The Metropolitan Water District of Southern California

Agenda

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

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

Engineering, Operations, and Technology Committee

Meeting with Board of Directors *

June 10, 2024

1:30 p.m.

Monday, June 10, 2024 Meeting Schedule
09:00 a.m. LEG
11:00 a.m. Break
11:30 a.m. Legal
01:30 p.m. EOT
03:30 p.m. OWS

Agendas, live streaming, meeting schedules, and other board materials are available here: https://mwdh2o.legistar.com/Calendar.aspx. Written public comments received by 5:00 p.m. (business days) before the meeting is scheduled will be posted under the Submitted Items and Responses tab available here: https://mwdh2o.legistar.com/Legislation.aspx. If you have technical difficulties with the live streaming page, a listen-only phone line is available at 1-877-853-5257; enter meeting ID: 873 4767 0235. Members of the public may present their comments to the Board on matters within their jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference 1-833-548-0276 and enter meeting ID: 876 9484 9772 or click https://us06web.zoom.us/j/87694849772?pwd=V3dGZGRYUjJ3allqdUxXTlJRM044Zz09

MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012
Teleconference Locations:
Cedars Sinai Medical Center • 8700 Beverly Blvd • Los Angeles, CA 90048
Allendale Ins Agency • 337 W. Foothill Blvd. • Glendora, CA 91741
3008 W. 82nd Place • Inglewood, CA 90305
81973 Alegre • La Quinta, CA 92253
Conference room • 1545 Victory Blvd 2nd Floor • Glendale, CA 91201

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

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

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

2. CONSENT CALENDAR OTHER ITEMS - ACTION

A. Approval of the Minutes of the Engineering, Operations, and Technology Committee for May 13, 2024 (Copies have been submitted to each Director, any additions, corrections, or omissions) **21-3390**

Attachments: 06102024 EOT 2A (05132024) Minutes

3. CONSENT CALENDAR ITEMS - ACTION

7-2 Authorize on-call agreements with AECOM, Black & Veatch, and Hazen and Sawyer in amounts not to exceed $3 million each, for a maximum of three years for engineering services; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-3402**

Attachments: 06112024 EOT 7-2 B-L
06102024 EOT 7-2 Presentation

7-3 Award a $897,469 contract to Exaro Technologies Corporation to construct a cathodic protection system along the Santa Monica Feeder; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-3404**

Attachments: 06112024 EOT 7-3 B-L (updated Attach #2)
06102024 EOT 7-3 Presentation

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

4. OTHER BOARD ITEMS - ACTION

8-1 Approve and appropriate an increase of $25 million to the Capital Investment Plan for fiscal years 2022/23 and 2023/24 for a new biennium amount of $625 million; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-3403**

Attachments: 06112024 EOT 8-1 B-L
06102024 EOT 8-1 Presentation

5. BOARD INFORMATION ITEMS

NONE

6. COMMITTEE ITEMS

a. Capital Investment Plan quarterly report for period ending March 30, 2024 **21-3405**

Attachments: 06112024 EOT 6a Report
06102024 EOT 6a Presentation

b. Celebrating the History of Water Quality at Metropolitan **21-3406**

Attachments: 06102024 EOT 6b Presentation

c. Report on U.S. Environmental Protection Agency Climate Pollution Reduction Grant Memorandum of Agreement with Coalition Members to fund proposed Targeted Zero-Emission Vehicles and Infrastructure for Water Utilities Program **21-3461**

Attachments: 06102024 EOT 6c Presentation

7. MANAGEMENT ANNOUNCEMENTS AND HIGHLIGHTS

a. Engineering Services activities
Information Technology activities
Water System Operations activities **21-3391**

Attachments: 06102024 EOT 7a Engineering Services Report
06102024 EOT 7a Information Technology Report
06102024 EOT 7a Water System Operations Report
06102024 EOT 7a Presentation

8. SUBCOMMITTEE REPORTS AND DISCUSSION

a. Discuss and provide direction to Subcommittee on Pure Water Southern California and Regional Conveyance **21-3392**

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

May 13, 2024

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

Members present: Directors Bryant, Camacho (entered after roll call), Dennstedt (entered after roll call), Erdman, Faessel, Lefevre (teleconference posted location), McMillan (entered after roll call), Miller (entered after roll call), Morris, Petersen (entered after roll call), Peterson (entered after roll call), Seckel, and Smith (AB 2449 "just cause").

Director Smith indicated he is participating under AB 2449 "just cause" due to illness. Director Smith appeared by audio and on camera.

Members absent: Directors Alvarez, and Fong-Sakai

Other board members present: Directors Ackerman, Armstrong, Dick, Garza, Kurtz, McCoy, Ortega, Pressman (teleconference posted location), Ramos (teleconference posted location).

Director Garza indicated he is participating under AB 2449 "just cause" due to illness. Director Garza appeared by audio and on camera.

Committee staff present: Bednarski, Chapman, Chaudhuri, Eckstrom, Hagekhalil, Kuo-Britton, Parsons, Saito, Upadhyay, and Wheeler

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

None

Director Morris entered the meeting.

CONSENT CALENDAR ITEMS – ACTION

2. CONSENT CALENDAR OTHER ITEMS – ACTION

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

3. CONSENT CALENDAR ITEMS – ACTION

7-1 Subject: Authorize an increase of $2.35 million to an agreement with HDR Engineering Inc. for a new not-to-exceed total amount of $5.15 million for final design services for erosion control improvements along the Colorado River Aqueduct; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA.

Presented by: Catherine Lou, Engineer, Engineering Services Group

Motion: Authorize an increase of $2.35 million to an agreement with HDR Engineering Inc. for a new not-to-exceed amount of $5.15 million for final design of erosion control structures along the CRA system.

Director Dennstedt entered the meeting.
Director Petersen entered the meeting.
Director Camacho entered the meeting.
Director Miller entered the meeting.
Director McMillian entered the meeting.

The following Directors provided comments or asked questions:

1. Seckel
2. Faessel
3. Dennstedt
4. Erdman
5. Miller

Staff responded to the Directors questions and comments.

7-2 Subject: Amend the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include upgrades to the flocculation system at the Joseph Jensen Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.

Presented by: Hunter Schneider, Engineer, Engineering Services Group

Motion: Amend the Capital Investment Plan for fiscal years 2022/23 and 2023/24 to include upgrades to the flocculation system at the Joseph Jensen Water Treatment Plant.

The following Directors provided comments or asked questions:
1. Faessel
2. Miller
3. Dennstedt
4. Erdman

Staff responded to the Directors' questions and comments.

After completion of the presentations, Director Morris made a motion seconded by Director Dennstedt to approve item 2A, 7-1 and 7-2.

The vote was:

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

The motion for Items 2A, 7-1 and 7-2 passed by a vote of 12 ayes, 0 noes, 0 abstentions, and 3 absent. Director Smith stated that he was alone in the room whilst casting his vote.

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

4. OTHER BOARD ITEMS – ACTION

8-1 Subject: Award a $24,912,000 construction contract to J.F. Shea Construction Inc. for urgent rehabilitation of prestressed concrete cylinder pipe portions of the Allen-McColloch Pipeline; authorize an increase of $250,000 to an agreement with Helix Environmental Planning Inc. for a new not-to-exceed amount of $2,500,000; and authorize an amendment to Metropolitan's Project Labor Agreement to add the subject project to the list of covered projects; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA.

Presented by: Christian Ovalle, Team Manager-Program Management, Engineering Services Group

Motion: a. Award a $24,912,000 contract to J.F. Shea Construction Inc. to rehabilitate approximately 2.4 miles of PCCP portions of the Allen-McColloch Pipeline.

b. Authorize an increase of $250,000 to an agreement with Helix Environmental Planning Inc. for a new not-to-exceed amount of $2,500,000.

c. Amend Metropolitan's Project Labor Agreement to include the Allen-McColloch Urgent PCCP Rehabilitation Stage 2 Project.

The following Directors provided comments or asked questions:

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

Staff responded to the Directors' questions and comments.

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

The vote was:

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

The motion for Item 8-1 passed by a vote of 12 ayes, 0 noes, 0 abstentions, and 3 absent.

Director Smith stated he was alone in the room.

5. BOARD INFORMATION ITEMS

None

6. COMMITTEE ITEMS

a. Subject: Development of Building Information Modeling project design technologies at Metropolitan.

Presented by: Javier Bautista, Team Manager-Design Technology, Engineering Services Group

Mr. Bautista reported on the following:

- BIM has been utilized to support the Pure Water program, Greg Avenue Pressure Control Structure & CRA Rehabilitation project.
- BIM is applied in all three phases of infrastructure life cycle management. It enhances visualization analysis, better quantity, cost estimation and illustrates potential obstacles.
- During construction phases it provides a virtual platform for planning and scheduling. It enhances scheming and as-built information.
- MWD is taking a proactive approach to implement BIM. In 2020, interviews were conducted among several agencies to understand further how they are utilizing BIM. Metropolitan's approach to BIM initiative is consistent with

emerging industry trends with this technology.

- BIM provides data rich 3-D modeling that produces a wealth of information for Metropolitan and stakeholders. Use of BIM will modernize work practices enhance workflow and utilize tools on collaboration platforms to support MWD design projects and asset management.

The following Directors provided comments or asked questions.

1. Faessel
2. Dennstedt
3. Ortega
4. Erdman

Staff responded to the Directors' questions and comments.

b. Subject: State Water Project Resilience Update.

Presented by: Ernie Ariza, Team Manager-Facility Planning, Engineering Services Group
James Bodnar, Unit Manager-Operations Planning & Program, Integrated Operations Plan and Support Services Group

Director Peterson entered the meeting.

Mr. Ariza reported on the following:

- DWR's primary measures to enhance SWP seismic resilience is to conduct pre-event mitigation and prepare for post-event response, in similar fashion to Metropolitan's approach.
- DWR conducts seismic monitoring along SWP facilities. The data is used to evaluate the effectiveness of each seismic station before replacing instruments & prior to building new stations.
- DWR operates and maintains more than 100 seismic stations along the SWP. Some of this information is used as part of the California earthquake warning system.
- 13 "seismic switches" have been installed along SWP, allowing operators to respond to seismic events by adjusting aqueduct operations.
- DWR participates in the annual aqueduct seismic resilience taskforce, along with Metropolitan and LADWP as a way to promote interagency collaboration.
- In 2022, construction began to improve seismic resilience at Sisk Dam, by adding seismic stability berms, and has plans for future expansion of the reservoir.

Mr. Bodnar reported on the following:

- Operational conditions and constraints within Metropolitan's system that limited 2023 deliveries on the SWP East Branch, with a total impact of approximately 60 TAF not delivered within current East Branch capacity.

- Current East Branch capacity limitations, prior studies looking at East Branch capacity enlargement, and investigation of preferred alternatives to enhance SWP reliability.

The following Directors provided comments or asked questions.

1. Seckel
2. Miller
3. Ortega
4. Peterson

Staff responded to the Directors' questions and comments.

c. Subject: Quarterly Cybersecurity Update.

Presented by: Jacob Margolis, Director of Information Technology Services, Information Technology Group

Mr. Margolis reported on the following:

- Member agency cybersecurity summit occurring July 11. This is an opportunity to do information sharing among our member agencies.
- Board of directors' cybersecurity awareness training specifically curated for the directors which launched today.
- ShareVault access available to the directors for secure file sharing.

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

7. MANAGEMENT ANNOUNCEMENTS AND HIGHLIGHTS

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

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

Mr. Upadhyay reported on the following:

- In the coming months, staff will discuss the implications of Glen Canyon Dam investigated by the Bureau of Reclamation.
- MWD received an award for our safety of dams for the management of our dams.
- Wadsworth Pump plant bypass shutdown connecting DVL up to the Rialto

feeder. This project will also allow us to pump in Colorado River water in the forebay via the San Diego canal.

- Reported that progress has been made on the stage 1 rehabilitation of the Allen-McColloch pipeline PCCP.

Mr. Chapman reported on the following:

- EPA has set forth new MCLs (maximum contaminant levels) for six PFAS compounds. No detection of these compounds found in MWD treated water. Compliance with the new regulations is required by 2029. Presentation on water quality regulations will be given to EOT in July.
- Recent Member Agency Water Quality Managers Meeting celebrating 50-year anniversary of the Safe Drinking Water Act and Metropolitan's Water Quality Section. Additional celebration events planned this fall.
- Desert employee appreciation event held at Iron Mountain on April 24 with 125 in attendance.

8. SUBCOMMITTEE REPORTS AND DISCUSSION

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

The following Directors provided comments or asked questions.

1. Seckel

Staff responded to the Director's question and comment.

Vice Chair Camacho left the meeting.

9. FOLLOW-UP ITEMS

NONE

10. FUTURE AGENDA ITEMS

NONE

11. ADJOURNMENT

The next meeting will be on June 10, 2024.

Meeting adjourned at 11:17 a.m.

Dennis Erdman
Chair

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

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

6/11/2024 Board Meeting

7-2

Subject

Authorize on-call agreements with AECOM, Black & Veatch, and Hazen and Sawyer in amounts not to exceed $3 million each, for a maximum of three years for engineering services; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Staff's strategy for managing capital and O&M work is to rely on in-house engineering staff to accomplish the base load of projects, while professional services agreements are selectively utilized to handle projects above this base load or where specialized services are required. This action authorizes three new professional services agreements to provide engineering support for capital and O&M projects. The three new agreements will be the on-call type, which is typically used for shorter-term assignments, urgent projects, and projects with specialized technical needs. The recommended maximum amounts of these agreements are $3 million each for AECOM, Black & Veatch, and Hazen and Sawyer. The maximum duration of these engineering services agreements will be three years.

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

Staff Recommendation: Option #1

Option #1

Authorize on-call agreements with AECOM, Black & Veatch, and Hazen and Sawyer in amounts not to exceed $3 million each, for a maximum period of three years for engineering services.

Fiscal Impact: Funding for the work to be assigned to the consultants under on-call agreements and performed this biennium has been previously authorized. Future costs will be accounted for and appropriated under subsequent biennial budgets. In addition, no work is guaranteed to the consultants under these agreements.

Business Analysis: Contracting with multiple firms provides flexibility and an efficient means for Metropolitan to obtain needed technical services and to complete capital projects in accordance with board-adopted schedules.

Option #2

Do not authorize the consulting agreements at this time.

Fiscal Impact: None

Business Analysis: Under this option, Metropolitan staff would perform the engineering activities, or would request board authorization for agreements on a project-specific basis. This option would forego an opportunity to reduce administrative costs or address urgent projects promptly.

Alternatives Considered

Staff initially considered using project-specific agreements instead of additional on-call agreements. Project-specific agreements are negotiated for an amount needed to cover a specific project, with agreements over $250,000 requiring approval by the Board. The current approach of utilizing multiple on-call agreements is recommended to ensure that staff can efficiently execute the planned work in the Capital Investment Plan (CIP) over the upcoming biennium. On-call agreements allow staff to streamline administrative procedures, reduce costs, and enable the design of projects to move forward without delay.

Applicable Policy

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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.

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

Not applicable

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities; personnel-related actions; and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5)).

CEQA determination for Option #2:

None required

Details and Background

Background

Metropolitan's Board adopts an operating budget biennially that includes planned expenditures for capital programs, which are aggregated within the CIP. The CIP contains the programs and projects necessary for ensuring the reliability of Metropolitan's infrastructure, operating systems, and other assets. Staff's approach for the design of capital projects is to use available in-house staff first, with professional consultant services used only where appropriate. This approach maintains a stable, responsive, and experienced in-house workforce and is consistent with Metropolitan's succession planning efforts.

When resource needs exceed available in-house staffing or require specialized technical expertise, Metropolitan uses a combination of project-specific and on-call professional services agreements. Firms are competitively evaluated, resulting in a list from which both project-specific and on-call agreements are executed as capital project needs are identified. Project-specific agreements are negotiated for an amount needed to cover specific tasks on a specific project, with agreements over $250,000 approved by the Board. By contrast, on-call agreements are multi-year agreements with not-to-exceed limits. These types of agreements have been used extensively in the past and provide a high degree of flexibility to respond to schedule or scope adjustments, allow quicker delivery times, and lower administrative costs for both Metropolitan and the consultants. For these types of agreements, consultants are assigned work only after specific tasks are identified by staff, up to the not-to-exceed amounts of the contracts. These on-call agreements have been successfully relied upon for over 15 years for the efficient execution of capital projects. Typically, Engineering Services has ten or more on-call

agreements for design services available for use at any one time and has utilized approximately 60 percent of the agreement capacities since inception.

Over the next several fiscal years, several projects have been identified that will require engineering services beyond the level that can be supported by in-house staff. These projects will be located along the Colorado River Aqueduct (CRA), within the conveyance and distribution system, and at Metropolitan's treatment plants, and will address critical programs such as rehabilitation of the CRA electrical systems, hydroelectric plants, valves structures, and infrastructure modifications needed to improve water reliability and address water supply equity. For these projects, it is anticipated that supplemental engineering support will be needed in the areas of: (1) electrical systems; (2) instrumentation and controls; (3) communications; (4) security systems; (5) mechanical equipment refurbishment; (6) pipeline and valve structure rehabilitation; (7) heating, ventilation, and air conditioning improvements; (8) site and erosion protection improvements; (9) treatment processes and chemical feed systems; (10) seismic and other structural upgrades; and (11) preparation of record drawings.

Multiple three-year on-call agreements are recommended to ensure that staff can execute the planned work in the CIP over the upcoming fiscal years. Staff recommends board authorization of three new multi-year agreements. Two will replace agreements that have already expired to ensure the timely execution of the CIP over the next several years; the other proposed agreement is with a firm that has not previously been awarded an on-call agreement but has performed well under project-specific agreements.

In support of Metropolitan's goal of increasing business opportunities for Small Business Enterprise (SBE) firms, staff establishes SBE participation levels for the vast majority of professional services agreements for capital projects. The only exceptions are for highly specialized areas of expertise, or for the uncommon occasions when sub-consulting opportunities are limited.

Agreements for Engineering Services – AECOM, Black & Veatch, and Hazen and Sawyer

Request for Qualifications (RFQ) No. 1305 was issued in March 2022 to establish a pool of qualified firms to support projects related to Metropolitan's conveyance, distribution, storage, and treatment facilities. Planned engineering services to be provided under the resulting agreements were identified in the RFQ and include conceptual, preliminary, and final design support for new facilities and rehabilitation of existing facilities; field investigations; planning studies; specialized technical analyses and reviews; cost estimating; engineering support during bid, advertisement, and construction; and project controls. The RFQ covered services in four categories: water treatment facilities, conveyance and distribution facilities, large rotating equipment, and power distribution. The consultants submitted Statements of Qualifications (SOQs) for one or more of these four categories. Twenty-one firms submitted SOQs, which were then evaluated based on qualifications, key personnel, experience related to planned projects, past performance, environmental sensitivity, and business outreach. All 21 firms were prequalified to provide services under one or more of the above categories through this process and will be eligible for project-specific agreements within the categories of work for which they were prequalified.

Agreements are currently in place with all of the prequalified firms, with a combined total of approximately $226 million in authorized agreements to date. Fourteen of these existing agreements are on-call agreements, and the remaining are project-specific agreements. New on-call agreements are recommended to be awarded at this time to three prequalified firms based on staff's current assessment of technical resources needed for capital projects over the next several fiscal years. New agreements are recommended with AECOM, Black & Veatch, and Hazen and Sawyer. These firms were selected through the evaluation process described above.

This action authorizes on-call agreements with AECOM, Black & Veatch, and Hazen and Sawyer in an amount not to exceed $3 million each per contract. The maximum duration of the agreements will be three years. Staff will return to the Board in the future to authorize additional agreements if a need for such work is identified. Staff plans to issue a new RFQ for engineering services in early 2025.

For each of the agreements, Metropolitan has established an SBE participation level of 25 percent of the amount of the agreement. AECOM, Black & Veatch, and Hazen and Sawyer have committed to meet this level of participation.

Summary

This action authorizes a total of three on-call agreements for engineering services with AECOM, Black & Veatch, and Hazen and Sawyer in an amount not to exceed $3 million each per contract for a maximum duration of three years.

5/30/2024

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

6/3/2024

Adel Hagekhalil *Date*
General Manager

Ref# es12695114

Engineering, Operations, & Technology Committee

Professional Services Agreements for Engineering Services

Item 7-2

June 10, 2024

Item 7-2

Professional Services Agreements for Engineering Services

Subject

Authorize on-call agreements with AECOM, Black & Veatch, and Hazen and Sawyer in amounts not to exceed $3 million each, for a maximum of three years for engineering services

Purpose

Contracting with multiple firms provides flexibility and an efficient means for Metropolitan to obtain needed technical services and to complete capital projects

Recommendation and Fiscal Impact

Authorize agreements for design services in support of the CIP

Fiscal impact - None

Budgeted

Professional Services Agreements for Engineering Services

Staffing Strategy for Capital Programs

- Rely on in-house labor to fullest extent possible
- Use consultants:
  - When capital resource needs exceed available staffing levels
  - For specialized technical expertise/skills
  - For independent/3rd party review
- Planned CIP expenditures for the upcoming biennium – $636.48 M
- Funding available within Metropolitan capital expenditure plan

Professional Services Agreements for Engineering Services

Professional Services Agreements

- Project-Specific Agreements
  - Used for projects with extended duration or larger scope
- On-Call Agreements
  - Typically utilized for short-term assignments, urgent projects, etc.
  - Allows for flexibility & expedited project delivery
  - Work is not guaranteed to consultants
- Approved individually by the Board over $250K

Professional Services Agreements for Engineering Services

Example Projects

- Pressure control structure rehabilitation
- Service connection rehabilitations
  - Valve & meter replacements

Covina Pressure Control Structure - Valve Replacement

Professional Services Agreements for Engineering Services

Example Projects

- Diemer plant slope stabilization & erosion protection

Diemer Plant

Professional Services Agreements for Engineering Services

Request for Qualifications (RFQ) 1305

- Issued March 2022 to establish pool of qualified firms
  - 21 firms responded
  - All firms were determined to be qualified in one specialized category or multiple categories
    - Water treatment facilities
    - Conveyance & distribution facilities
    - Large rotating equipment
    - Power distribution
  - Agreements currently in place for all qualified firms
  - Board awarded eight on-call agreements
    - Oct. 2022 – five agreements authorized
    - June 2023 – three agreements authorized

Professional Services Agreements for Engineering Services

Request for Qualifications (RFQ) 1305

- Three firms recommended for agreements at this time
- Services to be provided include:
  - Conceptual, preliminary & final designs
  - Specialized technical analyses
  - Support during bid, advertisement & construction
  - SBE participation level – 25% of agreement amount

Professional Services Agreements for Engineering Services

Alternatives Considered

- Utilize project specific agreements
  - Require board authorization for agreements exceeding $250,000
- Selected Alternative – Utilize on-call agreements
  - Streamlines administrative procedures & reduces costs
  - Allows timely completion of work

Board Options

- Option #1

  Authorize on-call agreements with AECOM, Black & Veatch, and Hazen and Sawyer in amounts not to exceed $3 million each, for a maximum period of three years for engineering services.
- Option #2

  Do not authorize the consulting agreements at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

6/11/2024 Board Meeting

7-3

Subject

Award a $897,469 contract to Exaro Technologies Corporation to construct a cathodic protection system along the Santa Monica Feeder; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

The Santa Monica Feeder serves the cities of Santa Monica, Beverly Hills, Burbank, and Glendale. The 49-inch diameter mortar-coated steel portion of the pipeline within the City of Glendale is experiencing corrosion deterioration due to corrosive soils along this portion of the pipeline alignment. Staff recommends installation of a cathodic protection system as a proactive and cost-effective measure to reduce the risk of shutdowns and costly urgent repairs.

This action awards a $897,469 contract to Exaro Technologies Corporation for the construction of a cathodic protection system on the Santa Monica Feeder. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the List of Subcontractors, and **Attachment 4** for the Location Map.

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

Staff Recommendation: Option #1

Option #1

Award an $897,469 contract to Exaro Technologies Corporation for the construction of a cathodic protection system on the Santa Monica Feeder.

Fiscal Impact: Expenditure of $1.25 million in capital funds. All costs will be incurred in the Fiscal Years 2024/2025 and 2025/2026 and have been previously authorized.
Business Analysis: This option will protect Metropolitan's assets, enhance delivery reliability to member agencies, and reduce the risk of costly urgent repairs.

Option #2

Do not proceed with the project at this time.
Fiscal Impact: None
Business Analysis: Under this option, staff would continue to monitor levels of stray current and corrosion in the Santa Monica Feeder. This option would forego an opportunity to enhance reliability and extend the service life of the Santa Monica Feeder and could lead to more extensive repairs, higher repair costs, and unplanned shutdowns.

Alternatives Considered

Staff considered using several shallow anode wells less than 50 feet deep instead of the two proposed 400-foot-deep anode wells. Shallower wells would not require a Los Angeles County well permit application. However, this option was deemed unacceptable because additional anode wells, beyond those required for the recommended

alternative, would be needed to compensate for the lack of depth. This would, in turn, increase the space needed for construction, require traffic control, increase the risk of utility interferences, and the amount of repaving.

The selected option will rehabilitate the feeder by installing the deep-well cathodic protection system. This alternative, which reduces the construction footprint, is a more cost-effective approach.

Applicable Policy

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

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

By Minute Item 51159, dated April 10, 2018, the Board authorized final design phase activities for installation of a cathodic protection system on the Santa Monica Feeder.

