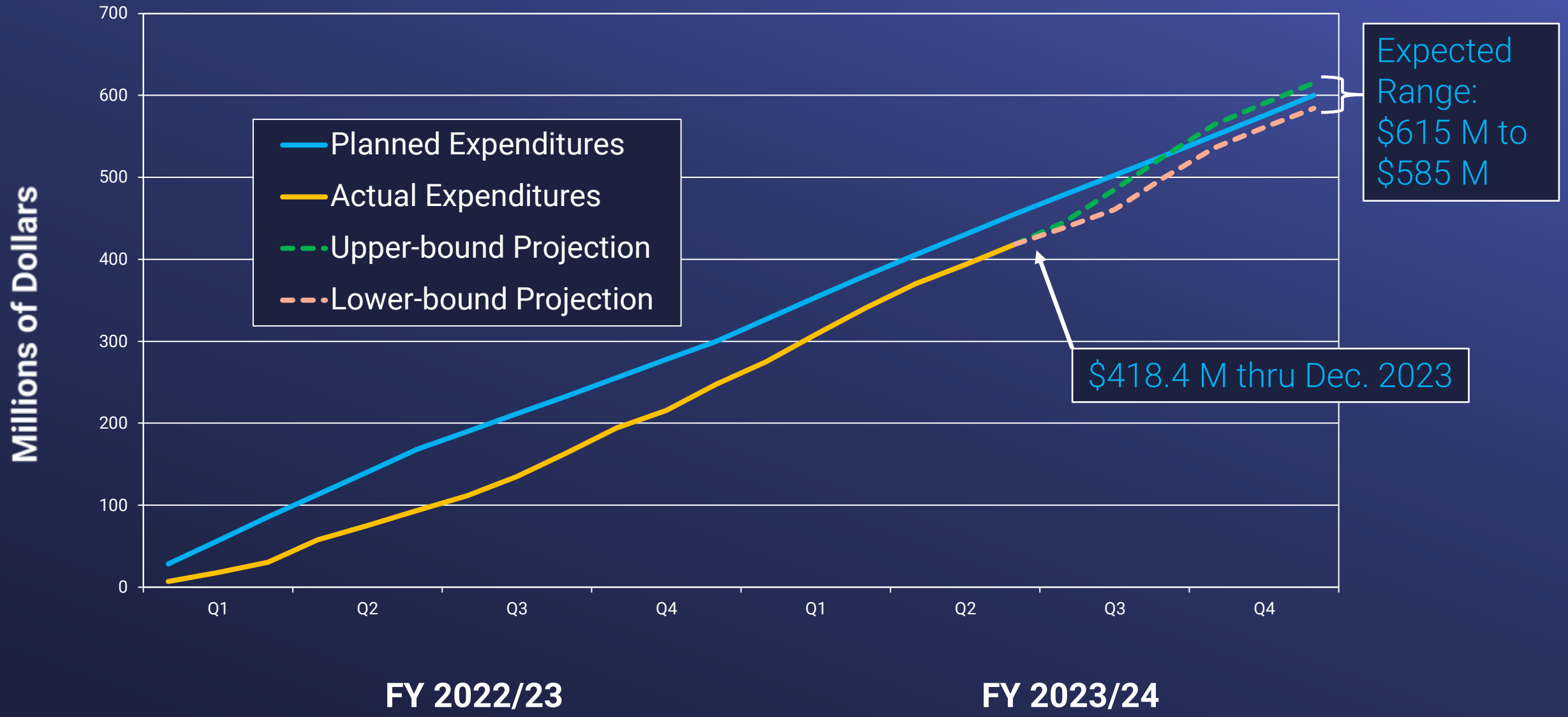
Capital Investment Plan Quarterly Report

Period Ending December 2023

2nd Quarter Summary for Fiscal Year 2023/24

- Board awarded contracts – $41.5 M
  - 4 Construction contracts awarded
  - 2 Procurement contracts awarded
- Contracts currently underway – $542.6 M
  - 34 Construction
  - 19 Procurement

CIP Expenditure Performance – Fiscal Years 2022/23 & 2023/24



CRA Pumping Plants Overhead Cranes Replacement

Installing the overhead crane girder at Eagle Mountain Pumping Plant

- Contract awarded in September 2020
  - Completed installation of cranes at Gene, Iron Mtn., & Eagle Mtn. pump plants
  - After reporting quarter, installation completed at Hinds pump plant
  - Completed fabrication of cranes for Hinds & Intake pump plants
  - Expected construction completion in June 2024
- Total Project Estimate: $19.7 M
- Total Project Cost through December: $14.5 M

Foothill Hydroelectric Power Plant Seismic Upgrade

- Contract awarded in April 2023
  - Completed installation of structural steel plates on roof
  - Nearly complete with installation of steel reinforcement on columns
  - Expected construction completion in September 2024
- Total Project Estimate: $32.0 M
- Total Project Cost through Dec: $20.3 M

Installation of Rebars and Post-Tensioning Bars for Seismic Reinforcement of the Columns

Second Lower Feeder PCCP Rehabilitation - Reach 3B

Completed 28-inch HDPE bypass at Palos Verdes Reservoir

Bolt Up of 42-inch Blind Flange

- Contract awarded in January 2023
  - Completed installation of the Palos Verdes reservoir bypass
  - Shutdown in progress (Dec. 2023 – Apr. 2024)
    - 2.4 miles of PCCP turned over to contractor for installation of steel lining
  - Expected construction completion in September 2025
- Total Project Estimate: $105.6 M
- Total Project Cost through Dec: $39.2 M

Performance Metrics – 2nd Quarter of FY 2023/24

Projects w/ Construction Costs Greater Than $3 Million

	Final Design % of Construction	Inspection % of Construction
Target Performance Range	9% to 12%	9% to 12%
Actual Performance	6.7%	N/A

Projects w/ Construction Costs Less Than $3 Million

	Final Design % of Construction	Inspection % of Construction
Target Performance Range	9% to 15%	9% to 15%
Actual Performance	14.7%	N/A

Minor Capital Projects

Fiscal Year Appropriation	2016/17 2017/18	2018/19 2019/20	2020/21 2021/22	2022/23 2023/24
Amount Appropriated	$10.0 M	$15.5 M	$20.0 M	$15.0 M
Amount Allocated	$7.8 M	$13.6 M	$16.2 M	$11.5 M
Expenditures Through December 2023	$7.2 M	$12.4 M	$9.1 M	$4.3 M
# of Projects Approved	41	48	52	40
# of Projects Completed Through December 2023	41	42	13	0
% of Work Complete	100%	96%	59%	26%

14 projects exceeded 3 years in duration


THE METROPOLITAN WATER DISTRICT OF
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Engineering, Operations, and Technology Committee

Information Technology Roadmap and Spending 2020 - 2026

Item 6b

March 11, 2024

Item 6b

IT Roadmap and Spending 2020 - 2026

Subject

Information Technology Roadmap and Spending 2020 - 2026

Purpose

This item provides an overview of past technology spending and proposed future spending to ensure MWD's reliability, resiliency and modernization

Agenda

- Background
- Information Technology Scope
- Information Technology Investment Drivers
- Information Technology Guiding Principles
- Information Technology Capital Investment FY2020-FY2023
- Information Technology Capital Investment FY2024-FY2026

Background

- Sep 2017 – Developed an IT Strategic Plan and presented to MWD's General Manager and Execs
  - Organization
  - Cybersecurity
  - Resiliency
  - Modernization
  - Data Analytics
- May 2022 – Presentation to Organization, Personnel & Technology Committee on IT Strategic Plan accomplishments
- Today's focus is on IT Capital Investment from FY2020 – FY2026

Information Technology Scope

- **Three data center** locations with over 500 servers (physical & virtual) providing processing and backup for all MWD applications
- **Network infrastructure** supporting the enterprise (Business and SCADA) comprised of 29 primary sites, 74 microwave sites, and 2 internet paths enabling communication of 25,000 devices and 50 terabytes of daily traffic
- **Communications**
  - **VoIP** 10K calls per year
  - **Teams** 12K (one on one) monthly calls

Information Technology Scope

- **Cybersecurity** providing monitoring, detection, alerting, and prevention of unauthorized system access across Metropolitan's service area
- **Enterprise Business and Water Operations** **112** applications supporting day-to-day operations
- **IT Service Desk** servicing over 2,400 computers and resolution of 600 tickets monthly. i**Hub** provides concierge services to Board members, executives, employees and technical support to Board & committee meetings as well as external agency meetings

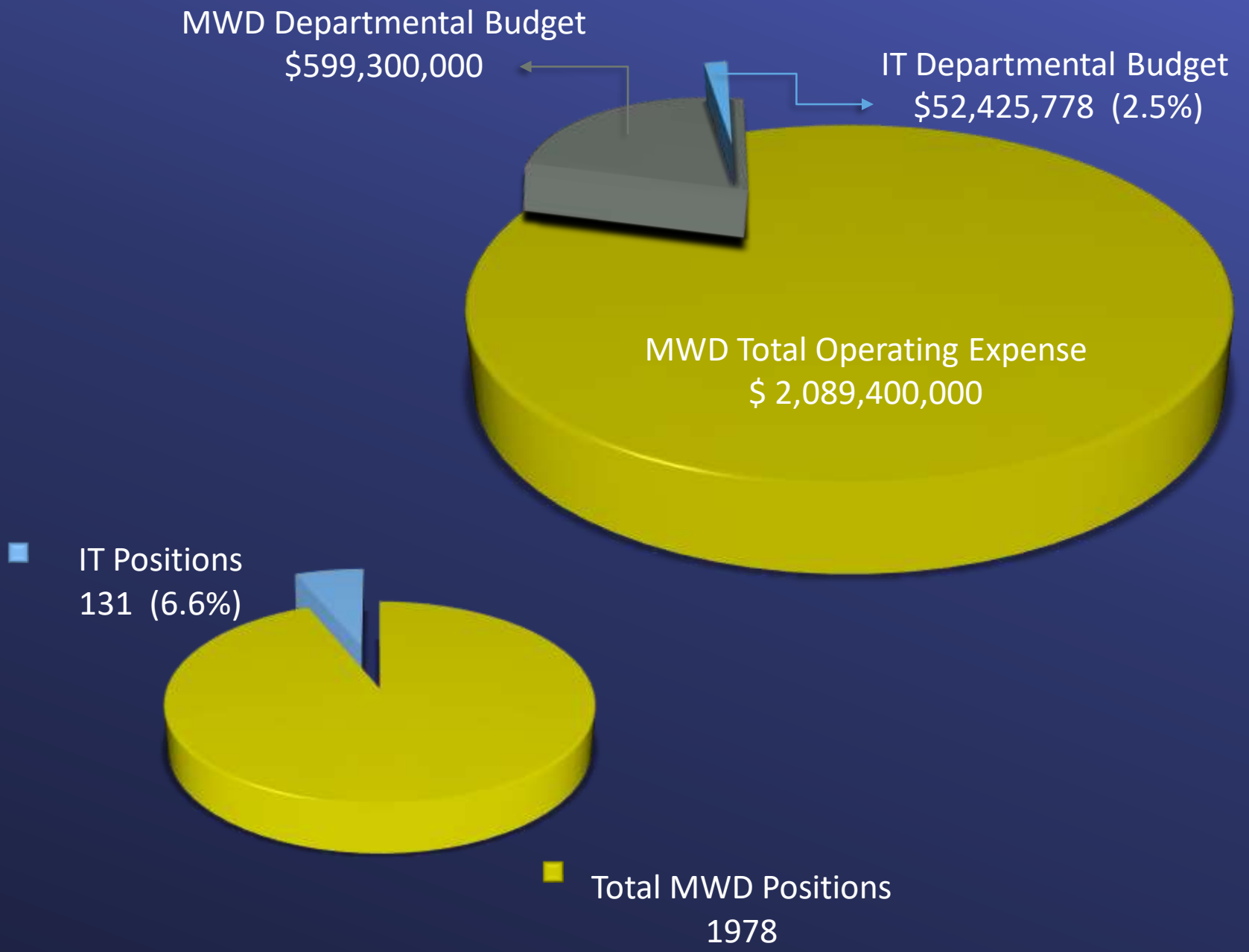
Information Technology Scope -

Applications by Business Area

Business Area	Applications
Administrative Services	5
Board Support	5
Chief Financial Office	13
Equal Employment Opportunity	1
Engineering Services Group	12
External Affairs	12
Human Resources	9
Information Technology	8
Water Resource Management	2
Water System Operations	34
Sustainability, Resilience, and Innovation.	7
Audit	1
Physical Security	3
Total	**112**

Information Technology Scope –

Operating Budget and Positions



Information Technology Investment Drivers

Service Reliability – *Non-Discretionary*

- Focused on system availability, software version upgrades, and end-of-life hardware and software

Resiliency – *Non-Discretionary*

- Focused on the ability to recover quickly and successfully from an event like a power outage, fire, earthquake, etc.
- Some examples of the latest instances include data center migration, fiber installation, backup of systems, disaster recovery and moving to the Cloud

Modernization and Efficiency - *Discretionary*

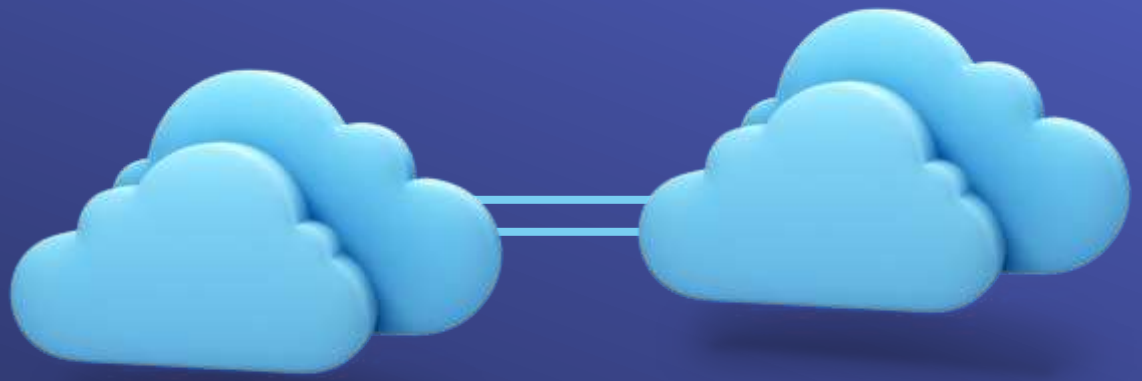
- Focused on new enhancements and systems
- Examples include application development enhancements, workflow enhancements, new data analytics, etc.

