

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. Petersen, Vice Chair
D. Alvarez
M. Camacho
A. Chacon
B. Dennstedt
S. Faessel
L. Fong-Sakai
R. Lefevre
J. McMillan
C. Miller
J. Morris
G. Peterson
T. Quinn
K. Seckel
T. Smith

Engineering, Operations, and Technology Committee - Final

Meeting with Board of Directors *

May 8, 2023

9:00 a.m.

Agendas, live streaming, meeting schedules, and other board materials are available here: <https://mwdh2o.legistar.com/Calendar.aspx>. 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 or a Committee on matters within their jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference (833) 548-0276 and enter meeting ID: 815 2066 4276 or click [https://us06web.zoom.us/j/81520664276?](https://us06web.zoom.us/j/81520664276?pwd=a1RTQWh6V3h3ckFhNmNsUWpKR1c2Zz09)
[pwd=a1RTQWh6V3h3ckFhNmNsUWpKR1c2Zz09](https://us06web.zoom.us/j/81520664276?pwd=a1RTQWh6V3h3ckFhNmNsUWpKR1c2Zz09)

Monday, May 8, 2023 Meeting Schedule

**09:00 a.m. EOT
11:00 a.m. LRAC
01:00 p.m. Break
01:30 p.m. OWS**

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

Teleconference Locations:

3008 W. 82nd Place • Inglewood, CA 90305

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

* 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))

2. SUBCOMMITTEE REPORTS

NONE

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

3. CONSENT CALENDAR OTHER ITEMS - ACTION

- A. Approval of the Minutes of the Engineering, Operations, and Technology Committee for April 10, 2023 (Copies have been submitted to each Director, Any additions, corrections, or omissions) [21-2153](#)

Attachments: [05082023 EOT 3A \(04102023\) Minutes](#)

4. **CONSENT CALENDAR ITEMS - ACTION**

- 7-1 Award a \$637,520 contract to Acro Constructors to upgrade the video production room at Metropolitan's Headquarters Building; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [21-2220](#)

Attachments: [05092023 EOT 7-1 B-L](#)
[05082023 EOT 7-1 Presentation](#)

- 7-2 Authorize an agreement with Arcadis U.S. Inc. for a not-to-exceed amount of \$550,000 to design, develop, and deploy Metropolitan's Capital Investment Plan Budget System Improvements; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [21-2221](#)

Attachments: [05092023 EOT 7-2 B-L](#)
[05082023 EOT 7-2 Presentation](#)

- 7-3 Authorize an increase of \$1.5 million to an existing agreement with Stantec Consulting Services Inc. for a new not-to-exceed total amount of \$1.69 million for preliminary design of a mechanical dewatering facility at the Joseph Jensen Water Treatment Plant; and an amendment to an agreement with Los Angeles Department of Water and Power to extend Metropolitan's use of two solids lagoons at the Aqueduct Filtration Plant; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA [21-2223](#)

Attachments: [05092023 EOT 7-3 B-L](#)
[05082023 EOT 7-3 Presentation](#)

- 7-4 Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include the Diemer Helicopter Hydrant Facility project; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA [21-2224](#)

Attachments: [05092023 EOT 7-4 B-L](#)
[05082023 EOT 7-4 Presentation](#)

- 7-5** Award a \$1,466,665 procurement contract to B&K Valves & Equipment, Inc. for 72 combination air release/vacuum valves to be installed on San Diego Pipeline Nos. 3 and 5; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-2226**

Attachments: [05092023 EOT 7-5 B-L](#)
[05082023 EOT 7-5 Presentation](#)

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

5. OTHER BOARD ITEMS - ACTION

- 8-1** Award a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America for two large-diameter butterfly valves to be installed at the Foothill Pump Station Intertie as part of water supply reliability improvements in the Rialto Pipeline service area; 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 areas) **21-2222**

Attachments: [05092023 EOT 8-1 B-L](#)
[05082023 EOT 8-1 Presentation](#)

- 8-2** Award a \$5,266,000 contract to Leed Electric, Inc., to install 12 flow monitoring stations along the Colorado River Aqueduct conveyance system; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-2225**

Attachments: [05092023 EOT 8-2 B-L](#)
[05082023 EOT 8-2 Presentation](#)

6. BOARD INFORMATION ITEMS

NONE

7. COMMITTEE ITEMS

- a.** Eastern Municipal Water District's Lake Skinner Water Transmission System and EM-11 Connection Project **21-2239**

Attachments: [05082023 EOT 7a Presentation](#)

- b.** Update on Constituents of Emerging Concern **21-2240**

Attachments: [05082023 EOT 7b Presentation](#)

8. MANAGEMENT REPORTS

- a. Water System Operations Manager's Report [21-2155](#)

Attachments: [05082023 EOT 8a Presentation](#)

- b. Engineering Services Manager's Report [21-2154](#)

Attachments: [05082023 EOT 8b Presentation](#)

- c. Information Technology Manager's Report [21-2156](#)

Attachments: [05082023 EOT 8c Presentation](#)

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

April 10, 2023

Chair Erdman called the meeting to order at 9:00 a.m.

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

Members absent: Directors Chacon and Quinn.

Other Board Members present: Ackerman, Atwater (teleconference posted location), Dick, Garza, Jung (teleconference posted location), Kurtz, and Pressman (teleconference posted location).

Committee staff present: Bednarski, Chapman, Chaudhuri, Eckstrom, Hagekhalil, Parsons, Upadhyay, and Jarrad.

1. OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO ADDRESS THE COMMITTEE ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION

None

2. SUBCOMMITTEE REPORTS

- A. Subject: Report from Subcommittee on Pure Water Southern California and Regional Conveyance

Presented by: Director John Morris

Subcommittee has presentations on

- State Water Project Dependent Areas Drought Mitigation Actions
- Pure Water Southern California Quarterly Report

CONSENT CALENDAR ITEMS -- ACTION

3. CONSENT CALENDAR OTHER ITEMS ACTION

- A. Approval of the Minutes of the Engineering, Operations, and Technology Committee for March 13, 2023

4. CONSENT CALENDAR ITEMS - ACTION

7-1 Subject: Adopt CEQA determination that the proposed action was previously addressed in the Mitigated Negative Declaration and related CEQA actions, and award an \$8,656,568 contract to Granite Construction Company for construction of structural protection measures at 24 cut-and-cover conduit locations along the Colorado River Aqueduct; authorize agreements with: (1) Environmental Science Associates in an amount not to exceed \$1,200,000 for biological surveys and environmental monitoring; and (2) Deto, Inc. in an amount not to exceed \$325,000 for compensatory environmental mitigation credits.

Presented by: Catherine Lou, Engineer, Engineering Services

Motion: Adopt CEQA determination that the proposed action was previously addressed in the Mitigated Negative Declaration and related CEQA actions, and a. Award an \$8,656,568 contract to Granite Construction Company for construction of structural protection measures at 24 cut-and-cover conduit locations along the Colorado River Aqueduct; b. Authorize an agreement with Environmental Science Associates in an amount not to exceed \$1,200,000 for biological surveys and environmental monitoring; and c. Authorize an agreement with Deto, Inc. in an amount not to exceed \$325,000 for compensatory environmental mitigation credits.

7-2 Subject: Award a \$6,174,000 contract to West Valley Investment Group for seismic upgrades to the Foothill Hydroelectric Plant and Control Building; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.

Presented by: Arya Ahang, Engineer, Engineering Services

Motion: Award a \$6,174,000 contract to West Valley Investment Group for seismic upgrades to the Foothill Hydroelectric Plant and Control Building.

The following Directors provided comments or asked questions

1. Faessel

Staff responded to the Directors questions and comments.

Director Dennstedt entered the meeting.

7-3 Subject: Authorize an agreement with Stantec Consulting Services, Inc. in an amount not to exceed \$900,000 for a detailed seismic analysis of the Lake Skinner outlet tower; and award a \$1,174,475 procurement contract to B&K Valves and Equipment, Inc. for the replacement of two valves at the Lake Skinner outlet tower; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.

Presented by: Albert Rodriguez, Sr Engineer, Engineering Services

Motion: a. Authorize an agreement with Stantec Consulting Services, Inc., for a not-to-exceed amount of \$900,000, for detailed seismic analysis of the Lake Skinner outlet tower.
b. Award a \$1,174,475 procurement contract to B&K Valves and Equipment, Inc. for the replacement of two valves at the Lake Skinner outlet tower.

The following Directors provided comments or asked questions

1. Faessel
2. Seckel
3. Erdman
4. Peterson

Staff responded to the Directors questions and comments.

7-4 Subject: Authorize an increase of \$475,000 to an agreement with Brown & Caldwell, for a new not-to-exceed amount of \$715,000, to investigate potential modifications to Metropolitan's existing East-West conveyance and distribution system; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.

Motion: Authorize an amendment to an existing agreement with Brown & Caldwell, for a \$475,000 increase to a new not-to-exceed amount of \$715,000, to investigate potential modifications to Metropolitan's existing East-West conveyance and distribution system.

Mr. John Bednarski, Group Manager, Engineering Services provided a summary of this item.

The following Directors provided comments or asked questions

1. Lefevre
2. Smith
3. Ortega
4. Miller
5. Fong-Sakai

Staff responded to the Directors questions and comments.

Director Petersen left the meeting.

- 7-5** Subject: Authorize an increase of \$5.4 million to an existing agreement with Arcadis U.S., Inc., for a new not-to-exceed total amount of \$6.35 million, for engineering design services to rehabilitate Garvey Reservoir; the General Manager has determined that this proposed action is exempt or otherwise not subject to CEQA.
- Motion: Authorize an increase of \$5.4 million to an existing agreement with Arcadis U.S., Inc., for a new not-to-exceed total amount of \$6.35 million, for engineering design services to rehabilitate Garvey Reservoir.

Mr. John Bednarski, Group Manager, Engineering Services provided a summary of this item.

- 7-6** Subject: Authorize an agreement with Canary Systems California, LLC, for an amount not to exceed \$1.95 million to upgrade the data acquisition systems at Diamond Valley Lake and Garvey Reservoir; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.
- Motion: Authorize an agreement with Canary Systems California, LLC, for an amount not to exceed \$1.95 million to upgrade the data acquisition systems at Diamond Valley Lake and Garvey Reservoir.

Mr. John Bednarski, Group Manager, Engineering Services provided a summary of this item.

After completion of the presentations, Director Lefevre made a motion, seconded by Director Morris, to approve the consent calendar consisting of items 3A, 7-1, 7-2, 7-3, 7-4, 7-5, and 7-6
The vote was:

- Ayes: Directors Alvarez, Dennstedt, Erdman, Faessel, Fong-Sakai, Lefevre, McMillan, Miller, Morris, Peterson, Seckel, and Smith
- Noes: None
- Abstentions: None
- Absent: Director Petersen, Camacho, Chacon, Quinn

The motion for Items 3A, 7-1, 7-2, 7-3, 7-4, 7-5, and 7-6 passed by a vote of 12 ayes, 0 noes, 0 abstentions, and 4 absent.

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

- 5. OTHER BOARD ITEMS - ACTION**
 NONE
- 6. BOARD INFORMATION ITEMS**
 NONE

7. COMMITTEE ITEMS

- a. Subject: Annual Seismic Resilience Update
- Presented by: John Shamma, Section Manager, Engineering Services

Mr. Shamma reported on the following:

- Review of ongoing Seismic Assessments of Metropolitan Infrastructure
- Overview of Agency Partnerships related to seismic resilience
- Review of Metropolitan's concrete structures in light of recent earthquakes in Turkey

The following Directors provided comments or asked questions

1. Seckel
2. Peterson
3. Faessel
4. Dennstedt

Staff responded to the Directors questions and comments.

Director Camacho entered the meeting.

- b. Subject: Jensen Operating Capacity Analysis
- Presented by: Keith Nobriga, Assistant Group Manager (Interim), Water System Operations

Mr. Nobriga reported on the following:

- Review of Jensen historical and forecasted flows
- Options under consideration to maintain or reduce Jensen's rated capacity
- Advantages and disadvantages of plant capacity options, including projected capital and O&M savings
- Board feedback received on option to continue phasing projects at 500 MGD

The following Directors provided comments or asked questions

1. Seckel
2. Camacho
3. Dennstedt
4. Smith
5. Erdman
6. Peterson
7. Lefevre
8. Miller

Staff responded to the Directors questions and comments.

- c. Subject: Update on Jensen Reliability Projects
- Presented by: JR Rhoads, Jensen Unit Manager, Water System Operations
 Joline Muñoz, Engineer, Engineering Services Group
- Mr. Rhoads and Ms. Muñoz reported on the following
- Overview of Jensen operations under extreme conditions
 - System reliability improvement needs
 - Key upcoming capital projects to ensure Jensen’s continued reliability:
Bromate Control, Electrical Upgrades Stage 3, and Solids Mechanical
Dewatering

Director Fong-Sakai entered the meeting.

- d. Subject: Quarterly Cybersecurity Update
- Presented by: Jacob Margolis, Director of Information Technology Services

In closed session, the committee heard the item. No action was taken.

8. MANAGEMENT REPORTS

- a. Subject: Water System Operations Manager’s Report
- Due to time constraints, report presentation deferred
- b. Subject: Engineering Services Manager’s Report
- Due to time constraints, report presentation deferred
- c. Subject: Information Technology Manager’s Report
- No Report for April

9. FOLLOW-UP ITEMS

Schedule of Directors to attend next Desert Housing Field Trip

10. FUTURE AGENDA ITEMS

How is overall CIP budget effected by new projects added during the budget cycle.

The next meeting will be held on May 8, 2023.

Meeting adjourned at 11:24 am.

Dennis Erdman
Chair



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

5/9/2023 Board Meeting

7-1

Subject

Award a \$637,520 contract to Acro Constructors to upgrade the video production room at Metropolitan's Headquarters Building; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The existing video production room at Metropolitan's Headquarters Building has been used by Metropolitan staff for 25 years to prepare videos and presentations that promote sustainable water practices, educate the public, and highlight innovation. The room needs upgrades to make it suitable for modern studio production standards. This action awards a construction contract to upgrade the video room for multimedia production purposes.

Details

Background

Metropolitan's Headquarters Building is a 522,682 square-foot, concrete-frame structure consisting of a 12-story high-rise tower attached to a five-story wing. Shortly after initial occupancy of the building in 1998, three adjacent rooms next to the parking garage elevators on the main level of the building were converted for use as an ad hoc video room. The room has been used by Metropolitan staff on a continual basis for 25 years to develop and produce content that is displayed at board meetings, presented at community meetings, and posted on Metropolitan's website and social media platforms. The video production space has been modified and upgraded over time to reflect the evolving and improving technologies that staff use to develop and produce video products.

The headquarters video production room has a working area of approximately 1,200 square feet and consists of one waiting room and two editing bays providing a video production space. The existing large-footprint multimedia equipment limits the workspace and inhibits efficient video production in the current room configuration. The video room shares one wall with a hallway of high traffic volume leading to the Board Room and the public cafeteria area, and another wall with the parking garage elevators, which emit mechanical noises that prevent staff from producing high-quality media products. To meet Metropolitan's growing video production and editing needs, several significant modifications need to be made to the existing workspace including optimization of the room layout, studio-level soundproofing, improvements to the room's entry/exit arrangement, provisions for expanded video production capabilities, improved lighting, and equipment for mastering multimedia presentations.

Design of the recommended improvements have been completed, and approvals from the City of Los Angeles Department of Building and Safety have been received. The construction contractor will be responsible for pulling all permits required for this project. Staff recommends award of a construction contract at this time.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the action described herein, pending board award of the contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed, pursuant to this action during the current biennium, are available within the Capital Investment Plan Appropriation for fiscal years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an

expenditure of \$1.17 million in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the System Reliability Program.

Headquarters Video Room Upgrades – Construction

The scope of the construction contract consists of installing a general lighting grid mounted above the main studio floor, cinema and photography lights, and emergency lighting; removal of existing gypsum board over existing walls and construction of custom soundproofing walls around the space; construction of a sound isolation enclosure for voiceover recordings; installation of cable pass-throughs for lighting, recording indication lights, and acoustical controls; and installation of wood shelving and cabinetry for equipment storage. Metropolitan force activities will include outage coordination, equipment testing, and commissioning support.

A total of \$1.17 million has been budgeted for this work. In addition to the amount of the contract described below, other funds to be allocated include \$89,000 for Metropolitan force activities described above; \$95,000 for construction management and inspection; \$86,000 for submittals review, responding to requests for information, and preparation of record drawings; \$61,000 for technical support and commissioning by La Cañada Design Group; \$82,000 for contract administration, project controls, and project management; and \$119,480 for the remaining budget. La Cañada Design Group will provide technical support under an existing on-call agreement.

Attachment 1 provides the allocation of the required funds. The total estimated cost of the upgrades to the headquarters video room, including the amount allocated to date and funds allocated for the work described in this action, is \$1.43 million.

Award of Construction Contract (Acro Constructors)

Specification No. 1989A for upgrades to the headquarters video room was advertised for bids on January 24, 2023. As shown in **Attachment 2**, three bids were received and opened on March 7, 2023. The low bid from Acro Constructors in the amount of \$637,520 complies with the requirements of the specifications. The other two bids were \$765,649 and \$799,578, while the engineer's estimate for this project was \$672,000. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 25 percent of the bid amount. Acro Constructors has committed to meet this level of participation.

This action awards a \$637,520 contract to Acro Constructors for upgrades to the video room at Metropolitan's Headquarters Building. As described above, Metropolitan staff will perform construction management and inspection. The total cost of construction for this project is \$726,520, which includes the amount of the contract (\$637,520) and Metropolitan force activities (\$89,000). 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 13.1 percent of the total construction cost.

Alternatives Considered

During the design process, staff considered the alternative of renting a professional studio space as needed. Given the current and anticipated demands of Metropolitan's programs, a studio space would need to be rented on a regular basis for a prolonged period, which would result in additional costs when compared with a dedicated location inside the Headquarters Building. Additionally, staff considered outsourcing all of the video production work to private companies. This alternative was not selected because in-house staff is available on demand, is flexible and invested, and provides consistent, high-quality work.

The selected alternative would upgrade the video room with a new lighting grid, production lights, and appropriate soundproofing, which will allow for an efficient layout while eliminating tripping hazards and reducing unwanted sounds. These changes will maintain the long-term operational reliability of the space, provide the best value to Metropolitan, and allow Metropolitan to develop video content in a timely manner.

Summary

This action awards a \$637,520 contract to Acro Constructors for upgrades to the video room at Metropolitan's Headquarters Building. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** List of Subcontractors, and **Attachment 4** for the Location Map.

Project Milestone

February 2024 – Completion of construction

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

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 involves operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private 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. Accordingly, the proposed action qualifies under the Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a \$637,520 contract to Acro Constructors for upgrades to the video room at Metropolitan's Headquarters Building.

Fiscal Impact: Expenditure of \$1.17 million in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will enhance Metropolitan's assets and provide the best value to Metropolitan. It will allow staff to expand video production and multimedia presentations which will be displayed at board meetings, presented at community meetings, posted on public platforms, and distributed via other communication channels.

Option #2

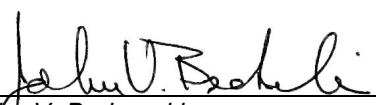
Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would continue to work in the existing video room. Staff would rent a studio space as needed to support Metropolitan's growing needs. This may lead to higher costs for Metropolitan over time due to rent payments. It would also limit video production capabilities to quickly meet the presentation needs of the Board and outreach efforts.

Staff Recommendation

Option # 1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

4/19/2023

Date



Adel Hagekhalil
General Manager

4/25/2023

*Date***Attachment 1 – Allocation of Funds****Attachment 2 – Abstract of Bids****Attachment 3 – Subcontractors for Low Bidder****Attachment 4 – Location Map**

Ref# es12686619

Allocation of Funds for Headquarters Video Room Upgrades

	Current Board Action (May 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., contract admin., & envir. monitoring)	82,000
Submittals Review & Record Drwgs.	86,000
Construction Inspection & Support	95,000
Metropolitan Force Construction	89,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	
La Cañada Design Group	61,000
Right-of-Way	-
Equipment Use	-
Contracts	
Acro Constructors	637,520
Remaining Budget	119,480
Total	\$ 1,170,000

The total amount expended to date for the upgrades to the headquarters video room is approximately \$260,000. The total estimated cost of the improvements, including the amount appropriated to date and funds allocated for the work described in this action, is \$1.434 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on March 7, 2023, at 2:00 P.M.

Specifications No. 1989A Headquarters Video Room Upgrades

The work consists of upgrading the video room at the Metropolitan's Headquarters Building, including installation of a lighting grid mounted above the main studio floor, LED cinema and photography lights, house lighting, recording indication light, photography backdrops, custom soundproofing and acoustical control around the studio, main entryway hardware, sound isolation enclosure for voiceover recordings, and cable pass-throughs.

Engineer's estimate: \$672,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Acro Constructors Burbank, CA	\$637,520	\$193,777	30	Yes
JT Construction Group Inc. Glendale, CA	\$765,649	-	-	-
MLC Constructors Inc. Corona, CA	\$799,578	-	-	-

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

The Metropolitan Water District of Southern California**Subcontractors for Low Bidder****Specifications No. 1989A
Headquarters Video Room Upgrades**

Low bidder: Acro Constructors

Subcontractor	Service Category; Specialty
ADL Painting & Wall Covering Inc. Corona CA	Painting
C. A. Buchen Corporation Sun Valley, CA	Structural Steel
Doortek Systems Inc. Anaheim, CA	Doors/Frames
Gama Contracting Services Inc. El Monte, CA	Demolition
Pacific West Industries dba Pacific West Air Conditioning Anaheim, CA	HVAC
Phillip's Draperies and Curtains Inc. Pasadena, CA	Curtains
Trendex Corporation Simi Valley, CA	Drywall
Triple C Electric Inc. Valencia, CA	Electrical
Unlimited Telecom Inc. Fullerton, CA	Low Voltage Electrical Systems





Engineering, Operations, & Technology Committee

Headquarters Video Room Upgrades

Item 7-1

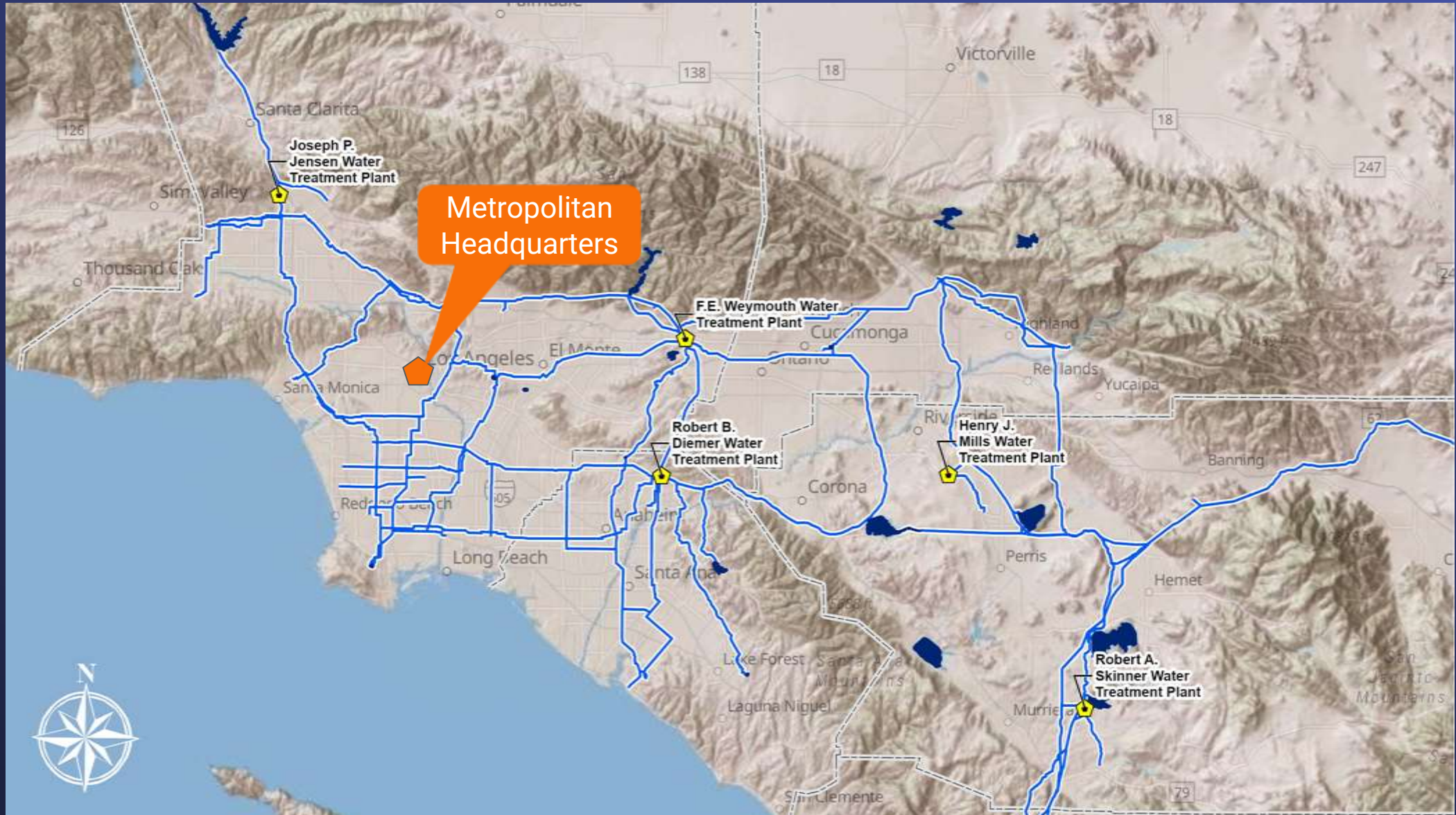
May 8, 2023

Headquarters Video Room Upgrades

Current Action

- Award a \$637,520 contract to Acro Constructors to upgrade the video production room at Metropolitan's Headquarters Building

Distribution System



Background

- Three rooms adjacent to the parking elevators in use since 1998
- Video room used to produce professional-level video and animation content
- Content used for:
 - Board & community meetings
 - Metropolitan's website & social media platforms



Examples of Media Content

Current Challenges to Media Production

- Room location is adjacent to highly trafficked hallway & parking elevators
- Large-footprint multimedia equipment restricts use of current workspace
- Extensive use of temporary cabling and lighting packages presents potential safety issues