Summary of Outreach Completed

Metropolitan staff has completed the initial outreach with the City of Glendale regarding the upcoming cathodic protection project.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is exempt from CEQA because the action consists of the 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. In addition, the proposed action consists of 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 minor public or private alterations in the condition of land, water, and/or vegetation, which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. (State CEQA Guidelines Sections 15301, 15303, and 15304)

CEQA determination for Option #2:

None required

Details and Background

Background

The Santa Monica Feeder was installed in 1941 and conveys treated water from the Eagle Rock Control Facility to its terminus at service connection SMN-1 in Santa Monica. The 23-mile-long feeder includes reaches of mortar-coated welded steel, precast concrete pipe, and cast-iron pipe.

Mortar coating typically provides long-term corrosion protection for welded steel pipe. However, these exterior coatings may lose their protective properties over time, making the steel increasingly susceptible to corrosion. Buried metallic pipelines may also be protected from corrosive soils with cathodic protection systems. These systems are installed to extend the life of the pipelines and reduce the potential for emergency repairs and have demonstrated successful past performance on numerous Metropolitan projects. Impressed current cathodic systems use an external power source to apply a protective current to the line. This protective current is then discharged through anodes, which are electrically connected to the pipe's metal. Since the anodes are composed

of metals that are more easily oxidized than the materials in welded steel pipelines, they corrode before the pipeline metal and continue to corrode until depleted.

Recent corrosion surveys of the pipeline indicate that a portion of the line within the City of Glendale is experiencing corrosion deterioration associated with the age of the line and its corrosive buried environment. Staff recommends the installation of an impressed current cathodic protection system to significantly arrest the rate of corrosion to the pipe in this area of the pipeline alignment. Final design of a cathodic protection system has been completed, and staff recommends proceeding with construction.

Santa Monica Feeder Cathodic Protection – Construction (Appropriation-15480, Project Number-104964)

The scope of the contract includes: (1) installation of traffic control during construction; (2) drilling of vertical wells to install graphite anodes; (3) installation of rectifiers and electrical service cabinets; (4) installation of electrical conduits; (5) street surface restoration; and (6) start-up testing.

A total of $1.25 million is required for this work. In addition to the amount of the contract described below, other allocated funds include: $105,000 for construction management and inspection; $32,000 for submittals review, technical support, responding to manufacturer requests for information, and preparation of record drawings; $122,000 for project management, environmental monitoring, survey, and contract administration; and $93,531 for the remaining budget. **Attachment 1** provides the allocation of the required funds.

Award of Construction Contract (Exaro Technologies Corporation)

Specifications No. 1963A to install an impressed current cathodic protection system on the Santa Monica Feeder was advertised for bids on March 5, 2024. As shown in **Attachment 2**, three bids were received and opened on April 9, 2024. The low bid from Exaro Technologies Corporation, in the amount of $897,469, complies with the requirements of the specifications. The other bids were $900,000 and $1,433,970, while the engineer's estimate for this project was $950,000. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 25 percent of the bid amount. Exaro Technologies Corporation has committed to meet this level of participation. The subcontractors for this contract are listed in **Attachment 3**.

This action awards a $897,469 contract to Exaro Technologies Corporation for the construction of a cathodic protection system on a portion of the Santa Monica Feeder. As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction less than $3 million is 12 to 15 percent. For this project, the performance metric goal for inspection is 11.7 percent of the total construction cost ($897,469).

Project Milestone

March 2025 – Completion of construction

5/20/2024
John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

5/28/2024
Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – List of Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# es12696044

Allocation of Funds for Santa Monica Feeder Cathodic Protection

	Current Board Action (Jun. 2024)
Labor	
Studies & Investigations	$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	122,000
Submittals Review & Record Drwgs.	32,000
Construction Inspection & Support	105,000
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Contracts	
Exaro Technologies Corporation	897,469
Remaining Budget	93,531
Total	**$ 1,250,000**

The total amount expended for the Santa Monica Feeder Cathodic Protection is approximately $650,000. The total cost to complete this project, including funds spent to date and funds allocated for the work described in this action, is $1.9 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on April 9, 2024 at 2:00 P.M.

Specifications No. 1963A
Santa Monica Feeder Cathodic Protection

This work consists of installing impressed cathodic protection systems, including two 400-foot-deep ground-bed anode wells, electric service cabinets, rectifiers, site restoration, and preparing, obtaining approval of, and implementing traffic control plans.

Engineer's estimate: $950,000

Bidder and Location	Total	SBE $	SBE %	Met SBE[1]
Exaro Technologies Corporation Burlingame, CA	**$897,469**	**$288,500**	**32%**	**Yes**
National Corrosion Stanton, CA	$900,00	-	-	-
Farwest Corrosion Control Company Downey, CA	$1,433,970	-	-	-

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

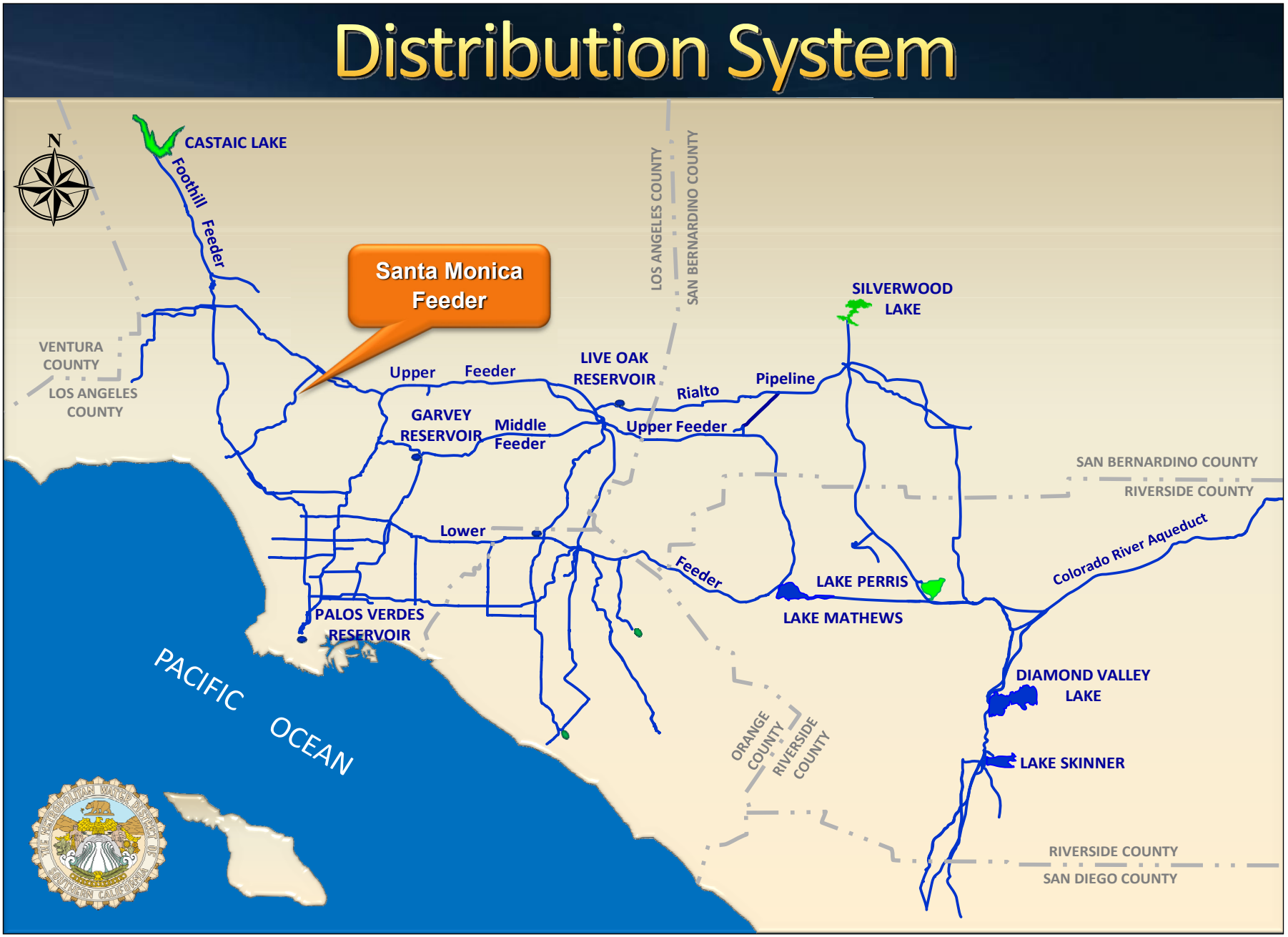
The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

Specifications No. 1963A
Santa Monica Feeder Cathodic Protection

Low bidder: Exaro Technologies Corporation

Subcontractor and Location	Service Category, Specialty
ABC Liovin Drilling Inc. Signal Hill, CA	Drilling
GEC2 Inc. Gardena, CA	Electrical
City Service Paving Placentia, CA	Paving


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

Engineering, Operations, & Technology Committee

Santa Monica Feeder Cathodic Protection

Item 7-3

June 10, 2024

Item 7-3

Santa Monica Feeder Cathodic Protection

Subject

Award a contract of $897,469 to Exaro Technologies Corporation for the construction of cathodic protection on the Santa Monica Feeder

Purpose

This project protects the Santa Monica Feeder from deterioration related to corrosion

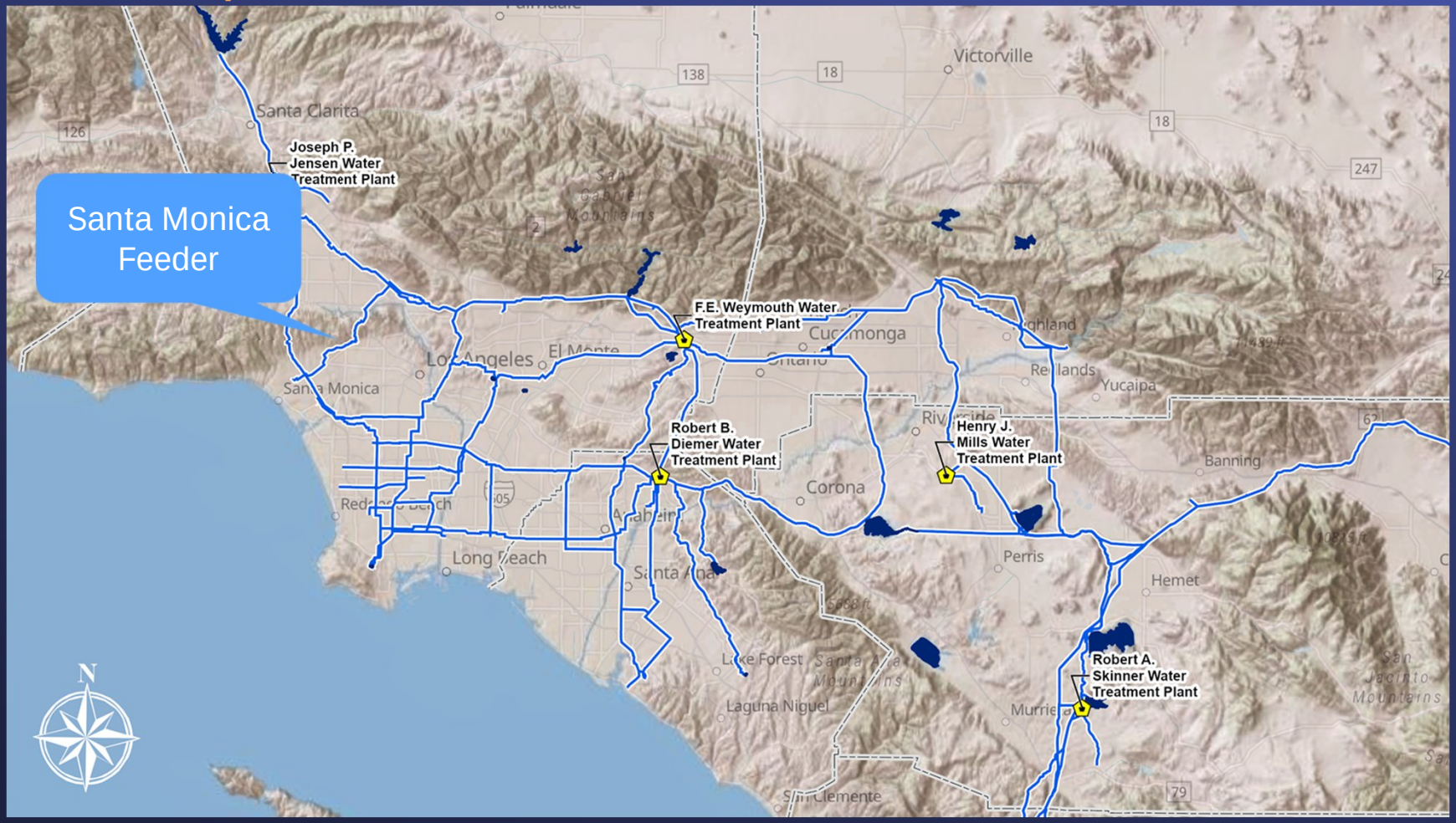
Recommendation and Fiscal Impact

Awards a construction contract for cathodic protection on the Santa Monica Feeder

Fiscal Impact of $1.25 M

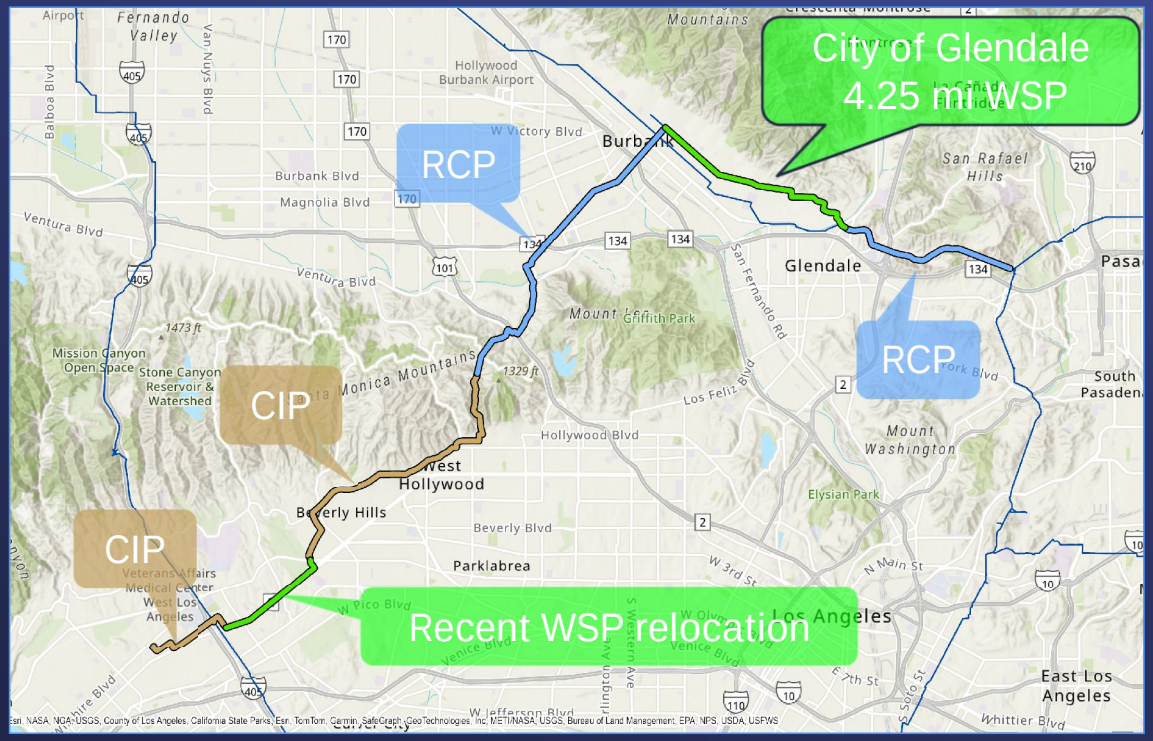
Budgeted

Location Map



Background

- Santa Monica Feeder installed in 1941
  - Mortar-coated welded steel pipe (WSP), reinforced concrete pipe (RCP), & cast-iron pipe (CIP)
  - Testing indicates mortar deteriorating on WSP in Glendale, increased corrosion risk
  - Cathodic protection required on 4.25 mile WSP alignment in Glendale to mitigate corrosion risk

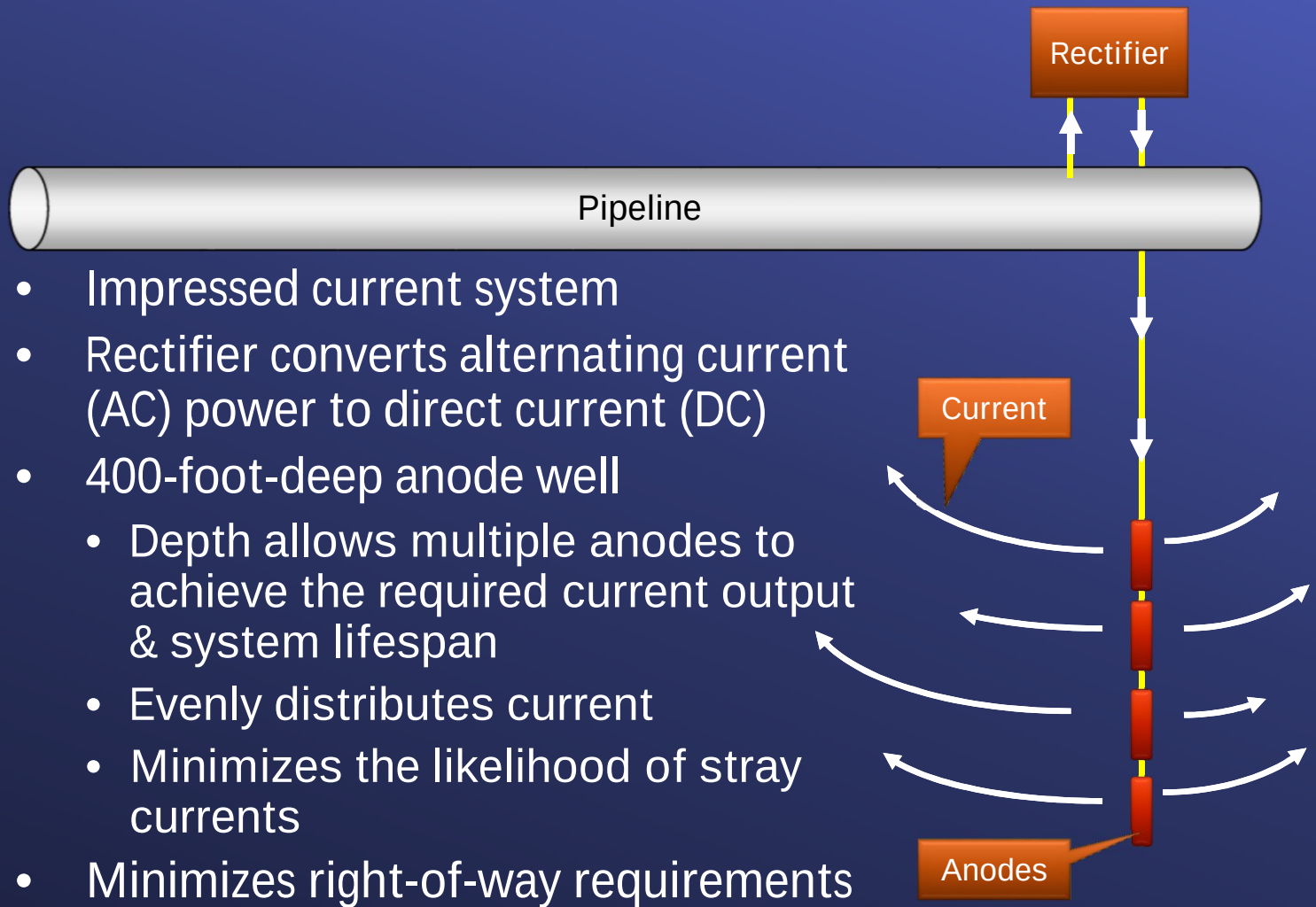


Background

- Pipelines subject to external corrosion from corrosive soils & stray electric currents
- Water utilities historically rely on cement mortar coatings to prevent external corrosion
  - Corrosive soils degrade mortar over time
- Cathodic Protection prevents corrosion using electric current
  - Highly effective – Required by Federal regulation on oil/gas pipes
  - Metropolitan installing pipeline CP since 1987 on steel pipes as needed to compensate for degrading mortar coating
  - Typically not effective on cast iron/reinforced concrete pipe

Cathodic Protection Typical System

- Impressed current system
- Rectifier converts alternating current (AC) power to direct current (DC)
- 400-foot-deep anode well
  - Depth allows multiple anodes to achieve the required current output & system lifespan
  - Evenly distributes current
  - Minimizes the likelihood of stray currents
- Minimizes right-of-way requirements



Santa Monica Feeder Cathodic Protection

Alternatives Considered

- Shallow anode wells less than 50 feet deep
  - More anode wells needed – higher construction cost & duration
  - Larger construction footprint – additional traffic closures
  - Risk of utility interference
- Selected Alternative – Two 400-foot-deep anode wells
  - Reduces construction footprint
  - Cost-effective – 30+ year life
  - Will protect entire 4.25-mile WSP pipe alignment

Santa Monica Feeder Cathodic Protection

Scope of Work - Contractor

- Setup traffic control
- Drill & install anode wells
- Install rectifiers, electrical service cabinets & conduits
- Restore street surface
- Start-up testing

Anode Well Drilling

Wire Conduit Trenching

Rectifier Cabinets

Bid Results
Specifications No. 1963A

Bids Received	April 9, 2024
No. of Bidders	3
Lowest Responsible Bidder	Exaro Technologies Corporation
Low Bid	$897,469
Other Bids	$900,000 and $1,433,970
Engineer's Estimate	$950,000
SBE Participation*	32%

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

Santa Monica Feeder Cathodic Protection

Scope of Work - Metropolitan

- Construction management
- Submittal review
- Technical support
- Prepare record drawings
- Environmental monitoring
- Survey, contract administration & project management

Allocation of Funds

Santa Monica Feeder Cathodic Protection

Metropolitan Labor		
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	$	122,000
Construction Inspection & Support		105,000
Submittals Review, Tech. Support, Record Dwgs.		32,000
Contracts		
Exaro Technologies Corporation		897,469
Remaining Budget		93,531
Total	$	1,250,000

Project Schedule

Board Options

- Option #1
  - Award an $897,469 contract to Exaro Technologies Corporation for the construction of a cathodic protection system on the Santa Monica Feeder.
- Option #2
  - Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Action

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

6/11/2024 Board Meeting

8-1

Subject

Approve and appropriate an increase of $25 million to the Capital Investment Plan for fiscal years 2022/23 and 2023/24 for a new biennium amount of $625 million; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

In April 2022, Metropolitan's Board approved the biennial budget at $600 million for fiscal years (FYs) 2022/23 and 2023/24. In the March 2024 CIP Quarterly report, staff showed that Capital Investment Plan (CIP) expenditures for the current biennium may exceed the $600 million biennial budget at the close of the biennium. In the first quarter of 2024, Metropolitan commenced urgent rehabilitation activities on the Allen-McColloch Pipeline (AMP) in response to inspections conducted in late 2023. These inspections indicated significant deterioration of the prestressed concrete cylinder pipe (PCCP) over portions of the pipeline. Due to these urgent rehabilitations, it is now expected that the existing CIP budget of $600 million will be exceeded by approximately $25 million. Metropolitan's Administrative Code states that the General Manager must request that the Board appropriate additional CIP funding if total expenditures are expected to exceed the appropriated amount. The total CIP expenditures for the current biennium are expected to be approximately $625 million due to unplanned urgent work on the AMP.

This action approves and appropriates an increase of $25 million to the CIP for FYs 2022/23 and 2023/24 budget for a new biennium amount of $625 million.

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

Staff Recommendation: Option #1

Option #1

Approve and appropriate an increase of $25 million to the Capital Investment Plan for FYs 2022/23 and 2023/24 budget for a new biennium amount of $625 million.

Fiscal Impact: This action will increase the CIP appropriation for the FY 2022/23 and FY 2023/24 biennial budget to $625 million. However, if some of the invoices are not able to be processed before June 30, 2024, some of the $25 million may be carried over to the FY 2024/25 budget. The additional $25 million in capital expenditures will be debt-financed, thereby increasing long-term debt service costs by about $1.4 million per year.

Business Analysis: This option will enable the continued efficient management of the CIP.

Option #2

Do not increase the budget for the Capital Investment Plan for FYs 2022/23 and 2023/24 at this time.
Fiscal Impact: None
Business Analysis: Under this option, staff would delay payment of contractor invoices until the next fiscal year begins in July 2024. This option places Metropolitan at risk of contract litigation and late payment penalties and effectively reduces the amount of new work that can be conducted in the upcoming biennium.

Alternatives Considered

Staff initially sought to identify opportunities to reduce the CIP expenditures and save money by staging resource expenditures, modifying project scopes, or deferring projects. However, since the urgent AMP rehabilitation is occurring near the end of the biennium, there was insufficient time to adjust the overall CIP expenditure plan. The recommended alternative to increase the biennium budget by approximately four percent to cover the sooner-than-expected rehabilitation of a portion of the AMP will protect Metropolitan's assets, enhance delivery reliability to member agencies, and complete rehabilitation of the most distressed PCCP pipe segments on the AMP in a timely manner.