Information Technology Investment Drivers

- Non-Discretionary projects must be executed to avoid system failure and operational issues
- Technology changes rapidly; *IT must be nimble*
- Software/hardware vendors are unpredictable as to when they will stop supporting systems or older versions
- IT is reliant on the Business stakeholders to provide requests for enhanced functionality to meet business needs
- Prioritization is key with constrained resources

Information Technology Guiding Principles

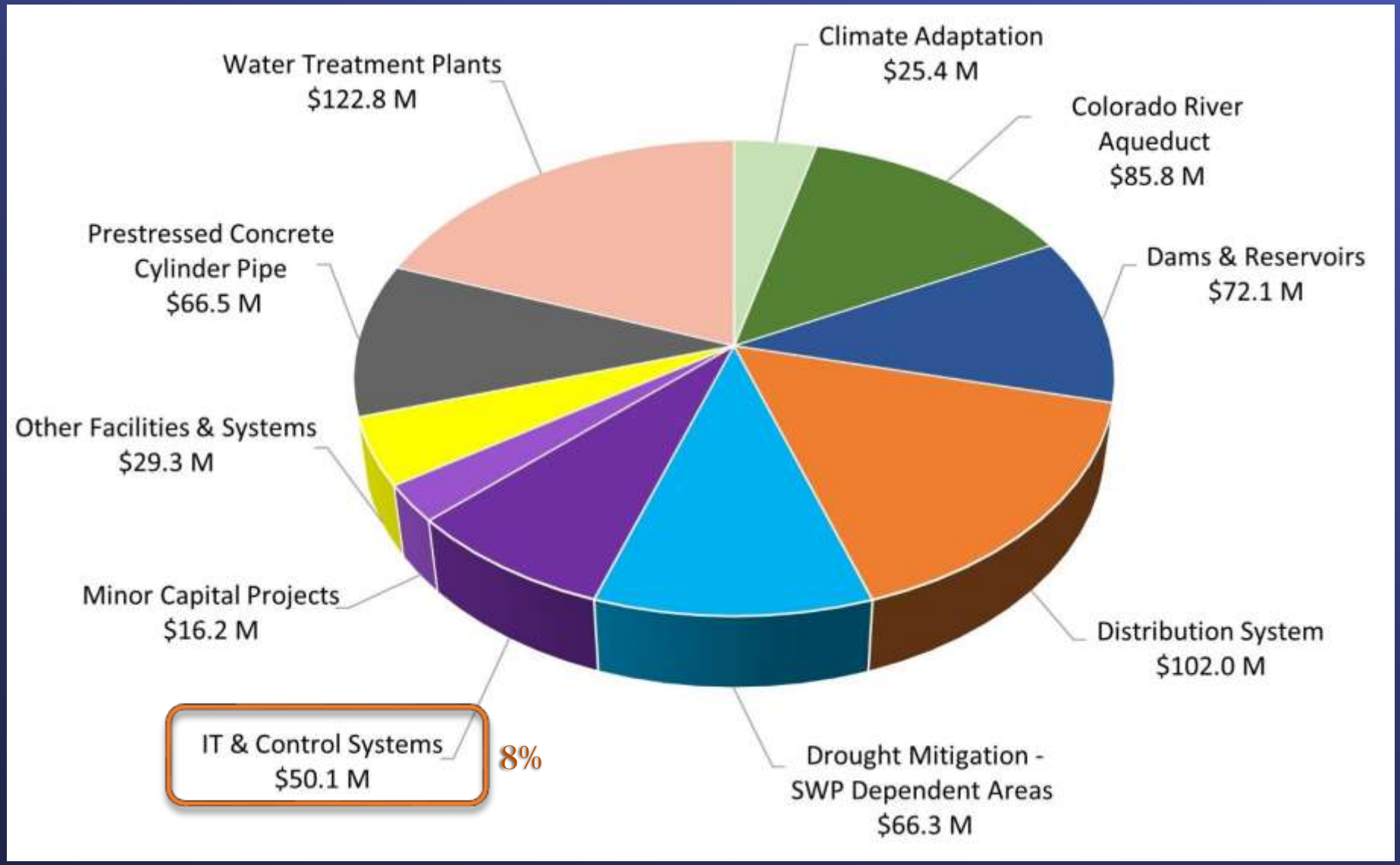
- Cloud First
- Mobility
- Data and Decision Analytics
- Friction Free Self Service



Information Technology Capital Investment Plan (CIP)

MWD Board of Director Workshop #2

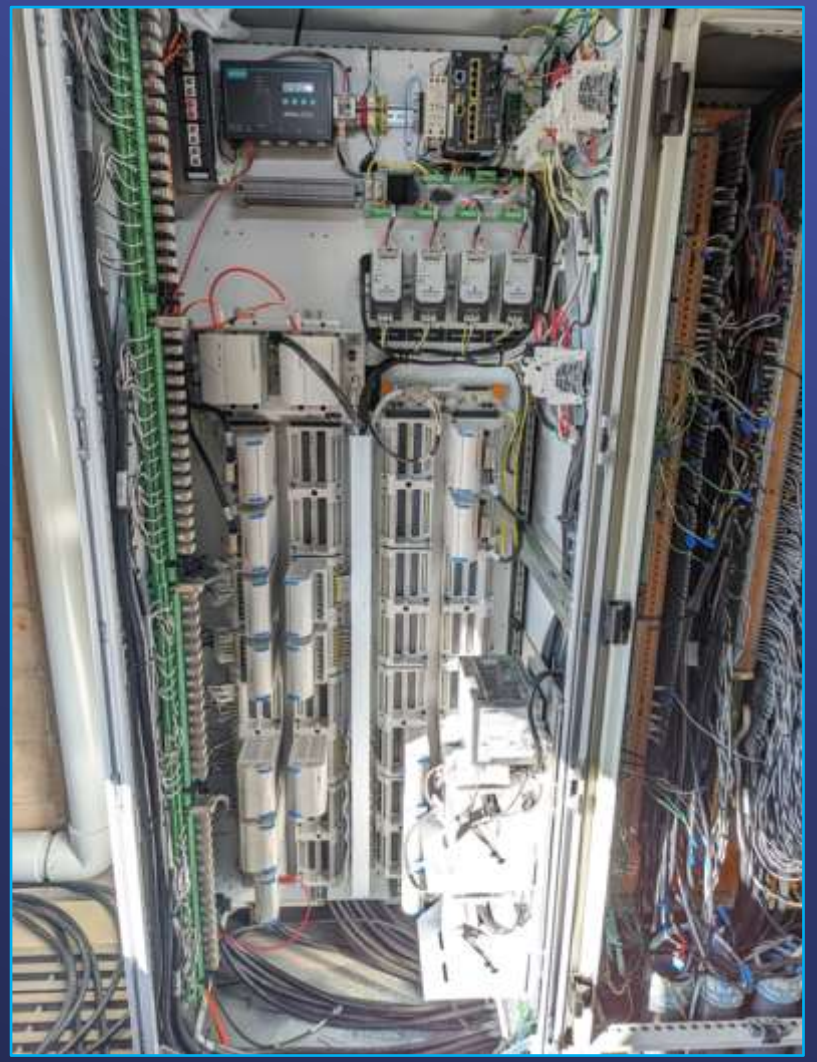
FY 2024 – 2026 Capital Investment



IT and Control Systems Investments
FY 2024 - 2026

- 55 Projects
  - In Progress – 40
  - New – 15
- Planned Expenditures:
  - $50.1 M

Enterprise Systems & IT Infrastructure	$ 22,807,976	46%
Control Systems (SCADA)	$ 19,701,677	39%
Other	$ 7,575,712	15%



Mills Control System Upgrades

IT CIP Projects by Expenditure Category FY 2020/21 - FY2023/24

Expenditure Category	Completed	In Progress	New
Service Reliability	3 $ 11.7M	15 $ 17.1	
Resiliency	2 $ 4.7M	6 $ 9.3M	
Modernization and Workplace Efficiency	3 $ 1.9M	9 $ 4.0M	1 $ 3.2M
Total	8 $ 18.3M	30 $ 30.4M	1 $ 3.2M

IT CIP Projects by Expenditure Category

FY 2024 - 2026

Expenditure Category	FY 2024/25 – 2025/26
Service Reliability	24 $ 35.95M (17 in progress)
Resiliency	13 $ 10.13M (6 in progress)
Modernization and Workplace Efficiency	18 $ 4.01M (17 in progress)
Total	**55** **$ 50.1M** **(40 in progress)**

New Service Reliability Projects

FY2024/25 – 2025/26

	Projects New Biennium FY 2024/25 – 2025/26	Year	CIP Budget
1	Enterprise Software Management	FY2024/25	$ 550,000
2	Clear Orbit Bar Coding System Replacement	FY2024/25	$ 1,583,000
3	Storage Infrastructure Refresh	FY2024/25	$ 895,000
4	Pasadena Microwave Project Phase II	FY2024/25	$ 830,000
5	Maintenance Management System (Maximo) Preparation for Version 8	FY2025/26	$ 875,000
6	Board Letter System (BDMS) Upgrade	FY2025/26	$ 700,000
7	Emergency Generators for Mountaintop Communication sites	FY2025/26	$ 3,570,000
	Sub-Total		**$ 9,003,000**

New Resiliency and Modernization Projects

FY2024/25 – 2025/26

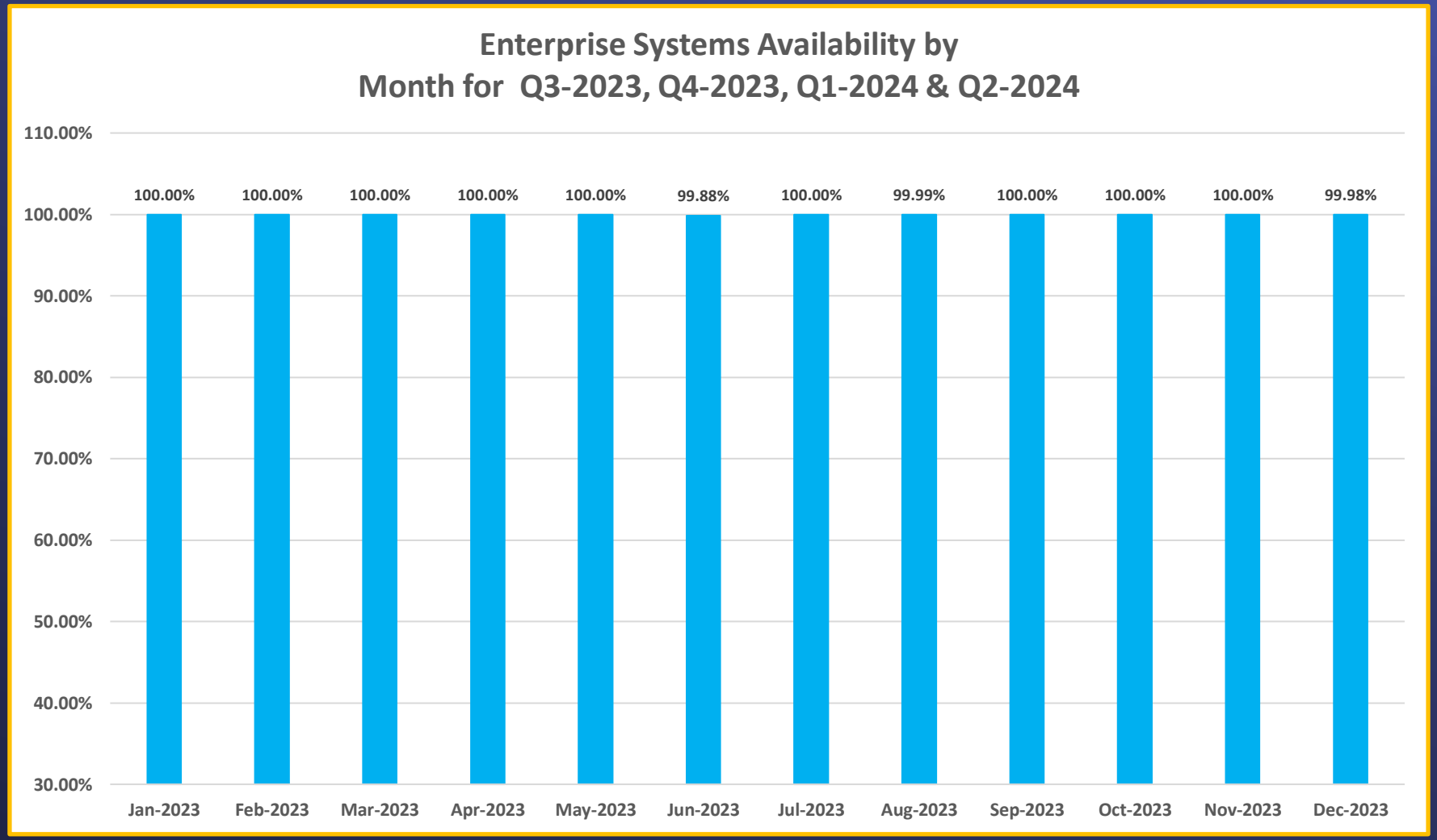
	Resiliency Projects New Biennium FY 2024/25 – 2025/26	Year	CIP Budget
1	Data Loss Prevention	FY2024/25	$ 910,000
2	Network Visibility and Situational Awareness Upgrades	FY2024/25	$ 1,215,200
3	Security Service Edge Implementation	FY2024/25	$ 1,428,400
4	Network Access Control	FY2024/25	$ 1,000,000
5	Weymouth Communication Room Relocation	FY2025/26	$ 745,000
6	Cyber and IT Governance Risk and Compliance Implementation	FY2025/26	$ 2,490,000
7	Smartbadge Implementation	FY2025/26	$ 1,500,000
	Sub-Total		**$ 9,288,600**