Existing Video Room

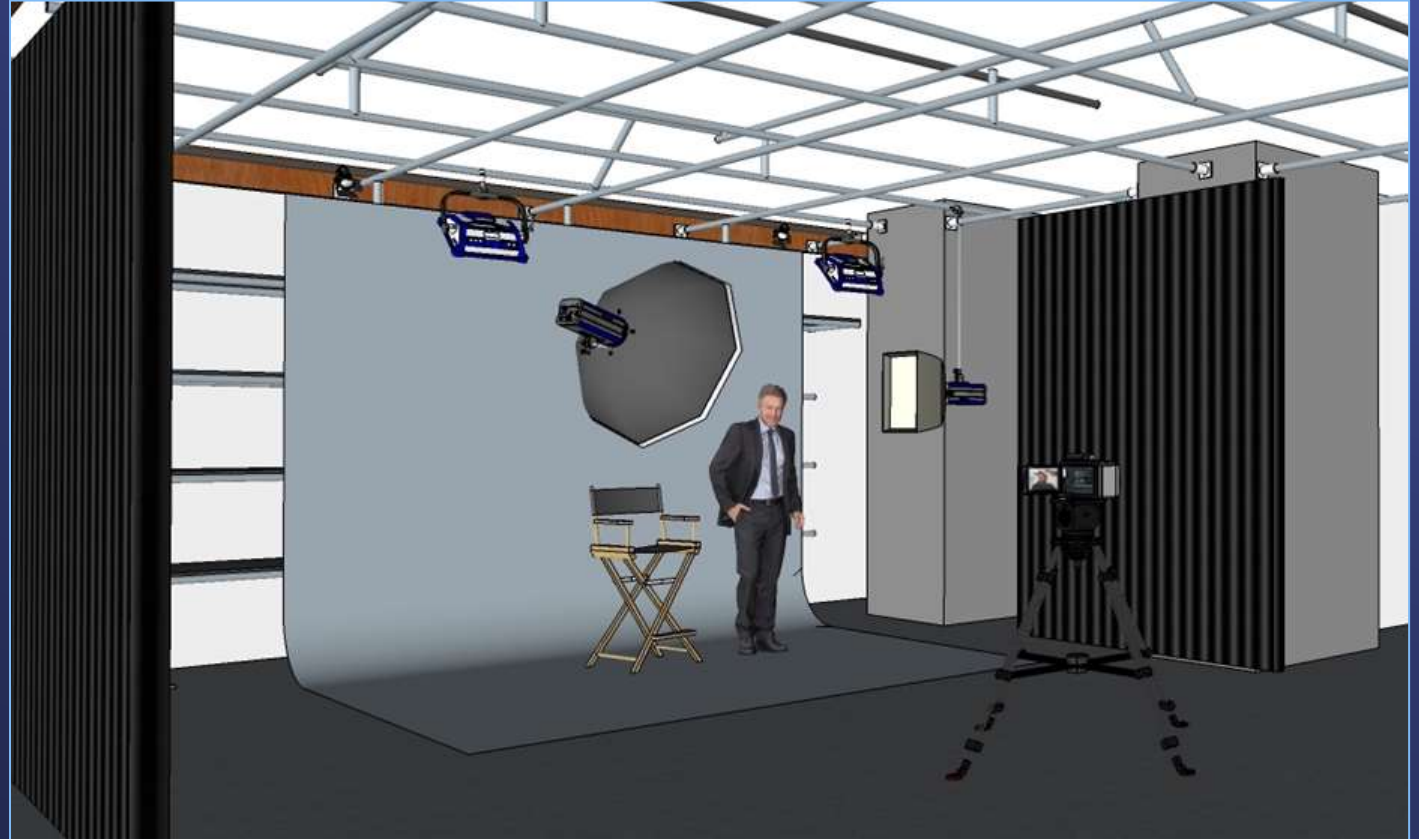
Headquarters Video Room Upgrades

Alternatives Considered

- Renting a professional studio space, as needed
 - Additional rental costs on a regular basis
- Outsourcing all video production
 - Availability, quality & staff investment
- Selected Alternative – Perform upgrades to the current video room
 - Maintains long-term reliability & flexibility of in-house services
 - Provides for timely production of high quality content

Scope of Work – Contractor

- Construct custom soundproofing within existing room(s)
- Install
 - Lighting grid, cinema & emergency lighting
 - Sound isolation enclosure for voiceover recordings
 - Enclosed cable passageways to enhance safety



Video Room Rendering

Headquarters Video Production Room

Scope of Work

- Consultant – La Cañada Design Group
 - Technical support during construction
 - Existing on-call agreement under GM's authority
- Metropolitan
 - Outage coordination
 - Equipment testing
 - Construction management & inspection
 - Contract administration, project controls & project management

Bid Results

Specifications No. 1989A

Bids Received

March 7, 2023

No. of Bidders

3

Lowest Responsible Bidder

Acro Constructors

Low Bid

\$637,520

Range of Other Bids

\$765,649 to \$799,578

Engineer's Estimate

\$672,000

SBE Participation*

30%

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

Allocation of Funds

Headquarters Video Room Upgrades

Metropolitan Labor

Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$	82,000
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Submittals Review, Tech. Support, Record Dwgs.		86,000
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Construction Inspection & Support		95,000
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Force Construction		89,000
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Professional/Technical Services

La Cañada Design Group		61,000
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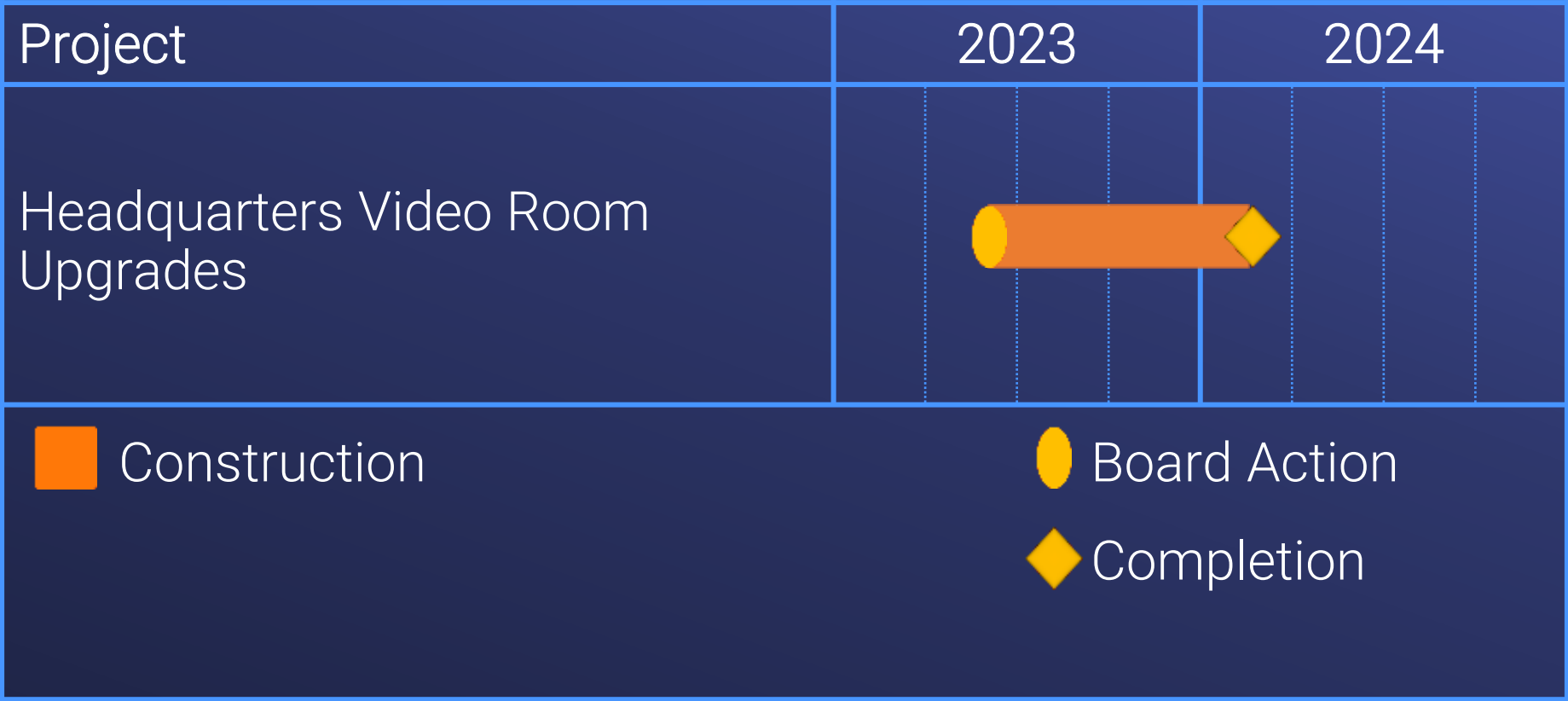
Contracts

Acro Constructors		637,520
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Remaining Budget		119,480
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Total	\$	1,170,000
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Project Schedule



Board Options

- Option #1
 - Award a \$637,520 contract to Acro Constructors for upgrades to the video room at Metropolitan's Headquarters Building.
- Option #2
 - Do not proceed with the project at this time.

Staff Recommendation

- Option #1





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

5/9/2023 Board Meeting

7-2

Subject

Authorize an agreement with Arcadis U.S. Inc., for a not-to-exceed amount of \$550,000 to design, develop, and deploy Metropolitan's Capital Investment Plan Budget System Improvements; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Metropolitan's Capital Investment Plan (CIP) Budget System is used by staff to collect project information, evaluate and prioritize projects, and help prepare the two-year CIP budget and the 10-year CIP expenditure forecast. The current system was developed by a combination of in-house staff and consultants and uses a web-based SharePoint platform. This system replaced the paper-based proposal process that was used for many years. The current CIP budget was developed with this web-based platform, and this platform is currently being used to prepare for the upcoming CIP budget cycle for fiscal years 2024/25 and 2025/26. While the current system did replace the manual paper process, further improvements are necessary to fully integrate and further streamline the overall process. This action authorizes an agreement to develop and deploy a new CIP Budget System that will enhance staff's ability to track workflows, improve reporting, increase evaluation efficiency, and provide greater in-house control over future enhancements.

Background

As part of Metropolitan's budget process, staff prepares a recommended two-year budget and expenditure plan for the CIP. The budget and expenditure plan are reflected in the CIP Appendix and included in Metropolitan's overall two-year budget and associated budget documents. The CIP budget preparation starts with the preparation and submission of project proposal packages which are comprised of a web-based project proposal form, a project risk assessment form, and a resource-loaded schedule form. After the proposal package is submitted, the projects are evaluated and prioritized for inclusion into the CIP budget.

A manual process, consisting of paper proposal forms was used for over 20 years. In early 2021, this process was replaced by the SharePoint system. This new system, along with a set of minor enhancements, will be used for the preparation of the CIP budget for fiscal years 2024/25 and 2025/26. While the current SharePoint system is a significant improvement over the paper forms, some manual processes remain due to limitations in the SharePoint platform. For example, although all three forms need to be completed before the proposal package can be evaluated, each of the forms resides in a disparate system with individual workflows that require manual data entry and tracking.

To further improve the system, staff recommends proceeding with the replacement of the current SharePoint system with a more reliable, efficient, flexible, and scalable system that addresses Metropolitan's current and future business requirements. The new system will also provide for integrated and interactive forms that are easier and faster for staff to develop and complete. The improved CIP Budget System will add new features and capabilities for greater automation, enhanced data collection and evaluation, and efficient project prioritization. The recommended system would also allow in-house staff to configure the forms and support the system users. Currently, alteration to the forms, workflows, or notifications can only be performed by software developers. To complete these improvements expeditiously, staff recommends authorizing a professional services agreement to design, develop, and deploy the CIP Budget System Improvements.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with CIP Budget System Improvements, pending authorization of the professional services agreement described below. Based on the current CIP expenditures forecast, funds for work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates that approximately \$865,000 will be incurred in the current biennium and has been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation committee to be included in the System Reliability Program.

CIP Budget System Improvements – Design, Development, and Deployment

This project will replace the current SharePoint system with a new and enhanced CIP budget system using commercially available, off-the-shelf software made specifically for CIP Budget Systems and developed using Enterprise Data Analytics web-based platform. The new system design will be an integrated proposal form containing the risk-consequence and resource-loaded schedule information, which will use a single workflow to develop, approve, and track the form. This improvement streamlines the submittal and approval process, eliminates duplicate entry data fields, improves data gathering, automates tracking and status notifications, reduces the required administrative effort, provides greater capability to modify and enhance the proposal form, and improves the overall user experience which will enable users to meet both current and future business requirements.

The new CIP Budget System will be developed and deployed by Arcadis U.S. Inc. (Arcadis) as described below. Planned activities to be conducted jointly by Metropolitan staff and Arcadis will include setting up software environments for the development and testing of the improved CIP Budget System prior to rollout.

A total of \$865,000 is required for this work. Funds to be allocated include \$550,000 for design, development, and deployment by Arcadis; \$126,000 for Metropolitan staff activities for the deployment and testing support; \$45,000 for project management and project controls; and \$144,000 for remaining budget. **Attachment 1** provides the allocation of the required funds.

Professional Services (Arcadis) – New Agreement

Arcadis is recommended to provide professional services for design, development, and deployment of the CIP Budget System Improvements. Arcadis was selected through a competitive process via Request for Proposal No. 1322 based on the firm's qualifications, record of past performance, expertise of the key staff, technical approach and methodology, and cost proposal for the improvements of the CIP Budget System. The planned activities for Arcadis include: (1) consolidation of project proposal, risk-consequence, and resource-loaded schedule forms, (2) improvement of the consolidated form and approval workflow, (3) automation of proposal tracking and status notifications, (4) data migration, (5) testing of the deployed system; and (6) furnishing system user manuals and technical documentation.

This action authorizes an agreement with Arcadis for a not-to-exceed amount of \$550,000 to design, develop, and deploy the CIP Budget System Improvements. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 25 percent. Arcadis U.S. Inc. has agreed to meet this level of participation.

Alternatives Considered

Alternatives considered for improving the CIP Budget System included utilizing in-house Metropolitan staff to perform all the work to improve the CIP Budget System. 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) to use project-specific professional services agreements when resource needs exceed available in-house staffing or require specialized technical expertise.

After assessing the current workload for in-house staff, required expertise, and the relative priority of this project, staff has determined that a hybrid approach of utilizing both consultants and in-house staff would ensure completion of the work in a timely and efficient manner. The consultants will design, develop, and deploy the CIP Budget System Improvements while the in-house staff will provide needed support to host the system for

development and testing, and perform project oversight, reviews, and user acceptance testing. This approach will allow staff to effectively support this project as well as other capital projects.

Summary

This action authorizes a professional services agreement with Arcadis for a not-to-exceed amount of \$550,000 to design, develop, and deploy the CIP Budget System Improvements. See **Attachment 1** for the Allocation of Funds.

Project Milestone

July 2024 – Go Live with CIP Budget System Improvements

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

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.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not subject to CEQA because it involves organizational or administrative activities of governments that would not result in a direct or indirect physical change to the environment (Section 15378(b)(5) of the State of CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize an agreement with Arcadis U.S. Inc. for a not-to-exceed total of \$550,000 to design, develop, and deploy the CIP Budget System Improvements.

Fiscal Impact: Expenditure of \$865,000 in capital funds. All costs will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will enhance the CIP budgeting process, which will streamline the project data collection, reduce manual data entry, automate workflow and reporting, and increase staff productivity.

Option #2

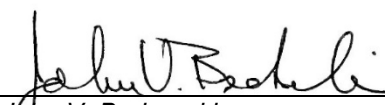
Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forgo an opportunity to enhance the CIP budgeting process in advance of future CIP budget preparations.

Staff Recommendation


Option #1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

4/19/2023

Date



Adel Hagekhalil
General Manager

4/25/2023

*Date***Attachment 1 – Allocation of Funds**

Ref# es12691152

Allocation of Funds for CIP Budget System Improvements

	Current Board Action (May 2023)
Labor	
Studies & Investigations	-
Design, Develop, Test, Deploy	126,000
Owner Costs (Project Management, IT Networking, etc.)	45,000
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	
Arcadis U.S. Inc.	550,000
Contracts	-
Remaining Budget	144,000
Total	\$ 865,000

This is the initial action for the CIP budget improvements. The total estimated cost to complete this project, including funds allocated for the work described in this action, is \$865,000.



Engineering, Operations, & Technology Committee

CIP Budget System Improvements

Item 7-2

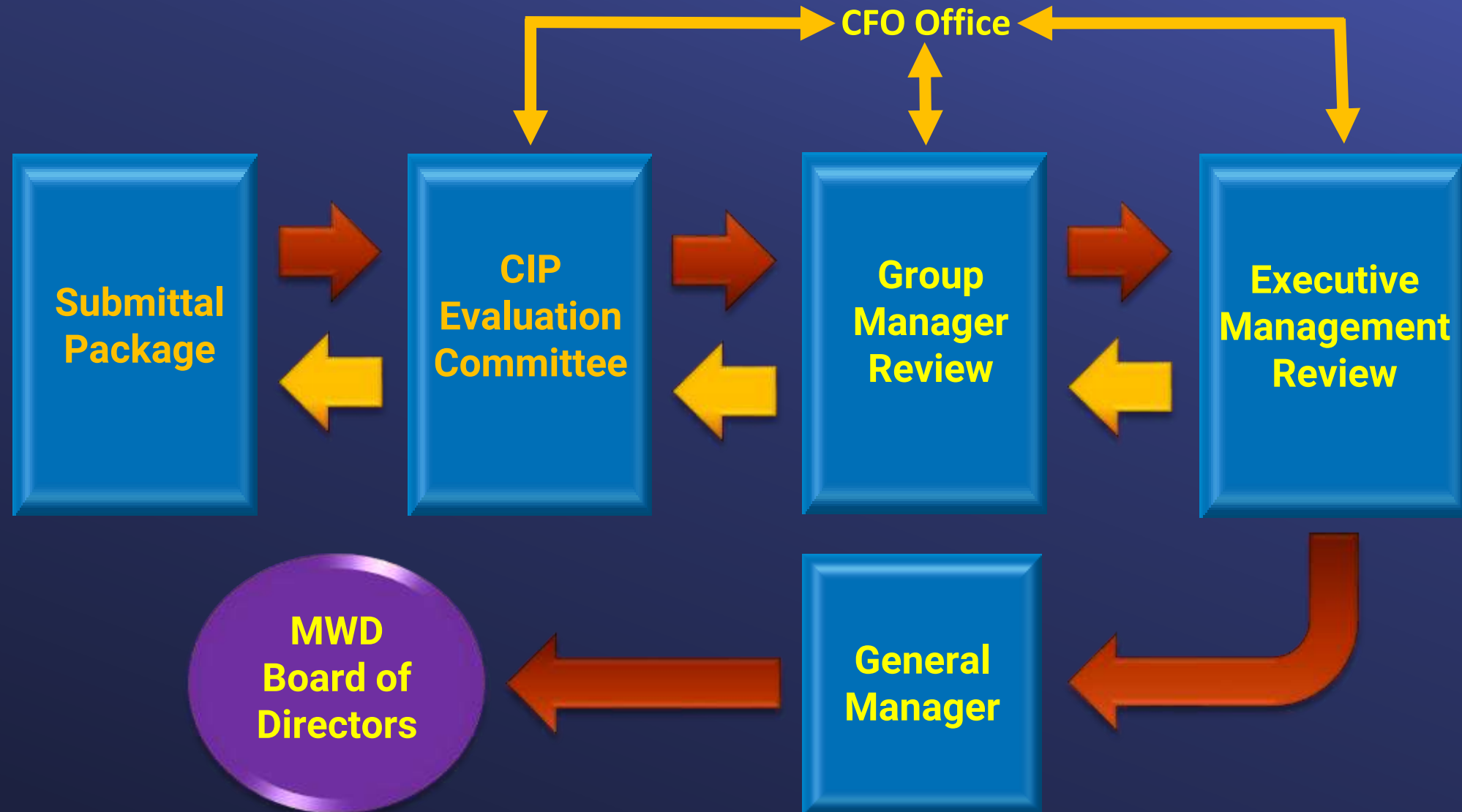
May 8, 2023

CIP Budget System Improvements

Current Action

- Authorize an agreement with Arcadis U.S. Inc., in an amount not to exceed \$550,000 to design, develop, and deploy the Capital Investment Plan (CIP) Budget System Improvements

CIP Development Process



CIP Budget System Improvements

A screenshot of a SharePoint web form titled "CAPITAL INVESTMENT PLAN" with the subtitle "Project Proposal Form". The form is displayed on a dark blue background. It contains several sections with white input fields and labels. The top section includes a "Project Name" field and a "Project Number" field. Below this is a "Project Description" section with a large text area. The bottom section is labeled "Project Justification" and contains a "Project Justification" field and a "Project Justification" field. The form is titled "CAPITAL INVESTMENT PLAN" and "Project Proposal Form".

Existing SharePoint
Proposal Form

Current CIP Budget System

- Web-based SharePoint forms
 - Proposal form
 - Risk form
 - Evaluation form
- Microsoft Excel form
 - Financial / Resource-loaded schedule form
- Each form resides in separate systems with unique workflows & manual tracking
- Current system requires software developer to make edits to any of the forms

New CIP Budget System

- Web-based Enterprise Data Analytics platform
 - Fully integrate all forms and use a single workflow
 - Streamline submittal & approval process
 - Enhance automation of tracking & approval process
 - Reduce administrative effort
 - Enhance user experience
 - Greater capacity and capability to modify & enhance the forms in-house for future business requirements

The screenshot displays the EDA Portfolio interface for the 'Etiwanda Reservoir Rehabilitation' project. The top navigation bar shows the user is logged in as 'luke.percival@arcadisgen.com'. The breadcrumb trail indicates the path: Home > Etiwanda Reservoir Rehabilitation. The project details section shows the 'Need Name' as 'Etiwanda Reservoir Rehabilitation', 'Need ID' as '309', 'Need Version ID' as '1290', 'Need Source' as 'Project', 'Location' as 'False', 'Must Invest' as 'False', and 'Assessment Date' as 'False'. The 'Actions' menu is open, showing options like 'Gather Additional Data', 'Submit for T2 Review', 'Escalate to Urgent', 'Manage locally', 'Move to Additional Inspection Needed', 'Move to Tier 1 Review', 'Move to Tier 2 Review', 'Move to Urgent', and 'Move to Local Management'. The 'Created On' and 'Updated On' dates are both '11/14/2022', and the 'Created By' and 'Updated By' are both 'luke.percival@arcadisgen.com'.

CIP Budget System Improvements

Alternatives Considered

- Perform CIP Budget System Improvements utilizing in-house staff
 - Assessed in-house staff availability & technical expertise
- Selected Alternative – Hybrid approach utilizing both consultant & in-house
 - Consultant: Customizing software
 - In-house: User acceptance testing and support to host the system for development

Existing SharePoint Risk Form

Arcadis U.S. Inc – New Agreement

- Selected under Request for Proposal No. 1322
- Scope of work
 - Design, Develop, & Deploy CIP Budget System Improvements
 - NTE amount: \$550,000
 - SBE participation level 25%

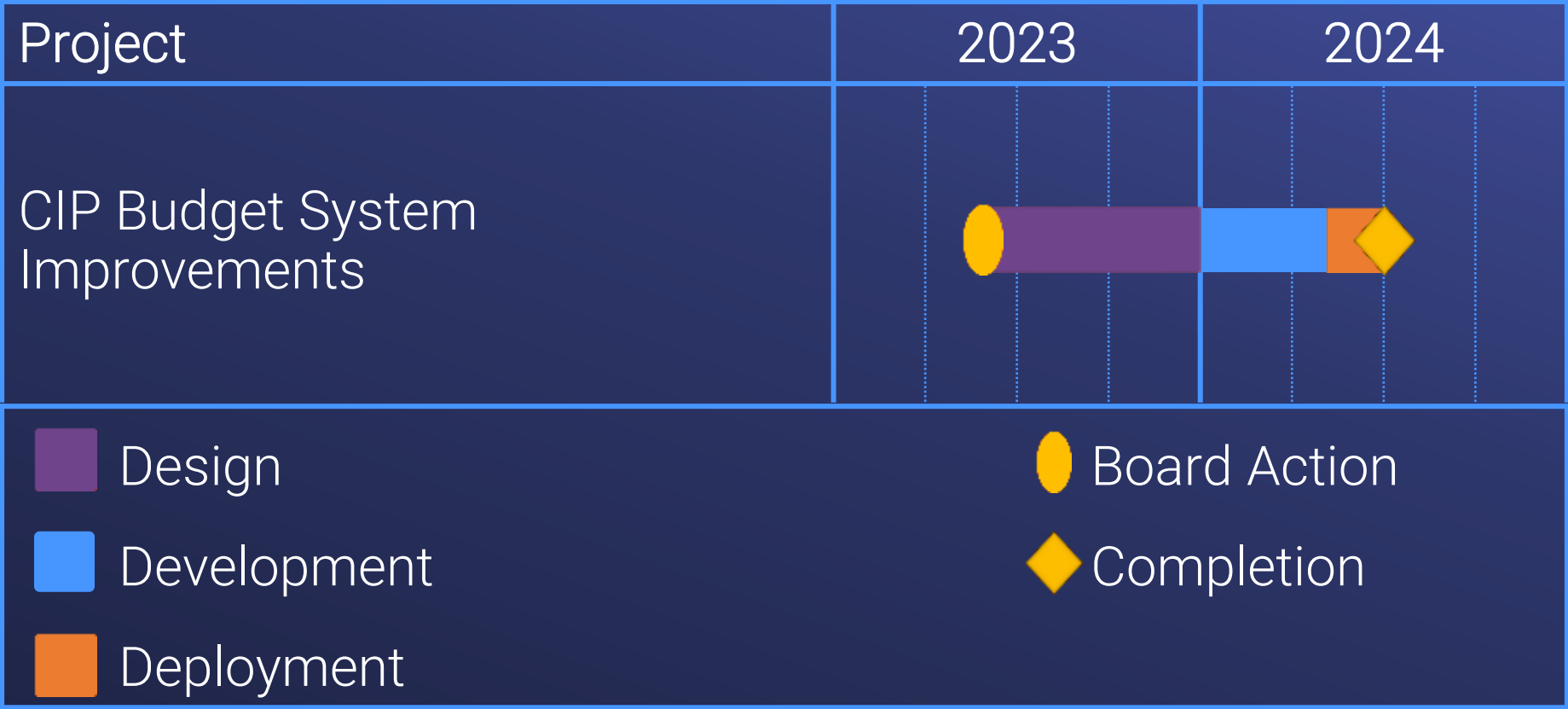
CIP Budget System Improvements

Allocation of Funds

CIP Budget System Improvements

Metropolitan Labor	
Design support & test	\$ 126,000
Owner Costs (Project management, IT networking, etc.)	45,000
Professional/ Technical Services	
Arcadis U.S. Inc.	550,000
Remaining Budget	144,000
<hr/>	
Total	\$ 865,000

Project Schedule



Board Options

- Option #1
Authorize an agreement with Arcadis U.S. Inc. for a not-to-exceed total of \$550,000 to design, develop, and deploy the CIP Budget System Improvements.
- Option #2
Do not proceed with the project at this time.

Staff Recommendation

- Option #1





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

5/9/2023 Board Meeting

7-3

Subject

Authorize an increase of \$1.5 million to an existing agreement with Stantec Consulting Services Inc. for a new not-to-exceed total amount of \$1.69 million for preliminary design of a mechanical dewatering facility at the Joseph Jensen Water Treatment Plant; and an amendment to an agreement with Los Angeles Department of Water and Power to extend Metropolitan's use of two solids lagoons at the Aqueduct Filtration Plant; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

Executive Summary

In December 2012, Metropolitan's Board authorized an agreement with Los Angeles Department of Water and Power (LADWP) for Metropolitan's use of four lagoons on the grounds of LADWP's Aqueduct Filtration Plant to facilitate the processing of solids materials from the treatment process. Under this strategy, the long-term use of LADWP lagoons, supplemented by a planned mechanical solids dewatering facility at the Joseph Jensen Water Treatment Plant (Jensen plant), would support solids processing for a Jensen flow capacity of 500 million gallons per day (mgd). Feasibility studies have been completed, and staff recommends proceeding with preliminary design of new mechanical dewatering facilities on the Jensen plant site. This action authorizes an amendment to an existing agreement for the design of dewatering facilities at the Jensen plant, and an amendment to the use agreement with LADWP to forego construction of two new lagoons on LADWP's property and to extend the date of use for two of the lagoons.

Details

Background

The Jensen plant was placed into service in 1972 and has a rated capacity of 750 mgd. Located in Granada Hills, the Jensen plant normally treats water from the West Branch of the State Water Project and delivers it to Metropolitan's Central Pool and to exclusive service areas on the west side of the distribution system.

The water treatment process results in settled solids being collected from the Jensen plant's sedimentation basins. These solids materials are currently thickened on-site and pumped through a solids-transfer system to four nearby lagoons on the grounds of LADWP's Los Angeles Aqueduct Filtration Plant. The dried solids are then transported for off-site disposal. Solids produced at the Jensen plant may also be discharged to a city of Los Angeles sanitary sewer. However, sewer disposal is expensive and is limited by the discharge permit.