Applicable Policy

Metropolitan Water District Administrative Code Section 2431: Engineering and Operations Committee Duties and Functions Metropolitan Water

District Administrative Code Section 5108: Appropriations Metropolitan Water District

Administrative Code Section 11104: Delegation of Responsibilities

Administrative Code Section 5108: Appropriations

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

By Minute Item 51353, dated October 9, 2018, the Board appropriated a total of $290 million for projects identified in the Capital Investment Plan for Fiscal Years (FYs) 2018/19 and 2019/20; authorized the General Manager to initiate or proceed with work on all capital projects identified in the CIP for FYs 2018/19 and 2019/20 subject to any limits on the General Manager's authority and CEQA requirements; and amend the Administrative Code to (a) allow for an appropriation of planned CIP expenditures following the approval of the biennial budget and authorize work on all capital projects identified in the CIP subject to the requirements of CEQA and limits on the General Manager's authority; and (b) delegate responsibility to the General Manager to determine whether a project is exempt from CEQA.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves organizational, maintenance, or administrative activities, personnel-related actions, and/or general policy and procedure making that will not result in direct or indirect physical changes in the environment. (Public Resources Code Section 21065; State CEQA Guidelines Section 15378(b)(2) and (5)).

CEQA determination for Option #2:

None required

Details and Background

Background

As part of Metropolitan's budget process, staff develops a recommended two-year budget expenditure plan for the CIP. The budget and expenditure plan for the CIP are reflected in the CIP Appendix and included in Metropolitan's overall two-year budget and associated budget documents. With the approval of the biennial budget, the Board also takes action to appropriate the funds necessary to fund the CIP in the upcoming biennium.

In addition, the Board authorizes the General Manager to initiate or proceed with work on capital projects identified in the CIP Appendix, subject to the requirement of CEQA and the limits of the General Manager's authority. This approach to appropriating funds for the CIP and authorizing the General Manager to conduct work has been in effect since October 2018. Since then, staff has utilized the streamlined approach to efficiently perform work on the CIP, resulting in a higher percentage of planned CIP work being conducted in a biennium compared to the prior authorization practices.

In April 2022, Metropolitan's Board approved and appropriated a $600 million CIP budget for FYs 2022/23 and 2023/24. The resulting CIP for the biennium included a mix of projects that support Metropolitan's strategic plan and financial targets. Expenditures less than the proposed budget would defer priority rehabilitation work needed to maintain system reliability, increasing the likelihood of unplanned system outages and/or service disruptions. The biennium budget does not take into account unplanned priority projects that are identified during the biennium.

In November 2023, an electromagnetic inspection was conducted on the nine miles of the PCCP section of the AMP. In December 2023, Metropolitan received an inspection report that identified 81 new distressed pipe segments; 44 pipe segments had 20 or more wire breaks, with one pipe segment having 130 wire breaks. Staff evaluated the potential risks due to the prestressing wire breaks and concluded that the distressed PCCP segments need to be rehabilitated as soon as possible.

The AMP rehabilitation activities effectively accelerated Metropolitan's overall planned activities to rehabilitate the PCCP portions of the AMP ahead of the schedule that is currently shown in the current CIP Appendix. The rehabilitation of the AMP is proceeding in two stages. Stage 1 rehabilitates 4,500 feet of PCCP on the AMP. This work is being conducted through the use of change order authority on three existing contracts. In February 2024, the Board approved increasing the change order authority on three contracts (Contracts 2002, 2026, and 2088) in order to complete the urgent work in an expeditious manner. The approved increases in change order authority from the February 2024 actions for the three contracts totaled $24.5 million. It is anticipated that approximately $25 million will be spent in the form of construction contract change orders, in-house labor for design and construction management, and consultant support by the end of June 2024. The work will be 85 percent complete by that date. In May 2024, Metropolitan's Board awarded a contract for Stage 2 work, which will rehabilitate 2.4 miles of PCCP from July 2024 to December 2024. The total estimated cost to complete the urgent rehabilitation of the AMP is $67 million. Due to these urgent rehabilitations, it is now expected that the existing CIP budget of $600 million will be exceeded by approximately $25 million.

In the March 2024 CIP Quarterly report, staff showed that CIP expenditures for the biennium could end above budget, although the exact amount was uncertain. Since the AMP expenditures occurred near the end of the biennium, there was insufficient time to adjust the overall CIP expenditure plan. Therefore, staff recommends increasing the CIP budget for the current biennium. Per Metropolitan's Administrative Code Section 5108, (e) "If, during the biennial budget period, the total Capital Investment Plan expenditures are expected to exceed the appropriated amount, the General Manager shall request that the Board appropriate additional funding and submit a report supporting said request."

This action approves and appropriates an increase of $25 million to the CIP for FYs 2022/23 and 2023/24 budget for a new biennium amount of $625 million to account for urgent rehabilitation of PCCP on the AMP that was conducted in the first six months of 2024.

5/20/2024

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

5/28/2024

Adel Hagekhalil *Date*
General Manager

Ref# es12702550

Engineering, Operations, & Technology Committee

Authorize an Increase to the Capital Investment Plan FY 2022/23 and 2023/24

Item 8-1

June 10, 2024

Item 8-1

Authorize an increase to the Capital Investment Plan FYs 2022/23 and 2023/24

Subject

Approve and appropriate an increase of $25 million to the Capital Investment Plan for fiscal years 2022/23 and 2023/24 for a new biennium amount of $625 million

Purpose

To execute urgently needed rehabilitation work in full compliance with the Admin Code

Recommendation and Fiscal Impact

Increase the Capital Investment Plan by $25 million

Fiscal Impact of $25 M

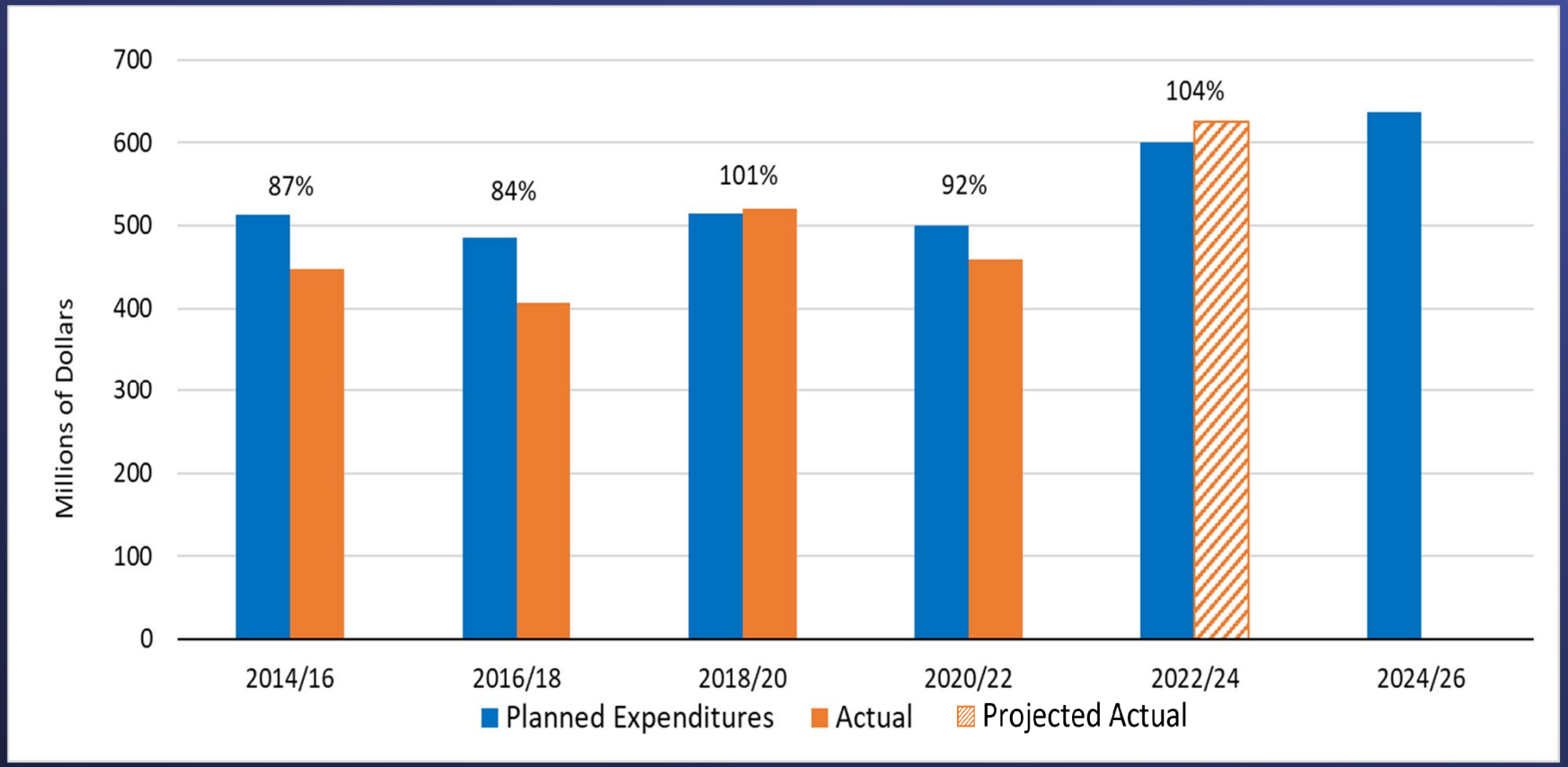
Non-Budgeted

CIP
Management

Background

- In 2018, Board revised the CIP funding process
  - Instead of incrementally authorizing & funding each CIP project by phase, Board now fully-funds all projects in CIP at start of two-year budget cycle
  - GM authorized to start or advance projects in the CIP Appendix
  - Staff manages spending within CIP Appropriation
- Revised process has greatly improved CIP expenditure performance

Background: Planned vs Actual CIP Expenditures



CIP Spending Controls

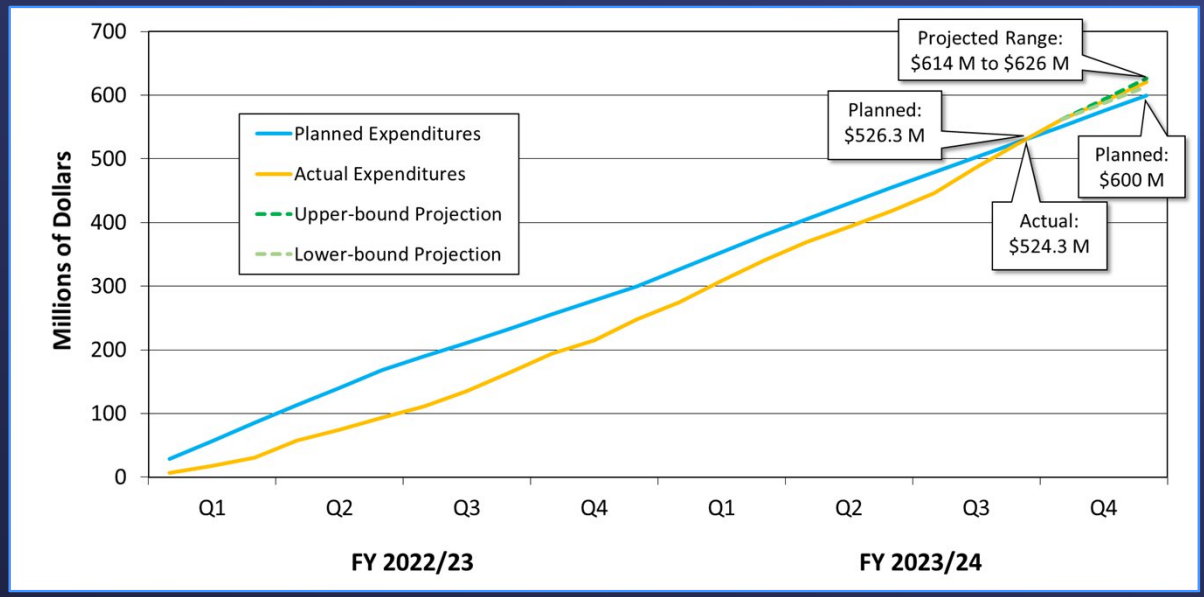
Managing Spending

- Engineering's CIP Office tracks & projects CIP actual spending vs. planned spending
  - In-house labor
  - Consultants
  - Materials/Equipment (District Force Work)
  - Incidentals
  - *Construction/Procurement Contracts*
    - Currently 64 active construction & procurement contracts valued at $545 M
    - Highly variable cash flow – controlled largely by contractor/supplier work progress

CIP Spending Controls
Fine-tuning

Staff monitors spending projections to meet the two-year CIP budget

- Continuous management & tracking project schedules
  - Adjust timing of contract awards to match spend plan
- However, staff has limited control of expenditures at end of the biennium when unexpected changes occur



Urgent Allen-McColloch Pipeline Project

- Urgent rehabilitation of AMP
  - November 2023: discovered wire breaks
  - January 2024: started District Force work
  - February 2024: Board authorized $22.5 M increase to existing contracts, started pipe fabrication
  - Stage 1 Urgent Repair work (Jan. to June 2024) estimated at $31M

Fabricating Liner Pipe

Installing PRV Near OC-88

Urgent
Allen-McColloch Pipeline Project

- April/May 2024: Install steel liners, carbon fiber lining

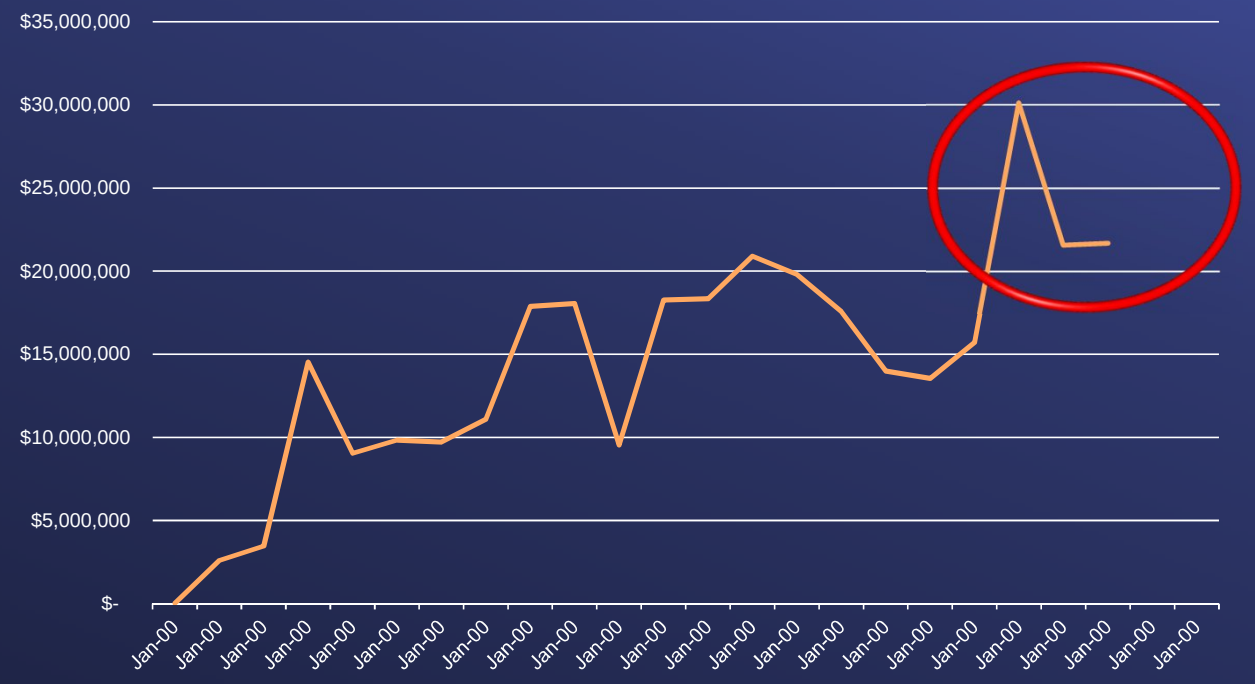
Circumferential Welding of Steel Pipe

Installation of Closure Pipe

Impact of AMP Expenditures Late in the Biennial Budget Cycle

Monthly Contract Expenditures Across the Current Biennium

- CIP spending is projected to exceed the $600 M appropriation due to the unexpected late spike in contract work attributed to urgent AMP repairs



Alternatives

Alternatives Considered

- Deferring payments to contractors into July
  - CA Contract Code addresses payments beyond 30 days
  - Would effectively reduce funds available in the next biennium for needed capital projects
- Selected Alternative – Increase CIP appropriation by $25 M for FYs 2022/23 & 2023/24 to a new total of $625 M
  - ~4% increase
  - Allows for continued management of CIP
  - Coordinated with Finance

Board Options

- Option #1
  - Approve and appropriate an increase of $25 million to the Capital Investment Plan for FYs 2022/23 and 2023/24 budget for a new biennium amount of $625 million.
- Option #2
  - Do not increase the budget for the Capital Investment Plan for FYs 2022/23 and 2023/24 at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering Services Group

- **Capital Investment Plan quarterly report for period ending March 30, 2024**

Summary

The attached report provides a summary of actions and accomplishments on the Capital Investment Plan (CIP) during the third quarter of fiscal year 2023/24. It also provides updates on the status of capital projects and capital expenditures to date, and information regarding service connections and relocations authorized by the General Manager during the reporting period of January to March 2024, the third quarter of fiscal year 2023/24, and the seventh quarter of the fiscal years 2022/23 and 2023/24 biennium.

Purpose

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

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

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

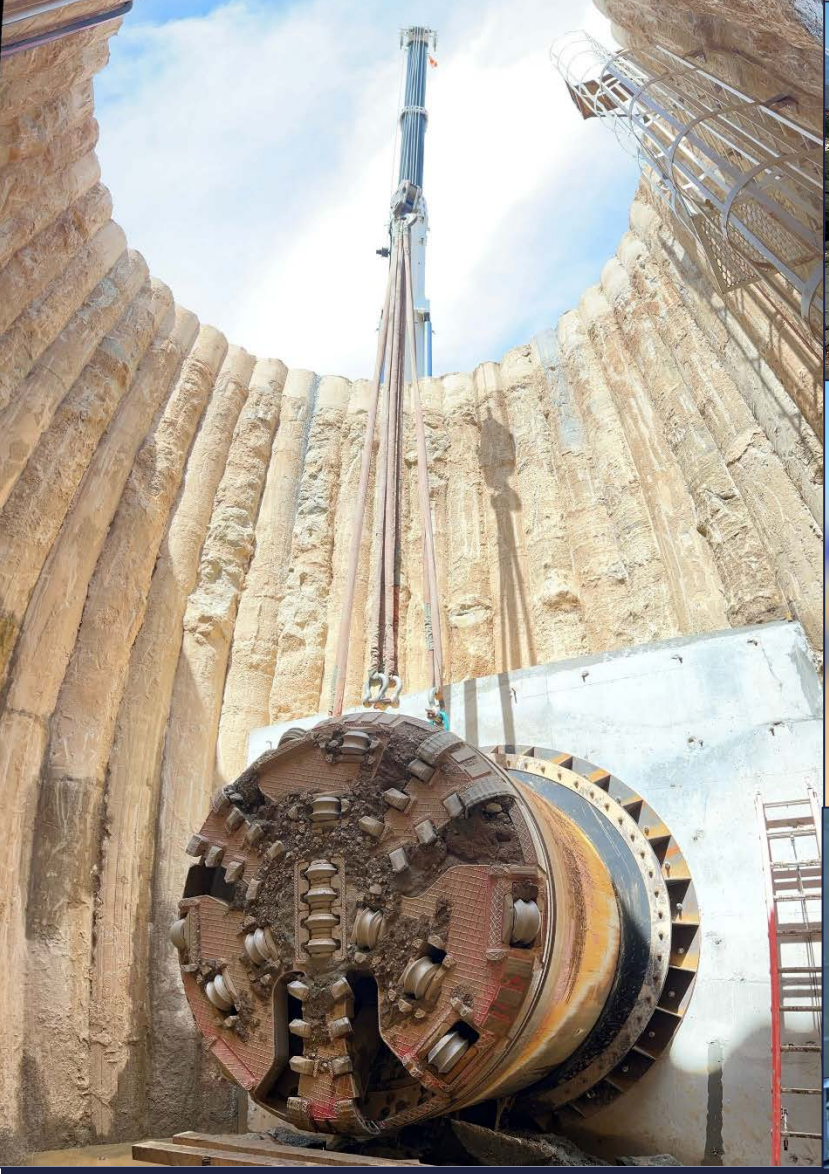
Section 8122(c) of Metropolitan's Administrative Code requires the General Manager to report on the execution of any relocation agreement under the General Manager's authority involving an amount in excess of $100,000.

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

Attachments

Capital Investment Plan quarterly report for period ending March 2024

Date of Report: June 11, 2024



The Metropolitan Water District of Southern California

Capital Investment Plan
Quarterly Report

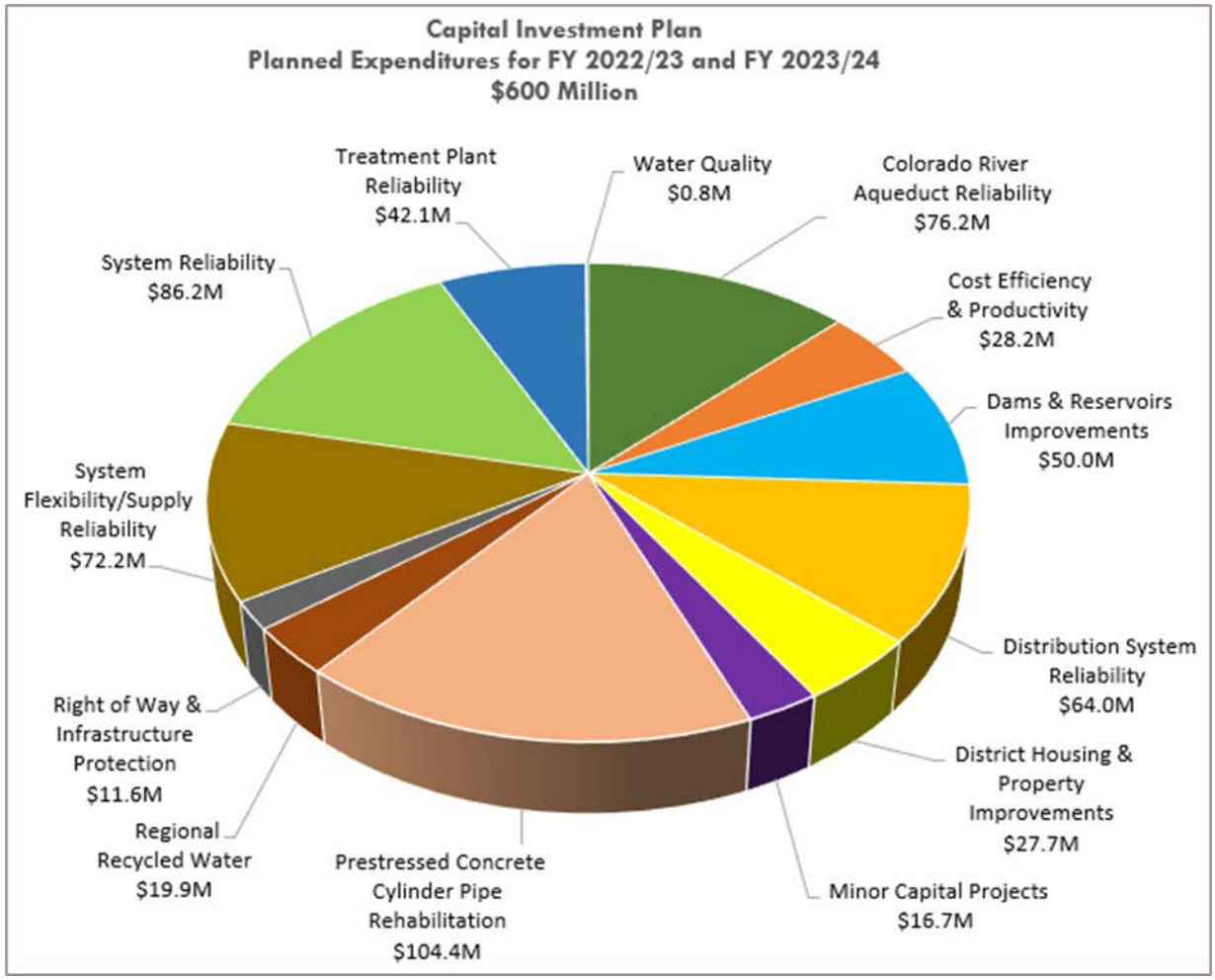
January - March 2024

Table of Contents

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

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

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



[Cover photos: (left to right; top to bottom): *Perris Valley Pipeline I-215 Tunnel Crossing – crane hoisting micro tunnel boring machine head out of Shaft No. 4; Lake Mathews PCCP Rehabilitation Valve Storage Building – site overview; Perris Valley Pipeline I-215 Tunnel Crossing – concrete inspector Nancy Casillas, who is a transitional worker under Metropolitan's Project Labor Agreement; Wadsworth Pumping Plant Bypass Pipeline – placement of 96-inch bypass pipeline*]

Executive Summary

This report provides a summary of the Capital Investment Plan (CIP) activities and accomplishments during the 3rd Quarter of Fiscal Year (FY) 2023/24, which ended in March 2024. CIP expenditures through the 3rd Quarter totaled $524.3 million and the expenditures are projected to be between $614 million and $626 million at the end of the biennium. The higher than previously projected spending is due to unplanned urgent rehabilitation work on the Allen-McColloch Pipeline (AMP). The CIP funds allocated to specific projects through the reporting quarter totaled $583.3 million, leaving approximately $16.7 million available to be allocated during the remainder of the current biennium.