	Modernization Projects New Biennium FY 2024 – 2026	Year	CIP Budget
1	WINS Billing System Phase 2	FY2025/26	$ 1,398,000
	Sub-Total		**$ 1,398,000**

Information Technology Group
Operational Metric: System Availability

Bench Mark: 99% (Excludes scheduled downtime for planned maintenance)

What do we get for investment in information technology?

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THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Engineering Services Group

- **Engineering Services Monthly Activities Report for February 2024**

Summary

This monthly report for the Engineering Services Group provides a summary of activities for February 2024 in the following key areas:

- Distribution System Reliability Program
- Prestressed Concrete Cylinder Pipe (PCCP) Reliability Program
- Colorado River Aqueduct (CRA) Reliability Program
- Treatment Plant Reliability Program
- System Reliability Program
- Protecting the Public and Metropolitan's Assets
- Pure Water Southern California Program
- System Flexibility/Supply Reliabillity
- American Society of Civil Engineers (ASCE) Engineers Week—Girl Day

Purpose

Informational

Attachments

Attachment 1: Detailed Report—Engineering Services Group's Monthly Activities for February 2024

Date of Report: March 11, 2024

Engineering Services Key Activities Report

February 2024

Engineering Services manages and executes projects within the Capital Investment Plan (CIP) to maintain infrastructure resiliency, ensure regulatory compliance, enhance sustainability, and provide flexibility in system operations to address uncertain water supply conditions.

Recent activities on CIP programs and other key engineering functions are described below.

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

Distribution System Reliability Program

This capital program maintains reliable water deliveries through specific rehabilitation and upgrade projects on Metropolitan's pipelines, reservoirs, and control structures. Recent activities include the following:

- La Verne Shops Building Completion Stage 4 – This project will complete the La Verne Shops building improvements and install Metropolitan-furnished shop equipment. The contractor continued installing electrical conduits for branch circuits and accessways for the new electrical ductbank, and began installing reinforcing steel for the new blast booth, foundation concrete formwork for the blast booth pit walls, new underground natural gas lines. Construction is approximately 78 percent complete and is scheduled to be complete in August 2024.
- Orange County Feeder Lining Repairs – This project replaces the deteriorated internal lining along an 11-mile portion of the Orange County Feeder within the cities of Santa Ana, Costa Mesa, and Newport Beach. Rehabilitation was completed in mid-February.
- Garvey Reservoir Rehabilitation – This project will replace the aging reservoir floating cover and liner, structurally strengthen the inlet/outlet tower, upgrade the on-site water quality laboratory building, rehabilitate the junction structure, and replace the existing standby generator and a portion of the security perimeter fence. Final design is approximately 18 percent complete and is scheduled to be complete in April 2025. A notice of preparation was issued in January 2024 for the environmental documentation for this rehabilitation effort, and a presentation to the Monterey Park city council was made on this same subject.

- Lakeview Pipeline Rehabilitation, Stage 2 – This project will rehabilitate approximately 3.7 miles of 11-foot-diameter steel pipe. Final design is approximately 70 percent complete and is scheduled to be complete by July 2024.

Prestressed Concrete Cylinder Pipe (PCCP) Reliability Program

This capital program was established to enhance the reliability of Metropolitan's water distribution system and to reduce the risk of costly emergency repairs of PCCP. The priority pipelines included in the program are the Second Lower Feeder, Sepulveda Feeder, Calabasas Feeder, Rialto Pipeline, and the Allen-McColloch Pipeline. A total of 100 miles of PCCP pipelines will be refurbished under this multi-year program. Recent activities include the following:

- Second Lower Feeder Valves – This procurement contract provides 13 conical plug valves for the Second Lower Feeder PCCP rehabilitation. Metropolitan's Board awarded a procurement contract for the valves in December 2018. Ten valves have been delivered as of January 2024. The eleventh and twelfth valves are scheduled to be shipped in the Fall of 2024. Fabrication of the final valve will be completed in late 2024 and delivery is projected for early 2025.
- Second Lower Feeder PCCP Rehabilitation Reach 3B – This project installs steel lining and three conical plug valves (described above) along a 3.7-mile-long portion of the Second Lower Feeder that traverses the cities of Lomita, Los Angeles, and Torrance. A temporary bypass line serving two service connections at the Palos Verdes Reservoir was completed and placed into service. Dewatering of the Second Lower Feeder was completed, the pipeline turned over to the contractor, and rehabilitation of the pipeline is in progress. The current shutdown is scheduled to be complete in April 2024. A second shutdown is planned for next winter. Construction is 42 percent complete and is scheduled to be completed in September 2025.
- Lake Mathews PCCP Valve Warehouse – This project constructs a 18,160 square-feet pre-engineered metal building on a reinforced concrete slab at Lake Mathews for valve and equipment storage related to the PCCP Rehabilitation Program. The contractor is currently installing the 10-inch fire protection line and the building fire sprinkler system. Construction is 97 percent complete and is scheduled to be complete in May 2024.
- Sepulveda Feeder Reach 1 – This project rehabilitates PCCP segments of the Sepulveda Feeder. Reach 1 of the Sepulveda Feeder spans 4.7 miles through several cities including the cities of Hawthorne, Inglewood, and Los Angeles. Final design is approximately 75 percent complete and is scheduled to be complete in June 2024.
- Electromagnetic Inspection – Regular inspections of the PCCP feeders are a critical step in evaluating the condition of each pipeline and assist staff in prioritizing the relining work on each feeder. This project conducts the fifth cycle of electromagnetic and visual inspections of Metropolitan's approximate 146.4 miles of PCCP pipelines. Inspections of the West Valley Feeder No. 2 and Calabasas Feeder were completed in January 2024 and inspection reports received in March 2024.

Colorado River Aqueduct (CRA) Reliability Program

This capital program maintains the reliability of Metropolitan's CRA conveyance system. Recent activities include the following:

- Flow Level Monitoring Stations – This project will install 12 flow monitoring stations at remote locations along the Colorado River Aqueduct. The contractor has delivered two precast concrete to the construction site. The contractor is currently placing concrete for the building slab and excavating for installation of the electrical ductbanks. Construction is nine percent complete and is scheduled to be complete in July 2024.
- Overhead Cranes Replacement – This project consists of replacing the overhead bridge cranes and retrofitting the support structures within the pump bays located at all five of Metropolitan's Colorado River Aqueduct pumping plants. The contractor has completed the installation of the new cranes at the Gene, Iron Mountain, Eagle Mountain, and Hinds pumping plants. Installation of the new crane at the Intake pumping plant will begin in April, following the March 2024 CRA Shutdown. Construction is 80 percent complete and is scheduled to be complete in June 2024.
- CRA Storage Buildings – This project furnishes and installs storage buildings at Hinds, Eagle Mountain, and Iron Mountain and constructs associated site improvements. The contractor has mobilized at Iron Mountain and Eagle Mountain and is performing initial site work. Construction is five precent complete and is scheduled to be completed in January 2026.
- Copper Basin Discharge Valve Replacement – This project installs a new 54-inch fixed cone valve and actuator at the base of the dam, refurbishes a slide gate and the existing valve house, and upgrades all associated electrical systems and access ladders at the Copper Basin Reservoir. This project will also include the replacement of the access ladders at the Gene Wash Dam. Final design is complete, and the acquisition of environmental permits are in progress. Construction contract is expected to be advertised in June 2024.
- Iron Mountain Switchgear – This project replaces the 2.3 kV Station Light and Power switchrack with a 4.16 kV indoor switchgear, a 2.3 kV emergency generator with a 4.16 kV generator, and upgrades the auxiliary distribution system at the Iron Mountain Pumping Plant. Preliminary design is 95 percent complete and scheduled to be complete by February 2024. A March 2024 Board action is planned for authorization of final design.

Treatment Plant Reliability Program

This capital program was initiated to maintain reliability and improve the operating efficiency of Metropolitan's water treatment plants through specific improvement projects. Recent activities include the following:

- Weymouth Basins 5-8 and Filter Building No. 2 Rehabilitation – This project rehabilitates major mechanical and structural components of Basins 5-8 and Filter Building No. 2 at the Weymouth plant, including the flocculation/sedimentation equipment, sludge pumps, baffle boards and walls, launders, inlet gates, and outlet drop gates. Rehabilitation work also includes seismic upgrades of basin walls and inlet channel, hazardous material abatement, and replacement of filter valves and actuators in Filter Building No. 2. The contractor completed construction of new clarifier and flocculator equipment in Basins 7 and 8, continued installation of baffle walls, handrails, piping and electrical conduits, and startup testing of filter valves, piping, and electrical components in Filter Building No. 2. Construction is 60 percent complete and is scheduled to be complete in June 2025.
- Mills Electrical Upgrades – This project upgrades the electrical system with dual-power feeds to key process equipment to comply with current codes and industry practice, improve plant reliability, and enhance worker safety. Stage 1 construction is complete. Stage 2 improvements will add a second incoming 12 kV service from Riverside Public Utilities, reconfigure the existing 4160-volt switchgear, and replace the standby generator switchgear and the emergency generator programmable logic controller. The contractor completed installation of the roofing and HVAC systems and continued installation of the electrical conduits inside the ORP Switchgear Building. Construction is approximately 47 percent complete and is scheduled to be complete in August 2025.
- Jensen Ozone PSUs Replacement – This project rehabilitates the ozone generation system at the Jensen plant by replacing four existing ozone power supply units (PSUs) and four sets of generator dielectrics. The project also makes required modifications to the associated electrical, control, and cooling water systems. Metropolitan's Board awarded a construction contract in June 2022. All PSUs and dielectrics have been manufactured and delivered. Replacement of the PSUs has been staged to ensure continuous use of ozone during construction. The contractor completed installation of two PSUs, two sets of dielectrics, the new cooling water system connections, and is preparing for PSU startup testing. Construction is 75 percent complete and is scheduled to be complete in June 2024.