In 2012, the boards of both Metropolitan and LADWP authorized a 50-year agreement that allowed Metropolitan to use four lagoons, identified as Lagoon Nos. 2, 3, 7 and 8, on the site of LADWP's Aqueduct Filtration Plant for solids dewatering. The four lagoons were expected to process 50 percent of the solids generated at a plant flow rate of 500 mgd under design conditions and could process all solids at lower flows and favorable water quality conditions. With the use of four lagoons, it was expected that construction of the mechanical dewatering facility at the Jensen plant could be deferred seven years or longer, reducing upfront capital expenditures. The agreement also allows the LA Department of Recreation and Parks to use Metropolitan property on the Jensen plant site for recreational ball fields pursuant to a separate lease agreement. Per the use agreement with LADWP, Lagoon Nos. 2 and 3 are to be returned to LADWP by October 1, 2024; Lagoon Nos. 7 and 8 are to be returned to LADWP by October 1, 2062. The agreement also commits LADWP to provide space for Metropolitan to build two new lagoons at the Aqueduct Filtration Plant.

In anticipation of the return of Lagoon Nos. 2 and 3 to LADWP, staff completed a feasibility study to evaluate options for replacing the solids dewatering functionality of Lagoons Nos. 2 and 3. The study took into account the higher groundwater levels in the vicinity of the proposed new lagoons, as well as historical dewatering performance of the existing lagoons, which has been hampered by wet weather conditions. The study recommends that Metropolitan should construct a mechanical dewatering facility at the Jensen plant site sized for 500 mgd rather than building two new lagoons on LADWP property and a mechanical dewatering facility sized for 250 mgd. Initial studies are now complete, and staff recommends proceeding with preliminary design of the dewatering facilities, amending an agreement for engineering services, and amending the agreement with LADWP, as discussed below.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with preliminary design of a solids mechanical dewatering facility at the Jensen plant, pending board authorization of the agreement amendments described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15508). Approximately \$2.6 million will be incurred in the current fiscal biennium. It is anticipated that all expenditures will be incurred in the current biennium and have been previously authorized.

This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Treatment Plant Reliability Program.

Jensen Solids Mechanical Dewatering Facility – Preliminary Design

Planned improvements for Jensen's residual solids processing include the construction of a mechanical dewatering facility and associated solids conveyance piping, chemical feed, and electrical and control systems.

Preliminary design activities include: (1) detailed field investigations; (2) environmental review; (3) preparation of a three-dimensional model and preliminary design drawings; (4) development of final design criteria; (5) updates to piping and instrumentation diagrams; (6) value engineering; (7) preparation of a preliminary design report; and (8) development of a class 3 construction cost estimate. These activities are planned to be conducted by both Metropolitan staff and Stantec Consulting Services Inc. (Stantec) under an existing agreement described below. The scope of work for Stantec includes preliminary design for civil, structural, mechanical, and electrical disciplines. Metropolitan staff will perform preliminary design for instrumentation design, environmental support, project management, and technical review.

A total of \$2.6 million is required for this work. Allocated funds include \$1.5 million for preliminary design activities by Stantec, described below. Allocated funds for Metropolitan staff activities include \$310,000 for instrumentation design, technical oversight, and review of consultant's work; \$325,000 for environmental support, project controls and project management; and \$165,000 for remaining budget. Other allocated funds include \$300,000 for value engineering and geotechnical investigations, which will be performed by specialty firms under contracts planned to be executed under the General Manager's Administrative Code authority.

Engineering Services (Stantec Consulting Services, Inc.) – Amendment to Agreement

In August 2022, an agreement with Stantec was authorized under the General Manager's authority for a not-to-exceed amount of \$190,000 to perform a study for the construction of a new mechanical dewatering facility at Jensen. Stantec was selected via Request for Proposals No. 1302 and was selected based on the firm's extensive experience in the design of large water/wastewater treatment plants with solids dewatering facilities. Stantec has completed study phase activities and is now recommended to perform the preliminary design scope of work discussed above under the amended agreement.

This action authorizes an increase of \$1.5 million to the existing agreement with Stantec Consulting Services Inc. for a new not-to-exceed amount of \$1.69 million to perform the preliminary design of a new mechanical solids dewatering facility at the Jensen plant. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 25 percent. Stantec has agreed to meet this level of participation. The planned subconsultants for this work are listed in **Attachment 2**.

Metropolitan Use of Solids Lagoons at the Aqueduct Filtration Plant – Amendment to Agreement

The existing 50-year use agreement was executed in February 2013 and allows Metropolitan to use Lagoons Nos. 2, 3, 7 and 8 on the grounds of the Los Angeles Aqueduct Filtration Plant site. The terms of the agreement provide the option for Metropolitan to construct two additional lagoons on LADWP property at its own cost and require that Lagoons Nos. 2 and 3 be returned to LADWP by October 1, 2024, based on the assumption that construction of the new lagoons would be completed by this date. Staff has evaluated plans for a long-term solution for Jensen solids management and concluded that a mechanical dewatering facility at Jensen sized to manage solids production from a 500 mgd plant flow coupled with the potential use of existing LADWP Lagoons 7 and 8 provides Metropolitan with the most resilient approach to solids management. This approach would eliminate the need for construction of the new lagoons on LADWP's property.

LADWP and Metropolitan have agreed to amend the language of the lagoon use agreement to allow additional time for Metropolitan to use Lagoons Nos. 2 and 3 during the design and construction of a new mechanical solids dewatering facility for the Jensen plant. Metropolitan's use of Lagoons Nos. 2 and 3 will be extended until Metropolitan's construction of the mechanical solids dewatering facility is complete or until December 31, 2033, whichever occurs first. Metropolitan will retain the use of Lagoons Nos. 7 and 8 for the 50-year term of the use agreement. Consistent with this approach, Metropolitan will forego the opportunity to construct two new lagoons on LADWP property, and new articles will be added to allow LADWP to use Lagoon No. 2, as needed, prior to December 31, 2033.

This action authorizes an amendment to the existing use agreement with LADWP to include changes described above in a form approved by the General Counsel.

Alternatives Considered

Staff evaluated alternative approaches for handling the residual solids at the Jensen plant, including (1) the construction of two new lagoons on the site of LADWP's plant, (2) construction of a mechanical dewatering system sized for the full Jensen plant flow of 750 mgd, and (3) construction of a hybrid dewatering system that relies on mechanical solids handling at the Jensen plant as well as the use of LADWP lagoons. The hybrid alternative that includes dewatering facilities sized for 500 mgd and the use of Lagoons Nos. 7 and 8 at the LADWP site will provide the Jensen plant with the flexibility to address occasional higher flows and higher inlet turbidity. Furthermore, with the construction of mechanical dewatering systems, solids handling capacity will not be impacted by inclement weather or high groundwater in the vicinity of the lagoons. Staff recommends proceeding with the hybrid approach of constructing a 500-mgd mechanical dewatering system at the Jensen plant and using existing LADWP Lagoons Nos. 7 and 8. A mechanical dewatering system will be routinely used for processing solids when the plant flows are less than 500 mgd. In those situations where the Jensen plant treats higher flows or high turbidity conditions are encountered, then the off-site lagoons will be used to supplement the mechanical dewatering capacity.

Alternatives considered to complete the preliminary design for the mechanical solids dewatering facility at the Jensen plant included assessing the availability and capability of in-house Metropolitan staff to complete 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, the relative priority of this project, and the specialized technical expertise required, staff recommends continuing the use of a professional services agreement to complete the subject project. This approach will allow for the completion of not only this project, but also other budgeted capital projects within their current schedules and ensure that the work is conducted in the most efficient manner possible.

Summary

This action amends an existing agreement with Stantec Consulting Services Inc. for a new not-to-exceed amount of \$1.69 million to provide engineering services for a mechanical solids dewatering facility at the Jensen plant. This action also amends the agreement with LADWP for the use of lagoons on the grounds of the Aqueduct Filtration Plant site to extend Metropolitan's use of Lagoon Nos. 2 and 3. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the List of Subconsultants, and **Attachment 3** for the Location Map.

Project Milestone

May 2024 – Completion of preliminary design of the Jensen plant's dewatering facility

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

By Minute Item 49271, dated December 11, 2012, the Board authorized an agreement with Los Angeles Department of Water and Power for Metropolitan use of solids lagoons at the Aqueduct Filtration Plant.

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.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed actions 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 actions qualify for a Class 6 Categorical Exemptions (Class 6, Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

- a. Authorize an increase of \$1.5 million to an existing agreement with Stantec Consulting Services Inc. for a new not-to-exceed total amount of \$1.69 million for preliminary design of a mechanical dewatering facility at the Jensen plant.
- b. Authorize an amendment to an agreement with Los Angeles Department of Water and Power to forego construction of two new lagoons on LADWP's property and to extend Metropolitan's use of two solids lagoons at the Aqueduct Filtration Plant.

Fiscal Impact: \$2.6 million in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized.

Business Analysis: This action will allow the Jensen plant to continue processing residual solids in the near term while completing design and construction of a new mechanical dewatering facility.

Option #2

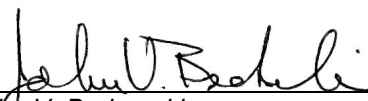
Do not proceed with amending the agreements.

Fiscal Impact: None

Business Analysis: This option would require staff to return to the Board with an alternative approach for addressing the future needs of the Jensen plant to process residual solids.

Staff Recommendation

Option #1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

4/21/2023

Date



Adel Hagekhalil
General Manager

4/25/2023

Date

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

Ref# es12689138

Allocation of Funds for Jensen Mechanical Dewatering Facility

	Current Board Action (May 2023)
Labor	
Studies & Investigations	\$ -
Preliminary Design	310,000
Owner Costs (Program mgmt., envir. planning)	325,000
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	
Stantec Consulting Services, Inc.	1,500,000
Geotechnical Investigations	230,000
Value Engineering	70,000
Contracts	-
Remaining Budget	165,000
Total	\$ 2,600,000

The total amount expended to develop the mechanical dewatering facility at Jensen is approximately \$227,000. The total estimated cost to complete this project, including the amount allocated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from \$45 million to \$55 million.

The Metropolitan Water District of Southern California
Subconsultants for Agreement with Stantec Consulting Services Inc.
Jensen Mechanical Dewatering Facility

Subconsultant and Location	Service Category; Specialty
T2 Utilities Huntington Beach, CA	Subsurface Utility Engineering
Beyaz and Patel San Diego, CA	Structural Design
ProjectLine Technical Services Costa Mesa, CA	Mechanical Design





Engineering, Operations, & Technology Committee

Jensen Solids Mechanical Dewatering

Item 7-3

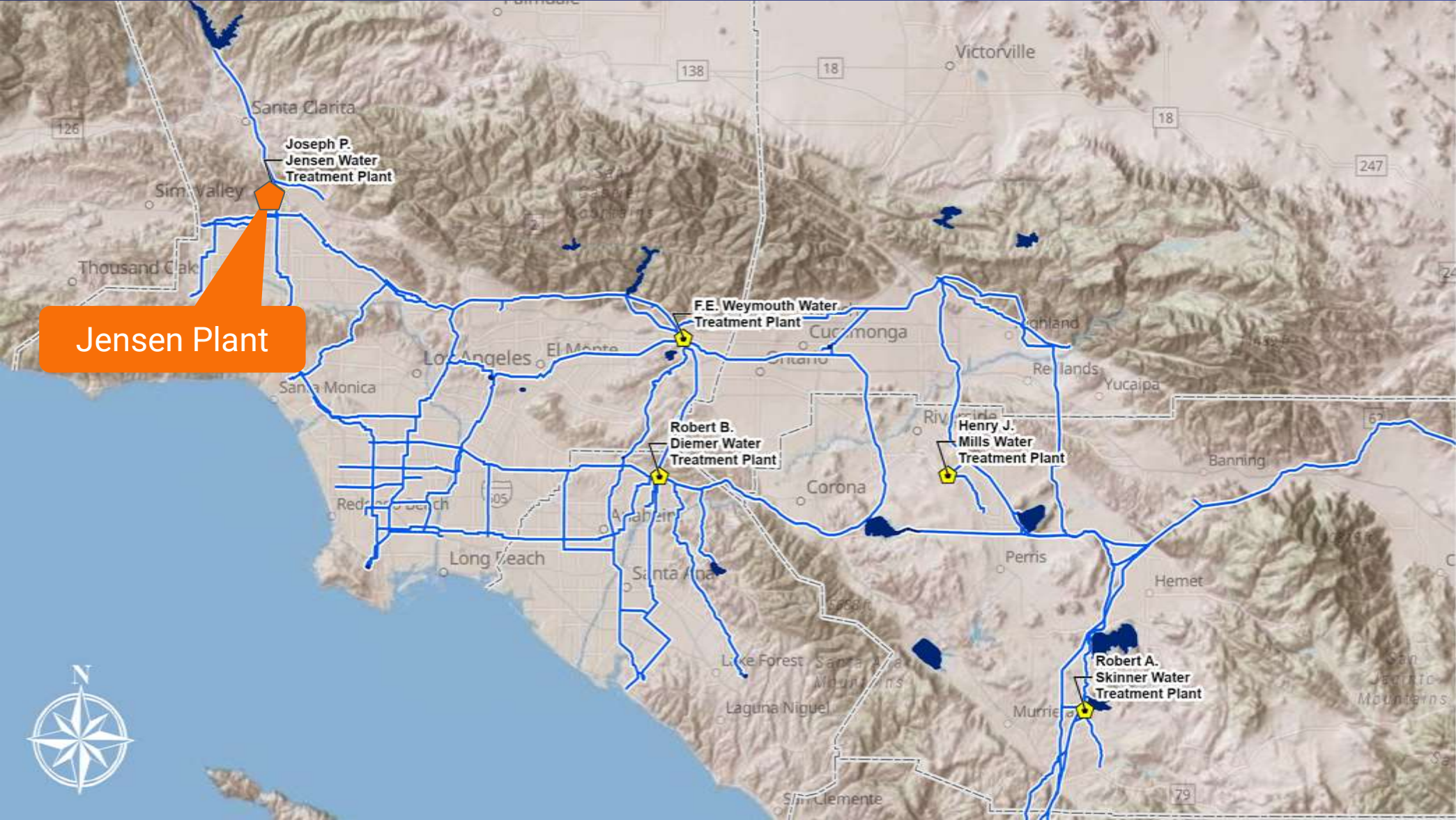
May 8, 2023

Jensen Solids Mechanical Dewatering Solids Handling

Current Action

- Authorize an increase of \$1.5 million to an existing agreement with Stantec Consulting Services Inc. for a new not-to-exceed total amount of \$1.69 million for preliminary design of a mechanical dewatering facility at the Joseph Jensen Water Treatment Plant
- Amend an agreement with Los Angeles Department of Water & Power to extend Metropolitan's use of two solids lagoons at the Aqueduct Filtration Plant

Distribution System



Background

Jensen Solids Handling LADWP Lagoons



Jensen Solids Handling LADWP Lagoons

Background



4 lagoons could process all solids at lower flows and favorable WQ conditions

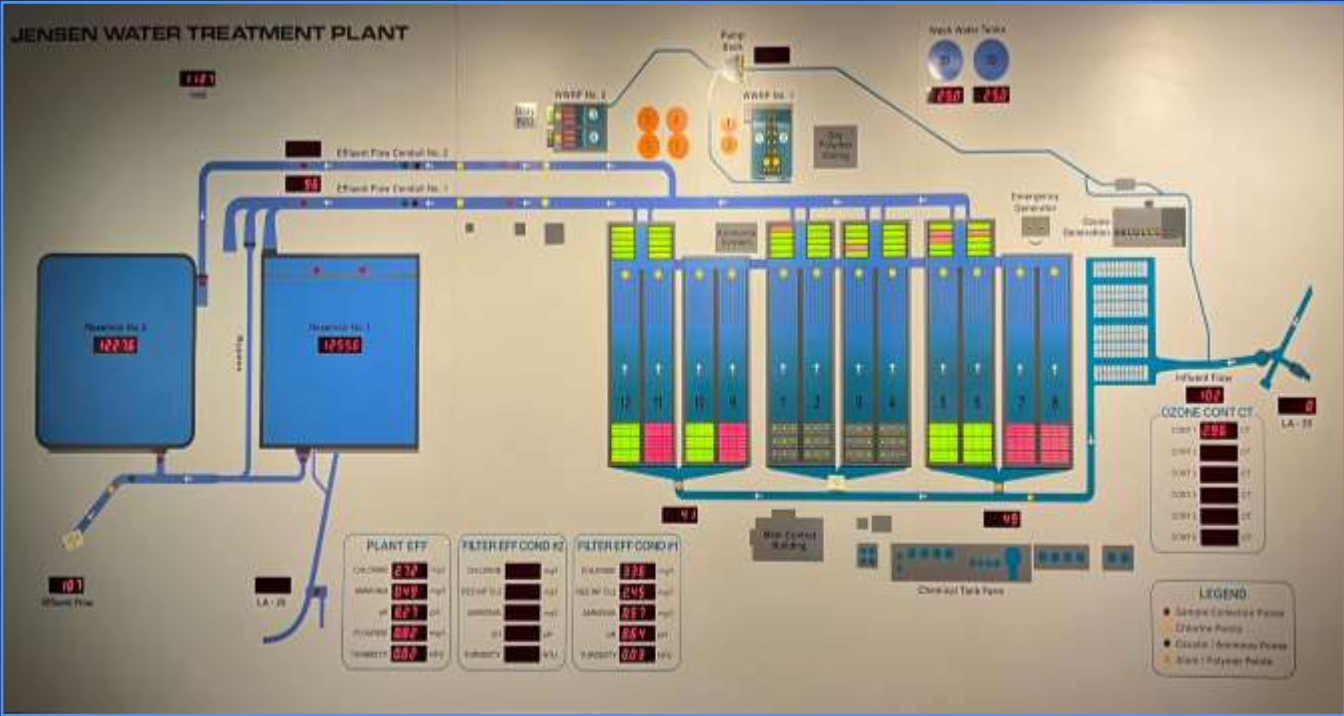
Background – Existing LADWP-MWD Agreement

- 50-year Lagoon Use Agreement
 - Lagoons 2 & 3: through 10/1/2024
 - Lagoons 7 & 8: through 10/1/2062
- LA Dept. of Rec. & Parks sports fields
 - 45 yr. lease, 10/1/57
- Metropolitan's option to build two new lagoons to replace Lagoons 2 & 3 on LADWP's property



Typical LADWP Lagoon

Recent Operations under Extreme Conditions



Wide Flow Range



Castaic Lake – Jan. 2023

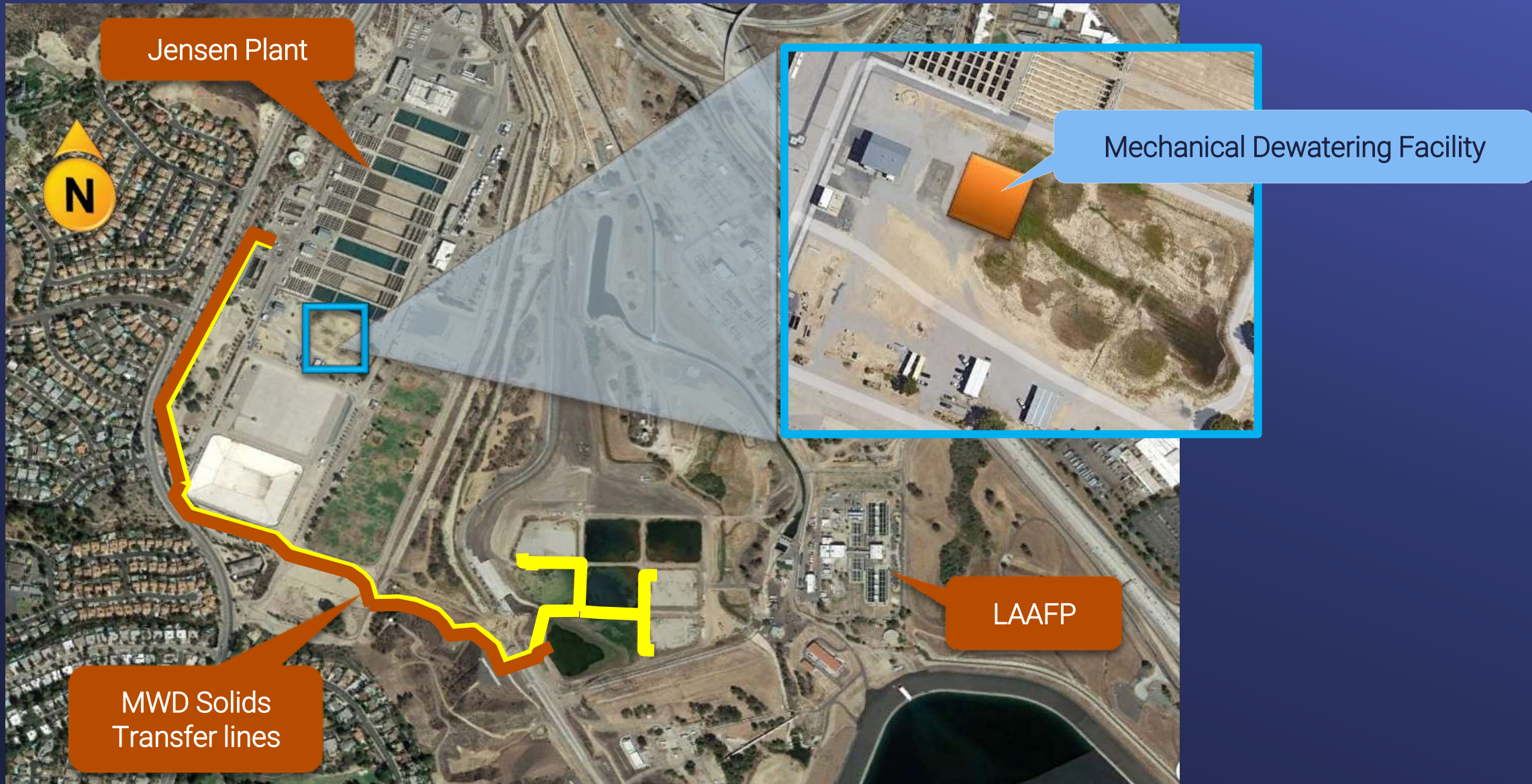
Project Scope – Solids Mechanical Dewatering

- 500 MGD mechanical dewatering to supplement usage of two lagoons at Jensen
- Met staff will build upon previous experience w/ design & construction at Weymouth, Diemer & Skinner
- Mechanical dewatering technology & location to be selected during preliminary design



Mechanical dewatering at Weymouth

Solids Mechanical Dewatering Proposed Location



Jensen Solids Mechanical Dewatering

Alternatives Considered

- Construct two new lagoons
 - Still requires mechanical dewatering for high turbidity source water
- 750 MGD Mechanical Dewatering
 - Facility can be upgraded in future if required
- Selected Alternative – Hybrid Approach
 - 500 MGD Mechanical Dewatering
 - Two lagoons at LAAFP
 - Cost-effective & flexible
 - Consistent with approach set forth in original 2012 Board action

Jensen Solids Mechanical Dewatering Lagoon Use Agreement

MWD/LADWP – Lagoon Use Agreement Amendment

- Amend existing agreement to:
 - Extend use of Lagoons 2 & 3 until completion of construction of mechanical dewatering facility or December 2033, whichever occurs first
 - Allow LADWP's use of Lagoon 2 upon request until December 2033
 - Continue use of Lagoons 7 & 8 through 2062
 - Forego option to build two new Lagoons 9 & 10

Jensen Solids Mechanical Dewatering Preliminary Design

Stantec – Agreement Amendment

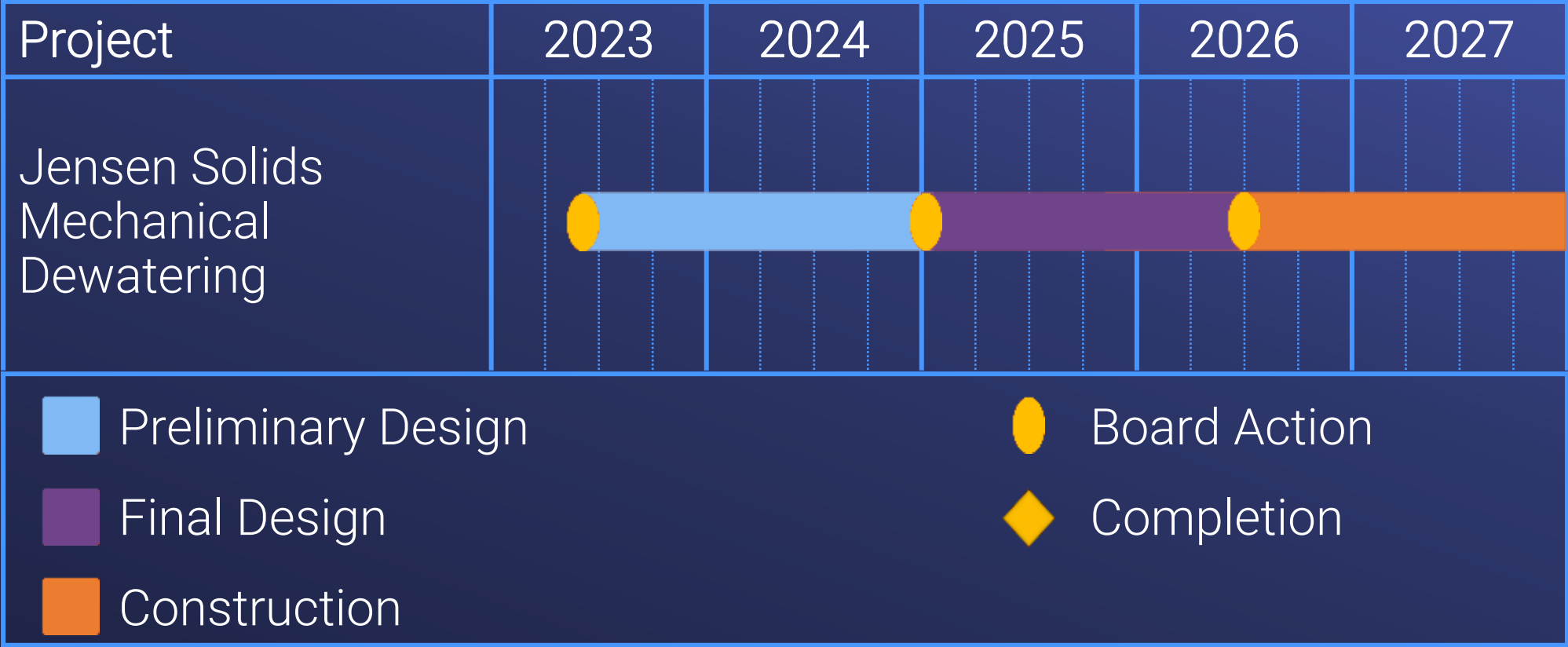
- Selected based on firm's extensive experience
 - Large water/wastewater solids dewatering design
 - Selected via RFP 1302
- Scope of Work
 - Field investigations & alternative evaluations
 - Preparation of 3D models, preliminary design & final design criteria
 - Construction cost estimate
- NTE amount: \$1.69 M
- SBE participation level: 25%

Allocation of Funds

Jensen Solids Mechanical Dewatering

Metropolitan Labor	
Preliminary Design	\$ 310,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	325,000
Professional/Technical Services	
Stantec Consulting Services, Inc.	1,500,000
Geotechnical Investigations	230,000
Value Engineering	70,000
Remaining Budget	165,000
<hr/>	
Total	\$ 2,600,000

Project Schedule



Board Options

- Option #1
 - a. Authorize an increase of \$1.5 million to an existing agreement with Stantec Consulting Services Inc. for a new not-to-exceed total amount of \$1.69 million for preliminary design of a mechanical dewatering facility at the Jensen plant.
 - b. Authorize an amendment to an agreement with Los Angeles Department of Water and Power to forego construction of two new lagoons on LADWP's property and to extend Metropolitan's use of two solids lagoons at the Aqueduct Filtration Plant.
- Option #2

Do not proceed with amending the agreements.

Staff Recommendation

- Option #1





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

5/9/2023 Board Meeting

7-4

Subject

Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include the Diemer Helicopter Hydrant Facility project; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA

Executive Summary

This action amends the Capital Investment Plan (CIP) to include a project to install a helicopter hydrant facility at the Robert B. Diemer Water Treatment Plant (Diemer plant). A helicopter hydrant consists of an open top tank and supporting infrastructure that allows helicopters to quickly collect water to fight nearby fires. Metropolitan will collaborate with the Yorba Linda Water District (YLWD) on the development of this project that has benefits to both agencies. Approval of this project at this time will allow staff to design, procure and install the required equipment in time to take advantage of federal grant funds that were made available to YLWD by the United States Forest Service (USFS).