During the quarter, seventeen project-specific board actions were heard in open sessions. Three construction contracts and four procurement contracts were awarded by the Board during the reporting period with a total contract amount of approximately $15.7 million. During the same time, a total of approximately $73.5 million in contract payments were authorized, reflecting construction progress on projects such as Colorado River Aqueduct (CRA) Conduit Structural Protection, CRA Conveyance System Level Sensor Installation, CRA Pumping Plants - Domestic Water Treatment System Replacement, CRA Pumping Plants –Overhead Crane Replacement, Foothill Hydroelectric Power Plant Seismic Upgrade, Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings, La Verne Shops Building Completion – Stage 5, Perris Valley Pipeline Interstate 215 Tunnel Crossing, San Diego Canal Concrete Liner Rehabilitation, Second Lower Feeder PCCP Rehabilitation – Reach 3B, Wadsworth Pumping Plant Bypass Pipeline, Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation, and Weymouth Plant Battery Energy Storage System.

Board Action Summary

During the 3rd Quarter, board actions heard in open session included seventeen project-specific actions summarized in Table 1 below. These actions awarded seven contracts totaling approximately $15.7 million, authorized five new professional/technical services agreements for a not-to-exceed amount of approximately $9.4 million, authorized software licenses for a not-to-exceed amount of approximately $0.8 million, authorized an increase to three professional/technical services agreements for an amount not-to-exceed approximately $7.3 million, authorized increases in change order authority to four existing contracts for a not-to-exceed amount of approximately $29.3 million, and authorized an increase to an existing purchase order for a not-to-exceed amount of approximately $0.3 million. Information on the awarded contracts can be found in Table 9 of this report. The table below excludes information on board items heard in closed session.

Table 1: 3rd Quarter Board Actions

Month	Board Letter Item No.	Project	Action taken
January	7-2	CRA Domestic Water Treatment System Upgrades	Authorized an increase of $4,800,000 in change order authority
January	7-3	Eastern Region Security Camera Upgrade Areas 1 and 2 & Western Region Security Camera Upgrade Areas 2, 4, 6, and 8	Authorized two agreements for a total not-to-exceed $5,685,000
January	7-4	Foothill Feeder Blow Off Valves Replacement and Rialto Pipeline Rehabilitation	Awarded a $549,592.04 procurement contract
January	7-5	Services Procurement Implementation	Authorized an agreement not-to-exceed $800,000

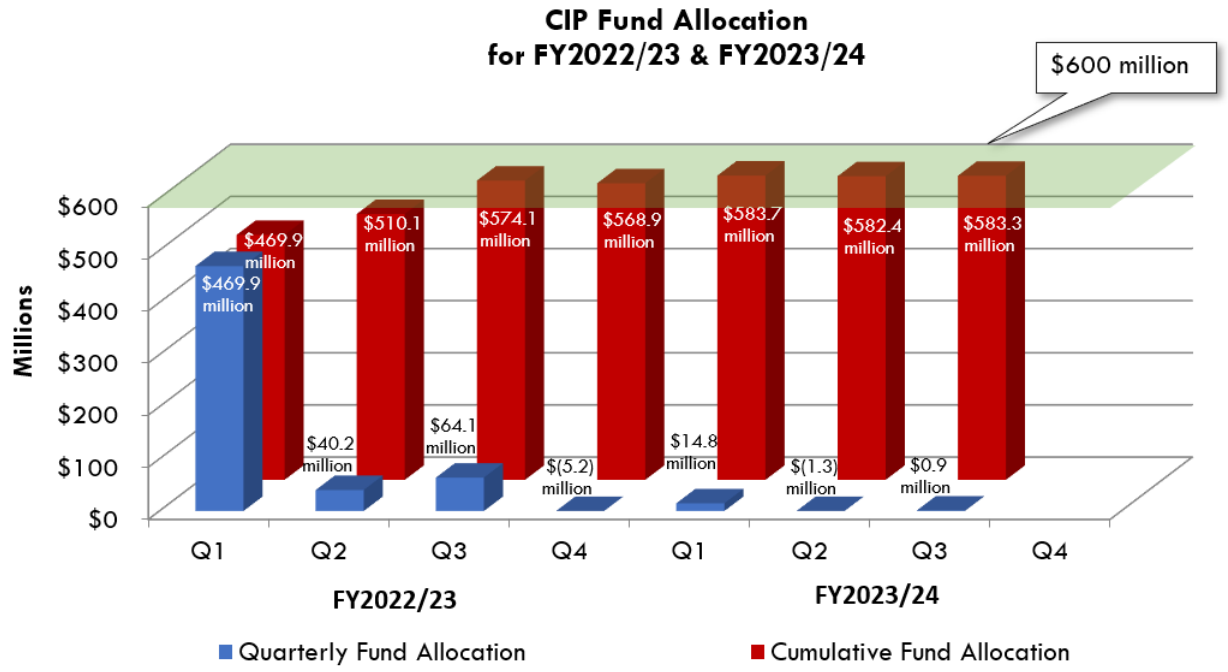
Month	Board Letter Item No.	Project	Action taken
January	7-6	Application-Servers Upgrade from Old Windows Operating System	Authorized an agreement not-to-exceed $1,923,940 and software licenses not-to-exceed $801,900
February	7-1	Foothill Feeder Acoustic Fiber Optic PCCP Monitoring System	Authorized an increase not-to-exceed $4,340,000 to an existing agreement
February	7-2	Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2	Awarded a $7,842,856 construction contract
February	7-3	Jensen Modules 2 & 3 and Mills Basin Solids Removal System Rehabilitation	Authorized an agreement not-to-exceed $1,000,000
February	7-4	CRA Main Pump Rehabilitation Pilot - Gene Pumping Plant Unit No. 1 Brushless Motor Exciter System	Awarded a $544,501 procurement contract
February	7-5	Weymouth Hazardous Waste Staging and Containment	Awarded a $2,375,700 construction contract
February	8-1	Allen-McColloch Pipeline PCCP Urgent Relining 2024 - Stages 1 and 2	Authorized increases for three change order authorities totaling $24,500,000 for two construction and one procurement contracts
March	7-1	Weymouth Area Paving	Awarded a $1,754,000 construction contract
March	7-2	East Lake Skinner Bypass and Bypass No. 2 Screening Structure Upgrade	Awarded a $892,552 procurement contract
March	7-3	Inland Feeder/SBVMWD Foothill Pump Station Intertie – Stage 2	Awarded a $1,779,174 procurement contract and authorized an increase of $260,000 to an existing agreement
March	7-4	Iron Mountain Station Light & Power Electrical Improvements	Authorized an increase of $2,700,000 to an existing agreement
March	7-5	Sepulveda Feeder Pump Stations - Stage 2 and Inglewood Lateral Improvements	Authorized two unplanned projects
March	7-7	Weymouth Filter Valve Replacement	Authorized an increase of $320,000 to an existing purchase order

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

separate board authorization. During the 3rd Quarter, the board amended the CIP to include two new CIP projects, Sepulveda Feeder Pump Stations - Stage 2 and Inglewood Lateral Improvements.

Figure 2 shows the allocation of the funds from Appropriation No. 15525 for this quarter and total for the current biennium through the quarter, which is approximately $583.3 million, leaving approximately $16.7 million available to be allocated during the remainder of the current biennium. This amount includes allocation of $15 million to the Minor Capital Projects Program. During the 3rd Quarter, approximately $17.8 million was allocated for work authorized and approximately a net amount of $16.9 million was allocated back to the CIP Appropriation 15525. Details of the allocations for work authorized during the reporting quarter and from the prior biennium can be found in the **Project Actions** section.

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



*Numbers may not sum due to rounding

Information on construction and procurement contracts activities for the 3rd Quarter of FY 2023/24 is presented in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the 3rd Quarter totaled approximately $73.5 million and primarily reflect construction progress on Colorado River Aqueduct (CRA) Conduit Structural Protection, CRA Conveyance System Level Sensor Installation, CRA Pumping Plants - Domestic Water Treatment System Replacement, CRA Pumping Plants - Overhead Crane Replacement, Foothill Hydroelectric Power Plant Seismic Upgrade, Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings, La Verne Shops Building Completion - Stage 5, Perris Valley Pipeline Interstate 215 Tunnel Crossing, San Diego Canal Concrete Liner Rehabilitation, Second Lower Feeder PCCP Rehabilitation - Reach 3B, Wadsworth Pumping Plant Bypass Pipeline, Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation, and Weymouth Plant Battery Energy Storage System.

Planned Expenditure and Budget

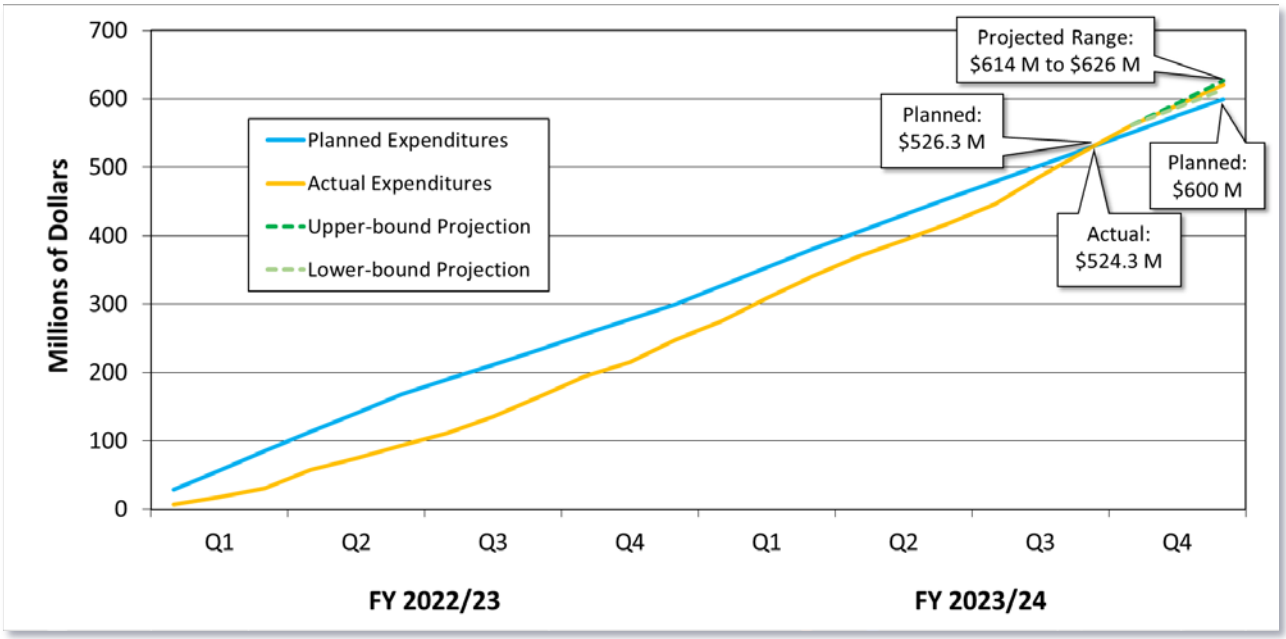
Table 2 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 3rd Quarter of FY 2023/24, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 3rd Quarter of FY 2023/24 were approximately 100% of planned expenditures.

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

Quarter	Planned Expenditures (millions)	Actual Expenditures (millions)
FY 2022/23, Q1	$85.3	$30.4
FY 2022/23, Q2	$82.8	$63.4
FY 2022/23, Q3	$64.9	$70.2
FY 2022/23, Q4	$67.0	$83.7
FY 2023/24, Q1	$80.2	$93.2
FY 2023/24, Q2	$75.1	$77.5
FY 2023/24, Q3	$71.1	$106.0
Totals*	**$526.3**	**$524.3**

* Numbers may not sum due to rounding.

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



As shown in Figure 3, the total planned expenditures in the current biennium are $600 million. The projected expenditures for the biennium are currently projected to be between $614 million and $626 million with the actual expenditures 49% higher than the planned expenditures during the 3rd Quarter of FY 2023/24. The higher than previously projected spending is due to unplanned urgent rehabilitation work on the Allen-McColloch Pipeline (AMP) in response to inspections conducted in late 2023. These inspections indicated significant deterioration of the prestressed concrete cylinder pipe (PCCP) over portions of the pipeline. By the end of the 4th Quarter of FY 2023/24, approximately $31 million in unplanned CIP expenditures are now expected to occur in the current biennium to address the distressed sections of pipe on the AMP.

Funding of Infrastructure Projects with Outside Sources

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

Pure Water Southern California

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

Metropolitan is currently discussing with the program partners Los Angeles County Sanitation Districts (LACSD), Southern Nevada Water Authority (SNWA) and the Arizona Department of Water Resources to determine their potential contributions to the program.

The U.S. Bureau of Reclamation (USBR) awarded a $5 million WaterSMART grant to Metropolitan in 2023. Negotiations have been completed and an agreement is anticipated in May. A three-time matching fund is required for this grant. Metropolitan also submitted an application for up to $125 million Large Scale Water Recycling (LSWR) grant to USBR in November 2023 which would require $375 million in matching funds. USBR plans to notify applicants of any grant award next quarter. Authorization to accept the award and the commitment of matching funds will need to be approved by the Board.

Drought Mitigation Projects

In December 2022, Metropolitan's Board adopted a resolution to accept $50 million in state funding from the California Department of Water Resources to support Metropolitan's drought mitigation projects. The Board also designated the Group Manager of Engineering Services to be the signatory to execute actions related to the funds. The California Department of Water Resources (DWR) will administer the funds and release the reimbursement after Metropolitan invoices expenses. The $50 million fund is available for reimbursement through June 30, 2026, and five percent of this amount may be used for administrative costs by DWR. From the state-allocated amount, it allocated to Metropolitan $47.5 million to improve and expand its infrastructure so that it will be more resilient and flexible to respond to fluctuating water supplies from each of its imported water sources and to enhance the ability to convey water throughout all its service area. Unlike the funds received for Pure Water discussed above, under this grant, staff will be required to submit invoices to DWR in order to receive reimbursement of expenditures that comply with the grant requirements. To date, three projects on the east side of Metropolitan's system are covered under this grant, and each of the three projects is in construction as part of an overall plan to connect DVL supplies to the Rialto Pipeline. During the reporting quarter, a progress report and invoices up to December 2023 were submitted and approved by DWR for $4.15 million to be reimbursed. First reimbursement of $797,000 was issued in late March. It is anticipated that approximately $14.5 million of contract spending will be submitted for reimbursement under this grant through the end of June 2024. This funding allows additional rehabilitation projects to procced as a result of applying state grant funds towards the applicable CIP projects.

Battery Energy Storage System Projects

In October 2020, Metropolitan's Board authorized amending the CIP Appendix to add unplanned battery energy storage system (BESS) projects to enhance the efficiency of Metropolitan's long-term power use, provide a hedge against projected electricity price increases, and improve the resiliency of the electric power supply at the Jensen, Skinner, and Weymouth Water Treatment Plants. This decision was aided by the California Public Utilities Commission's enhanced incentives for microgrid-capable BESS at critical facilities, which are expected to reimburse Metropolitan for $10.3 million of project costs. Construction of the BESS systems is underway with Weymouth BESS construction estimated to be completed in the first half of FY 2024/25 and Jensen & Skinner BESS construction

estimated to be completed in FY 2024/25. Unlike the funds received for Pure Water discussed above, the incentive will be paid to Metropolitan in phases: 50 percent at project completion, with the remaining 50 percent paid equally over five years upon annual proof of a 5 kg CO_2/kWh reduction in greenhouse gas emissions.

Webb Tract Delta Island Flooded Wetlands and Rice Field System Project

In May 2023, Metropolitan's Board adopted a resolution to support a grant application for $20.9 million grant from the Sacramento-San Joaquin Delta Conservancy (Delta Conservancy) and staff signed a grant agreement with Delta Conservancy in March 2024 that funds two projects on Webb Tract, a Metropolitan-owned island located in Contra Costa County. The two projects include construction of up to 1,500 acres of rice fields and design, permitting, and construction of up to 3,500 acres of wetland on the island. Unlike the funds received for Pure Water discussed above, under this grant, staff will be required to submit invoices to Delta Conservancy in order to receive reimbursement of expenditures that comply with the grant requirements During the reporting quarter, staff initiated an analysis to identify the best fields for rice production and once completed, an RFP will be released to solicit a farming interest to prepare the land and grow rice. An RFP is scheduled to be released during the next quarter. Wetland design also was initiated during the reporting quarter shortly after the grant agreement was executed. An alternatives analysis is currently in progress with selection of a preferred alternative expected early June 2024, at which point the first invoice will be submitted for Delta Conservancy's approval. Design and permitting of the wetlands are estimated to be completed in the summer of 2025, and construction is estimated to start at the end of the same year.

Major Capital Programs Overview

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

- Program
- Project Group/Appropriation
- Project

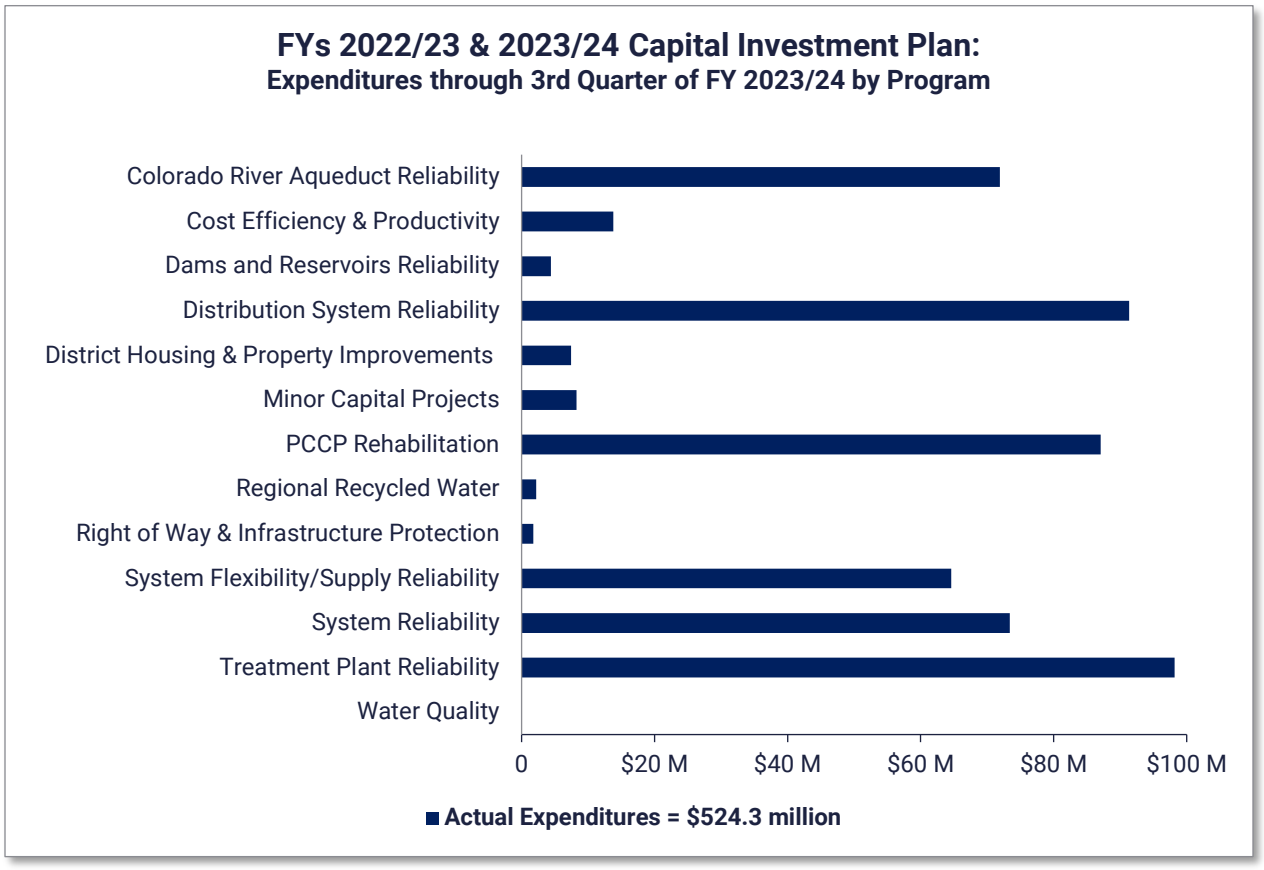
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more project groups/appropriations, and project group/appropriations are comprised of one or more projects. The status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

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

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

Figure 4 below shows actual expenditures for the 13 capital programs for 3rd Quarter of FY 2023/24.

Figure 4: Biennium-to-date Actual Expenditures through 3rd Quarter FY 2023/24



Major Capital Project Programs – Highlights

This section provides 3rd Quarter highlights for the 12 Major Capital Projects Programs; the Minor Capital Projects Program is highlighted in its own section of this report. Status is provided for selected projects within each Major Capital Projects Program. The selected projects typically achieved major milestones during the 3rd Quarter of FY 2023/24 or are scheduled to achieve major milestones in the next quarter.

Table 3: Major Capital Projects Programs

Program	Project
Colorado River Aqueduct (CRA) Reliability	CRA Conduit Structural Protection
Cost Efficiency & Productivity	mwdh2o.com Redesign
Dams and Reservoirs Improvements	Program highlights only
Distribution System Reliability	San Diego Canal Concrete Liner Rehabilitation at Three Sites
District Housing & Property Improvements	Program highlights only
Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation	Allen-McColloch Pipeline PCCP Urgent Rehabilitation 2024 - Stage 1
Regional Recycled Water	Program highlights only
Right-of-Way & Infrastructure Protection	Program highlights only
System Flexibility/Supply Reliability	Perris Valley Pipeline I-215 Tunnel Crossing
System Reliability	Data Center Backup Infrastructure Upgrade
Treatment Plant Reliability	Weymouth Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation
Water Quality	Program highlights only

Colorado River Aqueduct (CRA) Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $71.90 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Completed construction of the following construction contract:
  - CRA 6.9 kV Power Cable Terminations for Units 1 through 5
- Initiated construction of the following project:
  - Gene Communication System Upgrades
- Continued construction activities for the following contracts:
  - CRA Conduit Structural Protection
  - CRA Conveyance System Flow Level Sensor Installation
  - CRA Domestic Water Treatment System Upgrades at all five pumping plants
  - CRA Freda Siphon Internal Seal Installation
  - CRA Pumping Plants Overhead Cranes Replacement
  - Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings
- Awarded a procurement contract for CRA Main Pump Rehabilitation Pilot - Gene Pumping Plant Unit No. 1 Brushless Motor Exciter System
- Advertised a procurement contract for CRA 69 kV and 230 kV Transformers Replacement
- Continued final design of the following projects:
  - Cabazon Radial Gates Facility Improvements
  - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
  - CRA Desert Region Security Improvements – Stage 1
  - CRA Pumping Plant Sump System Rehabilitation
  - CRA Pumping Plant Village Utility Replacement
  - CRA Pumping Plants Main Pump Access Improvements
- Authorized consulting agreement for final design of the following project:
  - CRA Pumping Plants 2.3 kV Switchrack Rehabilitation – Iron Mountain Pumping Plant
- Continued preliminary design of the following projects:
  - CRA Desert Region Security Improvements - Stage 2
  - Hinds Pumping Plant Discharge Valve Platform Replacement
- Completed preliminary design of the following projects:
  - Black Metal Mountain 2.4 kV Electrical Power Upgrades
  - CRA Erosion Control Protection
- CRA Main Pump Motor Rehabilitation:
  - Completed study to install variable frequency drive pumps at Gene and Intake Pumping Plants

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue construction activities planned for the following contracts:
    - CRA Conduit Structural Protection
    - CRA Conveyance System Flow Level Sensor Installation
    - CRA Domestic Water Treatment System Upgrades at all five CRA pumping plants
    - CRA Pumping Plants Overhead Cranes Replacement
    - Gene Communication Reliability Upgrades
    - Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings
- Continue final design of the following projects:
    - Cabazon Radial Gates Facility Improvements
    - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
    - CRA Desert Region Security Improvements - Stage 1
    - CRA Pumping Plant Sump System Rehabilitation
    - CRA Pumping Plant Village Utility Replacement
    - CRA Pumping Plants Main Pump Access Improvements
- Initiate final design for the following projects:
    - Black Metal Mountain 2.4 kV Electrical Power Upgrades
    - CRA Erosion Control Protection
- Continue preliminary design of the following projects:
    - CRA Desert Region Security Improvements - Stage 2
    - Hinds Pumping Plant Discharge Valve Platform Replacement
- CRA Main Pump Motor Rehabilitation:
    - Continue study to assess rehabilitation options for pump units and their ancillary support systems for all five pumping plants.

CRA Conduit Structural Protection

Total Project Estimate:
$15.2 million

Total Project Cost to Date:
$9.0 million

This project consists of installing reinforced concrete slab protection crossings over portions of the CRA conveyance system as well as other conduit protective measures and other upgrades such as structural pads to support heavy equipment operations and access road realignments to support maintenance activities.

Phase	Construction
% Complete for Construction	78%
Construction Contract Award Date	April 2023
Estimated Construction Completion Date	February 2025
Contract Number	1895

The contractor completed work at multiple sites. Transition structure rehabilitation work was completed at two sites during the CRA shutdown. In the upcoming quarter, the contractor will continue site work and structural improvements at the remaining sites.