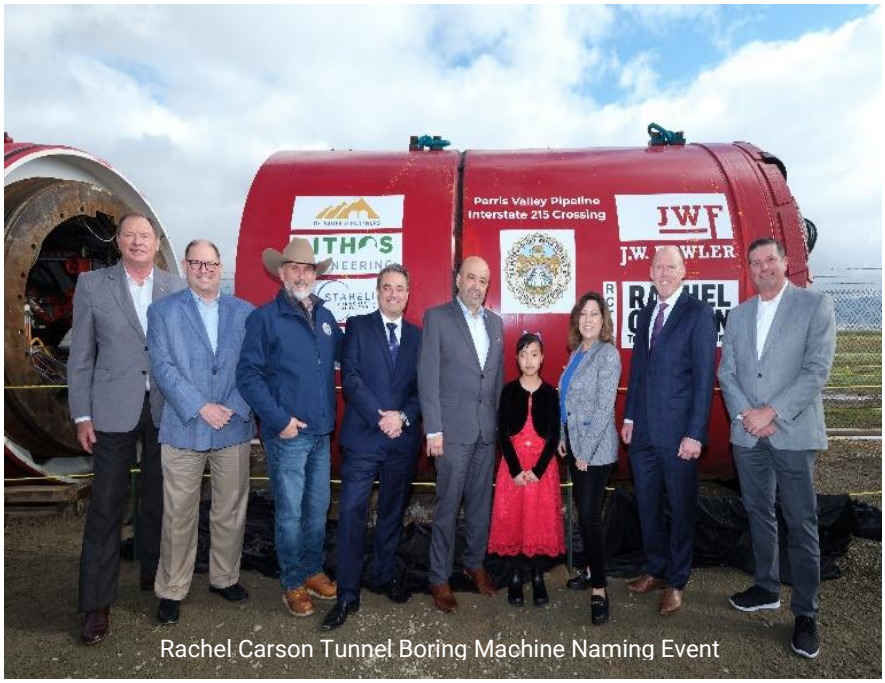
System Reliability Program

The System Reliability Program consists of capital projects to improve or modify facilities located throughout Metropolitan's service area to utilize new processes and/or technologies and improve facility safety and overall reliability. Recent activities include the following:

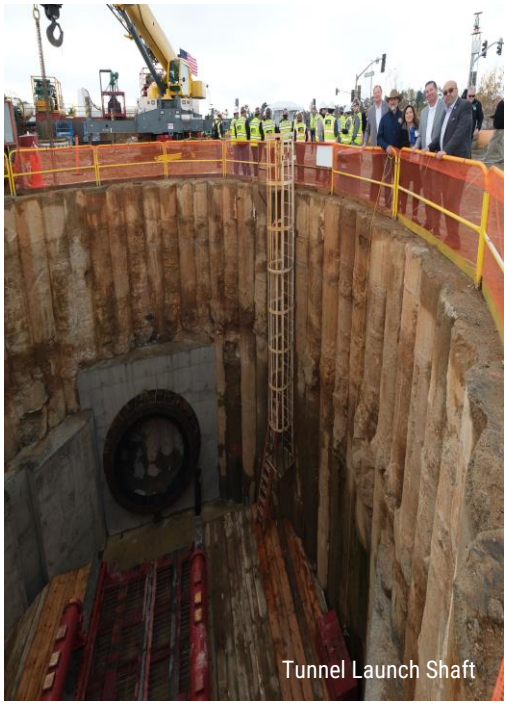
- Headquarters Physical Security Upgrades – This project implements comprehensive security upgrades for Metropolitan's Union Station Headquarters. These upgrades are consistent with federally recommended best practices for government buildings. This work has been prioritized and staged to minimize rework and impacts on day-to-day operations within the building. Stage 1 work is complete and provides enhanced security related to perimeter windows and doors. Stage 2 work is complete and provides security system upgrades inside the building with a focus on the main entry rotunda area, boardroom, executive dining lounge, and security control room. Stage 3 improvements will provide security system upgrades around the perimeter of the building. Metropolitan's Board awarded the third and final contract in December 2022. The contractor began fabrication of the ornamental fence within the courtyard and began concrete placement for the fixed bollards. Construction is 60 percent complete and is scheduled to be complete in June 2024.
- Headquarters Building Fire Alarm and Smoke Control System Upgrades – This project upgrades Metropolitan's Union Station Headquarters fire life safety systems, which includes replacement of the fire detection and alarm system and HVAC system improvements for smoke control. The fire alarm and smoke control systems in Metropolitan's Headquarters Building provide detection, notification, and control of building functions so that occupants and visitors can safely exit in the event of a fire. The contractor continued final testing and sign-off of the fire alarm and smoke control systems by the LAFD and Los Angeles Department of Building and Safety. Construction is 97 percent complete and is scheduled to be complete in March 2024.
- Headquarters Building Fire Sprinkler Level P1 Replacement – This project replaces a portion of the fire sprinkler piping network components in level P1 of the Headquarters Building. The work includes replacement of ancillary isolation valves, fire hydrant connections, and installation of new control valves. Metropolitan's Board awarded the contract in July 2023. Construction is complete.
- SCADA System Upgrades – This project will upgrade Metropolitan's entire control system in incremental stages, spanning the Colorado River Aqueduct, the five water treatment plants, and the conveyance and distribution system. The first stage of this project replaces the control system at the Mills plant, starting with a pilot effort on one of the plant's remote terminal units to demonstrate the proposed technology and the consultant's approach for the plant and the overall project. The consultant has installed the pilot equipment, and staff is currently evaluating the results of the pilot unit. The pilot phase is approximately 98 percent complete and is scheduled to be complete in April 2024. The system upgrades at the Mills plant are scheduled to be complete in October 2026.
- Foothill Hydroelectric Plant and Control Building Seismic Upgrade – This project strengthens the Foothill Hydroelectric Plant and Control Building to withstand a significant earthquake, by removing and replacing the roofing system; adding encasements to enlarge and strengthen concrete columns; and reinforcing shallow foundations. The contractor continued performing abatement activities on the building's roof, and installation of structural steel roof plates. Construction is approximately 37 percent complete and is scheduled to be complete in December 2024.

Perris Valley Pipeline – This project will complete construction of the Perris Valley Pipeline and provide service connections to Eastern and Western Municipal Water Districts. This project installs 3,000 linear feet of tunnel which crosses the Interstate 215 freeway. The Contractor has excavated three of four shafts and completed construction of the main drive shaft. An event to commemorate the naming of the tunnel boring machine (TBM), "Rachel Carson", was held at the March Air Field Museum in Riverside on January 25, 2024, and contest winner Jessica Wang (3rd grader) and 115 guests were in attendance. With the launch of this TBM, excavation of the first tunnel reach commenced on the eastern side of Interstate 215 in early February 2024. Overall construction is 35 percent complete and is scheduled to be complete in early 2025.

Perris Valley Pipeline- Shop Fabrication of Portal Access Pipe



Rachel Carson Tunnel Boring Machine Naming Event



Tunnel Launch Shaft

TBM Lowered into Launch Shaft

Protecting the Public and Metropolitan's Assets

Engineering Services continued to develop state-mandated Emergency Action Plans (EAPs) for Metropolitan's state-regulated dams to help ensure long-term public safety. In January, the EAPs for Live Oak Reservoir, Weymouth Finished Water Reservoir, and the Goodhart Canyon Detention Basin were submitted to the Cal OES and are currently under review. To date, ten of Metropolitan's 13 state required EAPs have been fully approved by Cal OES.

Adapt to changing climate and water resources

Pure Water Southern California

The Pure Water Southern California (PWSC) Program is a large-regional recycled water project that will provide a new local source of safe and reliable drinking water for Southern California. PWSC currently focuses in four areas: demonstration testing, environmental planning, technical studies, and preliminary design of initial pipeline reaches. PWSC will produce 150 mgd of purified water from the Advanced Water Purification Facility (AWPF) in Carson, for indirect potable reuse (IPR) and direct potable reuse (DPR) applications, with the initial deliveries by 2030 and completion by 2035.

- Demonstration Testing: Demonstration testing began in 2019 with N-only tertiary membrane bioreactor (tMBR) testing completed in 2021 and secondary MBR (sMBR) testing completed in 2023. Maintenance and modifications for tMBR optimization testing have been completed. The system is online and currently operating in the nitrification/denitrification mode.
- Environmental Planning: The Environmental Planning Phase began in 2020 with the goal of preparing an Environmental Impact Report (EIR) for approval in 2025. Various technical studies have been prepared to support the effort. The draft EIR is currently scheduled for publication in early-2025, with board certification of the document in the third quarter of 2025. Staff continues to finalize the project description, perform additional technical studies, incorporate changes to the program due to inclusion of the LADWP Operation NEXT pipe upsizing, and development of the draft EIR.
- Program Management: PWSC program management efforts lead the planning for the Program, including project controls, scheduling, budget development, risk management, coordination with Program partners and stakeholders, grants and funding, and preparation of various plans and studies.
    - A PWSC cost estimate update was presented to the PWSC/Regional Conveyance Subcommittee in November 2023. A cost estimate methodology technical memorandum was prepared to document the cost details developed for the AWPF and conveyance systems and provided to the Subcommittee in January 2024.
    - A draft construction sequencing memorandum has been prepared to identify the milestones and construction contracts needed to meet the projected completion of the AWPF, the backbone pipeline, and full delivery for IPR in 2032. The memorandum will be finalized by March 2024.
    - A Large-Scale Water Recycling grant application requesting $125 million was submitted to the US Bureau of Reclamation (USBR) in November 2023. Successful applicants will be notified in early 2024. To receive funding, Metropolitan prepared and submitted a feasibility study in January 2024 to meet the USBR requirements.

- Advanced Water Purification Facility: The AWPF will purify wastewater from LACSD's A.K Warren facility (formerly the JWPCP) using membrane bioreactors (MBRs), reverse osmosis (RO), and ultra violet/advanced oxidation (UV/AOP).
    - A draft conceptual facilities plan has been prepared to document key assumptions of AWPF components.
    - The AWPF team is evaluating the use of progressive design build to design and construct the treatment plant facilities.
    - A proposed Request for Qualifications (RFQ) from qualified firms to design and construct the AWPF is scheduled for April 2024. Authorization of this procurement is planned for late 2024.
    - The AWPF team is coordinating with Southern California Edision (SCE) to finalize the Method of Services (MOS) study agreement for SCE to evaluate SCE infrastructure needed to meet AWPF power requirements.
- Direct Potable Reuse (DPR): The California Division of Drinking Water (DDW) published the final DPR regulations in December 2023. Metropolitan has completed bench-scale testing to screen the potential DPR treatment processes that could be used for the program. Planning of pilot-scale testing is in progress. Technical workshop has been scheduled with Independent Scientific Advisory Panel (ISAP) in March 2024 to discuss bench-scale testing data and proposed DPR treatment train.
- Conveyance Pipeline System: The program's backbone conveyance system consists of over 40 miles of pipeline and two pump stations. Metropolitan's Board authorized consulting agreements for preliminary design of the first two pipeline reaches in March 2023. Metropolitan surveyors used a new high-definition mobile LiDAR system, which is mounted to the back of a truck, to survey all 14 miles of the proposed alignment for Reaches 1 and 2 in one day. This device captures over 500,000 survey measurements per second. The data is being processed and will assist with project planning and preliminary design.
    - Reach 1 – This reach is approximately six miles long and runs through the city of Carson. Current work includes utility field investigation and geotechnical work. Preliminary design is 37 percent complete and is scheduled to be complete by mid-2024.
    - Reach 2 – This reach is approximately 8 miles long and runs through the cities of Long Beach and Lakewood. Current work includes ground penetrating radar and obtaining permits for geotechnical work. Preliminary design is 12 percent complete and is scheduled to be complete by late-2024.


Mobile LiDAR Truck


Mobile LiDAR point cloud

System Flexibility/Supply Reliability

Projects under this capital program will enhance the flexibility and/or increase the capacity of Metropolitan's water supply and delivery infrastructure to meet current and projected service demands. Projects under this program address climate change affecting water supply, regional drought, and alternative water sources for areas dependent on State Project Water.

- Wadsworth Pumping Plant Bypass – This project installs a bypass pipeline and an isolation valve to interconnect the Wadsworth Pumping Plant with the Eastside Pipeline. This is one of several projects needed to deliver water from Diamond Valley Lake (DVL) to the Rialto Pipeline. The contractor is currently erecting the valve structure and relocating interfering utilities. Construction is approximately 45 percent complete and is scheduled to be complete in August 2024.
- Inland Feeder - Badlands Tunnel Surge Protection – This project installs a new open-to-atmosphere surge tank at the south portal of the tunnel, which will protect the Inland Feeder from hydraulic transients when pumping water from DVL to the Rialto Pipeline through the Inland Feeder. The contractor has mobilized and started clearing and grubbing of the work site. Construction is approximately three percent complete and is scheduled to be complete in August 2025.
- Inland Feeder-Rialto Pipeline Intertie – This project installs an interconnection pipeline and isolation valve structure between the Inland Feeder and Rialto Pipeline, so that water can be delivered from DVL to the Rialto Pipeline. The contractor has mobilized and started clearing and grubbing the work site. Construction is approximately two percent complete and is scheduled to be complete in March 2025.
- Sepulveda Feeder Pumping Stations, Stage 1 – This project installs new pump stations at the existing Venice and Sepulveda Canyon pressure control facilities, providing the ability to reverse flow in the Sepulveda Feeder and deliver 30 cubic feet per second from the Central Pool to portions of the Jensen plant exclusive area. This project utilizes a progressive design-build (PDB) project delivery method. Engineering and Operations staff are reviewing initial submittals and collaborating through a series of design workshops, planned through the end of the year, to support upcoming design work. The contractor and Metropolitan are coordinating with both Southern California Edison and Los Angeles Department of Water and Power on upgrades to the incoming power service at both locations. Phase 1, which includes site investigation, design to the 70 percent level, environmental planning, and preparation of long-lead-item procurement documents, is scheduled to be complete in September 2024. Work progress is on track to complete the first major milestone, delivery of the 30 percent design package and the Basis of Design Report (BODR), in April 2024.
- Allen-McColloch Pipeline Urgent Relining – This project will perform urgent relining of distressed PCCP segments of the Allen-McColloch Pipeline (AMP). Relining of the AMP will be performed in stages to minimize impacts to member agencies. Stage 1 will steel line all critical distressed PCCP pipe segments upstream of the OC-88 Pump Station with approximately 2,120 feet of welded steel liner pipe and steel line approximately 2,320 feet of PCCP with welded steel liner pipe downstream of the OC-88 Pump Station. The work upstream of the OC-88 Pump Station will be completed by May 2024. Metropolitan's Board authorized change orders to three existing contracts to expedite the relining work in February 2024. Stage 2 work will reline all remaining PCCP pipe segments downstream of the OC-88 Pump Station with approximately 2.6 miles of welded steel liner pipe during a July through December 2024 shutdown.