Details

Background

The Diemer plant was placed into service in 1963 with an initial capacity of 200 million gallons per day (mgd) and was expanded in 1969 to its present capacity of 520 mgd. It delivers a blend of waters from the Colorado River Aqueduct and State Water Project to Metropolitan's Central Pool and to an exclusive service area in Orange County. The Diemer plant is located within the city of Yorba Linda, and is immediately adjacent to Chino Hills State Park, which features a hilly, steep terrain populated by dense trees and vegetation.

In November 2008, the Freeway Complex Fire burned westward from Corona past the Diemer plant. Slopes on the east, north, and west sides of the plant were burned, which prompted the Orange County Fire Authority (OCFA) to classify the Diemer site as a high fire hazard risk area. Following that event, Metropolitan retrofitted the Diemer plant's control room with new fire protection measures including the addition of an independent high efficiency heating, ventilating, and air conditioning system to enhance smoke control in the event of a local fire occurrence; and installation of a special fire alarm and occupant notification system, which was coordinated with and approved by the OCFA. In October 2020, severe wildfires occurred within one mile of the Diemer site. The use of the recently installed wildfire smoke control filtration equipment allowed staff to continue plant operations while monitoring fire containment.

To date, Metropolitan staff continues to assess potential initiatives to enhance safety and reduce the risk of damage or disruption to plant operations in the event of fire. A new minor capital project was recently approved to design and construct an engineered water tank system at the Diemer plant site to allow water-dropping helicopters to fill up with water while the helicopters are in the air. During the initial planning of this system, Metropolitan staff learned that the YLWD has successfully designed and constructed two helicopter hydrants in fire-prone locations, each of them provided with an open top tank and supporting infrastructure that allow helicopters to quickly collect water to fight nearby fires.

In September 2022, the USFS awarded a grant to YLWD in the amount of \$500,000 to construct a new helicopter hydrant in the area. YLWD and Metropolitan staff agreed that a joint effort to fund, construct, and operate a

single helicopter hydrant facility and supporting improvements at the Diemer plant site is more efficient than constructing two separate systems near each other.

Staff and YLWD have discussed the terms of a memorandum of understanding (MOU) to allow the use of the \$500,000 in grant funding, and monetary and in-kind contributions, to jointly develop the project. Metropolitan will contribute \$480,000 in funds and will perform the design, procurement, and construction activities as described below. YLWD will provide up to \$500,000 in grant funding; technical support during design and construction; coordination with the California Department of Forestry and Fire Protection (Cal Fire) and OCFA to ensure design and operational conditions are acceptable to both agencies. Metropolitan will own and operate the facility after construction is completed.

Staff recommends this collaboration between YLWD and Metropolitan to maximize the value of the grant and the benefits of this project to both agencies. Staff recommends proceeding with the project at this time to install a helicopter hydrant facility at the Diemer plant site to enhance response to wildfire hazards, protect Metropolitan assets, and effectively utilize available grant funding. Upon board approval of this action, staff will develop a formal MOU between the two agencies to memorialize the agreement.

Budget Impact

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. This action amends the CIP to include the Diemer Helicopter Hydrant Facility project. It is not anticipated that the addition of this project to the CIP will increase CIP expenditures in the current biennium beyond those which have been previously approved by the Board. This project anticipates an expenditure of \$480,000 in Metropolitan's capital funds and \$500,000 in USFS grant funds. Approximately \$480,000 will be incurred in the current biennium and has been previously authorized. The remaining funds from this action will be accounted for and appropriated under the next biennial budget. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP Evaluation Team to be included in the Treatment Plant Reliability Program.

Diemer Helicopter Hydrant Facility – Design, Procurement, and Construction

This project will include design and construction of a new helicopter hydrant facility at the Diemer plant site. Planned activities include conducting field surveys and materials testing, and development of a site plan for the facility; preparation of drawings and specifications for procurement of the new hydrant tank; environmental analysis and documentation, as required by CEQA; design and construction of the tank foundation, a helicopter pad, and other related infrastructure; and project management. The procurement contract for the helicopter hydrant tank is planned to be awarded under the General Manager's authority. All other work will be performed by Metropolitan staff.

A total of \$980,000 is required for this action. Allocated funds include \$143,000 for field investigation; \$90,000 for design activities as described above; \$190,000 for procurement of the hydrant tank and construction materials; \$20,000 for fabrication inspection; \$420,000 for Metropolitan force construction; \$70,000 for environmental support and project management; and \$47,000 for remaining budget. **Attachment 1** provides the allocation of funds. The final design cost as a percentage of the estimated construction cost is approximately 14.8 percent. Engineering Services' goal for design of projects with construction cost less than \$3 million is 9 to 15 percent. The construction cost for this project is \$610,000, which includes \$420,000 for Metropolitan force construction and \$190,000 for procurement of the hydrant tank.

Alternatives Considered

Staff considered delaying the project and incorporating it into the next biennial CIP budget. However, this would extend the project completion beyond the allowable timeline established by the USFS to access grant funds obtained by YLWD. The selected alternative allows first responders to save critical time and effectively fight fires by offering a strategically placed, quick-fill, pilot-operated water source that can fill in minutes. This helicopter hydrant offers Metropolitan an innovative way to safeguard life, property, and the environment for the benefit of the community and the Diemer plant.

Summary

This action amends the current CIP to include installation of a helicopter hydrant facility at the Diemer plant site. This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal years 2022/23 and 2023/24 capital expenditure plan. See **Attachment 1** for the Allocation of Funds and **Attachment 2** for the Location Map.

Project Milestone

December 2024 – Completion of construction of the helicopter hydrant facility at the Diemer plant

Policy

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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 (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 helicopter hydrant facility is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action provides for data collection, design, and technical support with no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1 and Class 6 (Sections 15301 and 15306) of the State CEQA Guidelines.

Prior to formal approval of any proposed construction, CEQA documentation will be prepared and processed in accordance with CEQA and the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include the Diemer Helicopter Hydrant Facility project.

Fiscal Impact: Expenditure of \$480,000 in capital funds and \$500,000 in USFS grant funds. It is not anticipated that the addition of the project listed above to the CIP will increase CIP expenditures in the current biennium beyond those which have been previously approved by the Board. Approximately \$480,000 will be incurred in the current biennium and has been previously authorized. The remaining funds from this action will be accounted for and appropriated under the next biennial budget.

Business Analysis: This option will enhance safety and operational resiliency at the Diemer plant.

Option #2

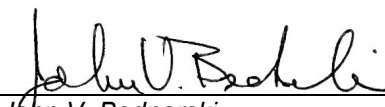
Do not proceed with the project at this time.

Fiscal Impact: Forfeit the opportunity to use \$500,000 in USFS grant funds secured by YLWD

Business Analysis: This option would forego an opportunity for Metropolitan's service area to use USFS grant funds to enhance safety and operational resiliency at the Diemer plant.

Staff Recommendation


Option #1



John V. Bednarski
Manager/Chief Engineer
Engineering Services

4/17/2023

Date



Adel Hagekhalil
General Manager

4/25/2023

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

Ref# es12692689

Allocation of Funds for Diemer Helicopter Hydrant Facility

	Current Board Action (May 2023)	
Labor		
Studies & Investigations	\$	143,000
Final Design		90,000
Owner Costs (Program mgmt., envir. planning)		70,000
Submittal Review & Record Drwgs.		-
Construction Inspection & Support		20,000
Metropolitan Force Construction		420,000
Materials & Supplies		190,000
Incidental Expenses		-
Professional/Technical Services		-
Contracts		-
Remaining Budget		47,000
Total	\$	980,000

This is the initial allocation of funds for the helicopter hydrant facility at the Diemer plant. The total estimated cost to complete this project is \$980,000, which includes \$500,000 in USFS grant funds.





Engineering, Operations, & Technology Committee

Diemer Helicopter Hydrant Facility

Item 7-4

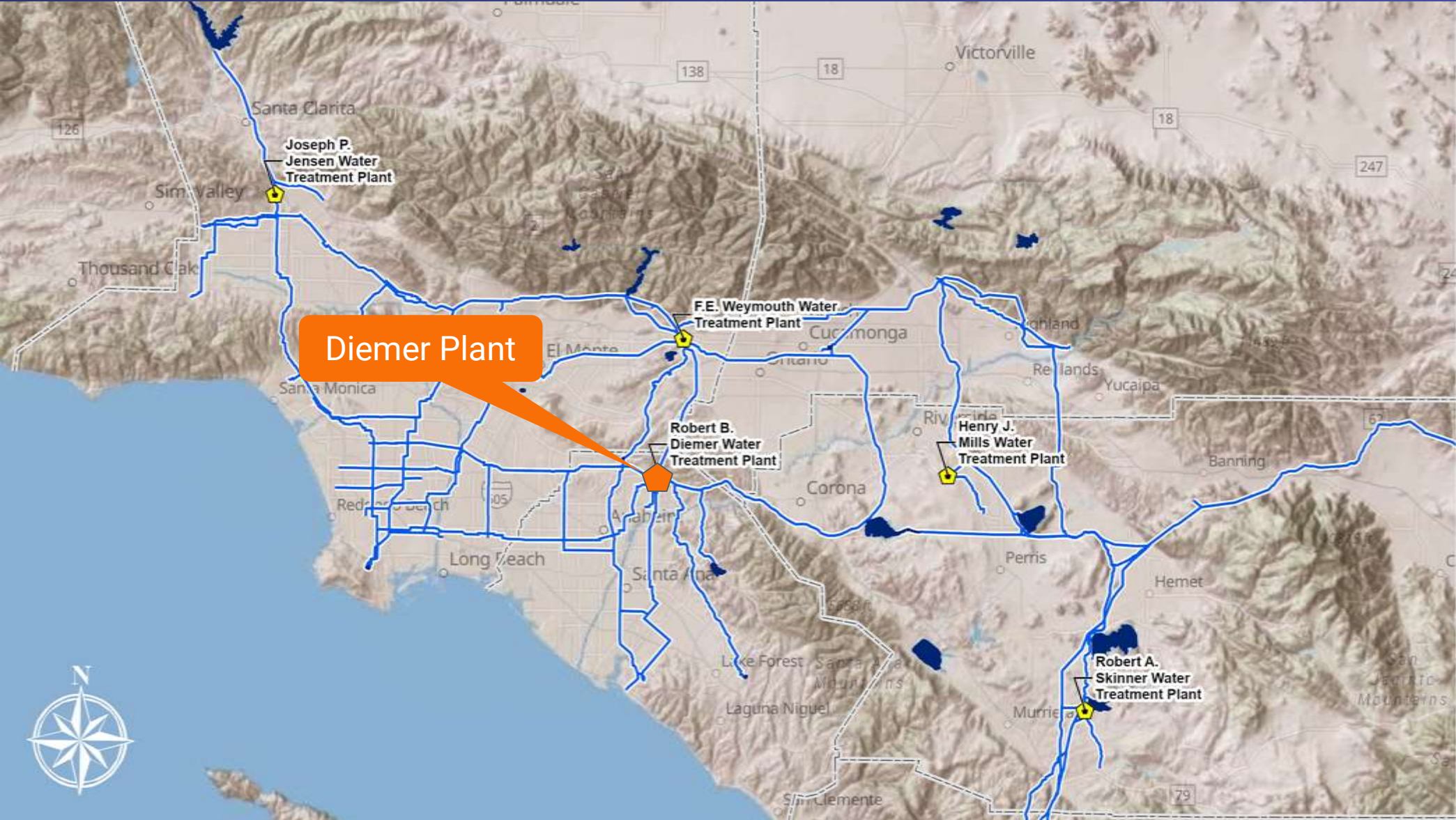
May 8, 2023

Diemer Helicopter Hydrant Facility

Current Action

- Amend the Capital Investment Plan for fiscal years 2022/2023 & 2023/2024 to include the Diemer Helicopter Hydrant Facility project

Distribution System



Background – Wildfire History

- 2008 Freeway Complex Fire burned east, north & west side slopes of the plant
- OCFA classified Diemer as high fire risk area
- Metropolitan Response - retrofitted control room with new smoke control filtration equipment



2008 Freeway Complex Fire

Background – Wildfire History

- 2020 Blue Ridge Fire within 1 mile of Diemer
- New smoke control filtration equipment allowed staff to continue operations
- Metropolitan Response - Approval of minor capital project to design & construct open-top water tank for firefighting helicopters



2020 Blue Ridge Fire

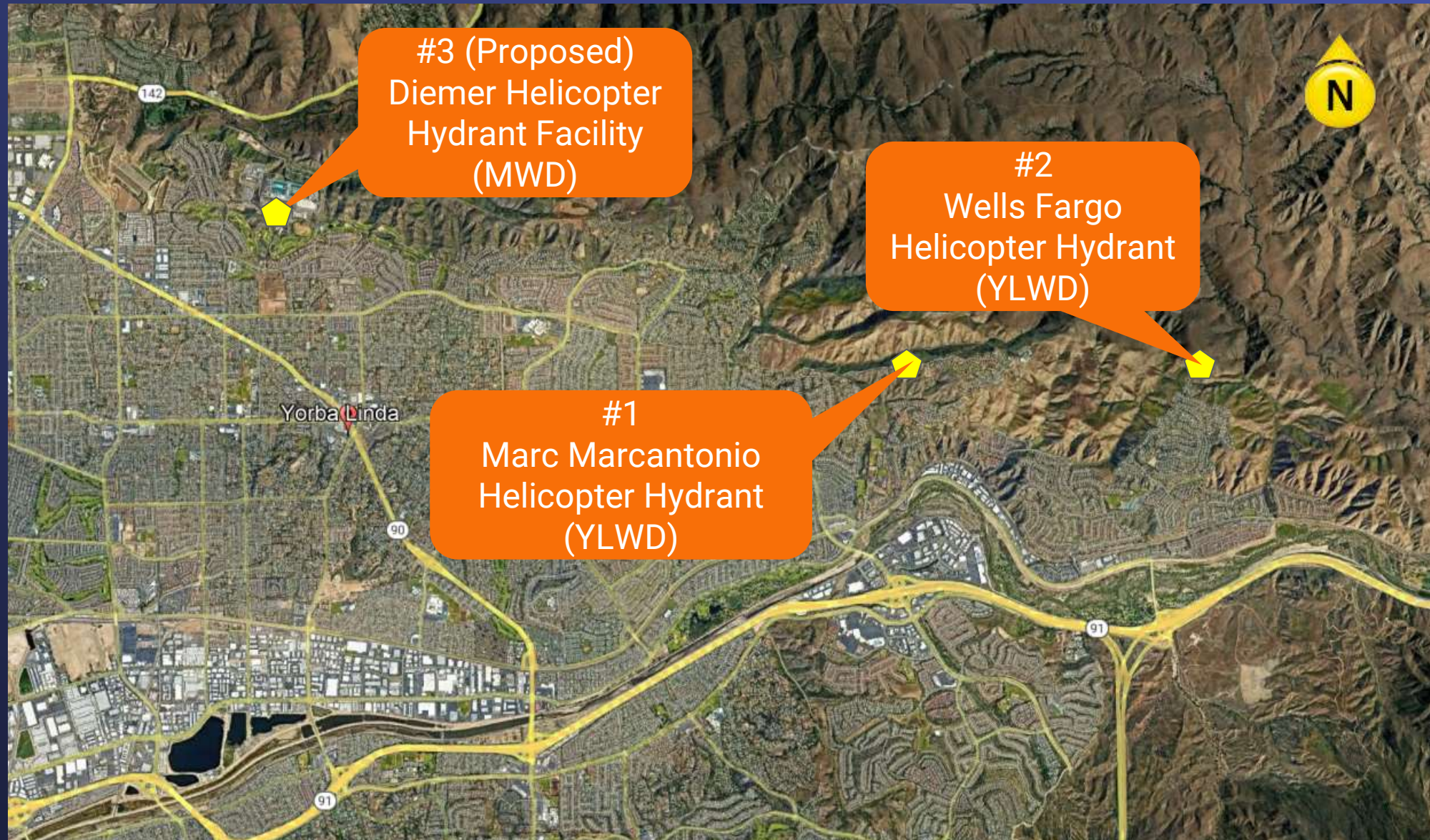
Background

- Metropolitan regularly coordinates with local first-responders and Orange County Emergency Management agencies
- Nov. 17, 2022 Diemer hosted a full-scale exercise for a hazardous materials response / security incident



2022 Diemer Full-Scale Exercise

Background



Diemer Helicopter Hydrant Facility

Background

- Yorba Linda Water District (YLWD)
 - September 2022 YLWD received United States Forest Service (USFS) \$500k grant for a new helicopter hydrant near Diemer
- YLWD & Metropolitan are proposing a partnership to build a third helicopter hydrant



YLWD Helicopter Hydrant in-use



YLWD Helicopter Hydrant Tank

Diemer Helicopter Hydrant Facility

Background

- YLWD & Metropolitan share a common goal for wildfire resilience in the area
- YLWD & Metropolitan agreed to collaborate resources for the construction of a helicopter hydrant facility at Diemer plant
 - Allows first responders access to a quick-fill water source
 - Innovative way to safeguard life, property & environment for benefit community & Diemer plant

Diemer Helicopter Hydrant Facility

Alternatives Considered

- Delay project & include in next CIP budget
 - Extends schedule beyond USFS grant timeline
- Selected Alternative – Install helicopter hydrant facility in current CIP budget
 - Takes advantage of USFS grant funding
 - Expedites commissioning of key facility for wildfire control

Diemer Helicopter Hydrant Facility

Scope of Work

- Metropolitan
 - Design, procure, & construct facility (open-top water tank & landing pad)
 - Own & operate facility
- YLWD
 - Provide \$500k in grant funding to Metropolitan
 - USFS, Cal Fire & OCFA coordination
 - Technical support in design & construction

Allocation of Funds

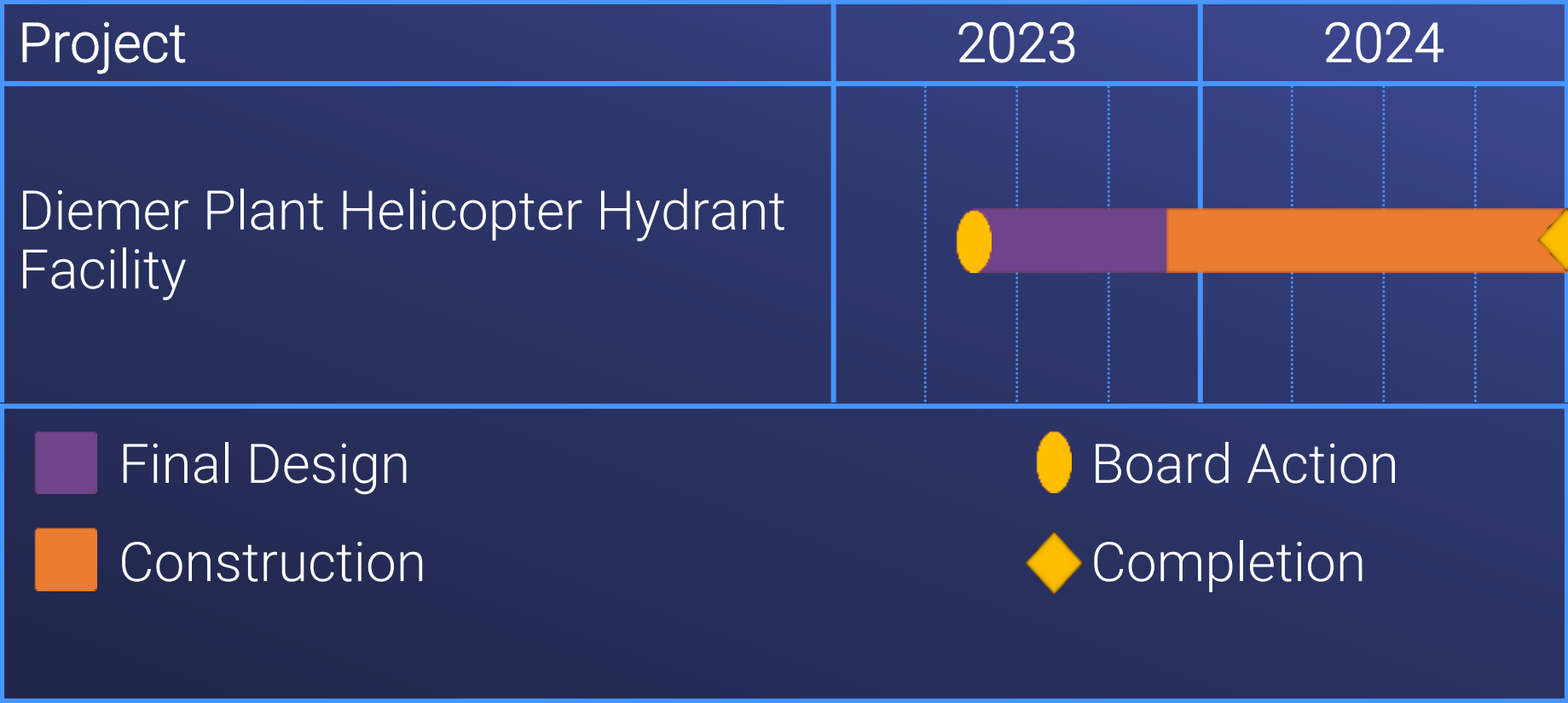
Diemer Plant Helicopter Hydrant Facility

Metropolitan Labor

Studies & Investigations	\$ 143,000
Final Design	90,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	70,000
Construction Inspection & Support	20,000
Force Construction	420,000
Materials (Tank)	190,000
Remaining Budget	47,000
<hr/>	
Total	\$ 980,000

*\$480,000 capital and \$500,000 Grant Funds

Project Schedule



Board Options

- Option #1
 - Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include the Diemer Helicopter Hydrant Facility project.
- Option #2
 - Do not proceed with the project at this time.

Staff Recommendation

- Option #1





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

5/9/2023 Board Meeting

7-5

Subject

Award a \$1,466,665 procurement contract to B&K Valves & Equipment Inc. for 72 combination air release/vacuum valves to be installed on San Diego Pipeline Nos. 3 and 5; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The existing air release/vacuum valves located on San Diego Pipeline Nos. 3 and 5 have deteriorated beyond repair and need to be replaced. Air release/vacuum valves release air from the pipeline or admit air into the pipeline to improve hydraulic efficiency, prevent water hammer under hydraulic surge conditions, or prevent collapse of the pipeline under potential vacuum conditions. Replacement of the valves is needed to ensure normal operation of the pipelines. This action awards a procurement contract for 72 replacement air release/vacuum valves. The valves will be installed by Metropolitan forces.

Details

Background

San Diego Pipeline No. 3 begins at Lake Skinner and extends southward into San Diego County. The pipeline is 75 inches in diameter and is comprised of precast concrete and welded steel sections. It was completed in 1960 and supplies up to 280 cubic feet per second (cfs) of untreated water to Western Municipal Water District and San Diego County Water Authority. San Diego Pipeline No. 5 also begins at Lake Skinner and extends approximately 18 miles south to the delivery point in San Diego County. The pipeline is 96 inches in diameter with both prestressed concrete and welded steel pipe sections. It was completed in 1982 and supplies up to 500 cfs of untreated water to the San Diego County Water Authority.

Both pipelines use combination air release/vacuum valves located at high points along the pipeline to protect the pipeline and maintain its efficiency. During operation or filling of the pipeline, air must be released when it builds up at high points or flow will be impeded. When the pipeline is dewatered, air must be introduced into the pipeline, or a vacuum condition can develop inside the pipe which could cause collapse or buckling.

The existing air release/vacuum valves on San Diego Pipeline Nos. 3 and 5 are original equipment and have been in service for approximately 60 years and 40 years, respectively. There are a total of 72 valves that range in size from 8 inches in diameter to 10 inches in diameter. Air release/vacuum valves are normally open to release air or prevent a vacuum within the pipe. As water level rises, a float shuts off the valve. Failure of an aging float mechanism could lead to an unplanned water discharge.

Staff recommends proceeding with the procurement of replacement air release/vacuum valves at this time. Once delivered, the valves will be replaced by Metropolitan staff.

Budget Impact

Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the procurement are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$1,700,000 in capital funds. Approximately \$1.0 million will be incurred in the current biennium and have been previously authorized. The remaining funds from this action will be accounted for and appropriated under the next biennial budget. This project has been reviewed in accordance with

Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Distribution System Reliability Program.

San Diego Pipeline Nos. 3 and 5 Air Release/Vacuum Valve Replacement – Procurement and Installation

The San Diego Pipeline Nos. 3 and 5 Air Release/Vacuum Valve Replacement project will replace all 72 existing valves in kind. The valves will be delivered to the Skinner plant where they will be stored in a controlled environment until they are scheduled for installation. A total of \$1,700,000 has been allocated for the work associated with the valve procurement. In addition to the amount of the contract described below, other funds to be allocated include \$62,000 for inspections; \$18,000 for submittals review; \$68,000 for project management, project controls, and contract administration; and \$85,335 for remaining budget.

Attachment 1 provides the allocation of the required funds. The total estimated cost of the replacement including the amount allocated to date, and funds allocated for the work described in this action is approximately \$2,165,000.

Award of Procurement Contract (B&K Valves & Equipment Inc.)

Request for Bids No. 401784 for the procurement of 72 air release and vacuum valves was advertised on November 30, 2022. As shown in **Attachment 2**, one bid was received and opened on December 13, 2022. The low bid from B&K Valves & Equipment Inc., in the amount of \$1,466,665, complies with the requirements of the specifications. This amount includes all sales and use taxes imposed by the state of California. Staff investigated why only one bid was received and determined that there are a limited number of valve manufacturers that routinely manufacture valves that meet the specifications required for this project. The budgetary estimate for this material, based on a survey of vendors, ranged from \$1.2 million to \$1.5 million. As a procurement contract, there are no subcontracting opportunities.

This action awards a \$1,466,665 procurement contract to B&K Valves & Equipment Inc. for 72 air release and vacuum valves to be installed on San Diego Pipeline Nos. 3 and 5.

Alternative Considered

Staff initially considered bidding out the installation of air release and vacuum valves. Although this alternative may have expedited the replacement of the valves, it would have been more expensive because it would have required multiple construction crews, advertisement for bids, and additional construction inspection. The selected alternative in which Metropolitan forces replace the valves during planned maintenance activities will reduce costs and improve efficiencies.

Summary

This action awards a \$1,466,665 contract to B&K Valves & Equipment Inc. for procurement of 72 air release and vacuum valves for San Diego Pipeline Nos. 3 and 5. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

Project Milestone

June 2024 – Delivery of valves to the Skinner plant

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

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 categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The overall activities involve the funding, design, inspection, minor alterations, and replacement of existing public facilities with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1, Class 2, and Class 6 Categorical Exemptions (Sections 15301, 15302, and 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a \$1,466,665 contract to B&K Valves & Equipment Inc. for procurement of 72 replacement air release and vacuum valves for San Diego Pipeline Nos. 3 and 5.

Fiscal Impact: Expenditure of \$1,700,000 in capital funds. Approximately \$1.0 million will be incurred in the current biennium and have been previously authorized. The remaining funds from this action will be accounted for and appropriated under the next biennial budget.

Business Analysis: This option will improve the operational reliability of water deliveries to member agencies with connections to San Diego Pipeline Nos. 3 and 5.

Option #2



Do not proceed with this project at this time.

Fiscal Impact: None

Business Analysis: This option would forego improving the reliability of service to those member agencies with connections to San Diego Pipeline Nos. 3 and 5 and may result in costly urgent repairs to the pipelines.