Transition Structure Cover Installation at Site 23 east of Hinds Pumping Plant near Desert Hot Springs

Cost Efficiency and Productivity Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $13.79 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2
  - Awarded construction contract
- Diamond Valley Lake to Lake Skinner Trail
  - Continued final design
- Enterprise Content Management Phase II
  - Initiated design
- Oracle Database Upgrade
  - Continued execution of the migration plan
- Payroll-Timekeeping Reimplementation
  - Continued design
- Real Property Group Business System Replacement
  - Continued preparation for financial integration testing
- WIFI Implementation
  - Drafted consulting agreements for design at Hinds, Eagle Mountain, Iron Mountain, and San Bernardino Region sites

Upcoming Activities

Upcoming work for the next quarter will include:

- Battery Energy Storage Systems at Jensen, Weymouth, and Skinner Plants
  - Continue construction
- Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2
  - Continue construction
- Oracle Database Upgrade
  - Continue database migration
- Payroll-Timekeeping Reimplementation
  - Continue design
- Real Property Group Business System Replacement
  - Complete financial system integration
- WIFI Implementation
  - Advertise bid package for implementation at Metropolitan Headquarters Courtyard and Los Angeles Region sites
- WINS Water Billing System Upgrade
  - Continue system upgrade

mwdh2o.com Redesign

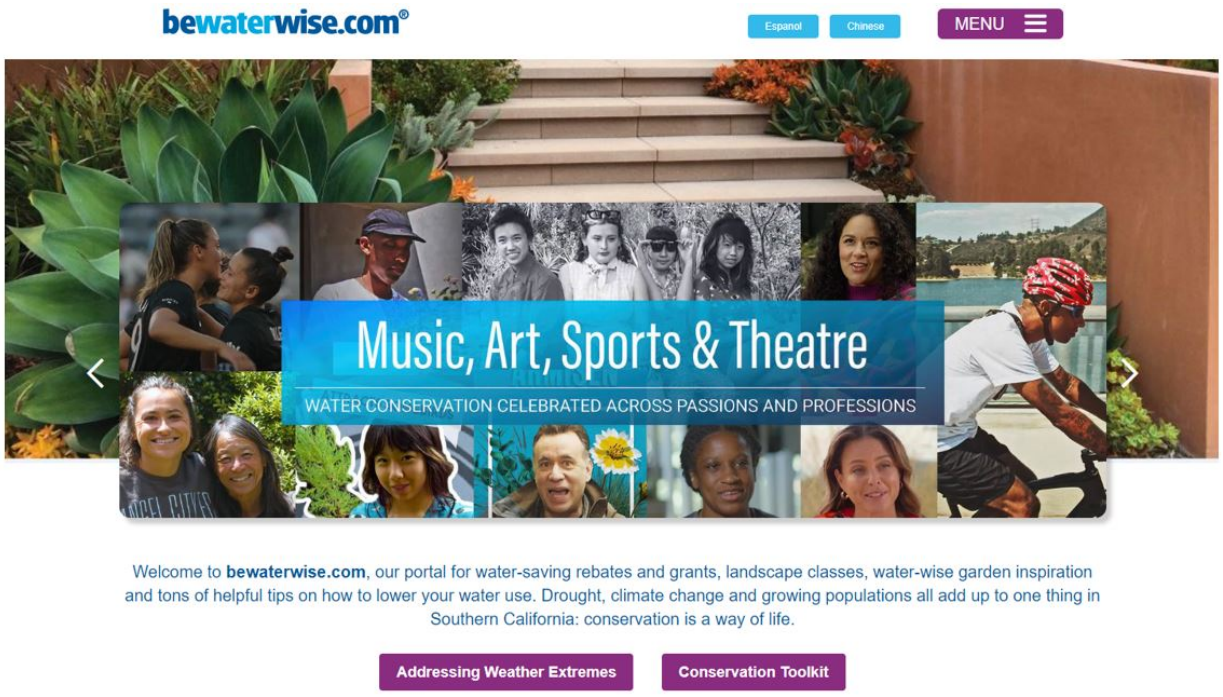
Total Project Estimate:
$1.86 million

Total Project Cost to Date:
$1.18 million

This project will redesign and incorporate the implementation of a content management system for the current mwdh2o.com website. This project will migrate this website and four other MWD external facing websites (SocalWaterDialogue, MWDinnovates, BeWaterWise, and educational website) to be hosted in the cloud for increased security.

Phase	Development
% Complete for Current Phase	100%
Current Phase Authorized	May 2019
Completion Date of Current Phase	March 2024

The four external facing websites have been migrated into the Amazon Web Services cloud platform and deployment was completed. A maintenance support contract was established for on-going support.



Redesigned BeWaterWise External Facing Website

Dams and Reservoirs Improvements Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $4.40 million

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

Program Highlights (3rd Quarter)

Accomplishments

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

Upcoming Activities

Upcoming work for the next quarter will include:

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

Distribution System Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $91.34 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Completed construction for the following construction contract:
  - San Diego Canal Concrete Liner Rehabilitation at Three Sites
- Awarded the following procurement contracts:
  - Furnishing plug valves for the Foothill Feeder Blow Off Valves Replacement and Rialto Pipeline Rehabilitation projects
  - Fabrication and delivery of three stainless steel slide gate assemblies for the East Lake Skinner Bypass and Bypass No. 2 Screening Structure Upgrade

Upcoming Activities

Upcoming work for the next quarter will include:

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

San Diego Canal Concrete Liner Rehabilitation at Three Sites

Total Project Estimate:
$6.4 million

Total Project Cost to Date:
$5.6 million

This project will remove and replace deteriorated concrete liner panels at three locations on the San Diego Canal.

Phase	Construction
% Complete for Construction	100%
Construction Contract Award Date	October 2023
Construction Completion Date	March 2024
Contract Number	2084

Construction was completed. In the upcoming quarter, a notice of completion (NOC) will be filed and the project will be closed out.

Compacting aggregate base material along side-slopes of San Diego Canal
in preparation for placement of rebar and new concrete panels

District Housing & Property Improvements Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $7.44 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Continued assessment of the alternative housing analysis to provide the most optimal recommendation at four pumping plants (Hinds, Eagle Mountain, Iron Mountain, and Gene)

Upcoming Activities

Upcoming work for the next quarter will include:

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

Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $87.05 million

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

Program Highlights (3rd Quarter)

Accomplishments

- PCCP Rehabilitation Valve and Equipment Storage Building
  - Continued construction of the pre-engineered metal building at Lake Mathews with the installation of the fire water line to the building initiated and the asphalt concrete paving continued
- Second Lower Feeder
  - Reach 3B – Continued construction activities related to the first of two planned shutdowns. Work included installation of approximately 2.4 miles of steel pipe liners, rehabilitation of ten access structures, and replacement of two service connection valves. This project will reline approximately 3.6 miles of Second Lower Feeder PCCP pipeline from the intertie with Sepulveda Feeder south to Oak Street PCS, through the cities of Torrance, Los Angeles, and Lomita, and replace three 48-inch diameter sectionalizing valves at the intertie with Sepulveda Feeder.
  - Isolation Valve Procurement – Continued fabrication and inspection of the remaining three 54-inch valves. To date, Metropolitan has received ten of thirteen large-diameter conical plug valves and actuators, including three 48-inch and seven 54-inch valves.
- Sepulveda Feeder
  - Reach 1 – Continued final design to rehabilitate approximately 4.7 miles of Sepulveda Feeder PCCP pipeline, from just north of the Inglewood Lateral south to the West Coast Feeder, through the cities of Inglewood and Hawthorne, and unincorporated Los Angeles County.
  - Reach 2 – Continued final design and permitting to rehabilitate approximately 3.8 miles of Sepulveda Feeder PCCP pipeline, from the Dominguez Gap Channel south to the intertie with Second Lower Feeder, through the cities of Torrance and Los Angeles.
  - North Reach – Continued preliminary design of the northern 20-mile portion of the Sepulveda Feeder, including both steel and PCCP portions of the pipeline and appurtenances. The westside pump stations project has prompted a re-prioritization of this northern section.
  - Reach 9 – Planned board authorization to advance the final design of Reach 9, the first construction package of the North Reach, which is necessary to support the operation of Stage 2 of the Sepulveda Feeder Pump Stations project.
  - Urgent Carbon Fiber Reinforced Polymer (CFRP) Relining at Stations 569+40, 760+33, and 921+69 – Completed CFRP relining at first and third of three repair sites and started work on the second site during the planned shutdown.
- Allen-McColloch Pipeline Urgent Relining
  - Completed final designs of Stages 1 and 2 of the urgent relining. Obtained board authorization to increase the change order authority for three existing contracts in order to procure steel liner pipe segments for Stage 1 and Stage 2 work and perform urgent rehabilitation of the Stage 1 carbon fiber and steel relining work. Completed steel liner pipe fabrication for Stage 1 and began steel liner fabrication for Stage 2. Advertised Stage 2 design for bid solicitation.

Upcoming Activities

Upcoming work for the next quarter will include:

- PCCP Rehabilitation Valve and Equipment Storage Building
    - Complete construction of the pre-engineered metal building at the Lake Mathews site
- Second Lower Feeder
    - Reach 3B – Complete rehabilitation work related to the first shutdown, restore the Second Lower Feeder and its service connections to normal operations, and prepare for work related to the second shutdown, which is scheduled to start in December 2024 and end in April 2025.
    - Isolation Valve Procurement - Continue fabrication of the remaining three valves
- Sepulveda Feeder
    - Reach 1 - Continue final design and permitting process for long-lead permits from Caltrans, City of Los Angeles, and City of Torrance
    - Reach 2 - Continue final design and permitting process
    - North Reach – Continue preliminary design
    - Urgent Carbon Fiber Reinforced Polymer Relining at Stations 569+40, 760+33, and 921+69 – Complete all relining work
- Allen-McColloch Pipeline Urgent Relining
    - Begin Stage 1 rehabilitation work including steel relining of approximately 4,700 feet of PCCP and carbon fiber relining of approximately 41 feet of PCCP. Obtain board award of a construction contract to implement Stage 2 rehabilitation of approximately 12,700 feet of PCCP.

Allen-McColloch Pipeline PCCP Urgent Rehabilitation 2024 - Stage 1

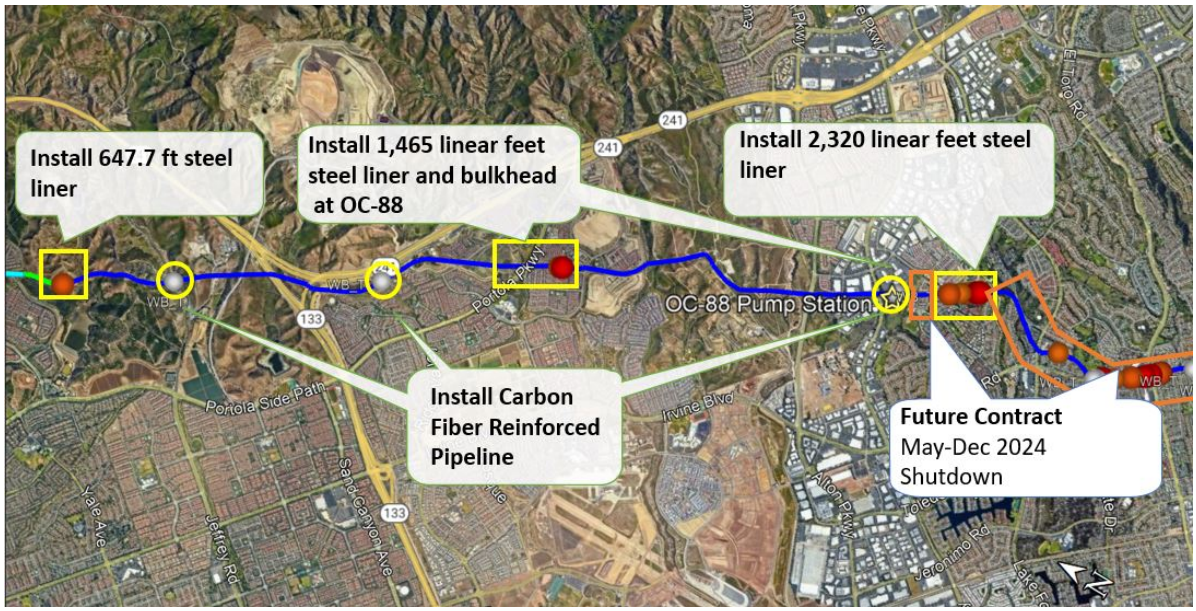
Total Project Estimate:
$21.6 million

Total Project Cost to Date:
$1.3 million

This project will rehabilitate approximately 4,700 linear feet of PCCP pipeline along the Allen-McColloch Pipeline (AMP), install a new 24-inch bypass line and pressure reducing valve at Station 1142, and install a new temporary bulkhead at Station 1146+32. In November 2023, 44 locations with an excessive number of wire breaks were identified along the AMP. For this pipeline, segments with 20 or more wire breaks are deemed to require urgent rehabilitation. PCCP Rehabilitation includes relining sections of the pipeline with steel liner and three 20-foot segment of carbon fiber reinforced polymer liner.

Phase	Final Design & Met Force Construction
% Complete for Construction	100%
Current Phase Authorized	March 2024
Completion Date of Current Phase	March 2024

Final design and Met Force construction of the bypass were completed. The board authorized three change orders to existing construction and procurement contracts to complete the remaining work. In the upcoming quarter, the pipeline will be shutdown and the remaining construction will be initiated and completed.



Overview of Allen-McColloch Pipeline PCCP Urgent Rehabilitation 2024 - Stage 1

Regional Recycled Water Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $2.20 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Advanced Water Treatment Demonstration Facility
  - Completed demo plant modifications and started tertiary membrane bioreactor (MBR) optimization testing
  - Continued updating record drawings to incorporate recent improvements
- Direct Potable Reuse Demonstration Facility
  - Completed preparation of the Direct Potable Reuse (DPR) draft bench-scale testing report
  - Initiated development of DPR pilot testing plan
  - Prepared a technical memorandum of research needs to address treated water augmentation requirements and presented the findings to the Independent Scientific Advisory Panel

Upcoming Activities

Upcoming work for the next quarter will include:

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

Right-Of-Way and Infrastructure Protection Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $1.76 million

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

Program Highlights (3rd Quarter)

Accomplishments

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

Upcoming Activities

Upcoming work for the next quarter will include:

- Western San Bernardino Region – Stage 2
  - Complete final design package
- Los Angeles County Region – Stage 1
  - Continue final design
- Riverside and San Diego County Region – Stage 1
  - Begin preliminary design
  - Continue final design for urgent rehabilitation of one site along San Diego Pipeline No. 4

System Flexibility/Supply Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $64.59 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Badlands Tunnel Surge Protection Facility
  - Completed contractor mobilization
- Inland Feeder/Rialto Pipeline Intertie
  - Continued construction
- Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pump Station Intertie
  - Awarded a valve procurement contract
  - Continued final design, right-of-way acquisition, CEQA, and permitting activities
  - Continued procurement of two 54-inch diameter butterfly valves
- Perris Valley Pipeline I-215 Tunnel Crossing
  - Completed excavation for three tunnel shafts
  - Began tunneling and completed the first tunnel segment
- Sepulveda Feeder Pump Stations
  - Continued Phase 1 design under a progressive design-build services agreement
- Wadsworth Pumping Plant Bypass Pipeline
  - Continued construction
- West Area Supply and Delivery Alternatives
  - Presented the Drought Mitigation Action portfolio to the Board

Upcoming Activities

Upcoming work for the next quarter will include:

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

Perris Valley Pipeline I-215 Tunnel Crossing

Total Project Estimate:
$79.3 million

Total Project Cost to Date:
$41.3 million

This project will connect northern and southern reaches of Perris Valley Pipeline by micro-tunneling and constructing approximately 3,000 linear feet of 97-inch diameter welded steel pipe. The project will also construct four access shafts, cathodic protection test stations, and geotechnical instrumentation and monitoring equipment.

Phase	Construction
% Complete for Construction	55%
Construction Contract Award Date	January 2023
Estimated Construction Completion Date	February 2025
Contract Number	1928

The contractor completed construction of three shafts, excavated approximately 900 linear feet of the tunnels, and began installing casing pipe. In the upcoming quarter, the contractor will complete construction of the remaining shaft, excavate approximately 1,500 linear feet of the tunnel, and continue installing the initial casing pipe.

Contractor using crane to lift micro tunnel boring machine head out of Shaft No. 4

System Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $73.41 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Applications-Servers Upgrade from Old Windows Operating System
  - Authorized purchase agreement to continue migration and upgrade older applications in batches
- Control System Upgrade – Phase 3
  - Completed functional testing
- Datacenter Backup Infrastructure Upgrade
  - Continued design and implementation
- Desert Microwave Site Tower Upgrades
  - Continued planning of hardware installation
  - Continued preparation of design packages
- Enterprise Data Analytics
  - Entered into negotiations with selected vendor
- Headquarters Building Fire Sprinkler Level P1 Replacement
  - Completed construction
- Headquarters Building Physical Security Improvements - Stage 3
  - Continued construction
- Headquarters Network Switch Replacement
  - Continued equipment installation
- Headquarters Video Room Upgrades
  - Continued construction
- Weymouth Area Paving
  - Awarded a construction contract

Upcoming Activities

Upcoming work for the next quarter will include:

- Applications-Servers Upgrade from Old Windows Operating System
  - Complete negotiations and begin solution design.
- Control System Upgrade – Phase 3
  - Present pilot results
- Desert Microwave Site Tower Upgrades
  - Advertise hardware installation bid package
- Headquarters Building Physical Security Improvements - Stage 3
  - Continue construction

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

Data Center Backup Infrastructure Upgrade

Total Project Estimate:
$1.6 million

Total Project Cost to Date:
$0.5 million

This project will replace the existing IT data centers backup system and related infrastructure with a new system called Rubrik.

Phase	IT Design/Deployment
% Complete for Current Phase	50%
Current Phase Authorized	February 2022
Estimated Completion Date of Current Phase	March 2025

Approximately 50% of the backup work has been initiated and configured and a request for quotes was published to procure additional storage. In the upcoming quarter, procurement of additional software storage will occur.

Main Rubrik Dashboard

Treatment Plant Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Mar. 2024) $98.16 million

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

Program Highlights (3rd Quarter)

Accomplishments

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

Upcoming Activities

Upcoming work for the next quarter will include:

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

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

Weymouth Basins Nos. 5-8 and Filter Building No.2 Rehabilitation

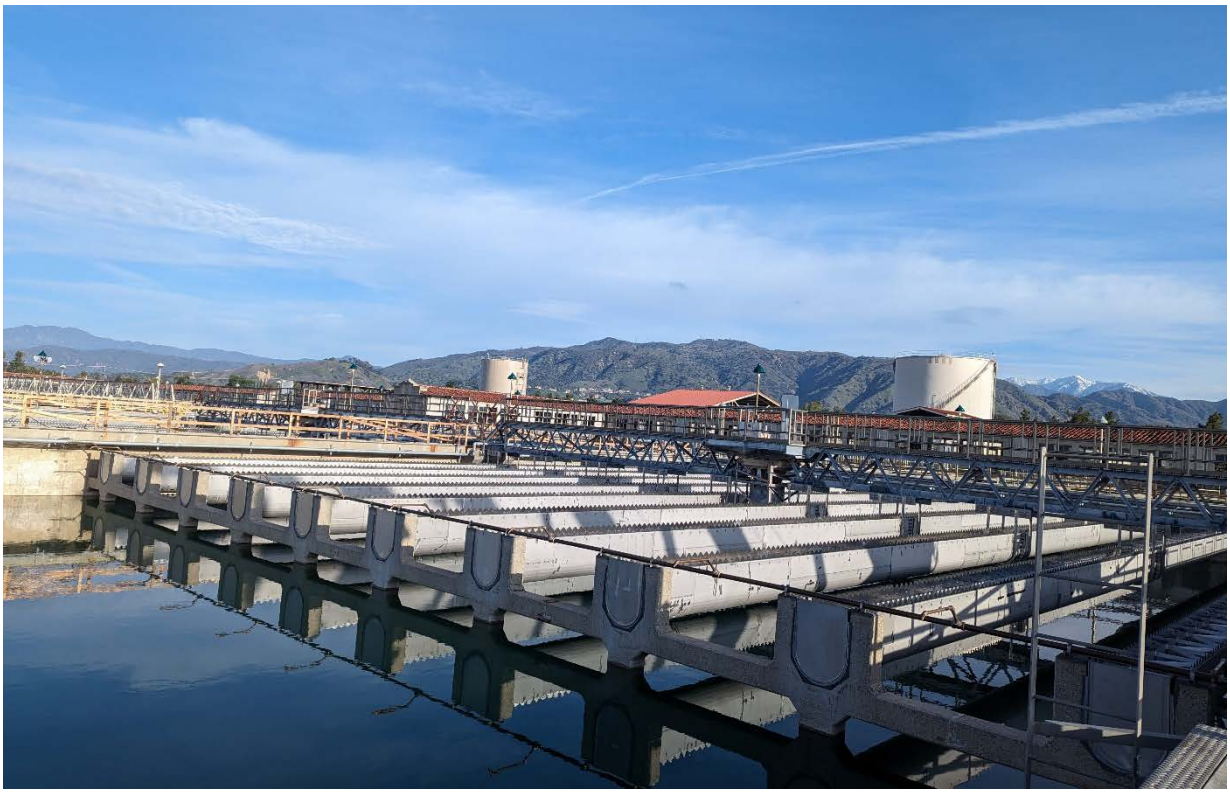
Total Project Estimate:
$117.0 million

Total Project Cost to Date:
$74.2 million

This project will rehabilitate and replace the Weymouth Water Treatment Plant's Basins 5-8 major mechanical equipment, structural components, and auxiliary systems, along with seismic upgrades to the Basins Nos. 1-8 inlet channels and needed improvements, including replacement of basin inlet gates for Basins 1-8.

Phase	Construction
% Complete for Construction	60%
Construction Contract Award Date	May 2022
Estimated Construction Completion Date	July 2025
Contract Number	1982

The contractor completed activities for the first quarter plant shutdown including startup testing of mechanical and electrical equipment. The Contractor also completed seismic upgrades and hazardous material abatement within Basins Nos. 7 and 8 and valve installations in Filter Building No. 2. In the upcoming quarter, the contractor will begin activities planned for the second quarter plant shutdown including mechanical equipment installation in the flocculation and sedimentation basins, Filter Building No. 2, and seismic improvements for the basin and inlet channel walls.



New stainless-steel launders in Basin No. 8

Water Quality Program

Actual Biennium Expenditures
(Jul. 2022 through Mar. 2024)
$0.00 million

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

Program Highlights (3rd Quarter)

Accomplishments

- Mills Enhanced Bromate Control Facilities
    - Continued final design

Upcoming Activities

Upcoming work for the next quarter will include:

- Mills Enhanced Bromate Control Facilities
    - Continue final design

Minor Capital Projects Program

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

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

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

Minor Cap Program Historical Summary

The following table provides the overall status of the three active Minor Cap appropriations for the fiscal years 2018/19–2019/20 through fiscal years 2022/23–2023/24.

Table 4: Minor Capital Projects Program

	Fiscal Year			Totals*
	2018/19–2019/20	2020/21–2021/22	2022/23–2023/24	
Amount Appropriated	$15.5M	$20M	$15M	$50.5M
Expenditures (through March 2024)	$12.4M	$9.4M	$4.5M	$26.4M
Number of Projects Approved	48	51	48	147
Number of Projects Completed (through March 2024)	44	16	0	60
Number of Projects with Durations of Over 3 Years	4	8	0	12

* Numbers may not sum due to rounding.

Through March 2024, 60 of the 147 projects approved under the appropriations mentioned above have been completed, and 12 active projects have exceeded three years in duration, as described below.

- Central Basin CENB-48 Service Connection Access Improvement was impacted by ongoing supply chain delays. Construction has been completed. Additional time is required to pay vendor invoices and complete project closure documents. The project is scheduled to be completed by April 2024.
- CRA Housing Fencing Improvements experienced delays due to delivery of materials. Construction has since been completed. Additional time is required to pay vendor invoices and complete project closure documents. The project is scheduled to be completed by April 2024.
- Dominguez Channel Pressure Release Structure Rehabilitation has been experiencing delays due to longer than anticipated lead time for valve manufacturing and delivery. The project is scheduled to be completed by December 2024.
- Eagle Mountain CRA Employee Housing experienced delays due to delivery of materials. Construction has since been completed. Additional time is required to pay vendor invoices and complete project closure documents. The project is scheduled to be completed by April 2024.
- East Valley Feeder Vaults Upgrades has been experiencing delays due to additional time required to acquire permits from an external agency. The project is scheduled to be completed by December 2024.
- Gene Inlet Surge Chamber Access Improvement has experienced delays due to re-scheduling of the installation of a recently fabricated hatch cover, which can only occur when Gene Wash Reservoir water level is lowered. Metropolitan forces plan to complete the installation during the 2026 CRA shutdown. The project is now scheduled to be completed by April 2026.
- Pasadena Water and Power Site Microwave Tower Replacement experienced delays due to longer than anticipated time for review and approval of lease agreement between City of Pasadena and Metropolitan. The project is scheduled to be completed by January 2025.
- Rialto Feeder Valve Replacement experienced related to equipment procurement. Construction and testing are complete. Additional time is required to pay vendor invoices and complete project closure documents. The project is scheduled to be completed by April 2024.
- Sepulveda Feeder Stray Current Drain Station Installation & Rehabilitation has experienced delays due to longer than anticipated time for review/approval of permit applications by the City of Los Angeles and Los Angeles Department of Transportation. The project is scheduled to be completed by October 2024.
- Service Connection CB-01 Valve Replacement has experienced delays due to longer than anticipated time for procurement of a fiberglass reinforced plastic platform. The project is scheduled to be completed by October 2024.
- Venice Pressure Control Structure Security Upgrades has experienced delays due to longer than anticipated time for procurement of automatic entrance gates. Delivery of gates is underway. The project is scheduled to be completed by October 2024.
- Weymouth Middle Feeder Chlorination Structure Rehabilitation has experienced delays due to longer than anticipated time for delivery of materials and re-scheduling of the equipment installation. Construction is complete. Additional time is required to pay vendor invoices and complete project closure documents. The project is scheduled to be completed by April 2024.