Partner with interested parties and the communities we serve

American Society of Civil Engineers (ASCE) Engineers Week – Girl Day

Staff participated in the 11th Annual ASCE Engineers Week – Girl Day event at Metropolitan's Headquarters Building on February 22, 2024. This event represents one of several events that ASCE rolls out each year to help inspire future generations of female engineers from disadvantaged and underrepresented backgrounds and provides opportunities for 6th graders through 12th graders to learn about science, technology, engineering, and mathematics through professional panels and various engineering craft activities. With the overarching theme this year of "Building Tomorrow, Today," two engineering staff members and one engineering college student intern spoke about their journey and how they decided to study engineering and embark on a career in engineering. They also shared their role and contributions on various projects that included the Greg Avenue Pump Plant, Perris Valley Pipeline, and Pure Water projects. Other activities included students making "pure water" through a filtration process using water bottles and other materials and a presentation from the California High-Speed Rail Authority.

ASCE Engineers Week – Girl Day event at Metropolitan's Headquarters

Johanna Clemens, Laura Abarca (college intern), Mai Hattar, and Hedieh Esfahani getting ready to welcome students

Laura Abarca sharing her engineering internship experience at Metropolitan

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Information Technology Group

- **Information Technology Group Board Report February Update**

Summary

This report provides a summary of activites related to the Information Technology Group for February 2024

Purpose

Informational

Attachments

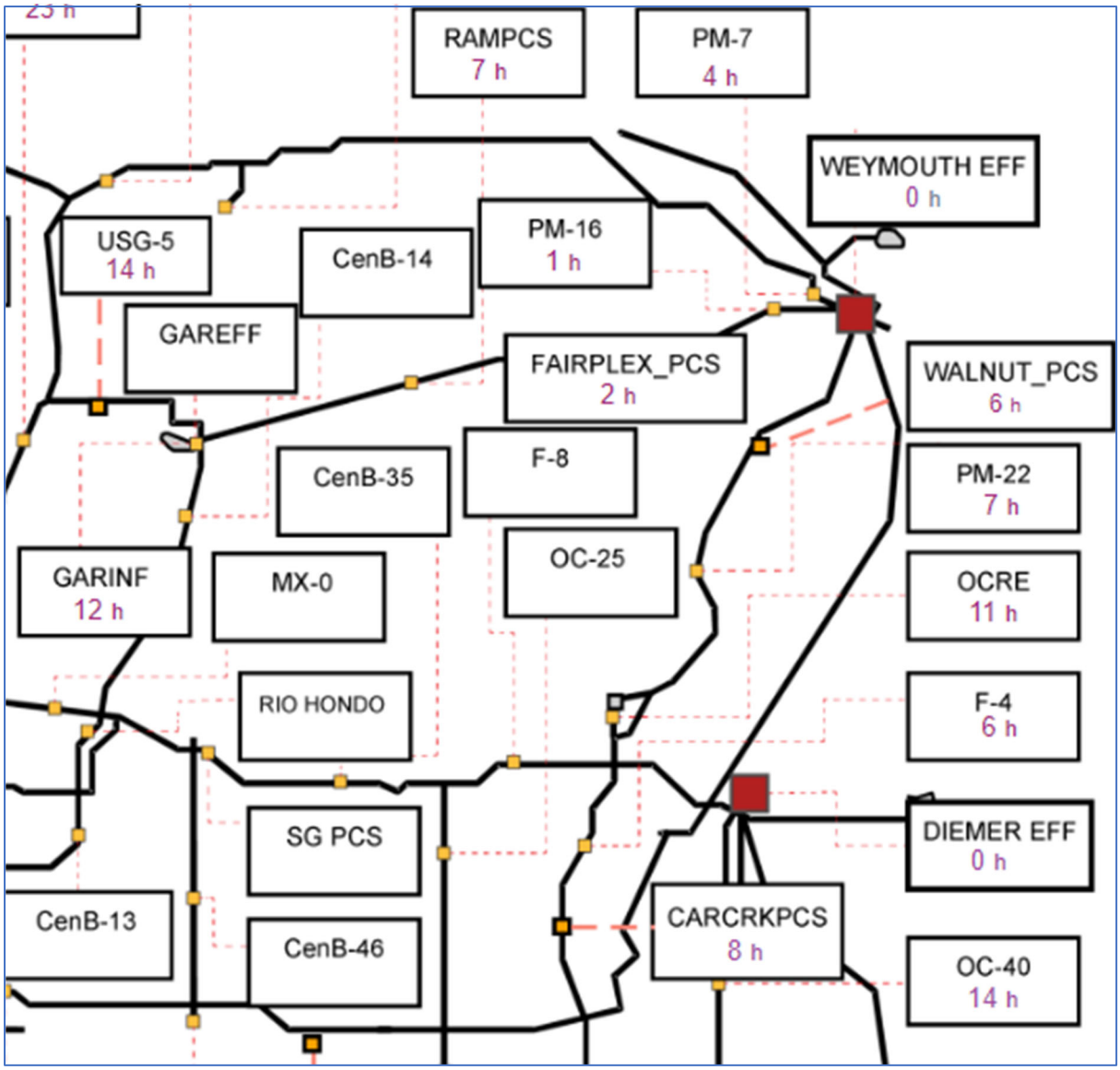
Attachment 1: Example: Model of water age prediction

Detailed Report

Metropolitan strives to improve and protect water quality. Part of that improvement involves understanding water aging, which plays a significant role in water quality. Because of the nitrification events that occurred mid-year 2023, the Engineering Service Group has been conducting a concerted effort to prioritize the hydraulic modeling and water quality calibration project. Efforts have recently focused on implementation of the water age prediction capabilities of the livemodel server, with water age predictions based on current distribution system operations along the Upper Feeder, north Middle Feeder, and Orange County Feeder. After the water age predictions are implemented, the project will move on to implementation of chlorine residual predictions. The Information Technology Group has jointly supported this effort by leading the way in the development of scripts to provide boundary condition data to the model as well as making the model predictions available to Metropolitan staff at large via displays in Aveva PI Vision.

Date of Report: 3/12/2024

Example: Model of water age prediction



Attachment 1: Example of model predictions of water age based on operating conditions on the morning of February 15, 2024. This tool will aid the Water System Operation (WSO) group, Water Quality Section and WSO System Operations Unit in operational decision-making. (Empty boxes are associated with remaining areas where efforts are focused.)

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Water System Operations Group

- **Operations Monthly Activities for February 2024**

Summary

This monthly report for the Water System Operations Group provides a summary of activities for February 2024 in the following key areas:

- Manage Business Operations, Budget, and Staffing
- Ensure Accurate Billing and Support Revenue Generation
- Provide Reliable Water Deliveries and Manage Storage
- Develop New Supplies and Optimize System Flexibility
- Manage Power Resources and Energy Use in a Sustainable Manner
- Protect Source Waters and Ensure Water Quality Compliance
- Optimize Water Treatment and Distribution
- Protect Infrastructure and Optimize Maintenance
- Ensure Power and Environmental Regulatory Compliance
- Enhance Emergency Preparedness and Response
- Prepare for Future Legislation and Regulations
- Advance Education and Outreach Initiatives
- Engage with Member Agencies and Other Stakeholders on Technical Matters

Purpose

Informational by the Water System Operations Group on a summary of key activities for the month of February 2024

Attachments

Attachment 1: Detailed Report—Water System Operations Group's Monthly Activities for February 2024

Date of Report: March 12, 2024

Water System Operations

Core Business Objectives

Manage Business Operations, Budget, and Staffing

WSO filled two vacancies in February.

Ensure Accurate Billing and Support Revenue Generation

Staff completed preventative maintenance on Metropolitan's Automated Meter Reading (AMR) systems in the San Fernando Valley, Los Angeles, and La Verne distribution areas. Metropolitan maintains approximately 460 service connections across the service area. Billing flow meters are calibrated at least once every six months to ensure accurate billing.

Automated Meter Reading (AMR) billing meter cabinet

Provide Reliable Water Deliveries and Manage Storage

Metropolitan member agency water deliveries were 58,200 acre-feet (AF) for February, with an average of 2,010 AF per day, about 250 AF per day lower than in January. Metropolitan has suspended Cyclic and Conjunctive Use Program deliveries to preserve State Water Project supplies. Treated water deliveries were 8,200 AF lower than in January, for a total of 28,500 AF or 49 percent of total deliveries for the month. The Colorado River Aqueduct (CRA)

pumped a total of 39,000 AF in February. Metropolitan maintained a three-pump flow along the CRA for most of the month. State Water Project (SWP) imports averaged 520 AF per day, totaling about 15,200 AF for the month. The target SWP blend is 0 percent for the Weymouth, Diemer, and Skinner plants.

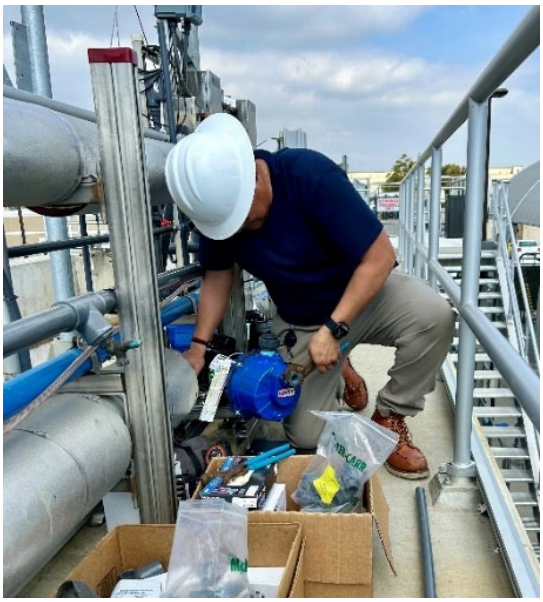
On February 21, the Department of Water Resources (DWR) increased the SWP Allocation for 2024 from 10 to 15 percent. The 15 percent SWP Allocation, when combined with Colorado River supplies, does not provide the region with sufficient water to meet demands, and Metropolitan will need to rely on stored supplies. However, recent wet conditions may result in increases to the SWP Allocation later this season. Water continues to be managed according to Water Surplus and Drought Management (WSDM) principles and operational objectives with an emphasis to maintain storage supplies to meet future demands in the SWP dependent area. Metropolitan suspended deliveries to Desert Water Agency and Coachella Valley Water District. With the current low SWP Allocation, Metropolitan is minimizing its use of Table A supplies early this year and will adapt as conditions change. Metropolitan has reduced blends at its treatment plants to preserve SWP supplies and use more Colorado River water.

Develop New Supplies and Optimize System Flexibility

During February, staff began baseline testing for tertiary membrane bioreactor nitrification-denitrification (tMBR NdN) testing at the Napolitano Innovation Center demonstration facility in Carson. Staff finalized and began implementing the test plan for tMBR NdN operations. SCADA staff modified the chemical dosing system to allow more automated operation of the carbon dosing system, optimizing chemical usage to meet MBR filtrate nitrate targets.

Dissolved oxygen measurement in the NIC demonstration facility bioreactors

Training for LACSD staff on microbial sample processing at the Napolitano Innovation Center



Sample pump installation for routine monitoring of biological tanks at the NIC demonstration facility

Manage Power Resources and Energy Use in a Sustainable Manner

Energy markets in February were generally within seasonal norms. Natural gas prices were in the $5-10 per Metric Million British Thermal Unit (MMBtu) range, with electricity prices in the CAISO market following suit, averaging in the $40-60 per megawatt-hour (MWh) range. No significant energy pricing events occurred in the western US or nationwide.

CRA pumping averaged around three pumps in February as the system began ramping down for the CRA shutdown scheduled for March. Reduced demand and nearly full storage levels at Lake Mathews continued to keep CRA pumping costs trending below budget. CRA pumping costs for February were about $3 million. The CRA energy cost budget for fiscal year 2023/24 is $82.6 million; the current cost forecast for fiscal year 2023/24 is significantly lower at $49 million due to reduced pumping and lower forward cost curves. Monthly costs are forecast to increase after the scheduled CRA shutdown in March as the aqueduct returns to a higher scheduled flow and energy prices increase in anticipation of summer.

Daily generation output from Metropolitan's small hydroelectric plants (HEPs) averaged around 6 megawatts during February, for a total energy output of about 4,600 MWh. Metropolitan's solar facilities, totaling 5.4 megawatts of capacity, generated approximately 500 MWh in February.

Protect Source Waters and Ensure Water Quality Compliance

Metropolitan complied with all water quality regulations and primary drinking water standards during January 2024.