Staff Recommendation

Option #1

 _____ John V. Bednarski Chief Engineer/Group Manager Engineering Services	4/19/2023 _____ Date
 _____ Adel Hagekhalil General Manager	4/25/2023 _____ Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# es12693200

Allocation of Funds for San Diego Pipeline Nos. 3 & 5 Air Release/Vacuum Valve Replacement

	Current Board Action (May 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., contract admin.)	68,000
Submittals Review & Record Drwgs.	18,000
Fabrication Inspections	50,000
Materials & Supplies	-
Incidental Expenses	12,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
B&K Valves & Equipment, Inc.	1,466,665
Remaining Budget	85,335
Total	\$ 1,700,000

The total amount expended to date for the San Diego Pipeline Nos. 3 and 5 Air Release and Vacuum Valve Replacement is approximately \$465,000. 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 \$2.17 million.

The Metropolitan Water District of Southern California**Abstract of Bids Received on December 13, 2022****RFB No. 401784****Furnishing Air Release/Vacuum Valves for San Diego Pipeline Nos. 3 & 5**

The work consists of furnishing and delivering 72 combination air release/vacuum valves in 8-inch and 10-inch diameters.

Engineer's estimate: \$1.2 million to \$1.5 million

Bidder and Location	Base Bid Price Total ^{1,2}
B&K Valves & Equipment Inc. Carlsbad, CA	\$1,466,665

¹ As a procurement contract, there are no subcontracting opportunities.

² Includes sales and use taxes of 10.25 percent imposed by the state of California





Engineering, Operations, & Technology Committee

San Diego Pipeline Nos. 3 & 5 Air Release/Vacuum Valve Replacement

Item 7-5

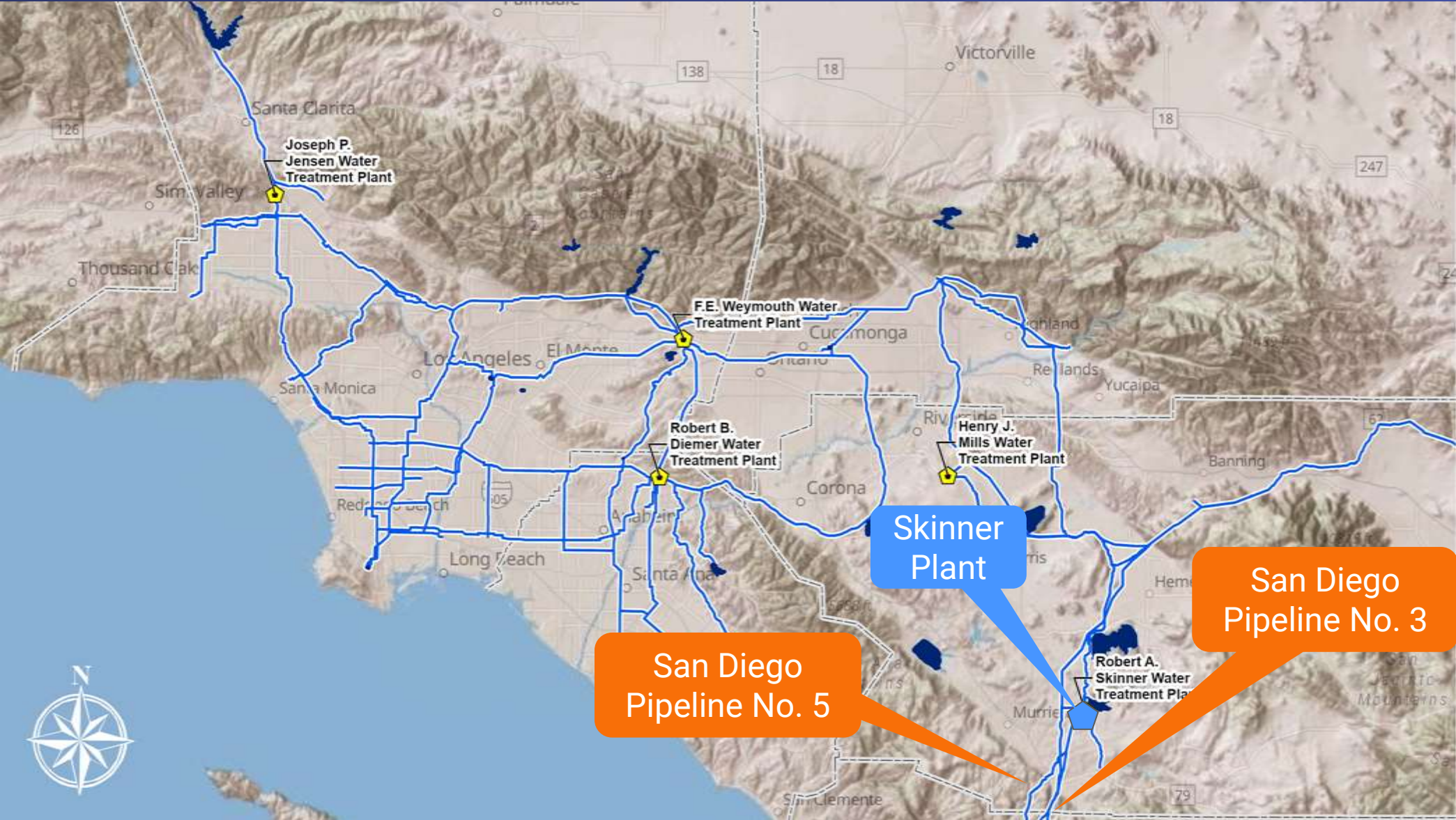
May 8, 2023

San Diego
Pipeline
Nos. 3 & 5
Air Release/
Vacuum Valve
Replacement

Current Action

- Award a \$1,466,665 procurement contract to B&K Valves & Equipment Inc. for 72 combination air release/vacuum valves to be installed on San Diego Pipeline Nos. 3 & 5

Distribution System



San Diego Pipeline Nos. 3 & 5 Air Release/ Vacuum Valve Replacement

Air Release/Vacuum Valves

- Air Release/Vacuum Valves (AR/VVs) used for proper operation
- Installed at pipeline high points
 - Air released when watered
 - Air introduced during dewatering
- AR/VVs on San Diego Pipeline No. 3 & No. 5 are original equipment
 - 60 years & 40 years old, respectively
 - Corroded
 - A total of 72 AR/VVs on pipeline require replacement



San Diego
Pipeline
Nos. 3 & 5
Air Release/
Vacuum Valve
Replacement

Scope of Work

- Procurement Contractor
 - Supply 72 AR/VVs
 - 8-inch & 10-inch diameters
- Metropolitan
 - Installation of AR/VVs during planned maintenance activities
 - Fabrication inspection
 - Submittal reviews
 - Project management

San Diego
Pipeline
Nos. 3 & 5
Air Release/
Vacuum Valve
Replacement

Alternatives Considered

- Alternative – Contractor installation of valves
 - More expensive option
- Selected Alternative – Metropolitan force installation
 - Installations can be scheduled during normal maintenance activities

Bid Results

Request for Bids No. 401784

Bids Received	December 13, 2022
No. of Bidders	1
Lowest Responsible Bidder	B&K Valve & Equipment Inc.
Low Bid	\$1,466,665
Range of Other Bids	N/A
Budgetary Estimate	\$1.2M - \$1.5M
SBE Participation*	N/A

*As a procurement contract, there are no subcontracting opportunities

Allocation of Funds

San Diego Pipeline Nos. 3 & 5

Metropolitan Labor

Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$ 80,000
Fabrication Inspection & Support	50,000
Submittals Review, Tech. Support, Record Dwgs.	18,000

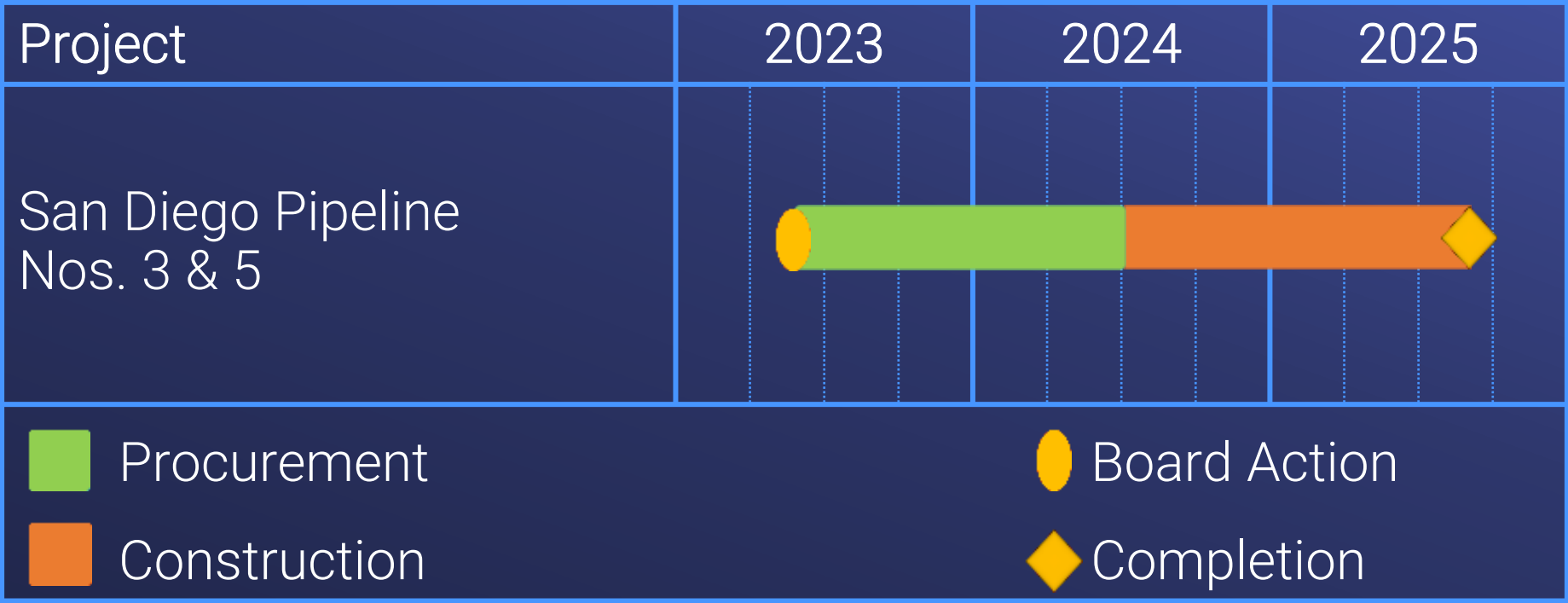
Contracts

B&K Valves & Equipment, Inc.	1,466,665
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Remaining Budget	85,335
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Total	\$ 1,700,000
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Project Schedule



Board Options

- Option #1
 - Award a \$1,466,665 contract to B&K Valves & Equipment Inc. for procurement of 72 replacement air release and vacuum valves for San Diego Pipeline Nos. 3 and 5.
- Option #2
 - Do not proceed with this project at this time.

Staff Recommendation

- Option #1





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

5/9/2023 Board Meeting

8-1

Subject

Award a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America for two large-diameter butterfly valves to be installed at the Foothill Pump Station Intertie as part of water supply reliability improvements in the Rialto Pipeline service area; 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 areas)

Executive Summary

The recent statewide drought and 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. Expanding the ability to deliver supplies from Diamond Valley Lake (DVL) benefits this area and preserves limited SWP supplies for the West Branch SWP member agencies. This project is one of four associated projects currently underway to provide the ability to directly deliver water from DVL to the Rialto Pipeline through the Inland Feeder. This action awards a procurement contract for two 54-inch diameter butterfly valves. Award of this procurement contract will ensure the timely fabrication and delivery of the valves for installation on this project during the 2024/2025 shutdown season.

Details

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. At this time, the Rialto Pipeline cannot access the water stored in DVL due to infrastructure and operational constraints.

Since December 2021, a series of drought mitigation projects were authorized by the Board to increase the ability of Metropolitan's conveyance system to deliver water to six member agencies that are entirely dependent on SWP supplies. The recent drought highlighted the potential supply vulnerabilities that these agencies can experience during periods of low SWP allocations from the state. The purpose of this first series of projects is to increase the flexibility of the eastern portion of Metropolitan's conveyance system to move water from DVL to SWP-dependent areas. Additional projects were approved by the Board in February 2022 to increase the flexibility of the existing conveyance system on the west side of Metropolitan's system to reliably supply water to additional SWP-dependent member agencies.

The Rialto Pipeline water supply reliability improvements were authorized by the Board in December 2021 and consist of four separate projects: Wadsworth Pumping Plant Bypass Pipeline, Inland Feeder/Rialto Pipeline Intertie, Inland Feeder – Badlands Tunnel Surge Protection, and Inland Feeder/San Bernardino Valley Municipal

Water District (SBVMWD) Foothill Pump Station Intertie. Together, 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. In times of drought, operation of Metropolitan's system with these improvements will also provide regional benefits by allowing limited SWP supplies to be directed to West Branch SWP member agencies.

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.

Final design of the Inland Feeder/SBVMWD Foothill Pump Station Intertie is currently underway. Due to the long lead-time needed to procure the valves, staff recommends award of a procurement contract for the new valves and appurtenant equipment at this time. Staff will return to the Board in fall 2023 to award another procurement contract for a 132-inch diameter butterfly valve and a construction contract for the Foothill Pump Station Intertie.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the procurement of the butterfly valves to improve water reliability of the Rialto Pipeline, pending award of the procurement contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24. This project anticipates an expenditure of \$3.28 million in capital funds. Approximately \$530,000 will be incurred in the current fiscal biennium and has been previously authorized. The remaining funds will be accounted for and appropriated under the next biennial budget.

This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the System Flexibility and Supply Reliability Program.

Inland Feeder/Foothill Pump Station Intertie – Procurement

The scope of the procurement contract includes furnishing two 54-inch butterfly valves, associated fittings, and accessories. Metropolitan forces will receive, offload, and place the valves in storage at Metropolitan's Cone Camp Yard. The valves will be installed under a future construction contract.

A total of \$3.28 million is required to perform this work. In addition to the amount of the contract, the allocated funds include \$260,000 for factory fabrication inspection and functional testing; \$16,000 for Metropolitan force activities described above; \$94,000 for submittals review, technical support, and responding to manufacturer requests for information; \$125,000 for contract administration and project management; and \$183,563 for remaining budget.

Attachment 1 provides the allocation of required funds. The total estimated cost to complete the Inland Feeder/SBVMWD Foothill Pump Station Intertie Project, including the amount appropriated to date, funds allocated for the work described in this action, and all future actions, is expected to range between \$22 million and \$25 million.

Award of Procurement Contract (Sojitz Machinery Corporation of America)

Specifications No. 2048 for furnishing butterfly valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie was advertised for bids on January 17, 2023. As shown in **Attachment 2**, three bids were received and opened on March 15, 2023. The bids from Vogt Valves Inc. and Santa Fe Win Water did not meet the requirements detailed in the specifications and were deemed to be non-responsive. The bid from Sojitz Machinery Corporation of America in the amount of \$2,601,437 complies with the requirements of the specifications. This amount includes all sales and use taxes imposed by the state of California. The budgetary estimate for this material, based on a survey of vendors, ranged from \$1.75 million to \$3.5 million.

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 allow for reliable water exchanges between Metropolitan and SBVMWD. As a procurement contract, there are no subcontracting opportunities, and no Small Business Enterprise participation level was established for this contract.

This action awards a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America to furnish two large-diameter butterfly valves for the Inland Feeder/Foothill Pump Station Intertie.

Alternatives Considered

During the planning phase of this project, staff considered using different types of valves for isolation, 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. 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 valves are used solely for isolation and pressure losses are acceptable, butterfly valves are more appropriate and cost-effective. The recommended action allows Metropolitan to procure the valves needed for isolation in a timely and cost-effective manner.

Summary

This action awards a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America to furnish two 54-inch diameter butterfly valves to be installed at the Inland Feeder/SBVMWD Foothill Pump Station Intertie to improve the water supply reliability of the Rialto Pipeline. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

Project Milestones

March 2025 – Complete fabrication and delivery of butterfly valves

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

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

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

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.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed actions are exempt under the provisions of CEQA and the State CEQA Guidelines.

The procurement contract for purchasing activities of the Inland Feeder/SBVMWD Foothill Pump Station Intertie fall under Class 1 Existing Facilities, Class 3 New Construction (small facilities), Class 4 Minor Alterations to Land, Class 6 Information Collection, Statutory Exemption Section 21080.21, 15282(k) Installation of Pipeline. These exemptions have been chosen because construction will occur in an existing facility, and a minor amount of construction, reconstruction, and minor alterations will occur. As this intertie is a pipeline of less than a mile in length, the Rialto Pipeline service area facilities are a public right-of-way with respect to 21080.21. Accordingly, no further CEQA documentation is necessary for the Board to act on the proposed action.

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America to furnish two large diameter butterfly valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie project as part of water supply reliability improvements in the Rialto Pipeline service area.

Fiscal Impact: Expenditure of \$3.28 million in capital funds. Approximately \$530,000 will be incurred in the current fiscal biennium and has been previously authorized. The remaining funds will be accounted for and appropriated under the next biennial budget.

Business Analysis: This option will improve the operational reliability of water deliveries to member agencies with connections to the Rialto Pipeline.

Option #2

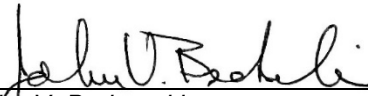

Do not proceed with this project at this time.

Fiscal Impact: None

Business Analysis: This option would forego improving the reliability of service to those member agencies with connections to the Rialto Pipeline.

Staff Recommendation

Option #1

 _____ John V. Bednarski Manager/Chief Engineer Engineering Services	4/19/2023 _____ Date
 _____ Adel Hagekhalil General Manager	4/25/2023 _____ Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# es04112023

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

	Current Board Action (May 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., contract admin.)	105,000
Submittals Review & Record Drwgs.	94,000
Construction Inspection & Support	260,000
Metropolitan Force Construction	16,000
Materials & Supplies	-
Incidental Expenses	20,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	
Sojitz Machinery Corporation of America	2,601,437
Remaining Budget	183,563
Total	\$ 3,280,000

The total amount expended to date for the Inland Feeder/SBVMWD Foothill Pump Station Intertie is approximately \$1.55 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 \$22 million to \$25 million.

The Metropolitan Water District of Southern California**Abstract of Bids Received on March 15, 2023, at 2:00 P.M.****Specifications No. 2048****Furnishing Butterfly Valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie**

The work consists of furnishing and delivering of two 54-inch diameter butterfly valves and all appurtenances.

Range of bids: \$1.75 million to \$3.5 million

Bidder and Location	Base Bid Price Total ^{1,2}
Santa Fe Win Water Santa Fe Springs, CA	\$928,131 ³
Vogt Valves Inc. Stafford, Texas	\$1,032,000 ³
Sojitz Machinery Corporation of America Farmington Hills, MI	\$2,601,437

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

³ Non-responsive bid





Engineering, Operations, & Technology Committee

Foothill Pump Station Intertie Valve Procurement

Item 8-1

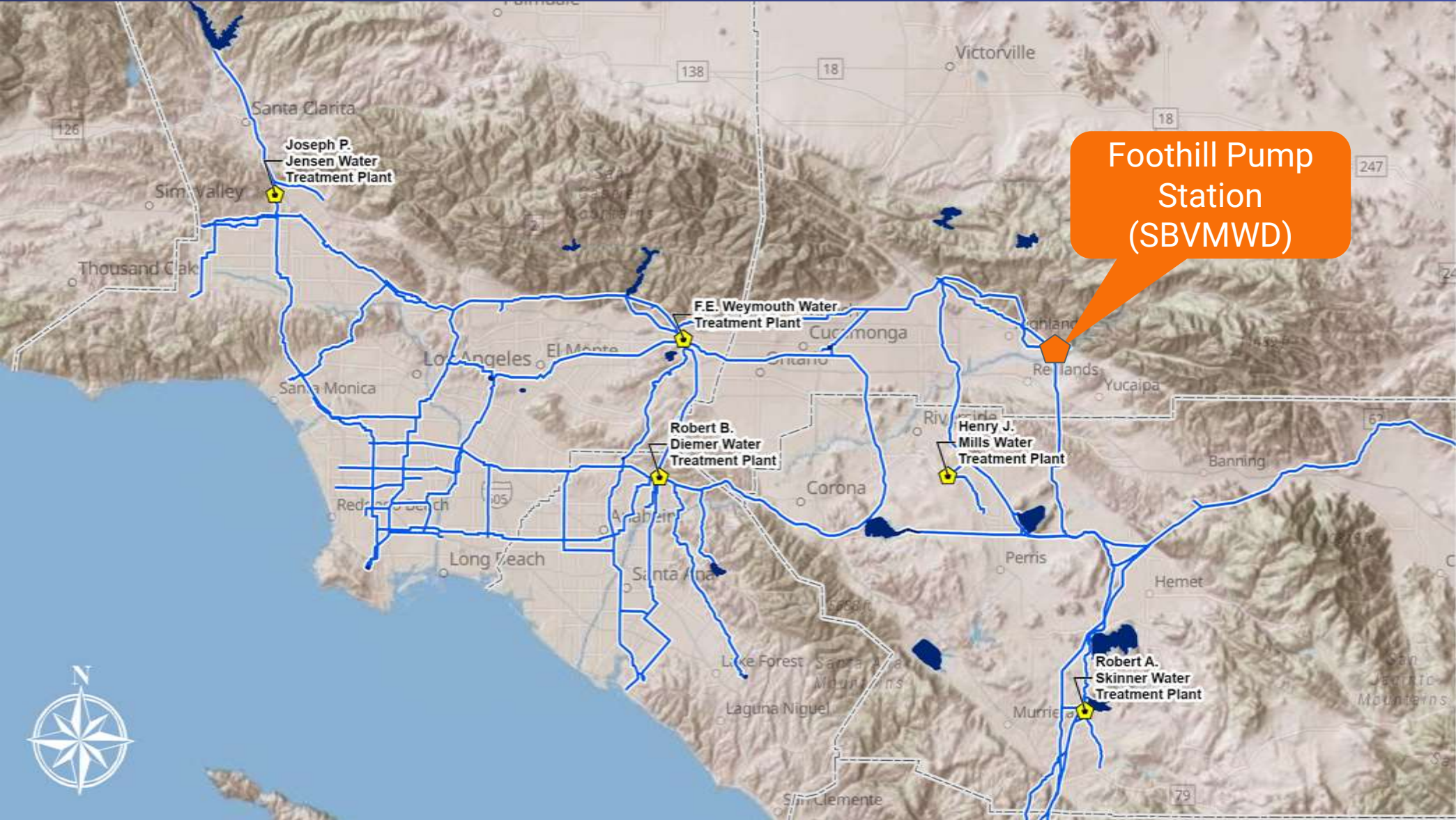
May 8, 2023

Foothill Pump Station Intertie Valve Procurement

Current Action

- Award a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America for two 54-inch diameter butterfly valves to be installed at Foothill Pump Station Intertie
- Part of series of projects to improve supply reliability for State Water Project (SWP) dependent member agencies

Distribution System



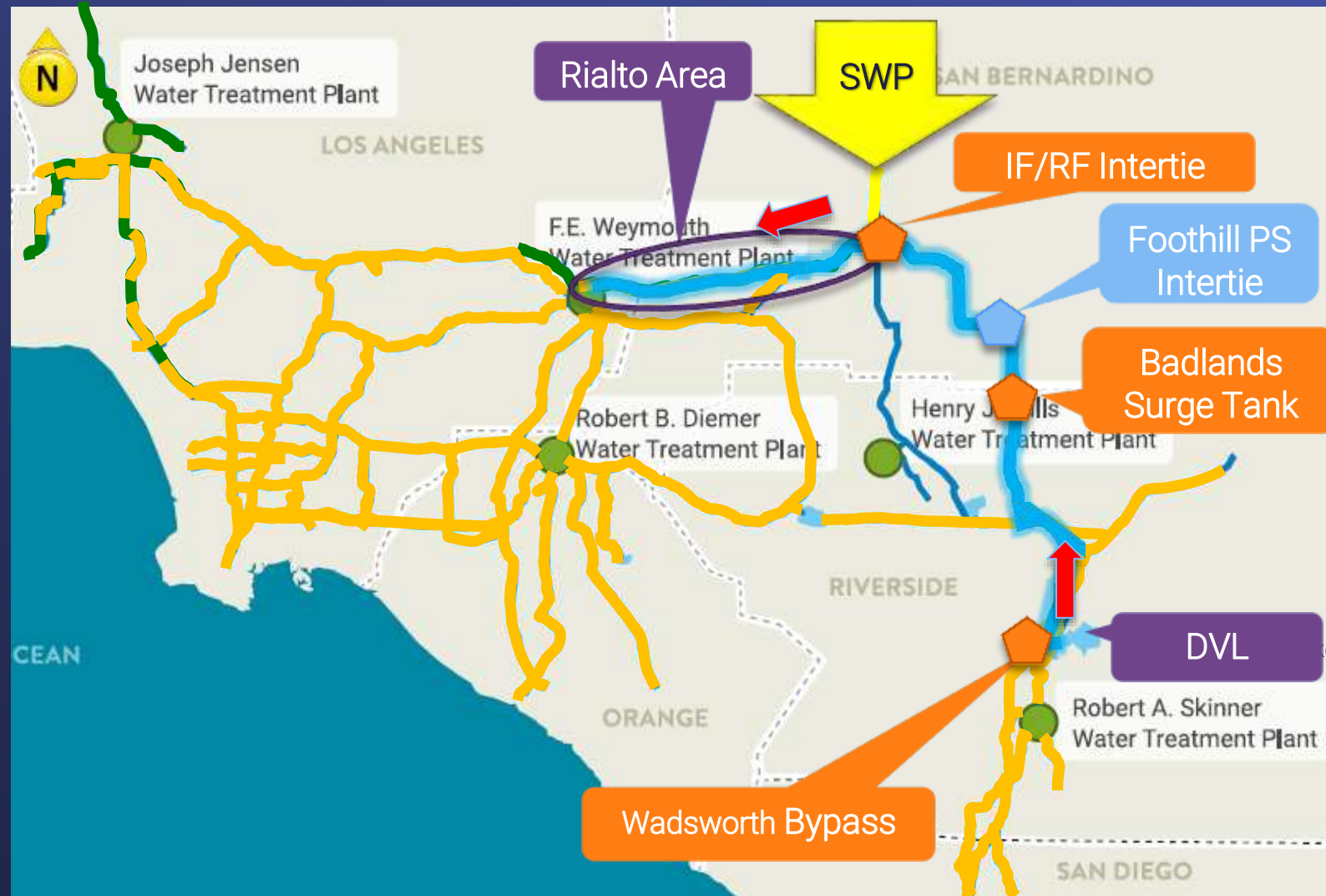
Background – On-going Water Supply Reliability Improvements

- Programs initiated to improve supply reliability of SWP dependent areas



Background-Rialto Area Water Supply Reliability Improvements

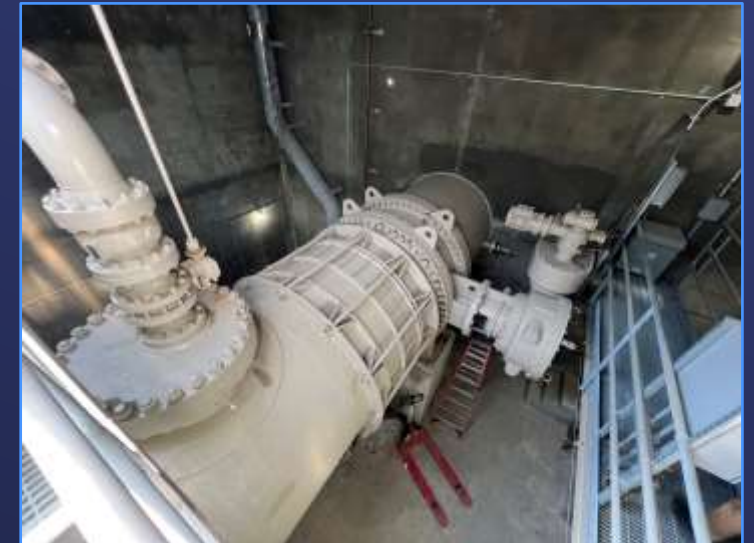
- Rialto Pipeline service area is dependent on SWP
- Rialto Pipeline Water Supply Improvements:
 - Wadsworth Bypass
 - Badlands Tunnel Surge Protection Facility
 - Foothill Pump Station Intertie
 - Inland Feeder Rialto Pipeline Intertie
- Valve procurement recommended at this time