Minor Cap Projects, 3rd Quarter

Authorized Projects

Ten projects were authorized under the Minor Cap Program during the 3rd Quarter of fiscal year 2023/24 (January through March 2024). The total amount authorized for these projects was $2,461,000.

- Diamond Valley Lake (DVL) Sump Pump Level System PLC Replacement – This project will replace three obsolete programmable logic controller (PLC) units at the DVL Pump Plant to enhance plant reliability. The project budget is $180,000.
- Diemer Sodium Hypochlorite Storage Tank Replacement – This project will replace Sodium Hypochlorite Storage Tank No. 82 at the Diemer plant and refurbish or replace components of associated support infrastructure including instrumentation, piping, structural and mechanical to enhance water treatment reliability. The project budget is $299,000.
- Fleet Management Portal Implementation – This project will provide a centralized self-service customer facing request system for employees to create their own fleet related requests and track approval status. The project budget is $260,000.
- Jensen Fluorosilicic Acid Storage Tank Replacement – This project will replace the two fluorosilicic acid storage tanks at the Jensen plant and related support infrastructure to enhance water treatment reliability. The project budget is $352,000.
- Mills Filtration System Monitoring Instrumentation Replacement – This project will replace obsolete filtration system monitoring instrumentation to enhance water treatment operation and reliability at the Mills plant. The new system includes pressure loss transmitters, level transmitters, and flowmeters for the filter beds. The project budget is $350,000.
- Skinner Caustic Soda Transfer Pipe Replacement – This project will replace caustic soda transfer pipe at the Skinner plant, which has exceeded its service life, with new pipe made of different materials for a longer service. The project also includes the replacement of associated hardware for the chemical transfer system to enhance safety and plant reliability. The project budget is $110,000.
- Skinner Electrical Panelboard Replacement – This project will replace obsolete electrical panelboards located within the basement of administration building and the Service Building No. 1 at the Skinner plant to enhance the plant reliability. The project budget is $150,000.
- Skinner Ozone Analyzers Replacement – This project will replace deteriorated ozone analyzers and support equipment in Skinner plant's ozone contactor building to maintain the plant ozonation reliability. The project budget is $130,000.
- Verizon SCADA Network Upgrade – This project will replace obsolete telecommunication system infrastructure at 18 sites serviced by Verizon with fiber optic systems to enhance the system reliability that supports SCADA communication services. The project budget is $340,000
- Whitewater Storm Monitoring System Installation – This project will install a monitoring camera system at Whitewater River crossing to monitor the conditions of the river and CRA siphons during and after storm events for damage to allow for timely repairs. The project budget is $290,000.

Completed Projects

Five projects were completed under the Minor Cap Program during the 3rd Quarter of fiscal year 2023/24 (January through March 2024):

- CRA SCADA Network Switch Replacement
- F-01 Service Connection Check Valve Replacement
- Garvey Reservoir Sodium Hypochlorite Tank Replacement
- Lake Mathews Lighting Improvements
- OC-89 and OC-90 Service Connection Flow Meter Replacement

Canceled Projects

Three projects were canceled during the 3rd Quarter of fiscal year 2023/24 (January through March 2024):

- Diemer Helicopter Hydrant Facility was originally initiated in FYs 2022/23 and 2023/24 minor cap appropriation. The project was canceled and is now being addressed by a major capital project Diemer Helicopter Hydrant Facility.
- San Fernando Road Rail Crossing Rehabilitation was originally initiated in FYs 2020/21 and 2021/22 minor cap appropriation. The project was canceled and is now being addressed by a major capital project San Fernando Road Rail Crossing Rehabilitation.
- Water Quality Laboratory Walk-In Refrigerator Replacement was originally initiated in FYs 2022/23 and 2023/24 minor cap appropriation. The project was canceled after a further evaluation deemed the project was no longer needed as the walk-in refrigerator could be repaired.

Expenditures

Actual biennium expenditures to date (July 2022 through March 2024) for the Minor Capital Projects Program were $8.28 million.

Project Actions

Table 5 lists capital project actions authorized by the General Manager along with funding allocation amounts during the 3rd Quarter of FY 2023/24, through the authority delegated by the Board in April 2022. The total funding amount authorized during the 3rd Quarter is $94,849,000 through thirty management actions. In some case listed below, the Total Amount Authorized may differ from the Amount Authorized for Current Biennium when the work authorized is scheduled to extend beyond the current biennium. In these cases, it is anticipated that staff will request sufficient funds to be allocated from the CIP Appropriation for the next biennium to cover the planned remaining future-year costs of the project. When the Amount Authorized for Current Biennium is equal to the Total Amount Authorized, the authorized work is planned to be completed within the current biennium. Table 5 excludes any board items heard in closed session and minor cap authorizations. Minor cap authorizations can be found in the Minor Capital Projects Program section of this report.

Table 5: Capital Projects Funded in 3rd Quarter

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Allen-McColloch Pipeline PCCP Urgent Rehabilitation of 2024 – Stage 1	Final Design and Met Force Construction of Bypass & Pressure Reducing Valve	$1,000,000	$2,186,000
Allen-McColloch Pipeline PCCP Urgent Rehabilitation of 2024 – Stage 2	Final Design	$1,000,000	$1,541,000
B-01 Venturi Flowmeter Replacement	Site Investigation, Preliminary Design, and Final Design	$300,000	$709,000
Badlands Tunnel Surge Protection Facility	Construction	$1,650,000	$23,800,000
CRA Domestic Water System Treatment[1]	Additional Construction	$1,000,000	$4,800,000
CRA - Iron Mountain Tunnel Rehabilitation[2]	Additional Investigations & Preliminary Design	$442,800	$742,800
CRA - Iron Mountain Tunnel Monitoring System Replacement	Replacement of Tunnel Monitoring Equipment	$122,200	$122,200
CUF Dechlorination System Upgrade - Phase 1	Construction	$1,056,000	$1,306,000
Desert Fiber Installation at Iron Mtn., Eagle Mtn., and Hinds Pumping Plants[3]	Additional Study	$250,000	$300,000

[1] Contractor has incurred additional costs from the owner's directed request to procure and replace the SCADA system, which were to be performed by Metropolitan forces, and an increase in change order authority was authorized per January 2024 board action.

[2] Additional investigations and preliminary design funds were required for a design recommendation from the value engineering workshop which involves geotechnical investigations and preliminary design of a plate spanning over the crack and contact grouting behind the liner.

[3] Additional funds were required to conduct Tower Mapping study to determine the best route to run fiber cables utilizing Metropolitan's 230kv power transmission line infrastructure for network connectivity.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Diamond Valley Lake Floating Wave Attenuator System Improvements - Stage 2	Construction	$350,000	$9,875,000
Diamond Valley Lake Secondary Inlet Sleeve Valve Refurbishment	Design and Construction	$1,000,000	$2,785,000
Diemer METCON	Site Investigations and As-Built Drawing Update	$120,000	$120,000
Eastern Region Security Camera System Upgrade - Area 1	Final Design	$250,000	$1,605,667
Eastern Region Security Camera System Upgrade - Area 2	Final Design	$200,000	$1,121,271
Inland Feeder Rialto Pipeline Intertie	Construction	$3,050,000	$20,000,000
Inland Feeder/SBVMWD Foothill Pump Station Intertie – Stage 2	Procurement: Two 54-inch Butterfly Valves	$1,500,000	$3,280,000
Jensen Modules 2 and 3 Basin Solids Removal System Rehabilitation[4]	Additional Enhanced Preliminary Design	$375,000	$1,150,000
Jensen San Fernando Road Rail Crossing Rehabilitation	Study	$45,000	$50,000
Mills Basins Solids Removal System Rehabilitation[5]	Additional Preliminary Design	$375,000	$1,150,000
MWD Intramet Redesign	Define and Design	$300,000	$300,000
Palos Verdes Reservoir Site Drainage Improvements[6]	Additional Study	$225,000	$235,000
Sepulveda Hydroelectric Plant Rehabilitation	Construction	$450,000	$5,470,000
Services Procurement Implementation	Design, Development, and Deployment	$300,000	$1,420,000

[4] Additional preliminary design funds were required to enhance the solids removal efficiency at the Jensen plant and address misalignment of the traveling bridges.

[5] Additional preliminary design funds were required to enhance the solids removal efficiency at the Mills plant and upgrade the control equipment for the traveling bridges.

[6] Additional study funds were required to develop a new conceptual plan for site drainage and disposal system improvements as a result of the recent site investigation findings.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Upper Feeder Blowoff Valves Replacement - Stage 1	Preliminary Design and Procurement and Installation of Isolation Valve	$1,000,000	$2,322,000
Western Region Security Camera Upgrade - Area 2	Final Design	$150,000	$1,135,347
Western Region Security Camera Upgrade - Area 4	Final Design	$250,000	$933,381
Western Region Security Camera Upgrade - Area 6	Final Design	$250,000	$1,342,667
Western Region Security Camera Upgrade - Area 8	Final Design	$250,000	$1,411,667
Weymouth Hazardous Waste Staging and Containment	Construction	$450,000	$3,400,000
Yorba Linda Power Plant Emergency and Control System Improvements	Preliminary Design	$135,000	$235,000
Total		**$17,846,000**	**$94,849,000**

Due to changes to the project implementation schedules or completion of projects under budget, $17,946,100 was reallocated back to the CIP Appropriation (Appropriation No. 15525) from the previously authorized projects and $1,000,000 of CIP Appropriation funds was allocated to a previously authorized project listed in Table 6 below. The reallocated funds were used to fund the projects listed in Table 5 and will be used to support the upcoming projects in the current biennium.

Table 6: General Manager Actions to Reallocate Capital Project Funds

Project Authorized (Title)	Amount Authorized for Reallocation to CIP Appropriation
CRA Domestic Water System Treatment	($11,000,000)
Garvey Reservoir Rehabilitation	($6,000,000)
San Gabriel Tower Seismic Upgrade	$1,000,000
Water Delivery System Improvements Remaining Budget	($946,100)
Total:	**($16,946,100)**

CEQA Determinations

Consistent with CEQA, the Board delegated this authority to the General Manager in April 2022. Adoption of Negative Declarations and Mitigated Negative Declarations, and certification of Environmental Impact Reports will continue to require action by Metropolitan's Board. Other than those capital projects that were presented to the Board, no CEQA exemption determinations were made by the General Manager during the 3rd Quarter. This excludes information on board items heard in closed session.

Construction and Procurement Contracts

The table below summarizes the status of all construction and procurement contracts that were awarded by the Board and active during the reporting quarter. These contracts are listed in Table 10 and Table 11. Total contract earnings for the 3rd Quarter were approximately $73.48 million.

Table 7: 3rd Quarter Contract Actions

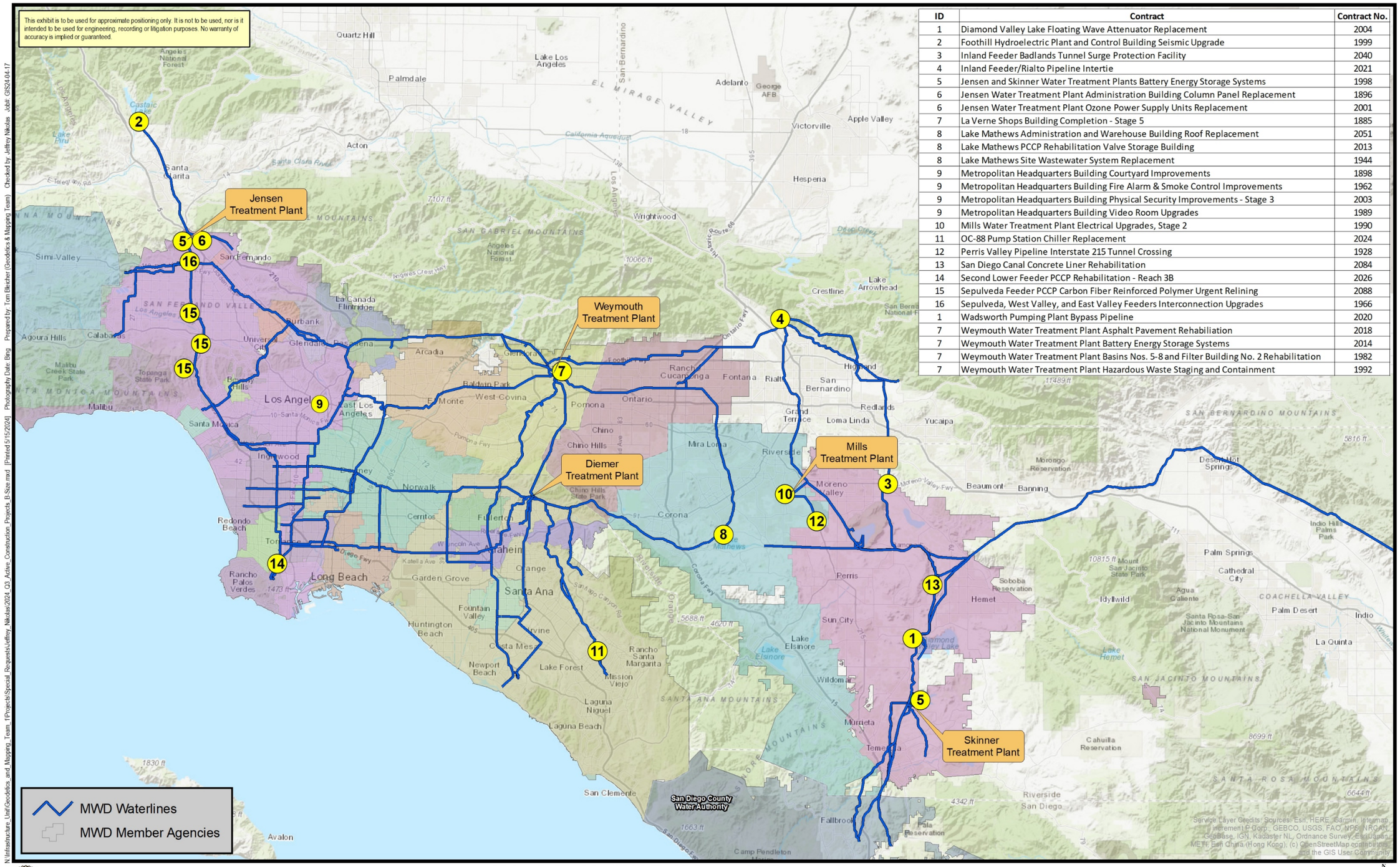
Contract Actions during Q3 for FY 2023/2024, January 2024 through March 2024	
Contracts Awarded by Board	3 construction contracts totaling $11.97 million (Table 9) 4 procurement contracts totaling $3.77 million (Table 9)
Total Payments Authorized	$73.48 million
Construction Contracts Completed	Notice of Completion was filed for 3 construction contracts (Table 8)
Procurement Contracts Delivery Completed	Delivery of all items completed for 2 procurement contracts[7]
Active Contracts at end of Q3[8]	34 construction contracts, totaling $461.76 million (Table 10) 21 procurement contracts, totaling $75.84 million (Table 11) $537.60 million total value*

*Numbers may not sum due to rounding.

The figures on the next two pages show the locations of the thirty-four construction contracts that were active through the end of the 3rd Quarter.

[7] Contract 1969 for Furnishing Inlet Valve Gearboxes for Skinner Module 7 and Purchase Order 217257 for Furnishing 50 Magnetic Flowmeters for Metropolitan's Delta Island Properties were completed during the reporting quarter.

[8] Active contracts at the end of the 3rd Quarter are those that are ongoing at the end of March 2024 and have not filed Notice of Completion with the county where the work was performed.



ID	Contract	Contract No.
1	Diamond Valley Lake Floating Wave Attenuator Replacement	2004
2	Foothill Hydroelectric Plant and Control Building Seismic Upgrade	1999
3	Inland Feeder Badlands Tunnel Surge Protection Facility	2040
4	Inland Feeder/Rialto Pipeline Intertie	2021
5	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	1998
6	Jensen Water Treatment Plant Administration Building Column Panel Replacement	1896
6	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	2001
7	La Verne Shops Building Completion - Stage 5	1885
8	Lake Mathews Administration and Warehouse Building Roof Replacement	2051
8	Lake Mathews PCCP Rehabilitation Valve Storage Building	2013
8	Lake Mathews Site Wastewater System Replacement	1944
9	Metropolitan Headquarters Building Courtyard Improvements	1898
9	Metropolitan Headquarters Building Fire Alarm & Smoke Control Improvements	1962
9	Metropolitan Headquarters Building Physical Security Improvements - Stage 3	2003
9	Metropolitan Headquarters Building Video Room Upgrades	1989
10	Mills Water Treatment Plant Electrical Upgrades, Stage 2	1990
11	OC-88 Pump Station Chiller Replacement	2024
12	Perris Valley Pipeline Interstate 215 Tunnel Crossing	1928
13	San Diego Canal Concrete Liner Rehabilitation	2084
14	Second Lower Feeder PCCP Rehabilitation - Reach 3B	2026
15	Sepulveda Feeder PCCP Carbon Fiber Reinforced Polymer Urgent Relining	2088
16	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	1966
1	Wadsworth Pumping Plant Bypass Pipeline	2020
7	Weymouth Water Treatment Plant Asphalt Pavement Rehabiliation	2018
7	Weymouth Water Treatment Plant Battery Energy Storage Systems	2014
7	Weymouth Water Treatment Plant Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation	1982
7	Weymouth Water Treatment Plant Hazardous Waste Staging and Containment	1992

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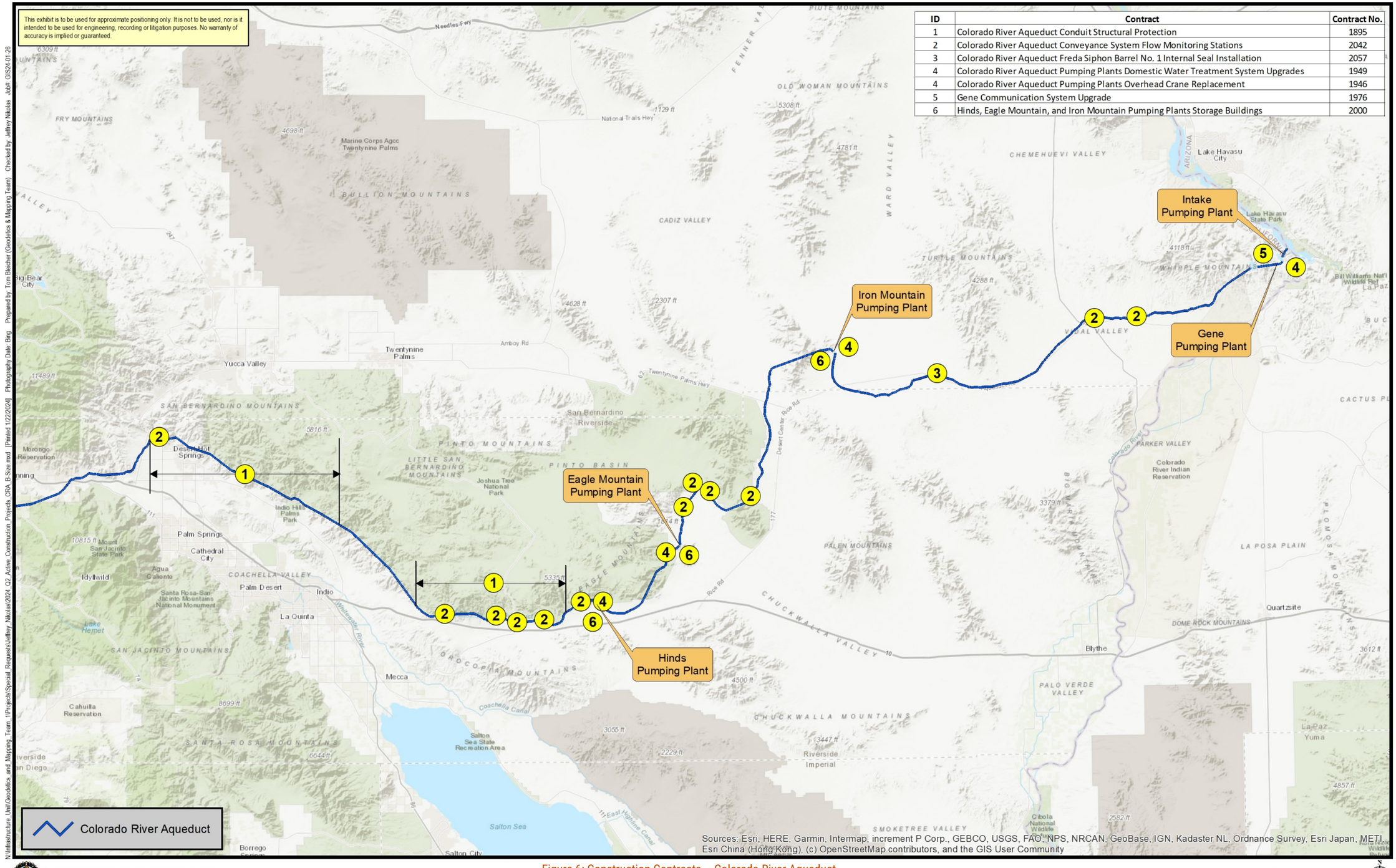
The Metropolitan Water District of Southern California
Engineering Services Group

Figure 5: Construction Contracts – Greater Los Angeles Region

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



The Metropolitan Water District of Southern California
Engineering Services Group

Figure 6: Construction Contracts – Colorado River Aqueduct

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

In the 3rd Quarter, the Board authorized an increase of $4,800,000 in change order authority for construction Contract No. 1949 to upgrade the domestic water treatment systems at the five Colorado River Aqueduct pumping plants. The increase in change authority will address the procurement, programming, and installation of nine programmable logic controllers (PLCs) to facilitate communication between the domestic water treatment systems and Metropolitan's Supervisory Control and Data Acquisition (SCADA) system.

In the 3rd Quarter, the Board also authorized an increase in change order authority for three contracts to conduct urgent rehabilitation of prestressed concrete cylinder pipe on the Allen-McColloch Pipeline: (1) a $12 million increase for Contract No. 2002 with Northwest Pipe Company, (2) a $10.5 million increase for Contract No. 2026 with J.F. Shea Construction, Inc., and (3) a $2 million increase for Contract No. 2088 with Structural Preservation Systems.

Notices of Completion during 3rd Quarter:

The following table shows the three board-awarded construction contracts for which Metropolitan accepted the contract as completed during the 3rd Quarter of FY 2023/24 and filed a Notice of Completion (NOC) with the county where the work was performed. In accordance with Section 9204 of the Civil Code of the State of California, an NOC is filed within 15 days of acceptance by Metropolitan of completion of construction by the contractor.

Table 8: Notices of Completion Filed This Quarter

Contract No.	Construction Contract	Notice of Completion	Original Bid Amount	Final Contract Costs	Change Order	Change Order %
1894	Mills Plant Maintenance Building Roof Replacement	1/17/2024	$287,824	$456,979	$169,155	58.8%
1961	Orange County Feeder Relining – Reach 3	2/8/2024	$17,226,250	$17,184,775	-$41,475	-0.24%
2007	Metropolitan Headquarters Building Level P1 Fire Protection Piping Replacement	2/6/2024	$3,740,792	$3,740,792	$0	0.0%
		Totals:	**$21,254,866**			

For the 3rd Quarter, the total bid amount of the completed construction contract was approximately $21.3 million.

For Contract No. 1894 listed above, change orders were issued to abate asbestos-containing materials that were discovered during the roof demolition stage and to restore the building interior that was damaged due to rainwater intrusion caused by heavier than anticipated rain. Also included was an owner-directed extra work to replace the cracked roof drain system.

The final contract costs can differ from the original bid amount due to change orders and actual costs incurred on unit price or other various bid items. The rolling average of change orders on completed construction contracts during the preceding 12-month period (April 2023 through March 2024) is 0.12 percent[9].

[9] Original amount of construction contracts completed (Apr. 2023 through Mar. 2024) = $ 73,210,600
Change orders for completed construction contracts (Apr. 2023 through Mar. 2024) = $ 88,629
Change order percentage (Apr. 2023 through Mar. 2024) = 0.12%

Note that this rolling average of change orders excludes Contract 1908-CRA Pumping Plants – Sump Rehabilitation since this contract had a significant owner-directed deductive change orders 49%) that would skew the 12-month rolling average.

Contracts Awarded by the Board during 3rd Quarter:

During the period of January through March 2024, three construction contracts totaling $11,972,556 and four procurement contracts totaling $3,765,819.04 were awarded by the Board.