On February 7 and 8, Metropolitan participated in onsite stakeholder meetings for the Topock Chromium-6 Groundwater Remediation Project in Lake Havasu City, AZ. The Department of Toxic Substances Control led a discussion on developing an orientation workshop for Topock Tribal Governments and stakeholders to improve communications and understanding of project technical and regulatory information. Pacific Gas and Electric also led a site walk to review groundwater remedy structures installed to date and discuss proposed modifications to enhance chromium-6 removal in the East Ravine area along the Colorado River. Start-up of the full groundwater remedy is anticipated to begin in 2027.

Topock site-walk included viewing culturally sensitive areas that could be impacted by infrastructure associated with a modified remediation approach

Optimize Water Treatment and Distribution

The State Water Project (SWP) target blend entering the Diemer and Weymouth plants remained at zero percent until February 25, when the SWP target blend was gradually increased to target 100 percent SWP by March 11 to accommodate the Lake Mathews shutdown. The SWP target entering Lake Skinner remained at zero percent in February, and the SWP blend leaving the lake was approximately 20 percent. Flow-weighted running annual averages for total dissolved solids from January 2023 through December 2023 for Metropolitan's treatment plants capable of receiving a blend of supplies from the SWP and the Colorado River Aqueduct were 357, 433, and 477 milligrams per liter (mg/L) for the Weymouth, Diemer, and Skinner plants, respectively.

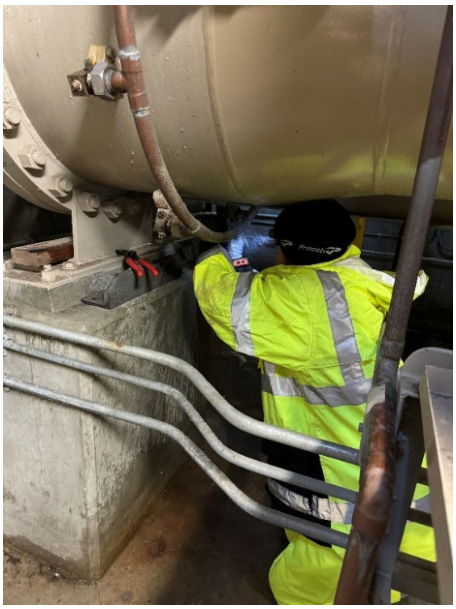
Weymouth plant staff provided project support for the Weymouth Administrative Building Seismic Upgrades and Building Improvements capital project. Staff relocated critical chlorine ejector feed lines in preparation for contractor construction work. Two backflow device assemblies were also relocated and replumbed.

Staff assembling supply piping (left) and checking for leaks (right) at the Weymouth plant

Staff at the Weymouth plant worked on commissioning filter valves for the Basins 5-8 and Filter Building No. 2 Rehabilitation capital project. Staff checked filter valve position indicators and completed limit switch testing. After verifying that the valves operated correctly, the filters were returned to service.

Staff adjusting valve position indicators (left) and verifying panel indication (right) at Weymouth plant

Skinner plant staff completed venturi meter preventive maintenance to ensure accurate flow measurements. Venturi meters use the pressure differential between two points to measure flow velocity. Keeping the flow tubes clean, where pressure is measured, is necessary for proper functionality. A rodding tool is used to clear the sensing line of debris before it is flushed clean.



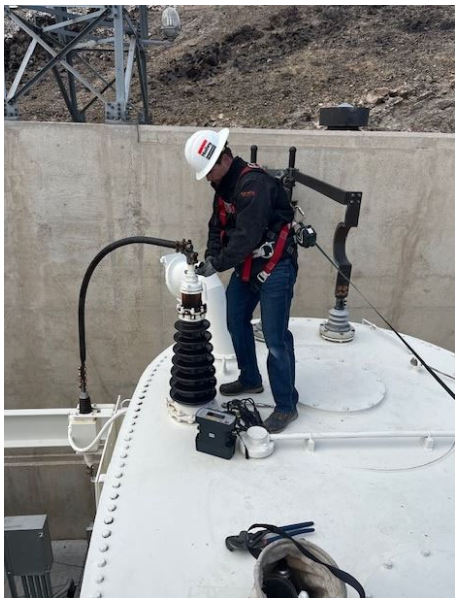
Staff performing venturi meter maintenance at the Skinner plant

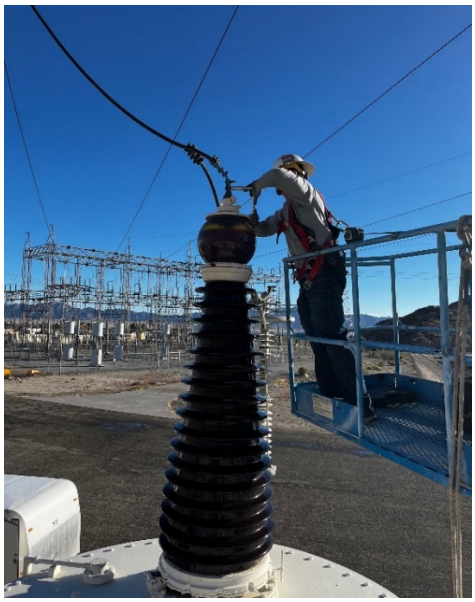
Staff upgraded the filter valve actuators at the Diemer plant which provide the mechanism to open and close filter valves. The actuators original spring packs were undersized which can cause excess mechanical wear when the valves are operated. The newly installed spring packs have a higher torque capacity and can operate more reliably.

Staff upgrading filter valve actuator spring packs at Diemer plant

Protect Infrastructure and Optimize Maintenance

On a five-year rotation, staff perform maintenance and testing on CRA high-voltage systems during the annual CRA Shutdown. The recent 3-pump flows on the CRA have allowed staff to get a head start on 230kV transformer testing this year.





Staff testing the 230kV transformers at Eagle Mountain pumping plant

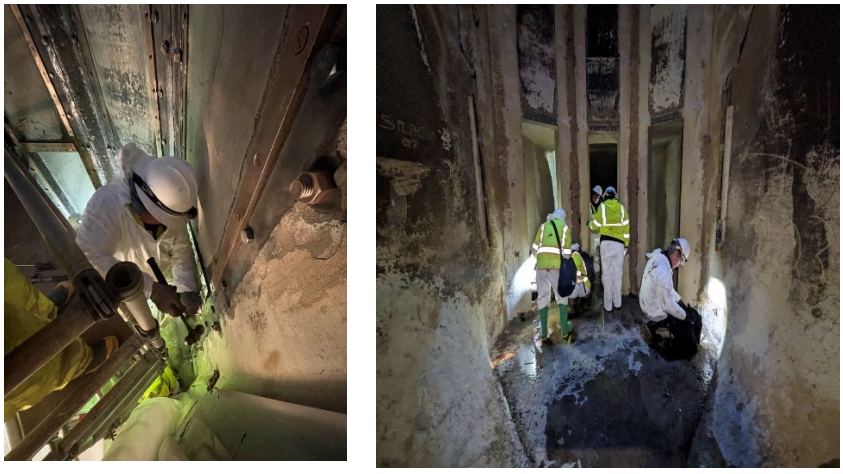
The CRA high-voltage transformers are crucial to moving water across the desert. Exposure to the harsh desert environment requires regular inspection, disassembly, cleaning, repair, and replacement of parts so the transformers can operate at maximum efficiency. Staff replaced the secondary bushings on the Intake Bank transformer.

Staff replacing secondary bushings at Intake Bank transformer on the CRA

Circulating water systems at the CRA pumping plants ensure everything from bearings to transformers can operate at optimal temperatures. Source water often contains contaminants such as sand and other debris, leading to wear on valve seats and other components. Staff replaced a supply valve to ensure the system stayed operable and could be isolated when needed.

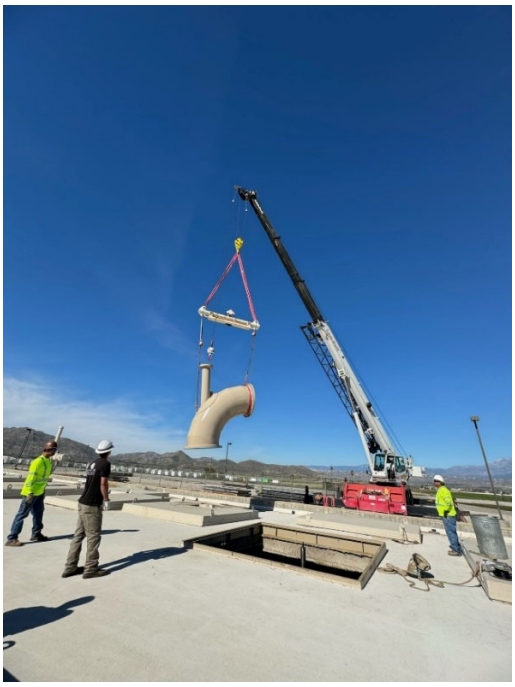
Staff replacing a circulating water supply valve at Gene pumping plant

Staff completed a 10-day shutdown on a portion of the Upper Feeder (Treated) from the Weymouth plant to Eagle Rock. Staff removed coatings and completed a 3-D scan to inform design of future tower upgrades at the San Gabriel Tower. Staff also performed inspections on three different tunnels, replaced several faulty valves, and installed security upgrades at several locations.



Staff inspecting the interior of San Gabriel Tower on the Upper Feeder (Treated)

Staff reinstalled a sleeve valve at the PC-1 Pressure Control Facility this month. Staff removed the valve last year and refurbished it at the Wadsworth Pump Plant maintenance shop. The valve is nearly 20 years old and is part of the Inland Feeder system. Six sleeve valves at this location will also need internal inspection and refurbishment.



Staff reinstalling a sleeve valve at PC-1 Pressure Control Facility

Staff completed preventative maintenance work on distribution system water quality analyzers. The online analyzers provide real-time chlorine, turbidity, and pH monitoring throughout the distribution system. The analyzers act as Metropolitan's early warning system alerting staff of potential water quality changes.

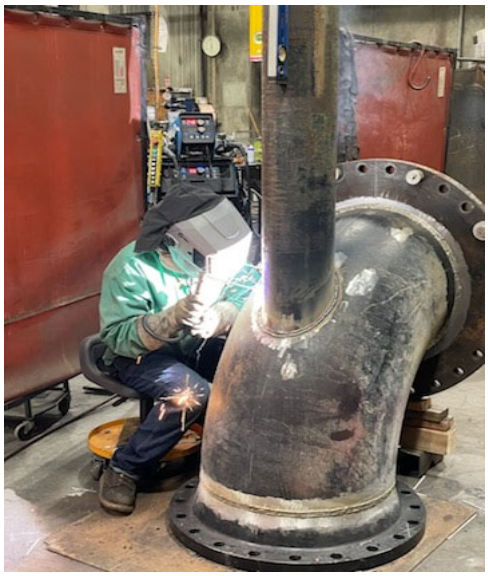
Staff working on a water quality panel at the Beverly Hills Pressure Control Structure

Staff installing a new water quality panel at Palos Verdes Reservoir

Staff continued improving communication capabilities at some of Metropolitan's remote locations by completing work at the Magazine Canyon Junction Shaft. The improvements included new receptacles and electrical conduits that will allow for upgraded fiber optic cable installation and future enhancements to the existing communication equipment.

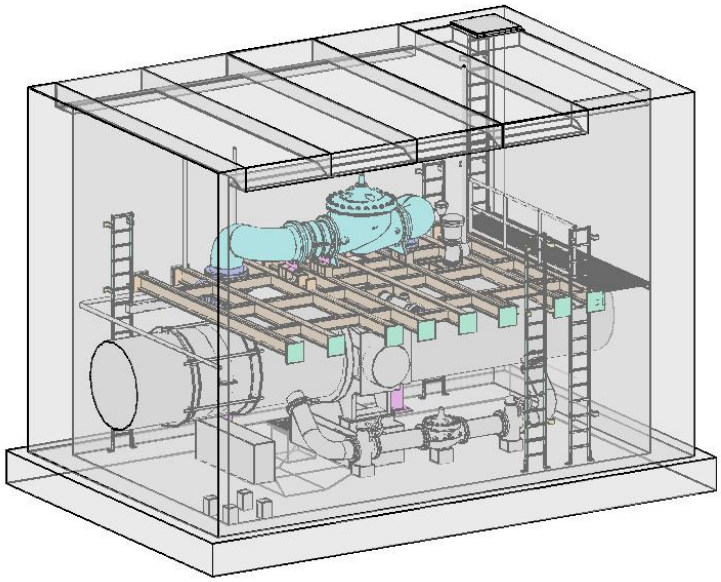
Staff installing electrical conduit at Magazine Canyon Junction Shaft

The La Verne Shops received an urgent request to manufacture a 24-inch bypass line for the OC-88 sectionalizing valve structure on the Allen-McColloch Pipeline (AMP). The scope of work involved manufacturing two 24-inch reducing elbows, two short pipe spools, two blind flanges, and a structural steel maintenance deck.