Foothill Pump Station Intertie Valve Procurement

54-inch Valve Procurement & Installation

- Valves isolate & direct flow during operation
- Delivery of valves scheduled for early 2025
 - Fabrication & delivery can take up to two years
- Valves to be installed during Inland Feeder shutdown
 - Under a separate construction contract



Foothill Pump Station Intertie Valve Procurement

Alternatives Considered

- Valve types evaluated
 - Conical, spherical & butterfly valves considered
 - Conical & spherical valves are larger, more expensive & take longer to fabricate
- Selected Alternative – Butterfly valves
 - For situations requiring only isolation, butterfly valves are more appropriate & cost-effective

Foothill Pump Station Intertie Valve Procurement

Scope of Work

- Contractor
 - Furnish & deliver two 54-inch butterfly valves
- Metropolitan
 - Factory fabrication inspection
 - Submittals review
 - Off-load & store valves
 - Contract administration & project management

Bid Results

Specifications No. 2048

Bids Received

March 15, 2023

No. of Bidders

3

Lowest Responsible Bidder

Sojitz Machinery Corporation of America

Low Bid

\$2,601,437

Range of Other Bids

\$928,131* and \$1,032,000*

Budgetary Estimate

\$1,750,000 to \$3,500,000

*Non-responsive bid

Allocation of Funds

Foothill Pump Station Intertie Valve Procurement

Metropolitan Labor

Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$ 125,000
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Fabrication Inspection	260,000
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Force Construction	16,000
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Submittals Review, Tech. Support, Record Dwgs.	94,000
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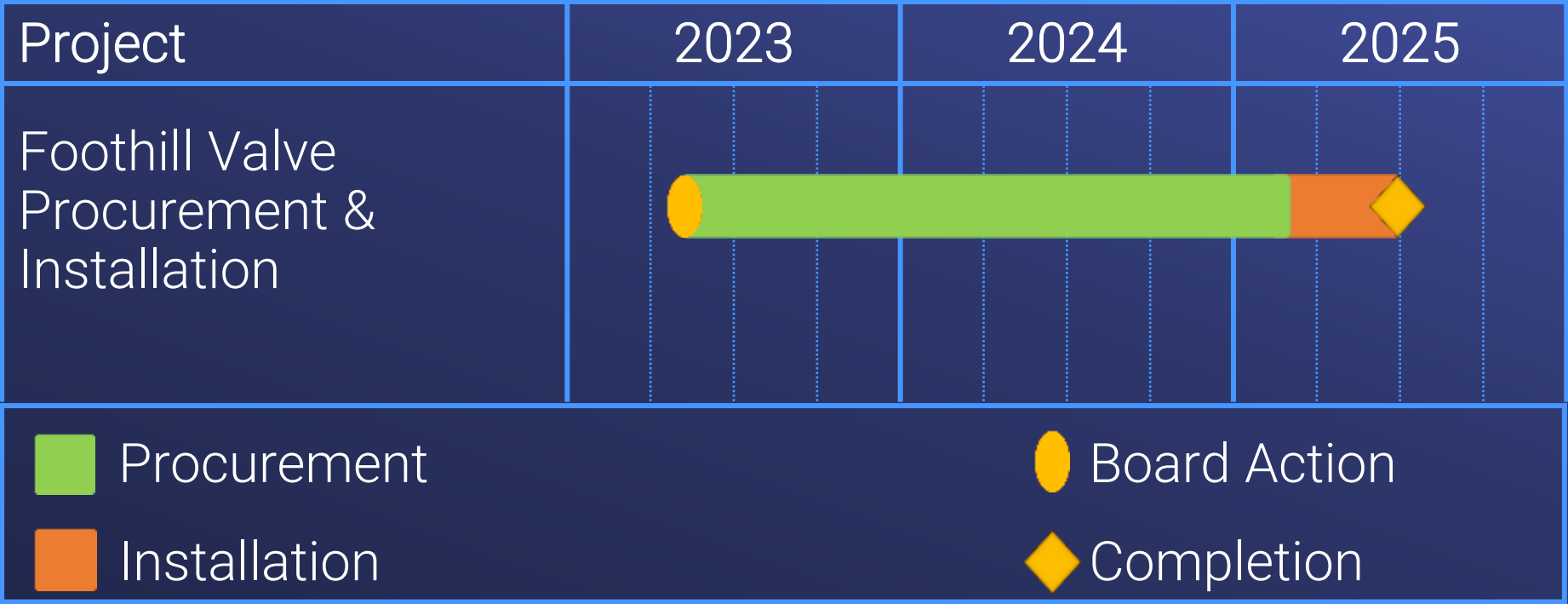
Contracts

Sojitz Machinery Corporation of America	2,601,437
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Remaining Budget	183,563
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Total	\$ 3,280,000
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Project Schedule



Board Options

- Option #1
 - Award a \$2,601,437 procurement contract to Sojitz Machinery Corporation of America to furnish two large diameter butterfly valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie project as part of water supply reliability improvements in the Rialto Pipeline service area.
- Option #2
 - Do not proceed with this project at this time.

Staff Recommendation

- Option #1





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

5/9/2023 Board Meeting

8-2

Subject

Award a \$5,266,000 contract to Leed Electric Inc. to install 12 flow monitoring stations along the Colorado River Aqueduct conveyance system; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Operation of the Colorado River Aqueduct (CRA) at full capacity with an eight-pump flow for extended periods presents operational challenges, as the higher water elevations in the canal and conduits/tunnels reduce hydraulic freeboard. Under these operating conditions, water can spill in certain canal sections, and there is the potential to over-pressurize the cut-and-cover conduits, especially in summer months when biological fouling in the canal reduces the hydraulic capacity of the aqueduct. Currently, flow monitoring of the aqueduct is conducted at the CRA pumping plants which are continually staffed. However, monitoring of water level conditions in the remaining portions of the aqueduct requires staff to access remote locations to make visual observations. This action awards a construction contract to install 12 in-line flow monitoring stations along the CRA's conveyance system, which will allow staff to remotely monitor the water levels in real-time to provide for better control and regulation of water flows through the CRA system.

Details

Background

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews in Riverside County. The CRA 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.

Each of the five pumping plants has nine main pumps. These pumps were installed in several phases over time to meet increasing water demands. When all pumps were originally installed, the hydraulic capacity of the CRA totaled 1,605 cubic feet per second (cfs). Under a rehabilitation program completed in 1992, pump unit performance was improved by enlarging the impeller diameters and modifying the angle of the vanes at the impeller discharge. At the present time, the hydraulic capacity of the CRA pumps is upwards of 1,700 cfs. Although the pump capacity now exceeds the initial design capacity of the conduits and canals, staff has been able to operate the system at the higher flows with additional monitoring, close coordination, and increased maintenance.

The CRA conveyance system is routinely and thoroughly cleaned during the annual shutdown in February to ensure that delivery capabilities of the aqueduct system are maintained. However, with warmer aqueduct temperatures, biological fouling of concrete surfaces decreases velocity due to increased friction, which results in higher water elevations. When the aqueduct is operating at maximum capacity, water levels in the aqueduct are at their highest level, and it becomes challenging to manage flows at these higher water elevations, especially in those portions of the aqueduct that are either open canals or buried cut-and-cover conduits. The higher water elevation reduces hydraulic freeboard and can result in water spill in canal sections and potentially cause over-pressurization of the cut-and-cover conduits. The cut-and-cover conduits are unreinforced and not designed to operate under pressurized conditions.

Over the last several years, when allocations from the State Water Project were extremely limited, the CRA operated at its maximum capacity more frequently and for longer durations than at any time during its operational history. Staff recommends that in-line flow monitoring facilities be installed along the CRA to allow staff to better monitor and control flows and plan for aqueduct algae control and cleaning operations. This project will install 12 flow monitoring stations along the CRA's conveyance system that will be integrated into Metropolitan's Supervisory Control and Data Acquisition (SCADA) system to provide real-time flow data, enabling water surface elevations to be continuously monitored and alarmed. The installation of monitoring equipment will allow staff to monitor and regulate flows more accurately in the aqueduct to maintain uniform and steady state flow conditions. This type of controlled operation will help to prevent spills in the canal sections and avoid over-pressurization of the unreinforced conduit sections of the conveyance system, thus providing safe and reliable water deliveries.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager authorized staff to proceed with construction of the CRA Conveyance Flow Monitoring Stations, pending board approval of the contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$7.75 million in capital funds. Approximately \$6.65 million will be incurred in the current biennium and has been previously authorized. The remaining funding required from this action will be accounted for and appropriated under the next biennial budget. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP Evaluation Team to be included in the CRA Reliability Program.

CRA Conveyance System Flow Monitoring Stations - Construction

The scope of the construction contract consists of installing 12 flow monitoring stations along the conveyance system of the CRA. The planned work includes: (1) installation of precast concrete buildings, antenna poles to support the transmitter and solar panels, and electrical duct banks; (2) control system integration; (3) rehabilitation of deteriorated accessways for the conduits; and (4) site grading. Metropolitan forces completed installation of the transducers last month during the annual 2023 CRA shutdown. This will allow a contractor to complete all remaining work while the CRA is in operation and commission the flow monitoring stations in a timely manner. Metropolitan forces will provide access, coordinate clearances with the contractor during construction, and perform SCADA integration programming.

A total of \$7,750,000 is allocated for this work. In addition to the amount of the contract described below, other funds to be allocated include: \$650,000 for construction management and inspection; \$252,000 for Metropolitan force activities, as described above; \$25,000 for technical support during construction, review of electrical submittals, and preparation of record drawings by Lee & Ro Inc.; \$387,000 for submittals reviews; \$466,000 for contract administration, environmental monitoring, and project management; and \$704,000 for remaining budget. **Attachment 1** provides the allocation of the required funds. The total estimated cost to complete the installation of the flow monitoring stations project, including the amount appropriated to date, and funds allocated for the work described in this action is \$9.15 million.

Award of Construction Contract (Leed Electric Inc.)

Specifications No. 2042 for the installation of flow monitoring stations was advertised on February 10, 2023. As shown in **Attachment 2**, two bids were received and opened on March 28, 2023. The low bid from Leed Electric Inc., in the amount of \$5,266,000, complies with the requirements of the specifications. The higher bid was \$6,659,550, while the engineer's estimate for this project was \$4.27 million. Staff investigated the difference between the low bid and the engineer's estimate and attributes the difference to increased costs associated with mobilization and demobilization at the 12 remote locations along the 80-mile project boundaries, increased electrical craft worker costs in desert regions, contractor's risk, and the limited bidding pool.

For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount. Leed Electric, Inc., is an SBE firm and thus achieves 100 percent SBE participation. The subcontractors for this contract are listed in **Attachment 3**.

As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric goal for inspection of projects with construction greater than \$3 million is 9 to 12 percent. For this project, the performance metric for inspection is 11.8 percent of the total construction cost.

Alternatives Considered

During planning and design of this project, staff considered several alternatives for housing of the equipment that will be installed aboveground. One alternative considered was to install all equipment in the open with shade canopies and an enclosed fence to protect the equipment; however, due to increased theft and vandalism experienced in remote locations, staff decided to forego this alternative. The selected alternative of installing all equipment within a precast building will provide comprehensive security and protect all equipment from the harsh desert environment increasing its service life. Additionally, the new installations will be similar to the existing flow monitoring stations that are already in service, standardizing the equipment and making maintenance more cost-effective.

Summary

This action awards a \$5,266,000 construction contract to install 12 flow monitoring stations along the CRA. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Listing of Subcontractors for the Low Bidder, and **Attachment 4** for the Location Map.

Project Milestone

July 2024 – Complete construction of flow monitoring stations

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

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 involves operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private 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. Additionally, the proposed action involves construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. Finally, the proposed action consists of public or private alterations in the condition of land, water, and/or vegetation, which do not involve removal of healthy, mature, scenic trees. Accordingly, the proposed action qualifies under Class 1, Class 3 and Class 4 Categorical Exemptions (Sections 15301, 15303 and 15304 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a \$5,266,000 contract to Leed Electric Inc. to install 12 flow monitoring stations along the CRA conveyance system.

Fiscal Impact: Expenditure of \$7.75 million in capital funds. Approximately \$6.65 million will be incurred in the current biennium and has been previously authorized. The remaining funding required from this action will be accounted for and appropriated under the next biennial budget.

Business Analysis: This option will enhance the safety and reliability of the CRA conveyance system.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forego an opportunity to enhance the reliability of the CRA and maintain reliable water deliveries.

Staff Recommendation

Option #1

 _____ John V. Bednarski Chief Engineer/Group Manager Engineering Services	4/17/2023 Date
 _____ Adel Hagekhalil General Manager	4/25/2023 Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# es12691758

Allocation of Funds for Installation of CRA Conveyance Flow Monitoring Stations

	Current Board Action (May 2023)
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	466,000
Submittals Review & Record Drwgs.	387,000
Construction Inspection & Support	650,000
Metropolitan Force Construction	180,000
Materials & Supplies	52,000
Incidental Expenses	20,000
Professional/Technical Services	
Lee & Ro, Inc.	25,000
Right-of-Way	-
Equipment Use	-
Contracts	
Leed Electrical, Inc.	5,266,000
Remaining Budget	704,000
Total	\$ 7,750,000

The total amount expended to date for the installation of CRA conveyance system flow monitoring stations is approximately \$1.4 million. The total estimated cost to complete, including the amount appropriated to date and funds allocated for the work described in this action, is \$9.15 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on March 28, 2023, at 2:00 P.M.

Specifications No. 2042

Colorado River Aqueduct Conveyance System Installation of Flow Monitoring Stations

The work includes installation of 12 flow monitoring stations along the conveyance system of the CRA. The planned work includes: (1) installation of precast concrete buildings, antenna poles to support the transmitter and solar panels, and electrical duct banks; (2) control system integration; (3) rehabilitation of deteriorated accessways for the conduits; and (4) site grading.

Engineer's estimate: \$4.27 million

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Leed Electric Inc. Santa Fe Springs, CA	\$5,266,000	\$5,266,000	100%	Yes
R2Build dba R2B Engineering Laguna Hills, CA	\$6,659,550	-	-	-

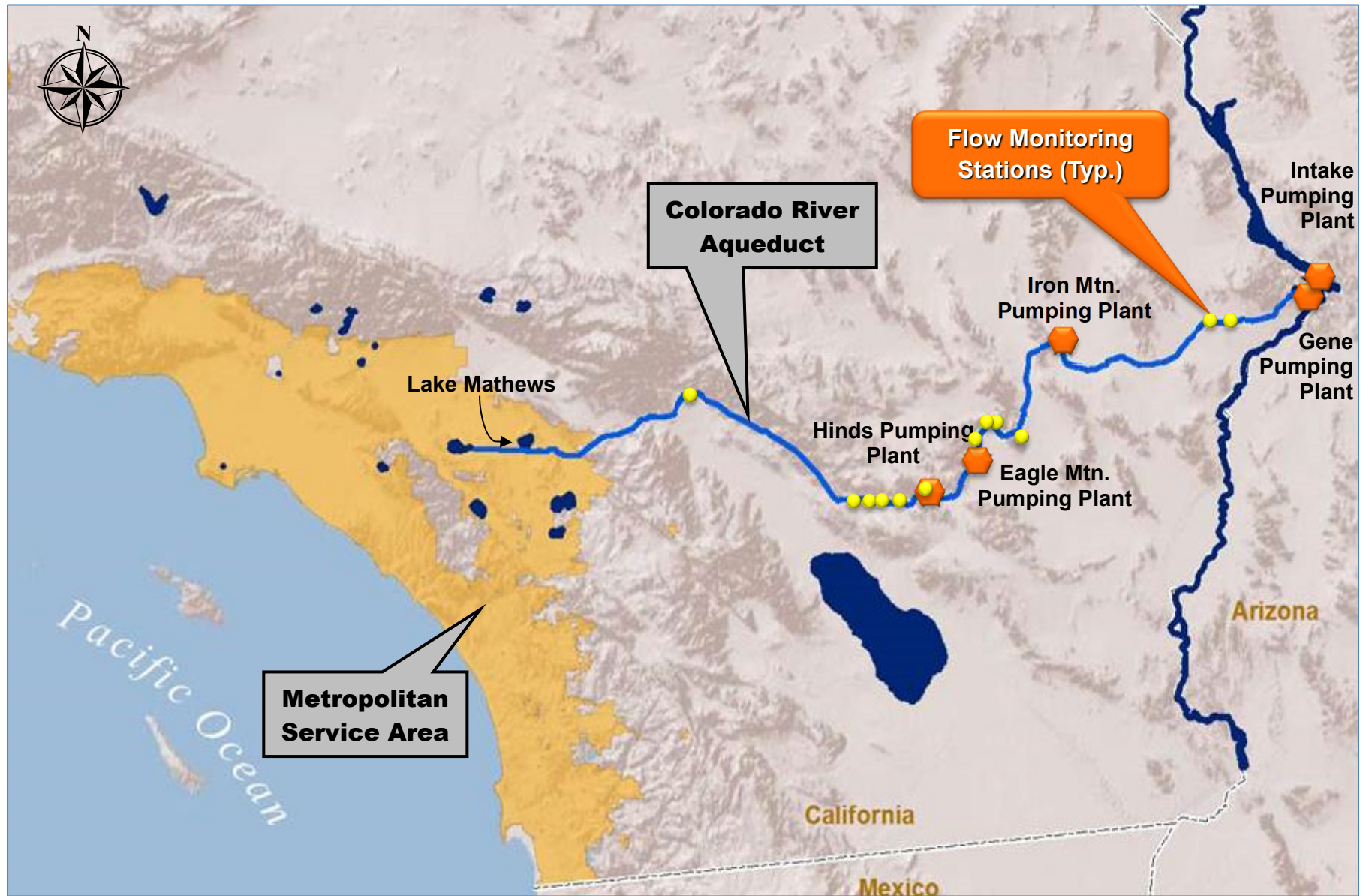
¹ Small Business Enterprise (SBE) participation level established at 25% for this contract.

The Metropolitan Water District of Southern California**Subcontractor for Low Bidder****Specifications No. 2042****Colorado River Aqueduct Conveyance System Installation of Flow Monitoring Stations**

Low bidder: Leed Electric, Inc.

Subcontractor	Service Category; Specialty
316 Engineering and Construction Co. Inc. Rosemead, CA	Civil, mechanical, and structural work

Location Map





Engineering, Operations, & Technology Committee

CRA Conveyance System Flow Monitoring Stations

Item 8-2

May 8, 2023

Colorado River Aqueduct Conveyance System Flow Monitoring Stations

Current Action

- Award a \$5,266,000 contract to Leed Electric Inc. to install 12 flow monitoring stations along the Colorado River Aqueduct conveyance system

The map illustrates the California State Water Project's route from the Sierra Nevada to the Colorado Desert. It shows the project's path through various counties, including Kern, Los Angeles, San Bernardino, Orange, San Diego, Imperial, Mohave, and Yuma. Key components of the project are highlighted, such as the Ventura River, Lake Perris, Lake Mathews, Diamond Valley Lake, and several pumping plants: Iron Mountain, Eagle Mountain, Hinds, and Gene. An orange callout box points to green dots along the route, labeled 'Flow Monitoring Stations (Typ.)'. A north arrow is located in the top left corner.

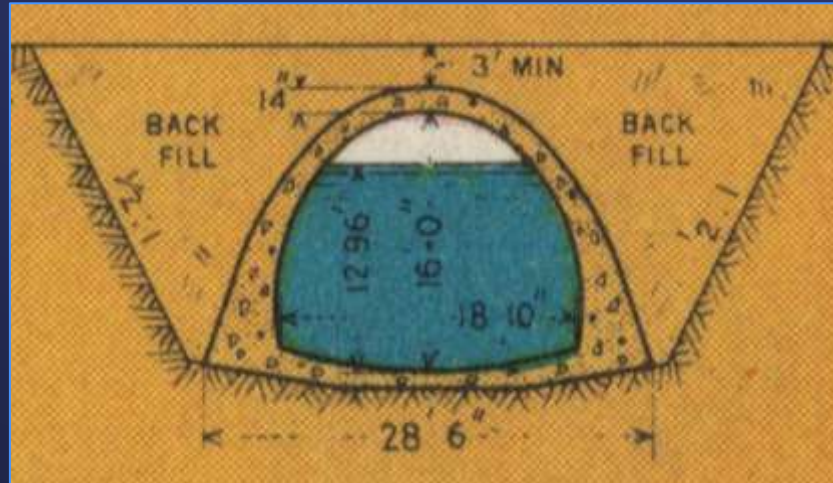
Background

- Hydraulic capacity of CRA increased in 1990s by over 100 cfs
- Extended periods of 8-pump flow
 - Requires frequent monitoring & continuous maintenance
- Concerns & rationale for continuous monitoring
 - Pressurization of cut-and-cover conduits
 - Overflow of open sections



Canal Dragging

May 8, 2023



Cut-and-Cover Conduit

Engineering, Operations, & Technology Committee



Increased Water Elevation (Canal)

Item # 8-2 Slide 4

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Colorado River Aqueduct Conveyance System Flow Monitoring Stations

Scope of Work

- Installation of flow monitoring stations
- Provide real time data
- Continuously monitor & regulate flow
- Maintain steady state flow conditions



Existing Monitoring Station

Colorado River Aqueduct Conveyance System Flow Monitoring Stations

Alternatives Considered

- Install equipment in the open with shade canopies & an enclosed fence
 - Increased theft & vandalism in remote locations
- Selected Alternative – Install equipment in pre-cast buildings
 - Provides comprehensive security & protection
 - Similar set-up to existing monitoring stations

Contractor - Scope of Work



Typical pre-cast concrete building

- Installation of pre-cast concrete buildings, antenna poles, & electrical ductbanks
- Site grading
- SCADA integration
- Rehabilitation of deteriorated accessways for conduits

Colorado River Aqueduct Conveyance System Flow Monitoring Stations



Typical transducer installation
in aqueduct

Metropolitan - Scope of Work

- SCADA programming
- Providing access & coordinating clearances
- Construction management & inspection
- Submittal review
- Environmental monitoring
- Project management & project controls

Bid Results

Specifications No. 2042

Bids Received	March 28, 2023
No. of Bidders	2
Lowest Bidder	Leed Electric Inc.
Low Bid	\$5,266,000
Other Bid	\$6,659,550
Engineer's Estimate	\$4,270,000
SBE Participation*	100%

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

Allocation of Funds

CRA Conveyance System Flow Monitoring Stations

Metropolitan Labor

Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$ 466,000
--	------------

Construction Inspection & Support	650,000
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Submittals Review, Tech. Support, Record Dwgs.	387,000
--	---------

Force Construction	180,000
--------------------	---------

Materials & Supplies

72,000

Professional/Technical Services

Lee & Ro, Inc.	25,000
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Construction Contract

Leed Electric Inc.	5,266,000
--------------------	-----------

Remaining Budget	704,000
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Total	\$7,750,000
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Project Schedule



Board Options

- Option #1
 - Award a \$5,266,000 contract to Leed Electric Inc. to install 12 flow monitoring stations along the CRA conveyance system.
- Option #2
 - Do not proceed with the project at this time.

Staff Recommendation

- Option #1





Engineering & Operations Committee

Eastern MWD's Lake Skinner Water Transmission System and EM-II Connection Project

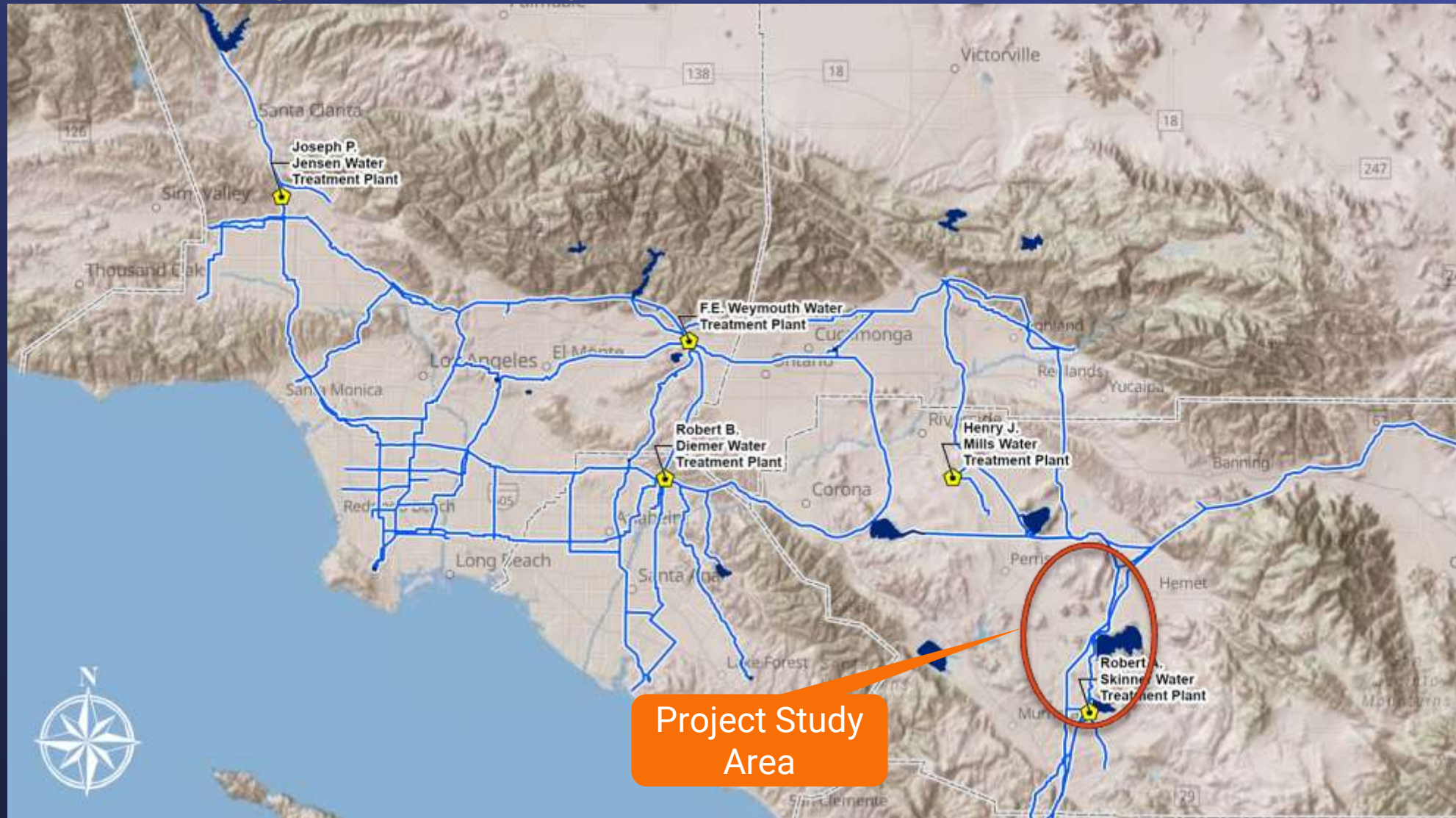
Item 7a

May 8, 2023

Presentation Outline

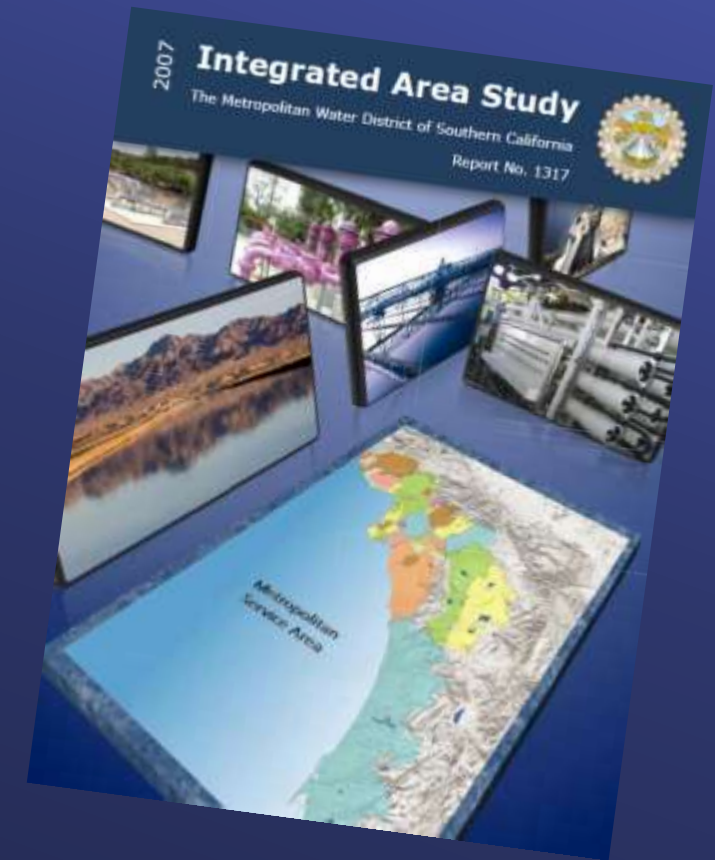
- Background
 - Integrated Area Study
 - Planned Regional Water Supply in Riverside
 - Existing Metropolitan Infrastructure
- Eastern MWD's Lake Skinner Water Transmission System and EM-11 Connection Project
 - Project Drivers
 - Project Components
 - Goals of Project
 - Benefits of Project
- Next Steps