Table 9: Construction and Procurement Contracts Awarded This Quarter

Construction Contracts	
DVL Floating Wave Attenuator Replacement	
Contract Number	2004
Contractor	Power Engineering Construction Co.
Amount	$7,842,856
Weymouth Water Treatment Plant Hazardous Waste Staging and Containment	
Contract Number	1992
Contractor	J.F. Shea Construction, Inc.
Amount	$2,375,700
Weymouth Water Treatment Plant Asphalt Pavement Rehabilitation	
Contract Number	2018
Contractor	Granite Construction Company
Amount	$1,754,000
Procurement Contracts	
Furnishing Slide Gates for East Lake Skinner Bypass Channel	
Contract Number	2029
Contractor	Whipps, Inc.
Amount	$892,552
Furnishing a Brushless Motor Exciter System for Gene Pumping Plant Unit No. 1	
Contract Number	2056
Contractor	WEG Electric Corp.
Amount	$544,501
Furnishing a 132-inch Butterfly Valve for the Foothill Pump Station Intertie	
Contract Number	2096
Contractor	Vogt Valves, Inc.
Amount	$1,779,174
Furnishing Plug Valves for the Foothill Feeder and Rialto Pipeline	
Purchase Order Number	219516
Contractor	Caasi Flow Control
Amount	$549,592.04

The table on this page lists the 34 ongoing construction contracts through the end of the 3rd Quarter. This list contains construction contracts awarded by the Board.

Table 10: Active Construction Contracts at the End of 3rd Quarter

	Cont. No.	Contract Title	Contractor	Contract Amount[10]	Earnings Through March 2024[11]	Start Date	Est. Completion Date	Est. Percent Complete
1	1885	La Verne Shops Building Completion – Stage 5	Woodcliff Corporation, Inc.	$19,329,827	$17,389,847	6/10/22	10/24	90%
2	1895	Colorado River Aqueduct Conduit Structural Protection	Granite Construction Company	$8,656,568	$6,748,885	5/11/23	2/25	78%
3	1896	Jensen Admin. Bldg. Entrance Glass Fiber Reinforced Concrete Panels Replacement[12]	MMJ Contracting, Inc.	$281,900	$105,898	7/14/23	8/24	38%
4	1898	Metropolitan Headquarters Courtyard Improvements	Access General Contracting	$250,974	$0	1/25/24	7/24	0%
5	1928	Perris Valley Pipeline Interstate 215 Tunnel Crossing	James W. Fowler, Company	$59,489,720	$32,559,213	2/13/23	2/25	55%
6	1944	Lake Mathews Reservoir Wastewater System Replacement	Creative Home dba CHI Construction	$4,010,000	$3,984,133	12/13/21	4/24	99%
7	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	$14,386,714	$12,449,540	10/14/20	6/24	87%
8	1949	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement	J.F. Shea Construction, Inc.	$32,869,737	$12,862,862	1/20/22	3/25	39%
9	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements[12]	Bernards Bros. Inc.	$14,355,588	$13,159,228	9/24/20	6/24	92%
10	1966	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	Blois Construction, Inc.	$3,143,592	$2,337,861	7/7/22	5/24	74%

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

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

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

	Cont. No.	Contract Title	Contractor	Contract Amount[10]	Earnings Through March 2024[11]	Start Date	Est. Completion Date	Est. Percent Complete
11	1976	Gene Communication System Upgrade	HP Communications, Inc.	$1,244,935	$18,000	12/14/23	11/24	1%
12	1982	Weymouth Water Treatment Plant Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation	J.F. Shea Construction, Inc.	$95,045,436	$62,472,641	6/10/22	7/25	66%
13	1989	Metropolitan Headquarters Building First Floor Video Suite Renovation	Acro Constructors	$637,520	$637,520	6/15/23	8/24	99%
14	1990	Henry J. Mills Water Treatment Plant Electrical Upgrades, Stage 2	CSI Electrical Contractors, Inc.	$9,392,642	$4,721,301	12/13/21	3/25	50%
15	1992	Weymouth Water Treatment Plant Hazardous Waste Staging and Containment	J.F. Shea Construction, Inc.	$2,375,700	$0	3/12/24	4/25	0%
16	1998	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems**Error! Bookmark not defined.**	Ameresco, Inc.	$11,604,521	$4,795,893	10/7/21	11/24	41%
17	1999	Foothill Hydroelectric Power Plant Seismic Upgrade	West Valley Investment Group, Inc.	$6,174,000	$3,189,515	4/27/23	9/24	52%
18	2000	Hinds, Eagle Mountain, and Iron Mountain Pumping Plants Storage Buildings	J. F. Shea Construction, Inc.	$16,490,000	$2,619,653	7/31/23	4/26	16%
19	2001	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	Leed Electric, Inc.	$2,257,897	$1,381,850	7/20/22	6/24	61%
20	2003	Metropolitan Headquarters Building Exterior Physical Security Improvements[12]	Caltec, Corp.	$2,204,266	$1,580,106	1/12/23	5/24	72%
21	2004	DVL Floating Wave Attenuator Replacement	Power Engineering Construction Co.	$7,842,856	$0	3/12/24	3/26	0%

	Cont. No.	Contract Title	Contractor	Contract Amount[10]	Earnings Through March 2024[11]	Start Date	Est. Completion Date	Est. Percent Complete
22	2013	Lake Mathews PCCP Rehabilitation Valve Storage Building[12]	Facility Builders & Erectors, Inc.	$4,872,022	$4,774,608	3/10/22	5/24	98%
23	2014	Weymouth Plant Battery Energy Storage System[12]	Siemens Industry, Inc.	$6,176,521	$4,070,004	7/18/22	6/24	66%
24	2018	Weymouth Water Treatment Plant Asphalt Pavement Rehabilitation	Granite Construction Company	$1,754,000	$0	4/10/24	12/24	0%
25	2020	Wadsworth Pumping Plant Bypass Pipeline	Steve P. Rados, Inc.	$14,820,500	$10,625,334	2/2/23	7/24	72%
26	2021	Inland Feeder/Rialto Pipeline Intertie	Steve P. Rados, Inc.	$15,681,000	$745,700	10/16/23	6/25	5%
27	2024	OC-88 Pump Station Chiller Replacement[12]	Mehta Mechanical Co., Inc. dba MMC Inc.	$2,654,000	$1,569,600	6/6/22	6/24	59%
28	2026	Second Lower Feeder PCCP Rehabilitation - Reach 3B	J.F. Shea Construction, Inc.	$68,942,706	$43,367,966	2/13/23	9/25	63%
29	2040	Inland Feeder Badlands Tunnel Surge Protection Facility	Steve P. Rados, Inc.	$18,840,000	$844,500	12/11/23	5/25	4%
30	2042	CRA Conveyance System Solar Level Sensor Installation	LEED Electric, Inc.	$5,266,000	$1,368,896	6/15/23	9/24	26%
31	2051	Lake Mathews Administration and Warehouse Building Roof Replacement	Best Contracting Services, Inc.	$452,886	$21,964	8/10/23	5/24	5%
32	2057	CRA Freda Siphon Barrel No.1 Internal Seal Installation	Miller Pipeline, LLC	$3,895,000	$750,956	10/9/23	5/24	19%
33	2084	San Diego Canal Concrete Liner Rehabilitation[13]	Bosco Constructors, Inc.	$4,400,000	$4,400,000	11/2/23	4/24	100%

[13] Construction is 100% complete and a Notice of Completion (NOC) will be filed with the County of Riverside in April 2024.

	Cont. No.	Contract Title	Contractor	Contract Amount[10]	Earnings Through March 2024[11]	Start Date	Est. Completion Date	Est. Percent Complete
34	2088	Sepulveda Feeder PCCP Carbon Fiber Reinforced Polymer Urgent Relining	Structural Preservation Systems	$1,962,691	$140,000	9/14/23	5/24	7%
Total contract value for active construction contracts:				**$461,761,719**				

The following table lists the 21 ongoing procurement contracts at the end of the 3rd Quarter.

Table 11: Active Procurement Contracts at the End of 3rd Quarter

	Cont. No.	Contract	Contractor	Contract Amount[14]	Earnings Through March 2024[15]	Start Date	Est. Delivery Completion Date	Est. Percent Complete[16]
1	1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	$2,380,909	$2,362,968	9/11/17	D[17]	99%
2	1867[18]	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1	Crispin Valve, LLC	$5,066,975	$3,769,482	12/18/17	6/24	74%
3	1868	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2	DeZurick, Inc.	$771,984	$765,184	12/18/17	D[17]	99%
4	1873	Furnishing One Hydraulic Shear System for the La Verne Maintenance Shops	Landmark Solutions, LLC	$151,870	$146,970	3/21/18	D[17]	97%
5	1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	$23,750,060	$19,585,112	12/24/18	1/25	82%
6	1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	$2,319,600	$2,273,100	9/17/18	D[17]	99%
7	1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limitorque	$3,370,402	$3,370,402	2/16/19	9/24	99%
8	1955	Furnishing Membrane Filtration Systems for the CRA Domestic Water Treatment Systems	Wigen Water Technologies	$1,244,535	$654,870	5/28/20	7/25	53%

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

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

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

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

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

	Cont. No.	Contract	Contractor	Contract Amount[14]	Earnings Through March 2024[15]	Start Date	Est. Delivery Completion Date	Est. Percent Complete[16]
9	1965	Furnishing Equipment for the Jensen Ozone Power Supply Units Upgrades	Suez Treatment Solutions, Inc.	$4,141,194	$3,616,396	3/30/20	D[17]	87%
10	2002	Furnishing Steel Liner for Lakeview Pipeline	Northwest Pipe Company	$16,055,500	$0	12/14/23	6/24	0%
11	2022	Furnishing Butterfly Valves for the Wadsworth Bypass Pipeline, Inland Feeder-Rialto Pipeline Intertie, and Badlands Tunnel Isolation Surge Tanks	Sojitz Machinery Corp. of America	$5,647,405	$0	10/3/22	9/25	0%
12	2028	Furnishing Slide Gates for the San Jacinto Diversion Structure	Whipps, Inc.	$820,853	$0	12/8/22	6/24	0%
13	2029	Furnishing Slide Gates for East Lake Skinner Bypass Channel	Whipps, Inc	$892,552	$0	4/10/24	11/25	0%
14	2046	Furnishing a 20-inch Triple Offset Ball Valve for Service Connection CB-11	Cascade Consultants, LLC	$407,800	$0	3/8/23	8/24	0%
15	2048	Furnishing Butterfly Valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie - Schedule 1	Sojitz Machinery Corp. of America	$2,601,437	$0	6/15/23	5/26	0%
16	2056	Furnishing a Brushless Motor Exciter System for Gene Pumping Plant Unit No. 1	WEG Electric	$544,501	$0	5/27/24	6/25[19]	0%
17	2096	Furnishing a 132-inch Butterfly Valve for the Foothill Pump Station Intertie	Vogt Valves, Inc,	$1,779,174	$0	6/3/24	5/27[19]	0%
18	PO 214904	Furnishing Two Butterfly Valves for the Lake Skinner Outlet Tower Valve Replacement	B&K Valves and Equipment, Inc.	$1,174,475	$0	6/13/23	6/25	0%
19	PO 214941	Furnishing Air Release and Vacuum Valves for San Diego Pipeline Nos. 3 and 5	B&K Valves and Equipment, Inc.	$1,466,665	$0	6/13/23	9/24	0%

[19] As of the date of this report, a Notice to Proceed has not been finalized and as such dates provided are estimates only.

	Cont. No.	Contract	Contractor	Contract Amount[14]	Earnings Through March 2024[15]	Start Date	Est. Delivery Completion Date	Est. Percent Complete[16]
20	PO 219501	Furnishing of five globe valves to be installed at four pressure control structures in the Orange County region	B&K Valves and Equipment, Inc.	$698,000	$0	12/5/23	1/25	0%
21	PO 219516	Furnishing Plug Valves for the Foothill Feeder and Rialto Pipeline	Caasi Flow Control	$549,592	$0	2/15/24	8/24	0%
Total contract value for active procurement contracts:				**$75,835,483**				

Performance Metrics

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

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

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

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

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

Once a project phase is complete, either final design or construction, staff's performance against these metrics is then calculated and compared to the target metrics. Table 12 and Table 13 on the following page summarize the comparison between the target metrics and the actual performance metrics for each project category for the current reporting period. In cases where the actual performance exceeded the target metric, explanations for the variance are provided. Actual performances are reported for the Board awarded construction contract projects.

Table 12: Performance Metric Actuals, Construction Costs > $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2	Final Design	$494,234	$7,842,856	9% to 12%	6.3%
Headquarters Building Fire Sprinkler Level P1 Replacement	Inspection	$123,282	$3,746,706	9% to 12%	3.3%
Orange County Feeder Relining - Reach 3	Inspection	$1,641,351	$18,556,181	9% to 12%	8.8%

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

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Mills Maintenance Building Roof Replacement[20]	Inspection	$162,117	$633,980	9% to 15%	25.6%
Weymouth Area Paving	Final Design	$115,500	$1,975,000	9% to 15%	5.8%
Weymouth Hazardous Waste Staging and Containment[21]	Final Design	$397,476	$2,496,700	9% to 15%	15.9%

[20] Inspection costs for Mills Maintenance Building Roof Replacement were higher than the target range due to the longer than anticipated time to complete construction, which required additional inspection. The construction delays were mainly due to unanticipated weather conditions, unforeseen site conditions, and longer than anticipated time to receive roofing materials due to supply shortages.

[21] Final design costs for Weymouth Hazardous Waste Staging and Containment were higher than the target range due to additional design efforts required to address unforeseen utilities that were discovered at the project site.

Service Connections and Relocations

Service Connections

No new agreements for service connections were approved by the General Manager pursuant to Sections 4700-4708 during the reporting period (January through March 2024).

Relocations

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

Projects Expensed to Overhead

Progress, costs, and future plans for the project listed below was evaluated by Engineering Services, Finance, and Water System Operations, and Real Property. This assessment determined that no further work on this project is warranted as the refrigerator could be repaired. The listed project received the necessary Board authorization for various levels of effort conducted.

The Water Quality Lab Walk-in Refrigerator Replacement project was determined to be no longer needed and has been canceled. Labor charges from the project were used to conduct a study to determine the scope of work needed to make the walk-in refrigerator function again. It was determined that the equipment can be covered by a Major O&M project, so this project is no longer required. All expenditures have been expensed, and no capital asset has been placed into service.

Table 14: Projects Expensed to Overhead

Project	Expensed Amount
Water Quality Lab Walk-in Refrigerator Replacement	$3,638

Program/Appropriation Status

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

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

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru March 2024 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Colorado River Aqueduct Reliability Program	**Total**	**$546,130**	**$497,440**	**$67,170**	**$71,903**
Cabazon Radial Gate Facility Improvements	15320	$2,456	$1,513	$0	$809
White Water Siphon Protection	15341	$15,585	$14,510	$2,654	$26
CRA - Conveyance Reliability	15373	$118,393	$117,852	$1,916	$1,475
CRA Pumping Plant Reliability	15374	$24,467	$24,012	$0	$9
CRA - Electrical/Power Systems Reliability	15384	$60,465	$56,811	$6,107	$8,321
CRA – Discharge Containment	15385	$8,129	$7,977	$0	$2
CRA - Reliability for FY2006/07 through FY2011/12	15438	$134,194	$125,192	$22,015	$5,720
CRA Main Pump Reliability	15481	$75,500	$70,284	$13,310	$17,226
CRA - Reliability for FY2012/13 through FY2017/18	15483	$78,805	$64,840	$19,052	$28,959
CRA - Reliability for FY2018/19 through FY2023/24	15507	$28,136	$14,449	$2,116	$9,355
Cost Efficiency & Productivity Program	**Total**	**$163,638**	**$117,461**	**$26,040**	**$13,792**
DVL Recreation Facilities	15334	$87,004	$60,296	$4,654	$911
Yorba Linda Power Plant Modifications	15446	$17,125	$17,115	$0	$23
Business Operations Improvement	15484	$19,316	$13,710	$1,926	$3,472
Project Controls and Reporting System	15490	$6,440	$6,292	$0	-$10

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru March 2024 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Enterprise Content Management	15500	$3,600	$3,595	$4,450	$0
DVL Recreation Rehabilitation & Refurbishment	15515	$2,248	$1,400	$150	$487
Energy Sustainability Improvements	15521	$27,905	$15,053	$14,860	$8,909
Dams and Reservoirs Improvements Program	**Total**	**$86,977**	**$73,392**	**$37,550**	**$4,404**
Reservoir Cover and Replacement	15417	$71,055	$62,745	$740	$3,376
Dam Rehabilitation & Safety Improvements	15419	$15,922	$10,647	$36,810	$1,028
Distribution System Reliability Program	**Total**	**$502,983**	**$459,465**	**$60,870**	**$91,337**
Conveyance and Distribution System - Rehabilitation	15377	$126,196	$122,969	$9,830	$21,225
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12	15441	$156,712	$149,704	$170	$34,215
Hydroelectric Power Plant Improvements	15458	$32,561	$22,092	$5,530	$4,816
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	$139,406	$128,347	$35,610	$14,694
Pipeline Rehabilitation and Replacement	15482	$1,143	$1,089	$360	$56
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	$46,966	$35,264	$9,370	$16,330
District Housing & Property Improvements Program	**Total**	**$12,285**	**$13,989**	**$23,200**	**$7,438**
Employee Village Enhancement	15513	$12,285	$13,989	$23,200	$7,438

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru March 2024 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Minor Capital Projects Program	**Total**	**$60,500**	**$33,576**	**$14,800**	**$8,277**
Capital Program for Projects Costing Less Than $400,000 For Fiscal Years 2016/17 And 2017/18	15498	$10,000	$7,193	$0	$21
Capital Program for Projects Costing Less Than $400,000 for FY2018/19 through FY2019/20	15504	$15,500	$12,439	$2,050	$1,015
Capital Program for Projects Costing Less Than $400,000 for FY2020/21 through FY2021/22	15518	$20,000	$9,425	$7,080	$2,722
Capital Program for Projects Costing Less Than $400,000 for FY2022/23 through FY2023/24	15526	$15,000	$4,519	$5,670	$4,519
Prestressed Concrete Cylinder Pipe Rehabilitation Program	**Total**	**$372,384**	**$354,714**	**$91,090**	**$87,047**
PCCP Rehabilitation and Replacement	15471	$26,966	$25,484	$510	$2,810
Sepulveda Feeder PCCP Rehabilitation	15496	$42,806	$34,548	$4,280	$6,625
Second Lower Feeder PCCP Rehabilitation	15497	$284,927	$278,496	$78,650	$72,131
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	$17,685	$16,187	$7,650	$5,481
Regional Recycled Water Program	**Total**	**$24,350**	**$22,505**	**$16,110**	**$2,205**
Demonstration-Scale Recycled Water Treatment Plant	15493	$24,350	$22,505	$16,110	$2,205
Right of Way & Infrastructure Protection Program	**Total**	**$31,715**	**$28,824**	**$10,663**	**$1,764**
Right of Way & Infrastructure Protection	15474	$31,715	$28,824	$10,663	$1,764

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru March 2024 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
System Flexibility/Supply Reliability Program	**Total**	**$751,702**	**$706,139**	**$59,475**	**$64,591**
Hayfield and Lake Perris Groundwater Recovery	15402	$1,500	$1,135	$1,795	$21
Perris Valley Pipeline	15425	$166,500	$165,982	$25,188	$34,865
Water Delivery System Improvements	15488	$119,131	$98,153	$28,991	$28,547
Verbena Property Acquisition	15492	$264,000	$262,148	$3,450	$200
Delta Wetlands Properties (Delta Islands)	15494	$200,570	$178,723	$51	$958
System Reliability Program	**Total**	**$450,210**	**$380,346**	**$81,000**	**$73,415**
Information Technology System - Infrastructure	15376	$51,306	$47,815	$70	$97
Information Technology System - Security	15378	$12,351	$11,701	$0	$886
La Verne Shop Facilities Upgrade	15395	$67,348	$65,182	$9,920	$17,863
Water Operations Control	15467	$59,561	$47,486	$18,040	$5,404
Union Station Headquarters Improvements	15473	$114,855	$100,811	$9,400	$14,585
IT Infrastructure Reliability	15487	$57,867	$48,305	$9,770	$11,512
Operations Support Facilities Improvement	15495	$32,889	$27,058	$14,020	$7,516
Metropolitan Security System Enhancements	15499	$25,866	$15,383	$7,185	$4,331
Infrastructure Reliability Information System	15501	$15,755	$9,644	$145	$6,778
System-Wide Paving & Roof Replacements for FY 2018/19 through FY 2019/20	15516	$5,491	$4,256	$6,580	$2,663

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru March 2024 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	$3,231	$2,625	$4,780	$1,706
Enterprise Data Analytics	15522	$3,690	$80	$1,090	$76
Treatment Plant Reliability Program	**Total**	**$888,610**	**$846,241**	**$37,770**	**$98,158**
Weymouth Water Treatment Plant Improvements	15369	$195,711	$192,053	$7,410	$3,912
Jensen Water Treatment Plant Improvements	15371	$47,437	$46,767	$310	$129
Diemer Water Treatment Plant Improvements	15380	$216,907	$209,432	$3,630	$1,102
Mills Water Treatment Plant Improvements	15381	$5,900	$5,286	$0	$9
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15436	$74,207	$68,605	$3,660	$2,934
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	$93,332	$90,600	$9,779	$63,083
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	$91,376	$86,366	$3,820	$1,670
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	$34,852	$30,907	$92	$6,315
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	$77,539	$77,395	$39	$437
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15478	$3,255	$2,402	$120	$966

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru March 2024 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	$2,664	$1,332	$0	$485
Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15486	$8,339	$7,537	$0	$53
Weymouth Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15505	$1,365	$962	$0	$660
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	$21,096	$15,207	$7,130	$10,001
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	$4,891	$3,436	$0	$2,681
Skinner Water Treatment Plant, Improvements for FY 2020/21 Through FY 2023/24	15512	$5,364	$4,841	$1,720	$1,204
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	$2,631	$2,266	$60	$1,670
Chlorine System Improvements	15523	$1,746	$846	$0	$846
Water Quality Program	**Total**	**$10,240**	**$9,615**	**$600**	**$0**
Enhanced Bromate Control	15472	$10,240	$9,615	$600	$0
Total CIP		**$3,901,723**	**$3,543,707**	**$526,338**	**$524,332**

Notes on the above table:

- Numbers may not sum due to rounding.
- Numbers are based on the general ledger information downloaded on 04/15/2024.
- $0 under Planned Expenditures indicates that while no expenditures are planned during the reporting period, expenditures may be planned during upcoming periods.
- Negative actual expenditures indicate the result of cost transfers, write-offs, or credits greater than actual costs for this biennium through the reporting quarter.