The La Verne Shops fabricated reducing elbows (left) and leg support (right) for a 24-inch bypass line at OC-88 on the AMP

Staff continued work to install a 24-inch Cla-Val pressure control valve inside the OC-88 sectionalizing valve structure along the Allen-McColloch Pipeline (AMP). The valve installation is being performed for improved hydraulic control of the AMP, in response to a recent inspection of this prestressed.



3D rendition of the planned bypass with I-Beam support

Staff mounting I-Beams to structure walls (left) and 100-ton crane hoisting I-Beams (right) at OC-88 valve structure along the AMP

Ensure Power and Environmental Regulatory Compliance

Metropolitan completed its annual self-certification for 2023, complying with mandatory electric reliability requirements of the North American Electric Reliability Corporation (NERC). Metropolitan is subject to 39 NERC standards with 135 unique requirements. The Western Electricity Coordinating Council (WECC) is the Regional Entity tasked with enforcing NERC standards. For calendar year 2023, WECC requires Metropolitan to self-certify for two standards relating to transmission planning and relay load ability.

The self-certification documentation was submitted to WECC prior to the March 1, 2024, deadline. Following best industry practice, Metropolitan reviews and ensures compliance with all applicable NERC standards each year.

Metropolitan contracts with the Arizona Electric Power Co-operative (AEPCO) to perform Transmission Operator functions for Metropolitan's 230 kV transmission system. Staff supported AEPCO during their 2023-24 NERC audit, which was completed in February 2024 with no deficiency findings.

Enhance Emergency Preparedness and Response

Staff completed annual Hazardous Material Chemical Responder and Incident Commander refresher training at the Skinner plant. The training and functional exercise was coordinated with the Riverside County Fire Department Hazardous Material Response Team and Riverside County Department of Environmental Health.

Chemical Response Refresher Training at the Skinner plant

Annual routine grading of all Metropolitan access roads and easements are necessary for staff, utility trucks, and emergency vehicles that require unhindered access to all locations throughout the district. Staff is currently working on routine grading of the CRA patrol roads in preparation for the upcoming CRA Shutdown and tunnel cleaning activities.

Staff grading CRA patrol roads near Desert Hot Springs

Prepare for Future Legislation and Regulations

On January 24, the Division of Drinking Water posted updated guidance for preparing Consumer Confidence Reports (CCRs). The reference manual only provides guidance for the CCR and does not contain provisions related to EPA's proposed revisions requiring public water systems serving over 10,000 people to deliver CCRs twice a year, among other new requirements. As a wholesaler, Metropolitan is not required to do a CCR, but will be required to provide water quality data to our member agencies twice per year. Staff will continue to monitor any future changes to the CCRs.

On February 2, EPA released the third set of data collected under the fifth Unregulated Contaminant Monitoring Rule (UCMR5) for 29 per- and polyfluoroalkyl substances (PFAS) and lithium. These limited data show that PFAS co-occur as mixtures in drinking water systems. For example, there are 831 public water systems that have reported results for two or more PFAS at or above the UCMR minimum reporting level. Staff are reviewing these data for PFAS occurrence within Metropolitan's service area.

On February 7, staff coordinated and led the recurring AWWA, California-Nevada Section PFAS Workgroup Meeting. Discussion topics included federal and state regulatory updates, UCMR5 prevalence data, and an update on the various legal issues relating to PFAS contamination.

On February 8, EPA published a notice requesting public input on drinking water analytical methods for emerging contaminants in drinking water (e.g., PFAS) that might support monitoring under the sixth Unregulated Contaminant Monitoring Rule (UCMR6) and/or other future cycles of the UCMR program. Staff are reviewing the proposal prior to the April 8, 2024, comment deadline. EPA will also host two identical pre-proposal webinars on April 17 and 18 to discuss potential approaches for developing UCMR6.

On February 8, EPA released two new proposed rules related to PFAS and the Resource Conservation and Recovery Act (RCRA). The first rule proposes to list nine PFAS (PFOA, PFOS, PFBS, HFPO-DA, PFNA, PFHxS, PFDA, PFHxA, and PFBA) and their salts and structural isomers as "hazardous constituents" under RCRA. The second rule revises the definition of "hazardous waste" applicable to corrective actions for treatment, storage, and disposal facilities (TSDFs). A hazardous constituent listing is the first step toward a potential "hazardous waste" listing. If these nine PFAS were to be classified as hazardous wastes under RCRA, then CERCLA liability would be triggered. Staff are preparing comments prior to the April 8 comment deadline.

On February 15, the Occupational Safety and Health and Standards Board (OSHSB) updated the Lead Standards for General Industry and Construction. Effective January 1, 2025, the new standards lowers the eight-hour time-weighted average Permissible Exposure Limit (PEL) for lead from 50 micrograms per cubic meter (µg/m3) to 10 µg/m3; lowers the Action Level from 30 µg/m3 to 2 µg/m3; requires a written plan to reduce and maintain employee blood lead levels below 10 micrograms per deciliter (µg/dl); and updates requirements to reduce lead ingestion and cross-contamination during construction activities. Staff are updating internal standard operating procedures for rule compliance.

Advance Education and Outreach Initiatives

On February 22, staff provided a tour of the Weymouth plant and Water Quality Laboratory to a group of AWWA, California-Nevada Section Young Professionals. The tour covered most of the aspects of water treatment and testing and highlighted the importance of a robust monitoring program to ensure regulatory compliance.

Staff hosting AWWA, CA-NV Young Professionals at Weymouth plant

Engage with Member Agencies and Other Stakeholders on Technical Matters

On February 6, Metropolitan hosted its regular quarterly meeting with the State Water Resources Control Board's Division of Drinking Water. Discussion topics included updates on regulations, capital projects, treatment and distribution system water quality, and Mills plant bromate monitoring.

Staff at Julian Hinds Pump Plant showcased their facility during a visit from Metropolitan's executive management and Member Agency General Managers. The current and future projects discussed exhibited Metropolitan's commitment to providing safe drinking water with no one left behind.

Staff hosting Metropolitan's GM and Member Agency GMs at Hinds pumping plant

Engineering, Operations, & Technology Committee

Management Announcements and Highlights

Item 7a

March 11, 2024

Engineering Services

11th Annual Girl Day Celebration at Metropolitan

Co-hosted event with ASCE

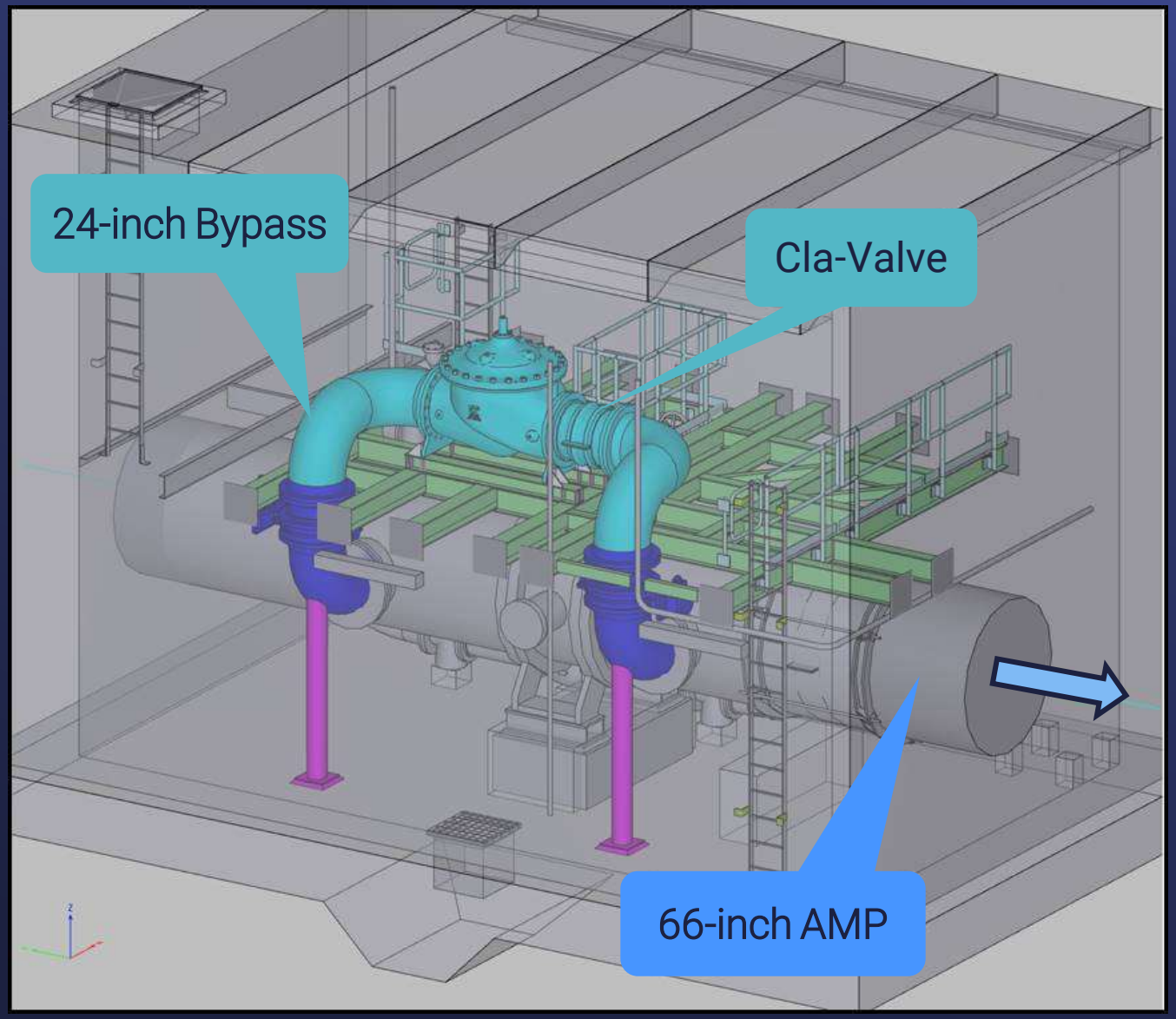
- February 22, 2024
- 117 middle school/high school students in attendance
- Representing Title IX schools in Los Angeles
- Several Engineering Services staff made presentations
- Event was part of ASCE's Engineer's Week

Girl Day at Metropolitan - "Building Tomorrow Today"

Metropolitan Speakers at Event

Attendees Gathering in Rotunda

Allen-McColloch Pipeline Urgent Repairs



Installation of 24-inch bypass Valve at OC-88 vault

- 66-inch valve will be closed
- 24-inch valve used to convey water to south end of AMP
- Effectively reduces downstream hydraulic grade line in southern portion of AMP
  - Upstream HGL 750 ft
  - Downstream HGL 670 ft

Allen-McColloch Pipeline Urgent Repairs

24-inch Cla Valve
installed in 66-inch valve vault near OC-88

All work performed by District Forces

Colorado River Aqueduct Structural Protection Project

- Contract Award: April 2023
- Contract Amount: $8.66M
- Anticipated Completion: January 2025
- Current Status: ±50% complete

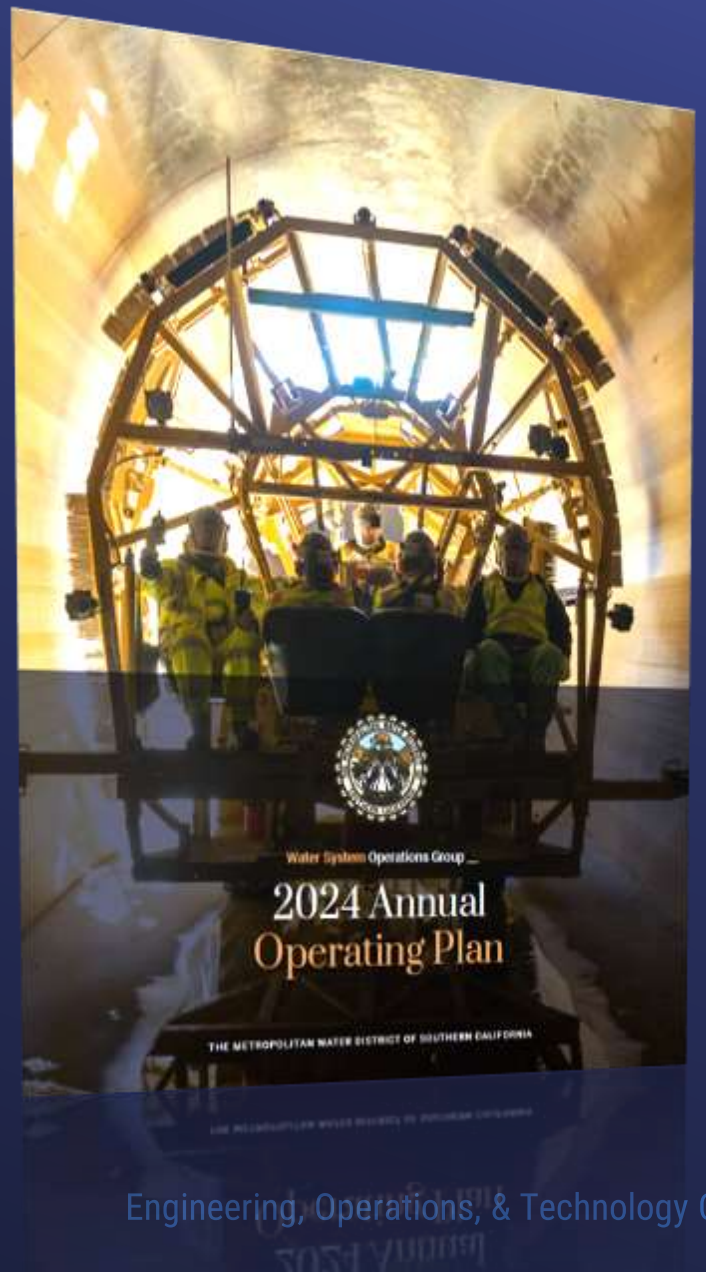
Placement of concrete for protective slab above aqueduct