Metropolitan's Service Area and EMWD's Lake Skinner Water Transmission System Study Area



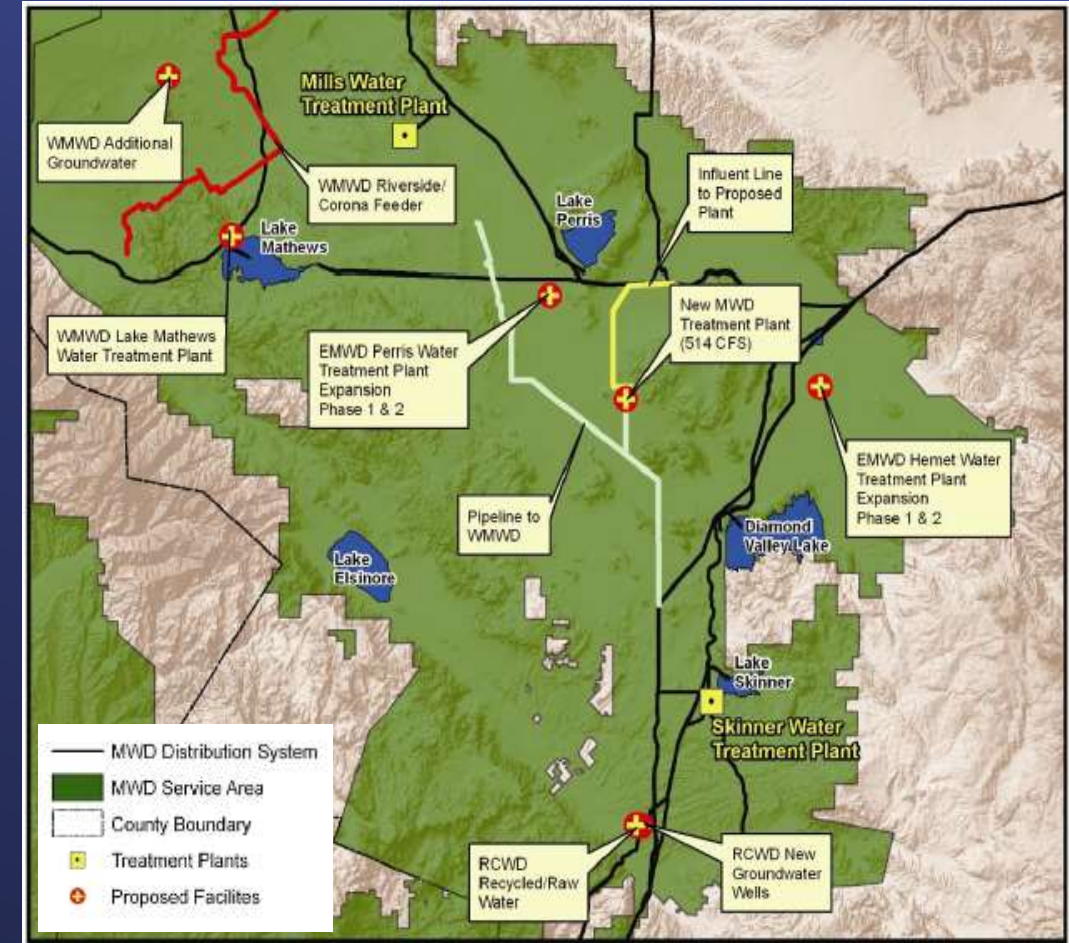
History of Planned Regional Water Supply

- Metropolitan's 2007 Integrated Area Study
 - Proposed project portfolios
 - Many portfolios included a regional WTP
 - To meet the capacity need by 2050
 - Envisioned a linkage of Mills WTP & Skinner WTP to create regional flexibility
 - Proposed the utilization of San Diego Pipelines 1 & 2 R/W for a new transmission pipeline



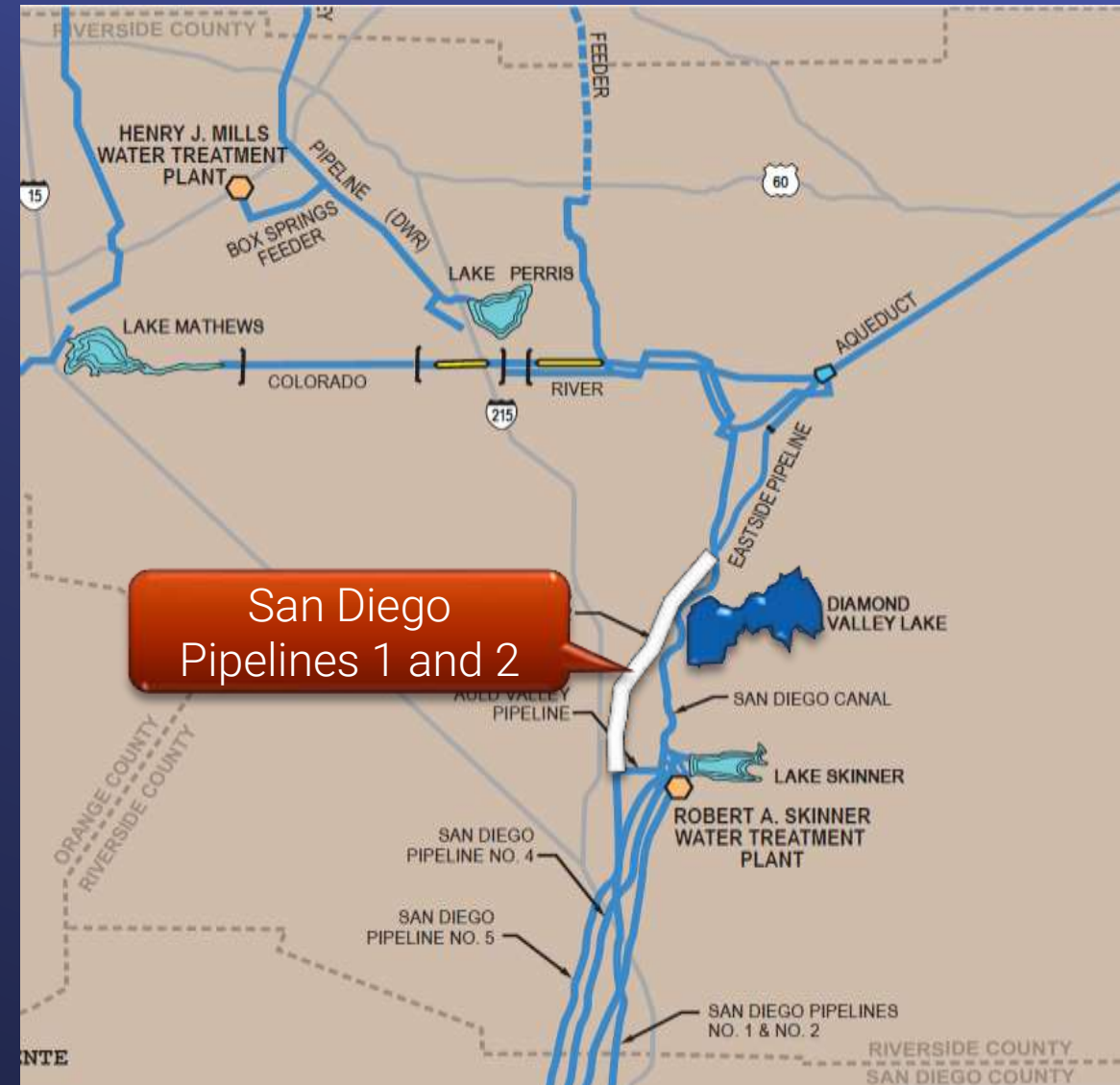
History of Planned Regional Water Supply

- Eastern MWD Studies
 - 2015 EMWD Water Supply Strategic Plan
 - 2015 EMWD Water Facilities Master Plan Update
- Metropolitan Studies
 - 2022 Metropolitan's IRP was approved
 - A subsequent study of the region concluded that there is no need for additional water treatment capacity in the planning horizon



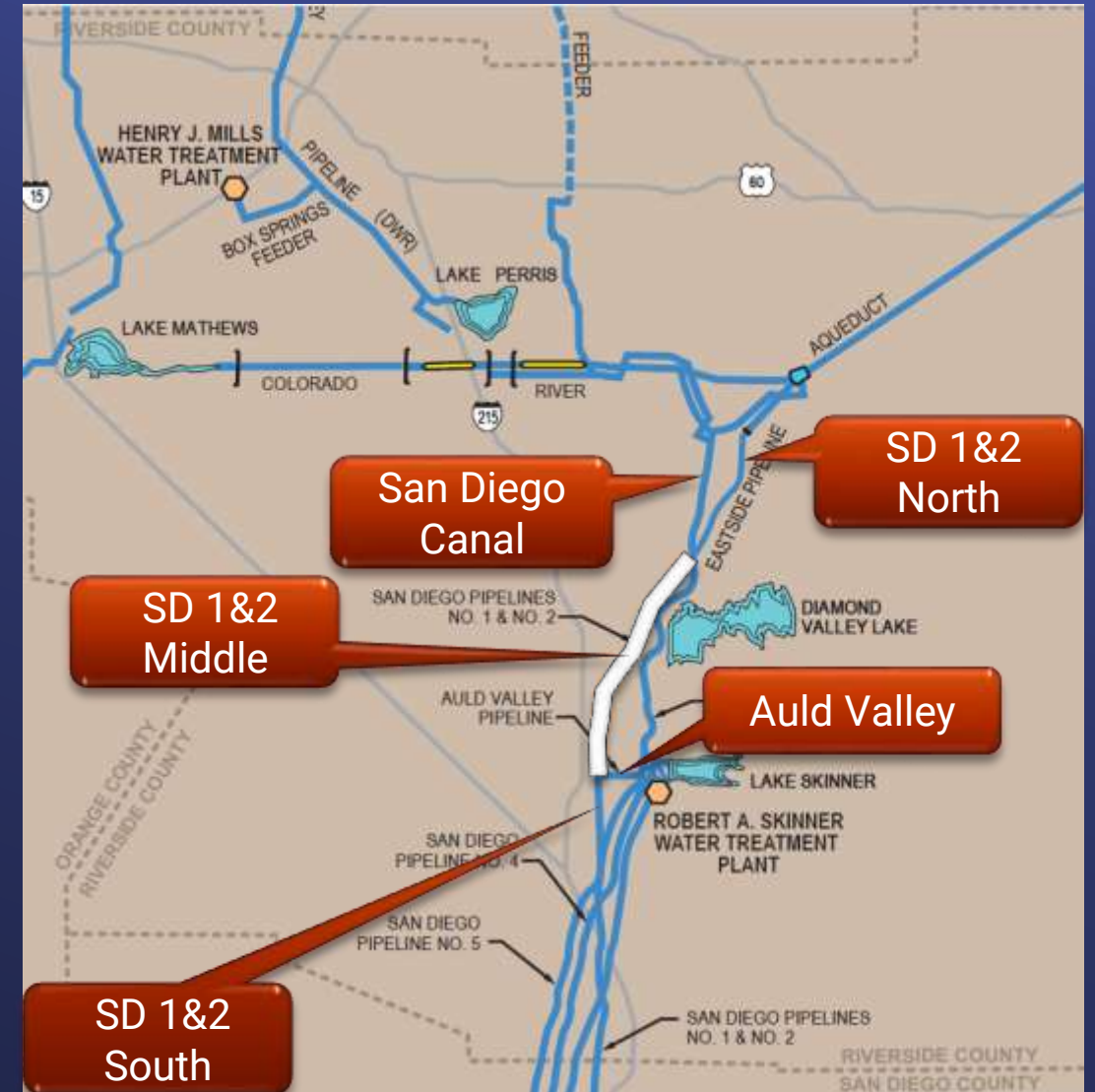
San Diego Pipelines 1 and 2

- Originally designed to deliver CRA water to San Diego
- Pipelines constructed in 1947 and 1954
- Pipe sizes from 48 to 54 inches
- Easement width varies from 100 to 150 feet



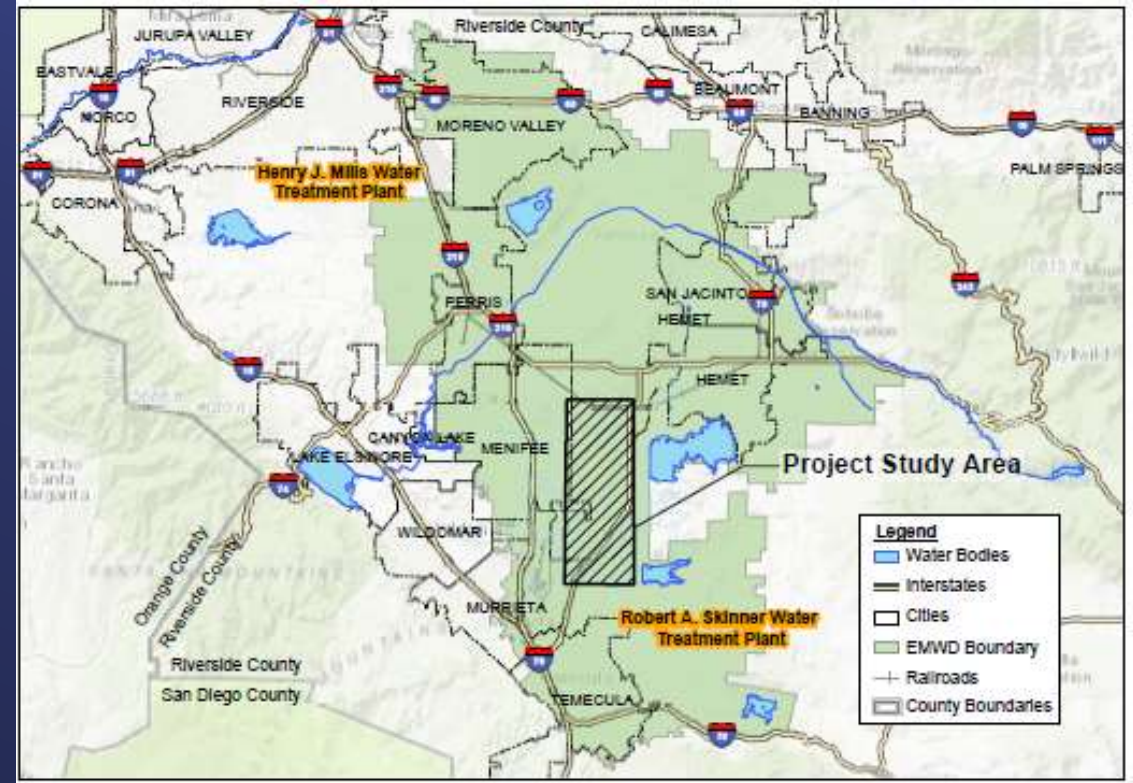
San Diego Pipelines 1 and 2

- Portion south of Skinner converted to treated water after the construction of the Auld Valley Pipeline
- Northern portion connected to the San Diego Canal
- Middle portion placed out of service
- During the construction of the DVL an 18" drain line was constructed in a portion of the R/W



Lake Skinner Water Transmission System and EM-11 Connection Project – Project Drivers

- Expands regional water system to meet future demands
- Delivers new treated water supply from Skinner WTP
- Increases supply reliability during outages
 - Mills WTP
 - Skinner WTP



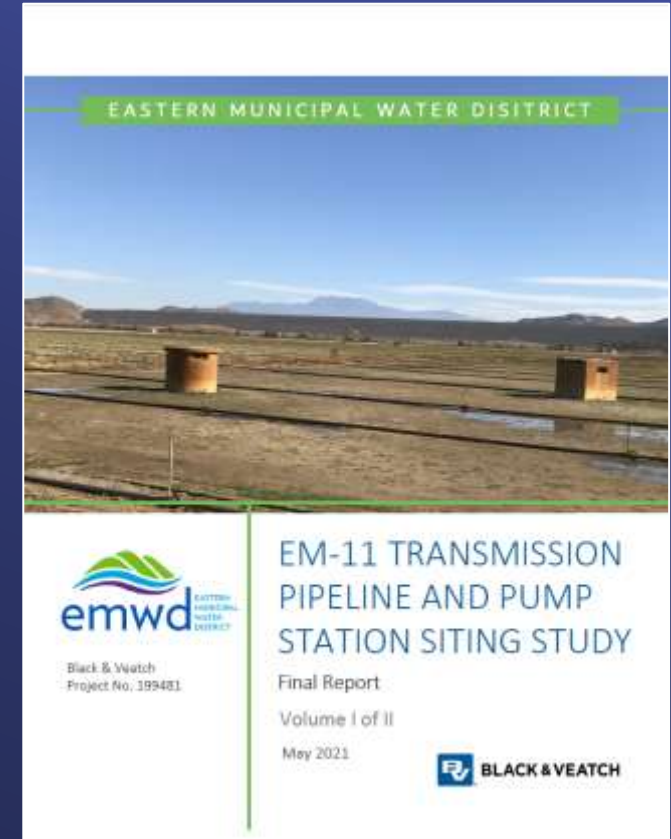
Lake Skinner Water Transmission System and EM-11 Connection Project – Project Attributes

- Components
 - 10 miles of transmission pipeline
 - 48-72-inch in diameter
 - 140 cfs Pump Station
 - 140 cfs Service Connection
- Location
 - Starting at the Skinner WTP
 - Utilizes out-of-service portion of San Diego Pipelines 1 & 2 easement



Lake Skinner Water Transmission System and EM-11 Connection Project – Study Goals and Objectives

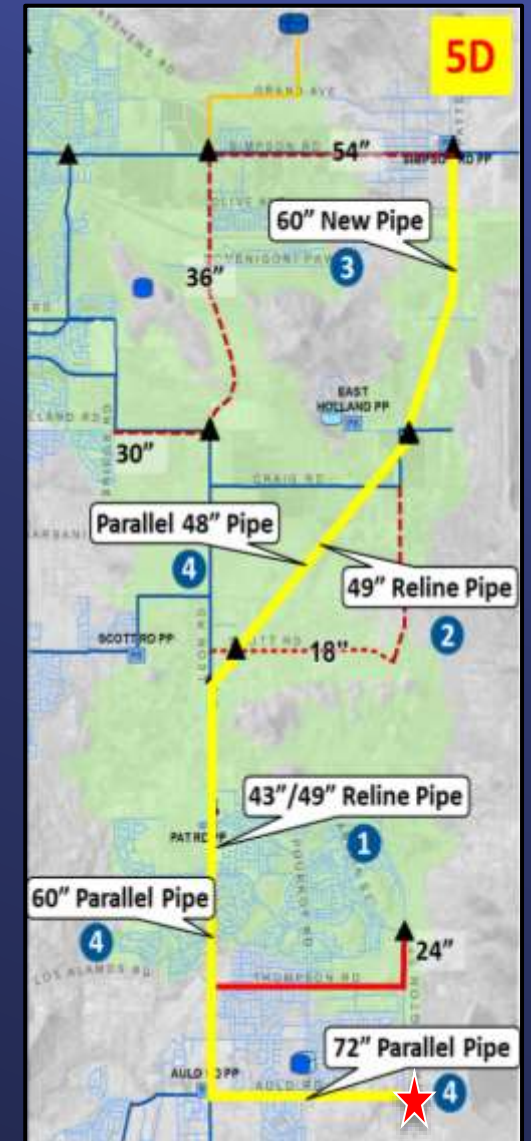
- Evaluate the feasibility of conveyance facilities
 - Consider the use of San Diego Pipelines 1 and 2
 - Phased implementation
- Identify easement and fee property requirements
- Prepare an environmental constraints report
- Select preferred alternatives



Lake Skinner Water Transmission System and EM-11 Connection Project – Alternative Alignments



- Five alignments evaluated
 - Multiple sub-alternatives within each alignment
- Selected an alignment that utilizes the San Diego Pipeline 1 & 2 easements



Lake Skinner Water Transmission System and EM-11 Connection Project – SD 1 & 2

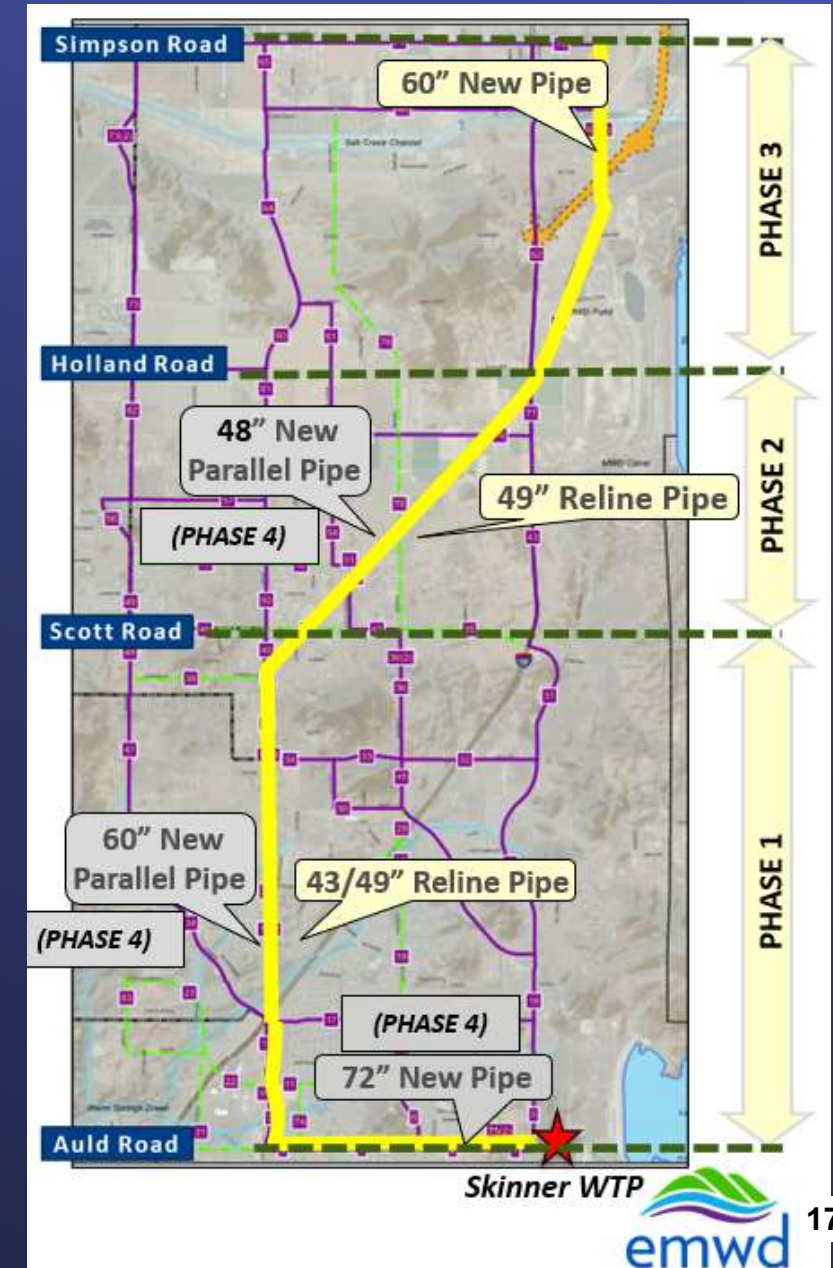
- Assessed the technical feasibility of re-purposing the pipelines
 - Pipelines may be re-purposed for high-pressure use
 - Structural rehabilitation required
 - Adequate easement width to accommodate new transmission pipeline
- Replacement drain line may be needed



Lake Skinner Water Transmission System and EM-11 Connection Project – Phases

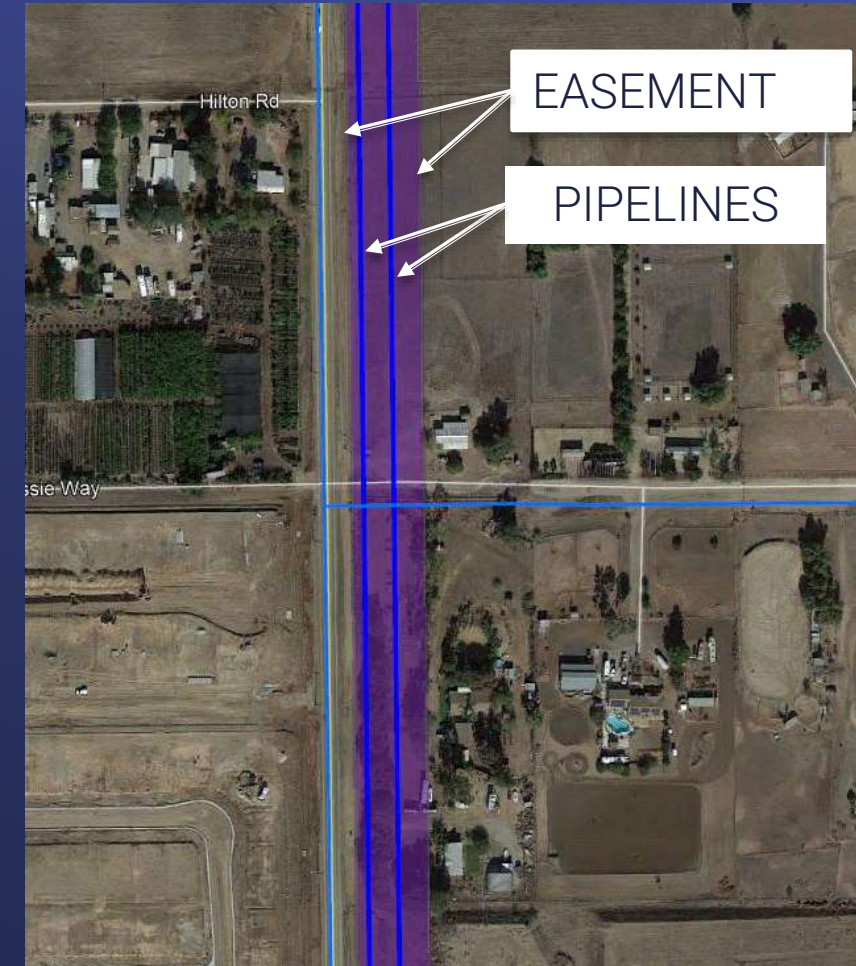
Phase	Supply	Service to Location
1	40 cfs	Scott Road
2	40 cfs	Craig Road / Holland Road
3	40 cfs	Simpson Road
4	80 cfs*	Simpson Road
5 (Buildout)	140 cfs*	<i>No new infrastructure</i>

*Supply increases at 80 cfs and 140 cfs dependent on development patterns. No additional infrastructure.