Conducting work in a manner that protects sensitive species

Water System Operations

Strategic Operations for Maximum Reliability

2024 Annual Operating Plan



- Review of operations and challenges overcome in 2023
- Plans for a full range of conditions in 2024
- Communicates expected future operations to member agencies and partners

Current Operational Conditions

Colorado River Aqueduct

Managing through Shutdowns

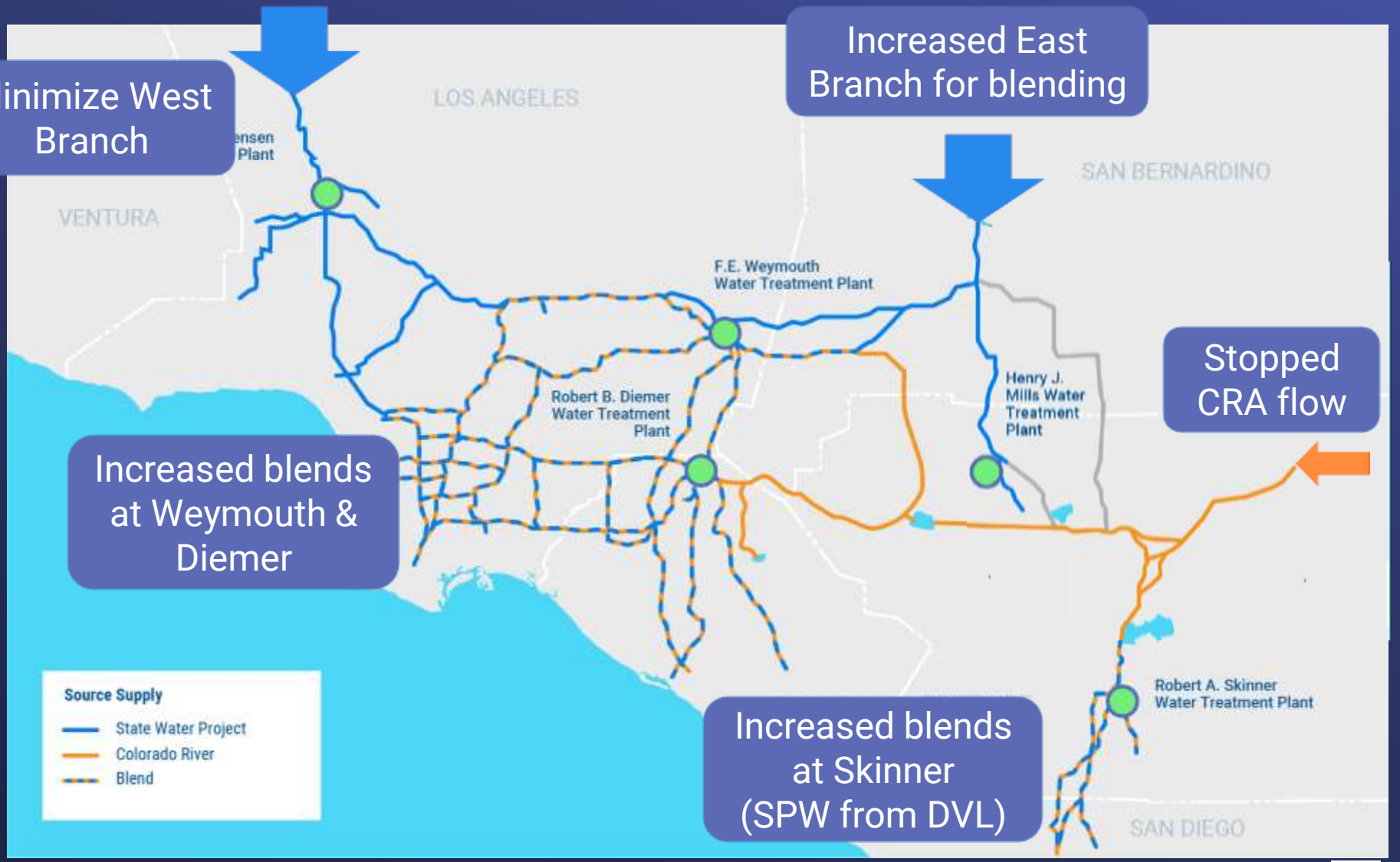
- 2024 SWP Allocation at 15%
- CRA at 0-pump flow with CRA shutdown underway
- Deliveries to DWCV at 0 cfs
- SWP blends are 100% at Weymouth and Diemer, and increasing from 20% at Skinner, to support Lake Mathews and CRA shutdowns
- February 2024 deliveries of 62 TAF were 1 TAF less than February 2023

Adapted Operations to Support Current Shutdowns

March 2024 Operations

Increased SWP Supplies for Lake Mathews Shutdown (March 12-13)

Dropped Pumps for CRA Shutdown (March 5-28)



Ensuring Continued System Reliability

Sepulveda Feeder
Rehabilitate PCCP via carbon fiber relining
Mar. 18 – Apr. 10, 2024

Santa Monica Feeder
Repair water quality sample line
Recently Completed

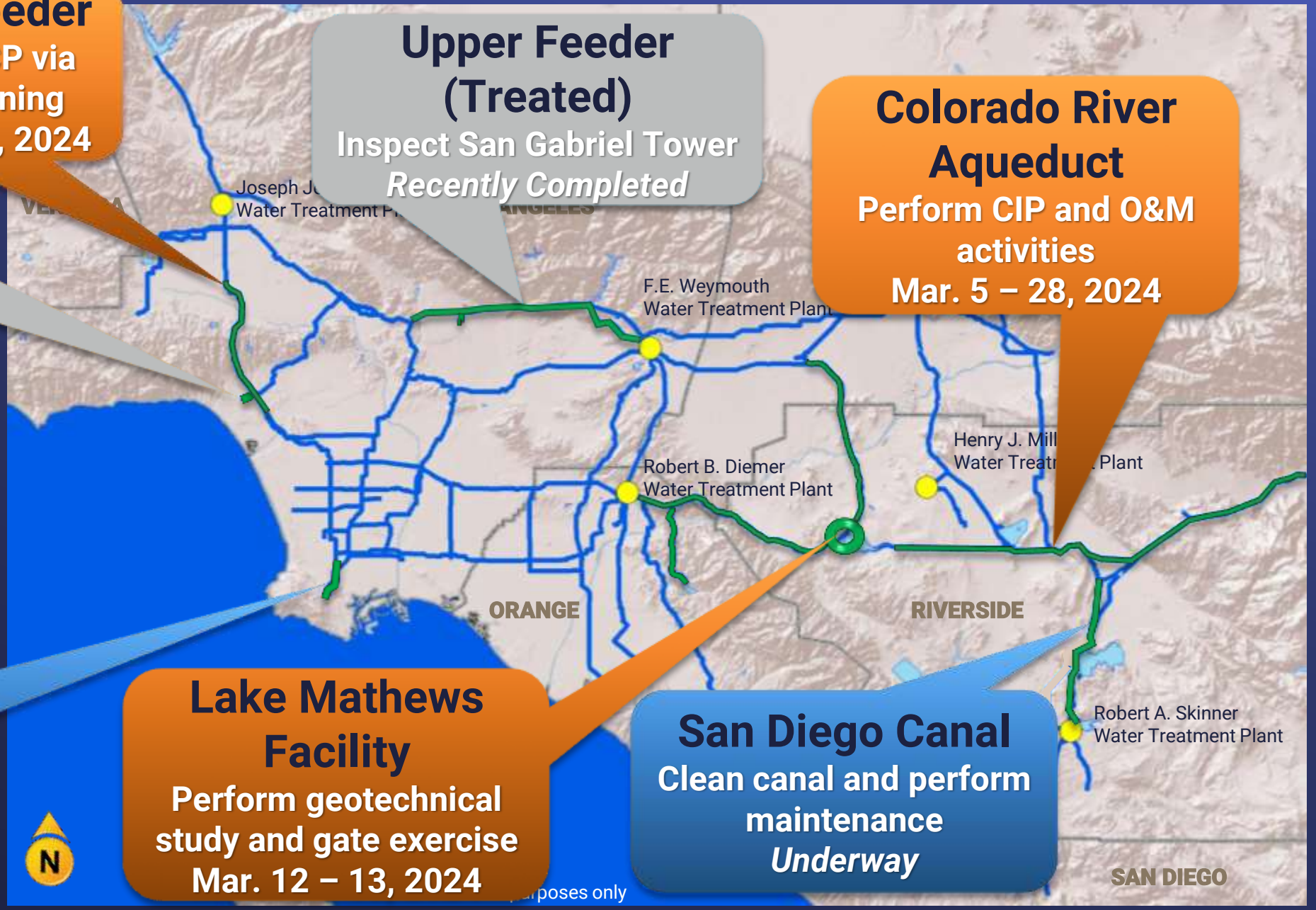
Second Lower Feeder
Rehabilitate PCCP
Underway

Upper Feeder (Treated)
Inspect San Gabriel Tower
Recently Completed

Colorado River Aqueduct
Perform CIP and O&M activities
Mar. 5 – 28, 2024

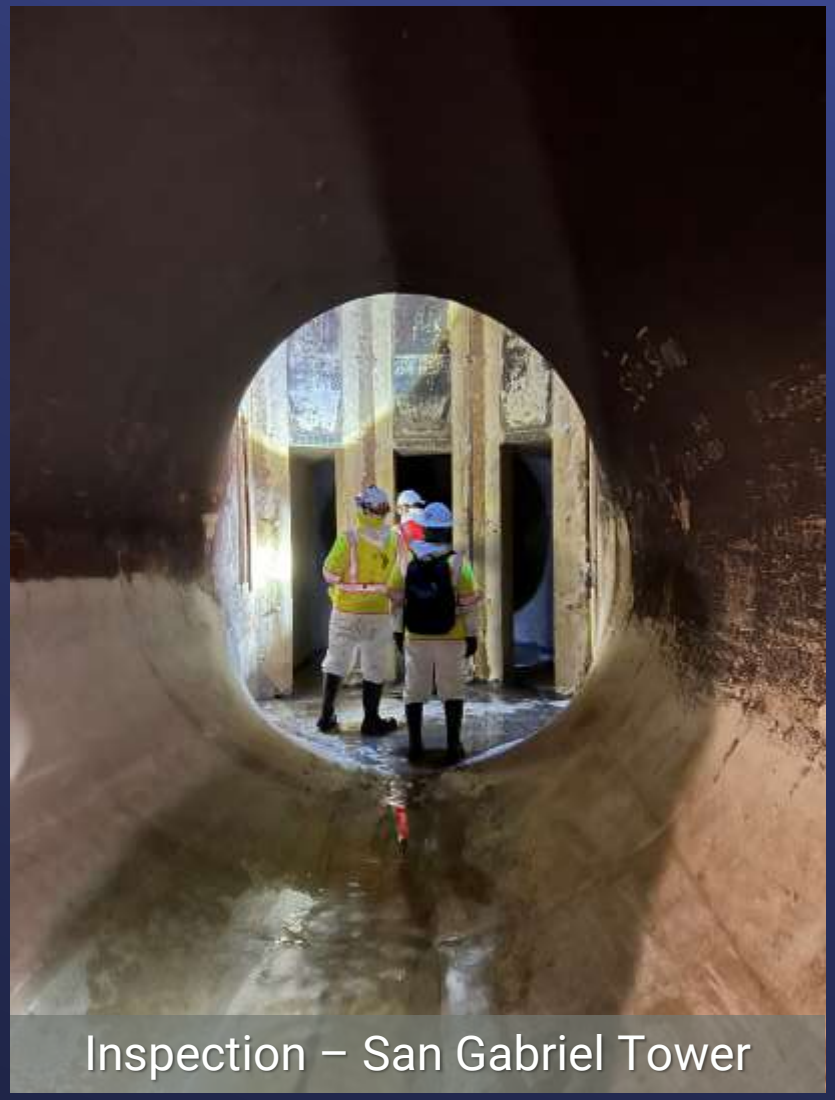
Lake Mathews Facility
Perform geotechnical study and gate exercise
Mar. 12 – 13, 2024

San Diego Canal
Clean canal and perform maintenance
Underway



Upper Feeder Shutdown

Crane Support – San Gabriel Tower



Inspection – San Gabriel Tower

View Up – San Gabriel Tower

San Diego Canal Shutdown

Reinforced Steel Installation

Concrete Panel Installation

Information Technology

No update for this period


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928