Lake Skinner Water Transmission System and EM-11 Connection Project – Coordination

- EMWD held project update meetings and site visits
- EMWD investigated easement rights
- Metropolitan confirmed San Diego Pipelines 1 & 2 have no plans to be used in the planning horizon
- EMWD submitted legal and plats along the easement corridor for Metropolitan's review
- On-going agency coordination through the CEQA process



Lake Skinner Water Transmission System and EM-11 Connection Project – Benefits

- Accommodates projected regional demands and operational flexibility
- Expands EMWD's ability to acquire treated supplies from Skinner
- Creates operational flexibility for region
- Re-purposes the out-of-service San Diego Pipelines 1 & 2 Segments
 - Minimizes construction impacts
 - Minimizes environmental impacts
 - Avoids duplicating existing infrastructure
 - Meets demands in cost-effective manner
 - Provides the opportunity for a phased approach

Next Steps

- Eastern MWD
 - Complete the CEQA process
 - Confirm timing based on the 2022 Water Supply Strategic Plan Update
 - Complete a Service Connection request
 - Confirm approach for 18-inch drain line replacement
- Metropolitan
 - Continue collaboration with Eastern MWD
 - Present results of assessment for recent trends for treated water supplies
 - Seek Board approval to transfer San Diego Pipelines 1 & 2 R/W to Eastern







Engineering, Operations & Technology Committee

Update on Constituents of Emerging Concern

Item 7b

May 8, 2023

Constituents of Emerging Concern (CECs)

Presentation Topics

- Introduction to CECs
- Regulatory process
- Per- and polyfluoroalkyl substances (PFAS)
- Microplastics
- Metropolitan's applied research

Constituents of Emerging Concern (CECs)



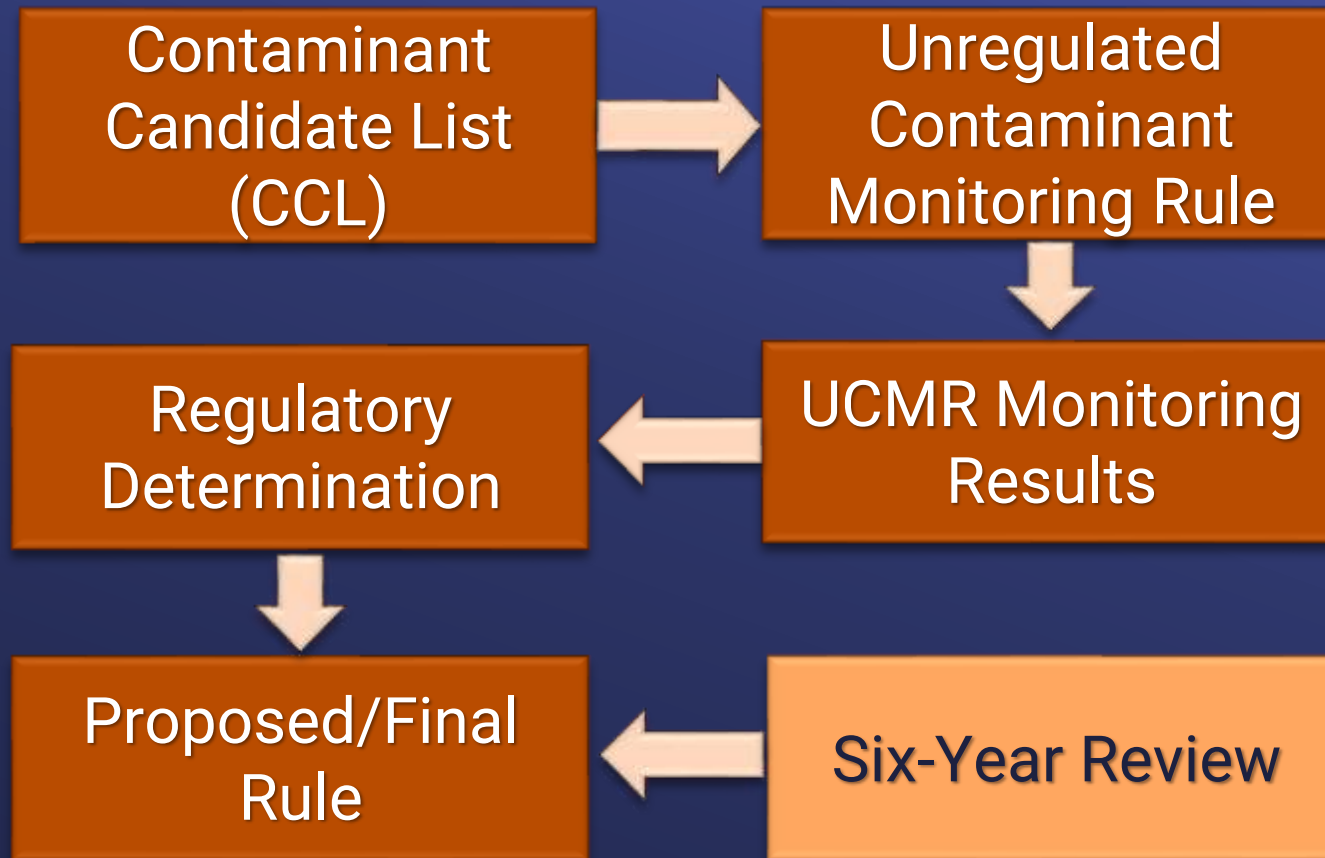
What are CECs?

- *Over 120 regulated constituents in drinking water*
- *Thousands of non-regulated potential constituents*
- Emerging and non-regulated constituents with potential health concerns
 - Pharmaceutical and personal care products
 - Cyanotoxins
 - Unregulated disinfection byproducts, e.g., nitrosamines
 - Pathogens
 - Per- and polyfluoroalkyl substances (PFAS)
 - Microplastics

Regulating CECs



Regulatory Decision Process



States have primacy and their own regulatory process, but state standards cannot be less stringent than federal regulations

State Legislation on CECs



Senate Bill 230 (Portantino)

- Co-sponsored by Metropolitan
- Signed into law in September 2022
- Ensures a unified, consistent, and science-based approach to identify CECs relevant to California
 - Authorizes the State Water Board to establish a **dedicated program for CECs in drinking water**
 - Authorizes the State Water Board to establish a Science Advisory Panel for CECs in drinking water
 - Establishes the CEC Action Fund in the State Treasury

Per- and Polyfluoroalkyl Substances (PFAS)



What are PFAS?

- Large group of manufactured chemicals used in products that resist oils, stains, water, and in fire-suppression foam
 - Some PFAS linked to various health effects
- California DDW issued monitoring orders to drinking water systems starting in 2019
 - PFAS detected in some southern California groundwater
- Monitoring required by U.S. EPA
 - UCMR 3, 2013 – 2015: monitoring for 6 PFAS
 - UCMR 5, 2023 – 2025: monitoring for 29 PFAS

*UCMR = Unregulated Contaminant Monitoring Rule

U.S. EPA Proposed Drinking Water Regulations for Six PFAS

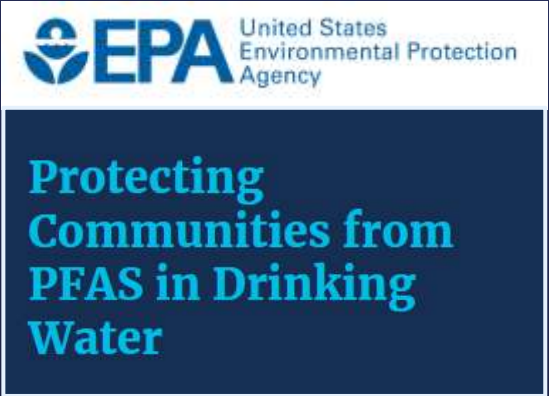
	PFOA	PFOS	GenX	PFBS	PFHxS	PFNA
Proposed MCL*	4 ng/L	4 ng/L	Hazard Index** of 1 (unitless)			

- EPA expects to finalize the regulation by the end of 2023
- Compliance required within 3 years of promulgation

*MCL = Maximum Contaminant Level

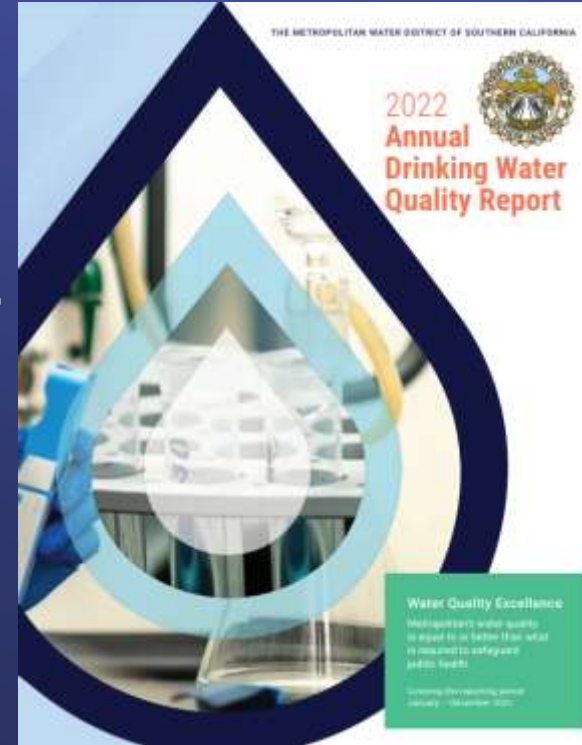
** Hazard Index = Sum of $\frac{\text{Measured concentration in water}}{\text{Health Based Water Concentration}}$

Proposed Federal Drinking Water Standards



PFAS Occurrence – Metropolitan's Monitoring

- Metropolitan has voluntarily monitored source and treated water for PFAS since 2013
- The six PFAS with proposed drinking water standards have not been detected in Metropolitan's treated water
- Four PFAS detected at trace levels in some source waters
 - PFHxA, PFBA, PFOS, PFPeA
- Two PFAS detected at trace levels in treated waters
 - PFHxA, PFPeA
- Monitoring results provided to Member Agencies in Annual Water Quality Report



PFAS and CERCLA



EPA is expected to finalize rule designating PFOA and PFOS under CERCLA by August 2023

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- Sept. 2022 – EPA proposed to designate PFOA and PFOS as hazardous substances under CERCLA
- April 13, 2023 – EPA requested public input on whether to designate seven additional PFAS as hazardous substances
 - PFBS, PFHxS, PFNA, GenX, PFBA, PFHxA, and PFDA
 - Precursors to the nine PFAS; groups/categories of PFAS
- Potential impacts to water utilities
 - Liability and costs for disposal of treatment residuals containing PFAS
 - Potential for litigation and financial burden
- Water agencies are asking Congress for exemption from CERCLA liability



Microplastics in California



The Rise of Microplastics

- California SWRCB definition
 - Particles between 1 nanometer and 5 millimeters in size
- Many sources of microplastics
 - Car tires, plastic containers, clothing fibers, cosmetics, personal care products
- Enter water supplies from wastewater and industrial discharges, surface runoff, etc.
- Additional research needed on potential health effects
- Drinking water treatment is effective at removing microplastics (>90%)

Upcoming Monitoring Requirements for Microplastics

August 2022 – State Water Board adopted policy handbook on testing and reporting of microplastics in drinking water, per requirements in **SB 1422**

- **Pilot phase:** Standardized and validated sampling procedures are being developed
- **Phase 1:** Source water monitoring for 2 years (probably starting in early 2024)
- **Phase 2:** Finished drinking water monitoring for 2 years
- Metropolitan and nine member or retail agencies listed as potentially required to monitor



May 22, 2023

State Water Board
workshop for utilities
potentially required
to monitor

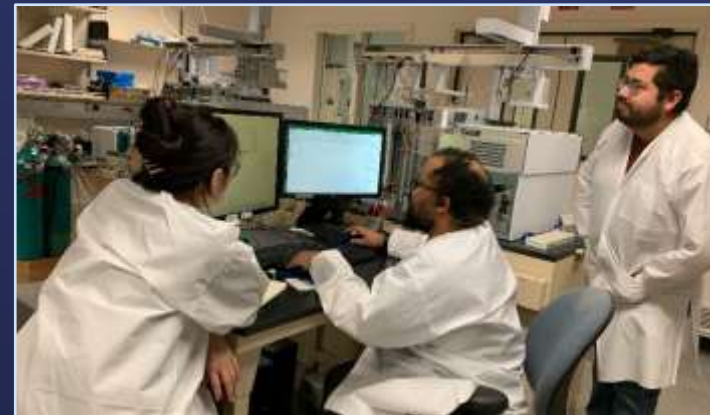
Metropolitan's Method Development and Engagement on Microplastics



- Participated in a methods evaluation study (2021)
- Working with SWRCB to ensure a robust monitoring program and reliable data
- Providing support to member agencies
 - Metropolitan webinar and workshop on April 12
- Converting lab space for microplastics analysis
- Evaluating sampling devices, developing monitoring plan, and procuring equipment for analysis
- Developing communication tools

Over 40 Years of Proactive Applied Research

- Promote applied research to improve understanding of CECs
- Ensure readiness to respond to emerging water quality challenges and future regulations
- Provide input and guidance on regulatory and legislative processes to promote sound science and effective regulations







Engineering, Operations, & Technology Committee

Water System Operations Manager's Report

Item 8a
May 8, 2023

Current Operational Conditions



Article 21 Deliveries to Diamond Valley Lake on March 27, 2023

Adapting to Surplus Conditions

- 2023 SWP Allocation increased to 100%
- Managed Article 21 Supplies
- CRA operating at a 5-pump flow
- SWP blend targets are 100% at Weymouth and Diemer; Skinner blends currently 15% and increasing
- Delivering Colorado River water to DWCV storage
- April 2023 deliveries of 68 TAF were 69 TAF lower than April 2022; lowest April demand since 1983

100% SWP Allocation



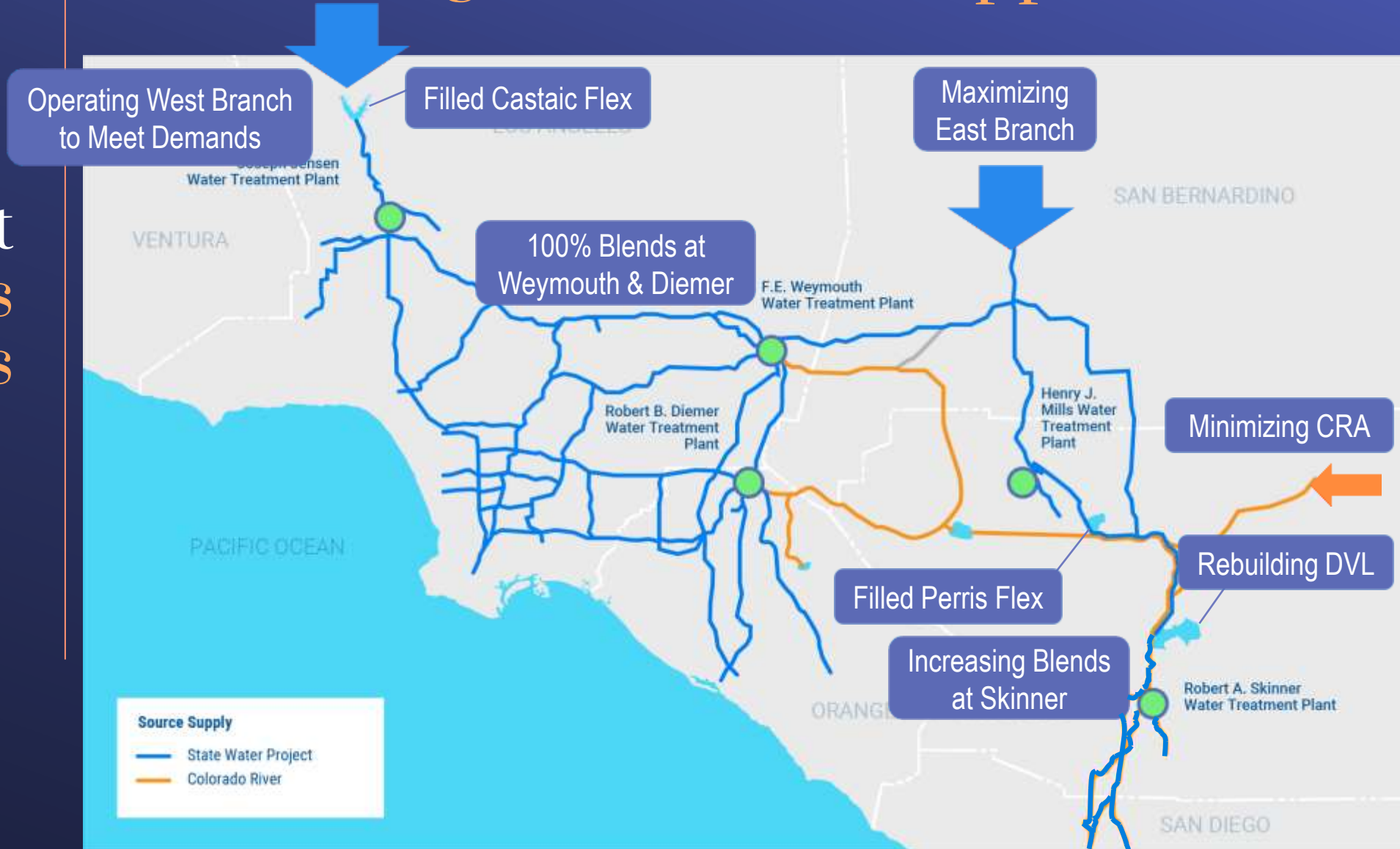
East Branch of California Aqueduct

Maximizing Use of SWP Supplies

- Prioritizing rebuilding storage for SWP Dependent Areas
- Maximizing SWP West and East Branch deliveries
- Delivered ~148 TAF of Article 21 supplies
 - Filled Perris and Castaic Flex
 - Refilling DVL; currently ~65% full
- Maximizing blends while balancing system and water quality constraints
- Coordinating with member agencies on CUP and Cyclic programs (incl. CCOP and Reverse Cyclic)

Maximizing Use of SWP Supplies

Current
Surplus
Operations



Maximizing deliveries to DWCV storage under low CRA flows

Managing Colorado River Supplies



- Gates installed on CRA increases flow to DWCV when CRA is running at lower flows
- Installed gate allows deliveries up to ~700 cfs



Ensuring Continued System Reliability

Middle Feeder (North)

Inspected pipeline from Covina PCS to Ramona PCS and replaced valves
Recently Completed

Etiwanda Pipeline

Repair lining
Ongoing

Lakeview Pipeline

Remove bulkheads at Perris Facility and inspect pipeline
Apr. 28 – May 6, 2023

Second Lower Feeder

Rehabilitate PCCP
Ongoing

Orange County Feeder

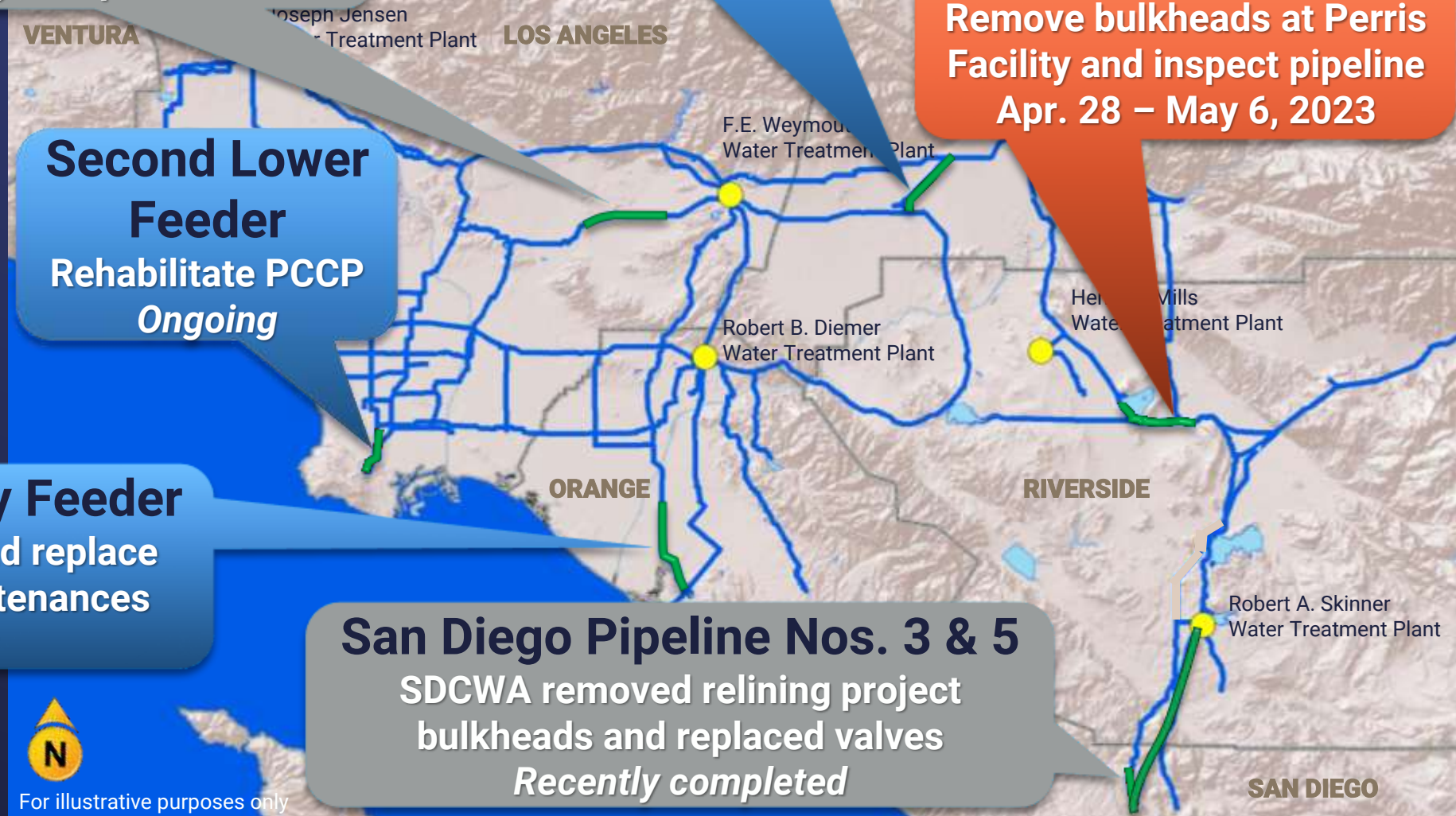
Reline pipeline and replace valves and appurtenances
Ongoing

San Diego Pipeline Nos. 3 & 5

SDCWA removed relining project bulkheads and replaced valves
Recently completed



For illustrative purposes only



Emergency Shutdown



Flooded Structure at DWR's
Northpark Valve Vault

May 8, 2023



For illustrative purposes only

Santa Ana Valley Pipeline and Mills Plant

Emergency Shutdown



Leak on DWR's 12" Bypass Line at Northpark Valve Vault

- Mills shut down and SAVP dewatered to allow DWR to assess cause of leak and repair method
- Close coordination with Eastern MWD and Western MWD to manage unscheduled shutdown
 - Mills reservoir filled and local storage increased prior to shutdown
 - Contingency plan to switch to DVL to Mills operation if longer shutdown needed
- DWR identified leak on 12-inch bypass line and immediately proceeded with weld repair
- Mills and SAVP returned to service the morning of April 26





Engineering, Operations, & Technology Committee

Engineering Services Manager's Report

Item 8b

May 8, 2023

Construction and Procurement Contracts March 2023

Construction and Procurement Contracts Through March 2023

Number of Active Contracts at end of month	47
Total Bid Amount of Contracts in Progress at end of month	\$566.6M
Contracts Awarded in month	1
Contracts With Notice To Proceed Issued in month	1
Contracts Completed in month	2
Contract Gross Earnings in month	\$16.4 M

Project Labor Agreement – Update (March 2023)

Recent Contracts with PLA

Project Description	Contractor	Contract Status	Amount
Perris Valley Pipeline Interstate 215 Crossing	James W. Fowler Co.	Awarded	\$59.5 M
Second Lower Feeder Reach 3B PCCP Rehabilitation	J.F. Shea Construction, Inc.	Awarded	\$72 M
Wadsworth Pump Plant Eastside Pipeline Intertie	Steve P. Rados	Awarded	\$18.2 M
CRA Structural Protection	Granite Construction Company	Awarded	\$8.7 M
Foothill Hydroelectric Power Plant Seismic Upgrade	West Valley Investment Group	Awarded	\$6.1 M
Hinds, Eagle Mountain, and Iron Pumping Plant Storage Buildings	J.F. Shea Construction, Inc.	Award Pending June 2023	\$16.5 M
TOTAL			\$181 M

Sepulveda Feeder Pump Station Project – Update



Job Walk Participants



Project Site

➤ Current Status

- RFQ advertised – March 20, 2023
- Mandatory Job Walk held – March 27, 2023
- RFQ Responses Due – May 25, 2023
- Board award of Phase 1 agreement – late summer 2023 (Design)
- Construction Complete – mid-2026

Garvey Reservoir Site Drainage and Erosion Control Projects



New Block Wall, Stand Pipes & Vee
Ditches to Control Off-site Drainage



New Runoff Impoundment Area
(Multiple sites on reservoir property)

Weymouth Water Treatment Plant Battery Energy Storage System

- Board Award Date:
 - June 14, 2022
- Contract Amount:
 - \$6,176,521 / Paid to date: 34%
- Progress of work:
 - 70% complete
- Anticipated completion:
 - September 2023



Battery Cabinets
at Weymouth Plant

2023 Member Agency Engineering Manager Forum

- June 1, 2023
- In-person event
- Fifth consecutive year
- Co-hosted with Inland Empire Utility Agency



2022 Virtual Event





Engineering, Operations, and Technology Committee

IT Manager's Report

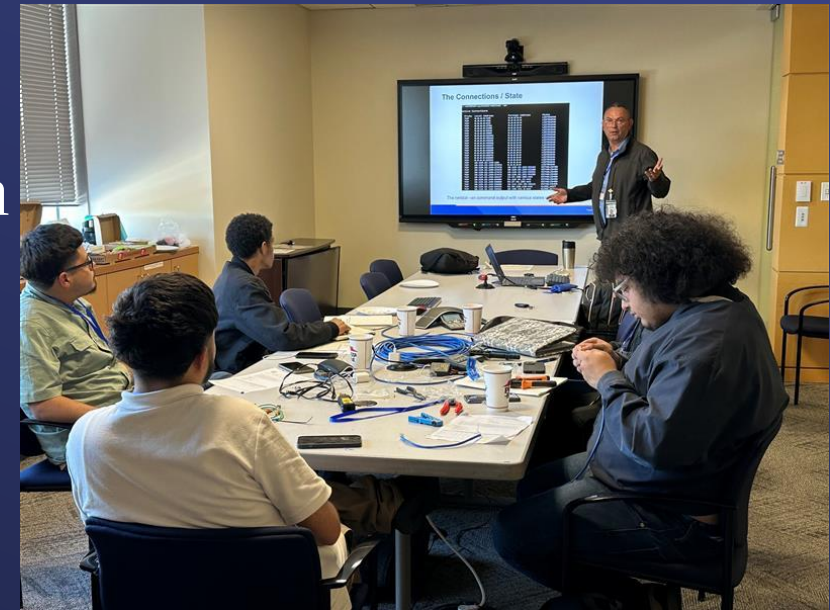
Item 8c

May 8, 2023

Cybersecurity Internship

Tomorrow's Talent

- Partnership between IT; Sustainability, Resiliency, and Innovation Office; External Affairs; and Metropolitan partner, Tomorrow's Talent
- Hosted group of 7 students from Narbonne and Carson High Schools between April 3-6, 2023



Cybersecurity Internship

- IT classroom training event to learn about the knowledge, skills and abilities desired in a successful Cybersecurity professional within the Critical Infrastructure areas of responsibility.
- Classes included various hands-on activities:
 - Live cybersecurity operations center environment
 - Research and daily operations briefings
 - Networked systems session identification troubleshooting
 - Incident response trouble ticket creation, system component repair, and identification and review of basic network components and architecture

Cybersecurity Internship

Continuous Internship Efforts

- In addition to the partnership with Tomorrow's Talent, IT is looking to host 3 interns this summer with a focus in 3 distinct areas:
 - Cybersecurity
 - GIS
 - IT Network
- Great way to connect with young talent and provide a gateway to opportunities in the water and technology fields