List of Tables

List of Figures

Engineering, Operations, & Technology Committee

Capital Investment Plan Quarterly Report for Period Ending March 2024

Item 6a

June 10, 2024

Item 6a

Capital Investment Plan Quarterly Report for Period Ending March 2024

Subject

Capital Investment Plan Quarterly Report for the Third Quarter of FY 2023/24 which covers January 2024 through March 2024

Purpose

Informational summary of report that was provided in the board packet

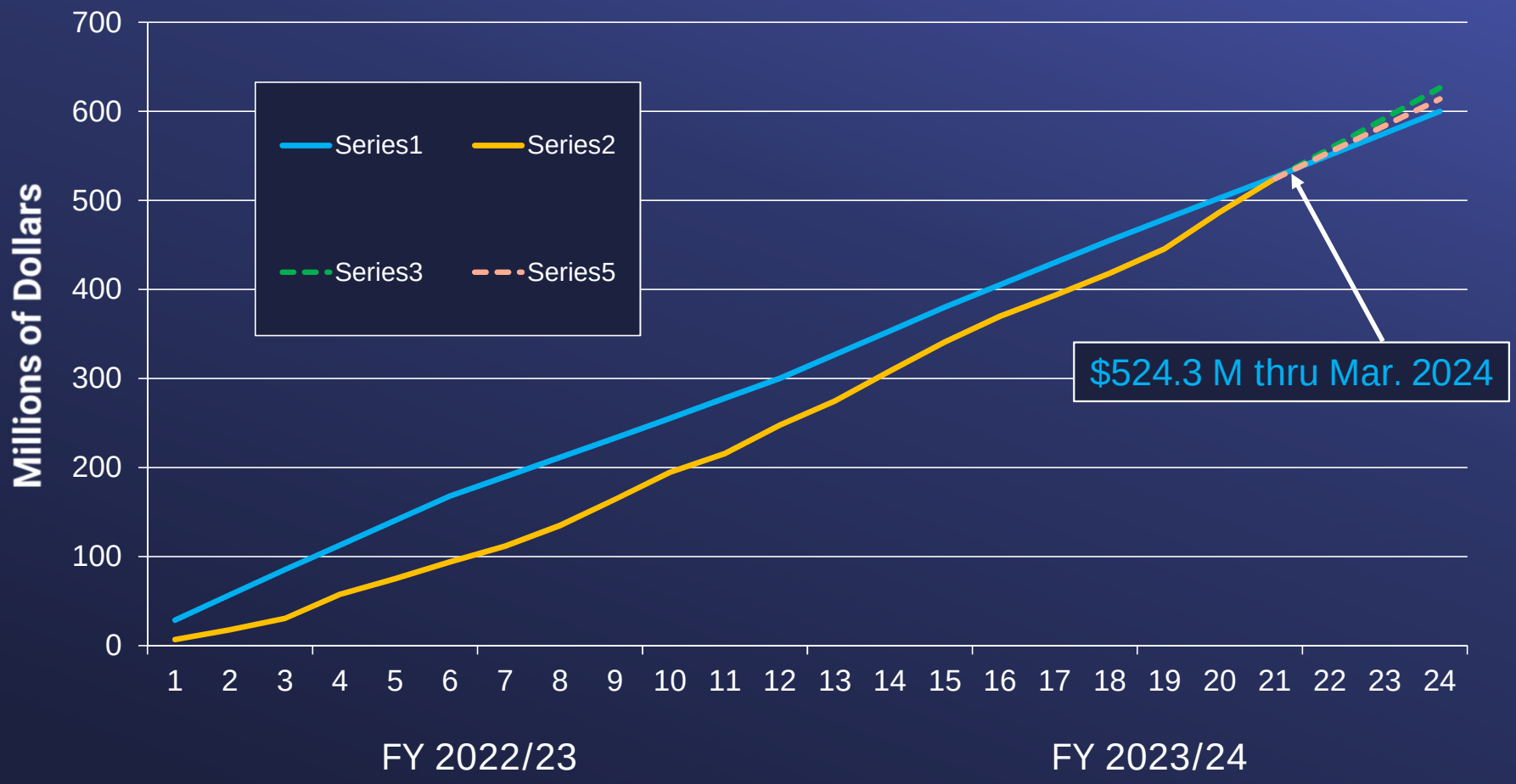
Capital Investment Plan Quarterly Report

Period Ending March 2024

3rd Quarter Summary for Fiscal Year 2023/24

- Board awarded contracts – $15.7 M
  - 3 Construction contracts awarded
  - 4 Procurement contracts awarded
- Contracts currently underway – $537.6 M
  - 34 Construction
  - 21 Procurement

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



CRA Conduit Structural Protection

Transition Structure Cover Installation
near Desert Hot Springs

- Contract awarded in April 2023
  - Completed work at multiple sites
  - Completed transition structure rehabilitation at two sites
  - Projected construction completion in July 2024
- Total Project Estimate: $15.2 M
- Total Project Cost thru Mar: $9.0 M

San Diego Canal Concrete Liner Rehabilitation at Three Sites

- Contract awarded in October 2023
  - Completed construction
  - Notice of Completion was filed April 2024
- Total Project Estimate: $6.4 M
- Total Project Cost thru Mar: $5.6 M

Contractor compacting aggregate base material along side slopes of San Diego Canal

Weymouth Basins 5-8 and Filter Building No. 2 Rehabilitation

New stainless-steel launders in Basin 8

- Contract awarded in May 2022
  - Completed construction activities for first quarter plant shutdown
  - Completed seismic upgrades and mechanical upgrades within Basins 7 & 8
  - Projected construction completion in July 2025
- Total Project Estimate: $117.0 M
- Total Project Cost thru Mar: $74.2 M

Funding of Drought Mitigation Projects with Outside Sources

- $47.5 M State Grant to be applied to construction contract work for:
  - Wadsworth Pumping Plant Bypass Pipeline
  - Inland Feeder/Rialto Pipeline Intertie
  - Badlands Tunnel Surge Protection Facility
- Approximately $14.5 M in contract spending in the current biennium
- Funding allows additional rehabilitation projects to proceed as a result of applying state grant funds for the three projects

Placement of 96-inch bypass pipeline
for Wadsworth Pumping Plant Bypass Pipeline

Construction Contract Completion and Change Orders

Contract	Original Contract Amount	Contract Change Orders
Mills WTP Maintenance Building Roof Replacement	$287,824	$169,155
Orange County Feeder Relining – Reach 3	$17,226,250	-$41,475
Metropolitan HQ Building Level P1 Fire Protection Piping Replacement	$3,740,792	$0
Total	$21,254,866	

Performance Metrics – 3rd Quarter of FY 2023/24

Projects w/ Construction Costs Greater Than $3 Million

	Final Design % of Construction	Inspection % of Construction
Target Performance Range	9% to 12%	9% to 12%
Actual Performance	6.3%	7.9%

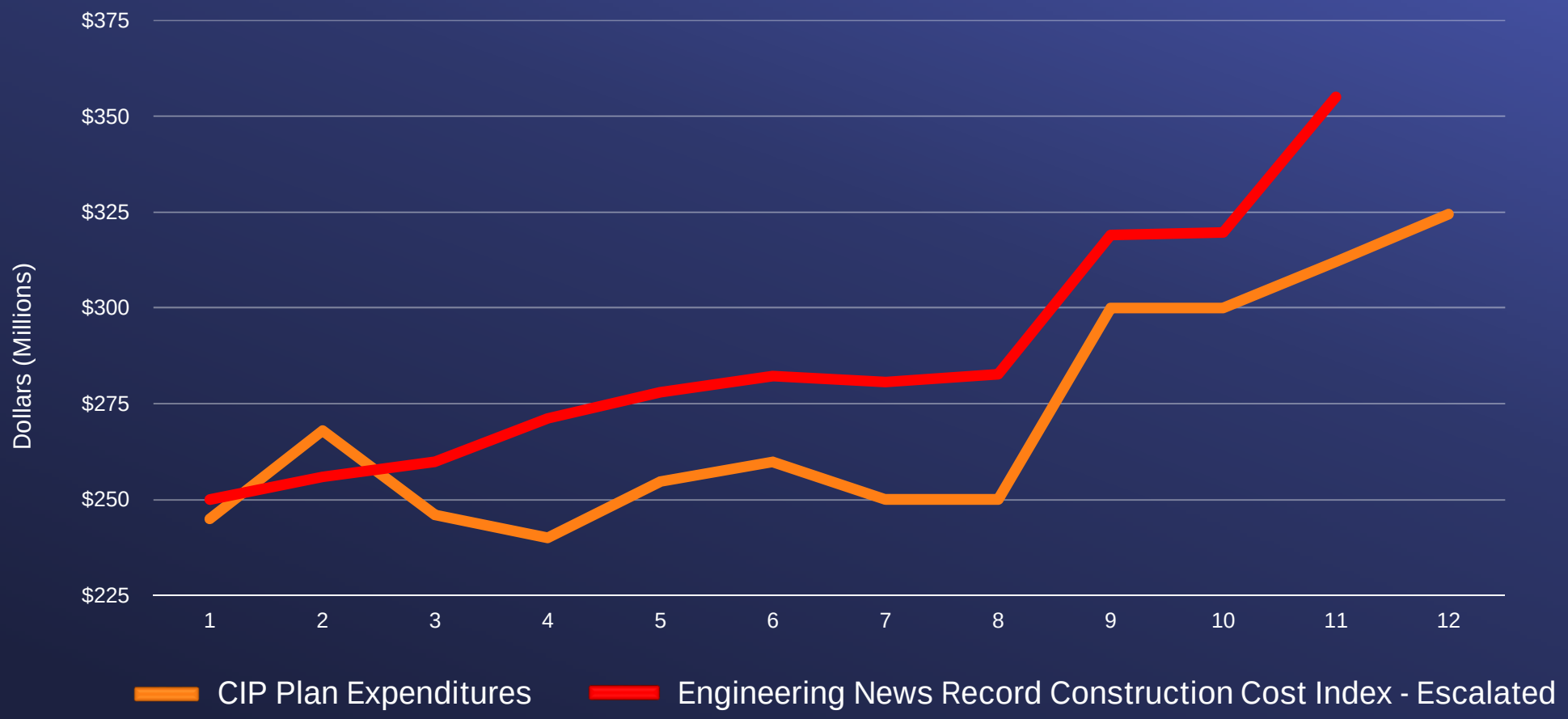
Projects w/ Construction Costs Less Than $3 Million

	Final Design % of Construction	Inspection % of Construction
Target Performance Range	9% to 15%	9% to 15%
Actual Performance	11.5%	25.6%

Minor Capital Projects

Fiscal Year Appropriation	2018/19 2019/20	2020/21 2021/22	2022/23 2023/24
Amount Appropriated	$15.5 M	$20.0 M	$15.0 M
Amount Allocated	$13.6 M	$16.5 M	$13.6 M
Expenditures Through March 2024	$12.4 M	$9.4 M	$4.5 M
% of Work Complete	97%	67%	32%

CIP Planned Expenditures and Cost Indexes Adjusted for Inflation




THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering, Operations & Technology Committee

Celebrating the History of Water Quality at Metropolitan

Item 6b

June 10, 2024

Item 6b

History of Water Quality

Subject

The History of the Water Quality Section

Purpose

Celebrating 50 years since the formation of Metropolitan's Water Quality and Research Branch in response to passage of the Safe Drinking Water Act in 1974

Next Steps

Another 50 years of Water Quality excellence, compliance, and innovation

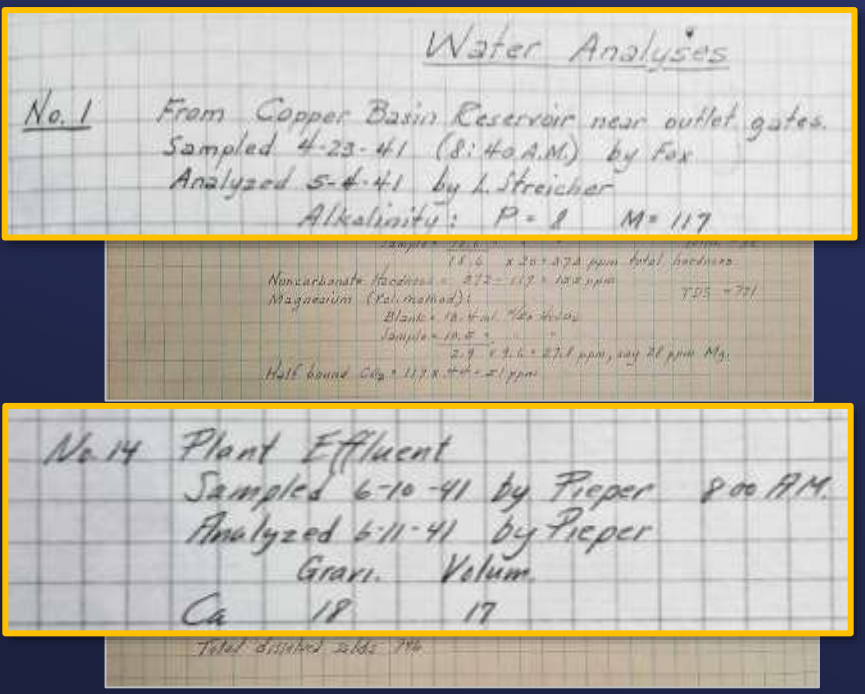
History of
Water Quality

Softening and Filtration Plant, 1940s (Weymouth Plant)

Water Quality Before 1974

- 6,000 yrs. ago: Water treatment first referenced in ancient Greece to control bad tastes and odors
- 1700s: Filtration started in Europe
- 1854: John Snow - cholera outbreak
- 1908: Chlorine disinfection - New Jersey
- 1914: First U.S. federal drinking water standards
- 1941: Metropolitan's Softening and Filtration Plant started operation
- 1962: Expanded federal standards - 28 substances
- 1970: U.S. Environmental Protection Agency

Water Quality Testing at Metropolitan, 1941 & 1942

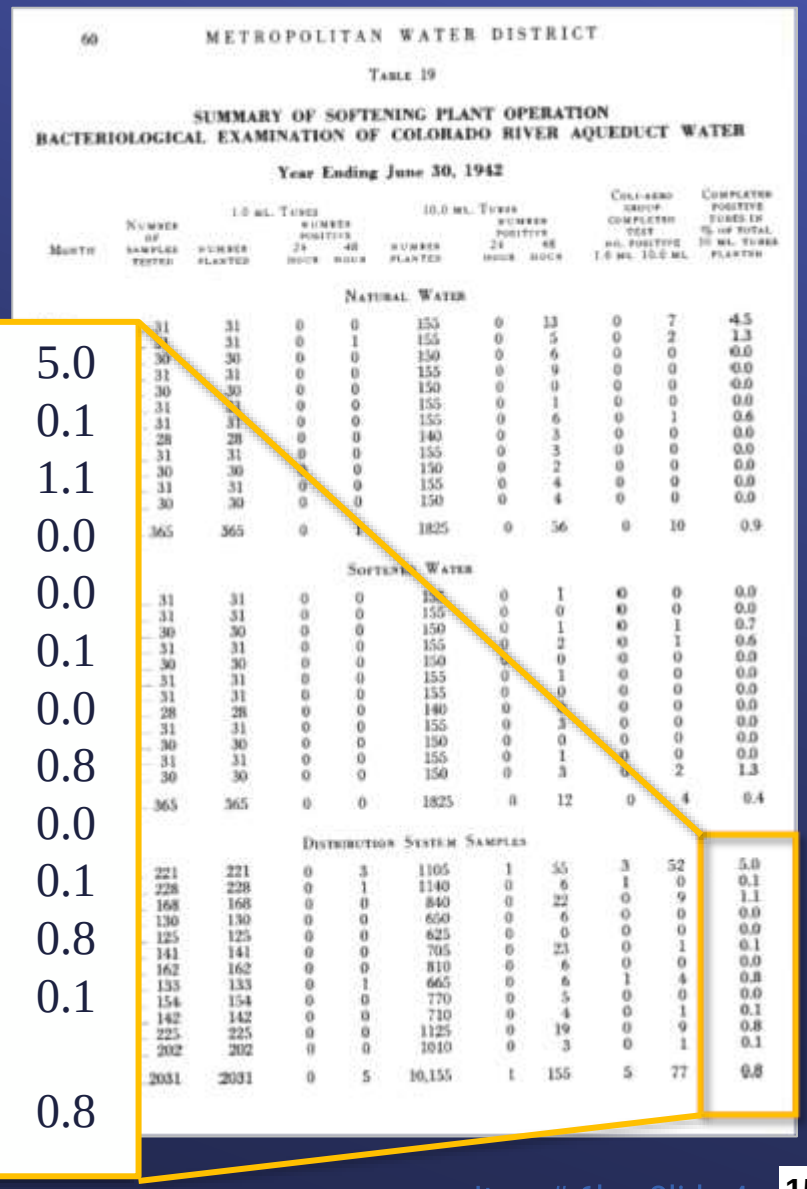


Water quality samples No. 1 and No. 14

Fourth Annual Report, 1942

As a precautionary measure under war conditions, the water is sampled throughout the distribution system to be examined especially for poison and bacterial contamination

Table 19 shows that the water received and delivered by the District at all times was decidedly better in bacterial quality than required by the U.S. Public Health Service



60 METROPOLITAN WATER DISTRICT

TABLE 19

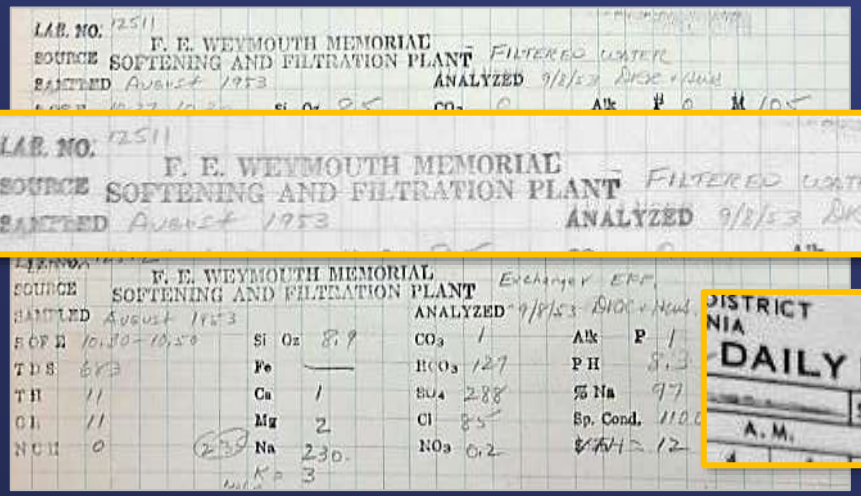
SUMMARY OF SOFTENING PLANT OPERATION
BACTERIOLOGICAL EXAMINATION OF COLORADO RIVER AQUEDUCT WATER

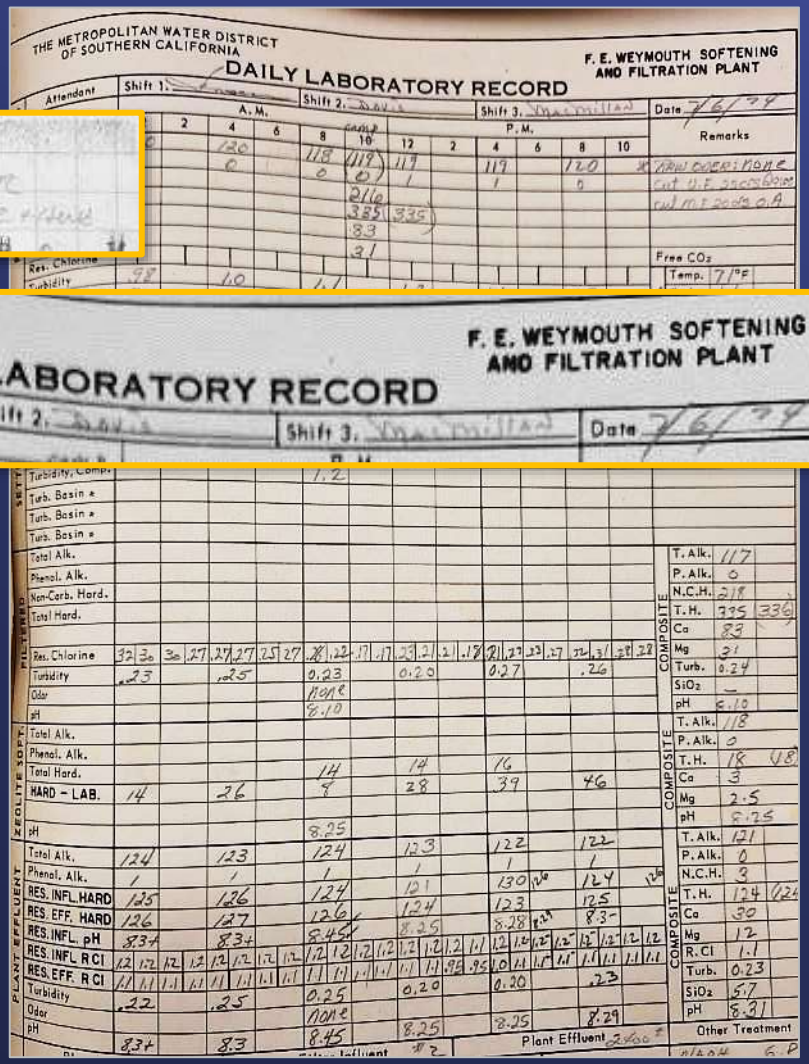
Year Ending June 30, 1942

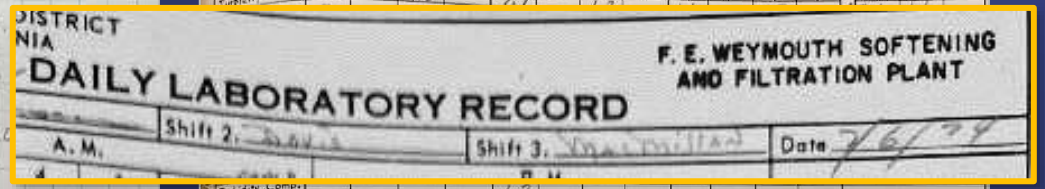
Month	Number of samples tested	1.0 ml. Tubes: Number planted	1.0 ml. Tubes: Number positive 24 hours	1.0 ml. Tubes: Number positive 48 hours	10.0 ml. Tubes: Number planted	10.0 ml. Tubes: Number positive 24 hours	10.0 ml. Tubes: Number positive 48 hours	Coli-aero group completed test: No. positive 1.0 ml.	Coli-aero group completed test: No. positive 10.0 ml.	Completed positive tubes in % of total 10 ml. tubes planted
Natural Water										
	31	31	0	0	155	0	13	0	7	4.5
	31	31	0	1	155	0	5	0	2	1.3
	30	30	0	0	150	0	6	0	0	0.0
	31	31	0	0	155	0	9	0	0	0.0
	30	30	0	0	150	0	0	0	0	0.0
	31	31	0	0	155	0	1	0	0	0.0
	31	31	0	0	155	0	6	0	1	0.6
	28	28	0	0	140	0	3	0	0	0.0
	31	31	0	0	155	0	3	0	0	0.0
	30	30	0	0	150	0	2	0	0	0.0
	31	31	0	0	155	0	4	0	0	0.0
	30	30	0	0	150	0	4	0	0	0.0
	365	365	0	1	1825	0	56	0	10	0.9
Softened Water										
	31	31	0	0	155	0	1	0	0	0.0
	31	31	0	0	155	0	0	0	0	0.0
	30	30	0	0	150	0	1	0	1	0.7
	31	31	0	0	155	0	2	0	1	0.6
	30	30	0	0	150	0	0	0	0	0.0
	31	31	0	0	155	0	1	0	0	0.0
	31	31	0	0	155	0	0	0	0	0.0
	28	28	0	0	140	0	0	0	0	0.0
	31	31	0	0	155	0	3	0	0	0.0
	30	30	0	0	150	0	0	0	0	0.0
	31	31	0	0	155	0	1	0	0	0.0
	30	30	0	0	150	0	3	0	2	1.3
	365	365	0	0	1825	0	12	0	4	0.4
Distribution System Samples										
	221	221	0	3	1105	1	55	3	52	5.0
	228	228	0	1	1140	0	6	1	0	0.1
	168	168	0	0	840	0	22	0	9	1.1
	130	130	0	0	650	0	6	0	0	0.0
	125	125	0	0	625	0	0	0	0	0.0
	141	141	0	0	705	0	23	0	1	0.1
	162	162	0	0	810	0	6	0	0	0.0
	133	133	0	1	665	0	6	1	4	0.8
	154	154	0	0	770	0	5	0	0	0.0
	142	142	0	0	710	0	4	0	1	0.1
	225	225	0	0	1125	0	19	0	9	0.8
	202	202	0	0	1010	0	3	0	1	0.1
	2031	2031	0	5	10,155	1	155	5	77	0.8

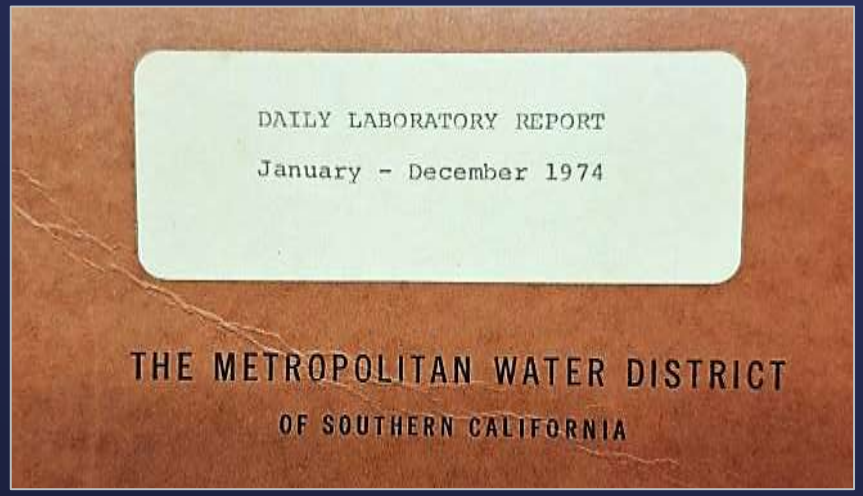
5.0
0.1
1.1
0.0
0.0
0.1
0.0
0.8
0.0
0.1
0.8
0.1
0.8

Water Quality Testing at Metropolitan up to 1974









1950s Research

Laboratory investigations have been continued to find the most satisfactory means for conditioning the water to reduce scaling and minimize corrosion.

Laboratory studies using artificially introduced fission products indicate that normal District softening plant operation procedures…can effectively remove radioactive contamination from the treated water.

The Safe Drinking Water Act

SDWA
1974

Senator Warren Magnuson
Washington State, 1944-1981

- 1973: Senator Warren Magnuson proposed the Safe Drinking Water Act

  …to address the lack of decisive federal regulations of contaminants in water supplies

- Signed by President Ford on December 16, 1974
- Authorized EPA to establish minimum health related standards to protect tap water
  - 22 regulated contaminants - coliform bacteria, metals, organic pesticides, turbidity, and radiological contamination
- Compliance required by June 24, 1977

…establish standards and treatment requirements for public water supplies, finance drinking water infrastructure projects, promote water system compliance…

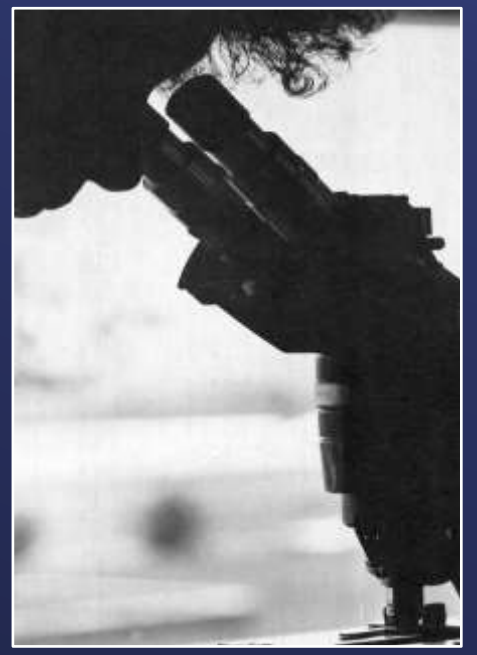
The Water Quality & Research Branch, 1974

- Formed by action of Metropolitan's Board of Directors in July 1974

  "To implement the system-wide surveillance program, a Water Quality and Research Branch was created with responsibility for coordinating water quality monitoring throughout the aqueduct and distribution system"

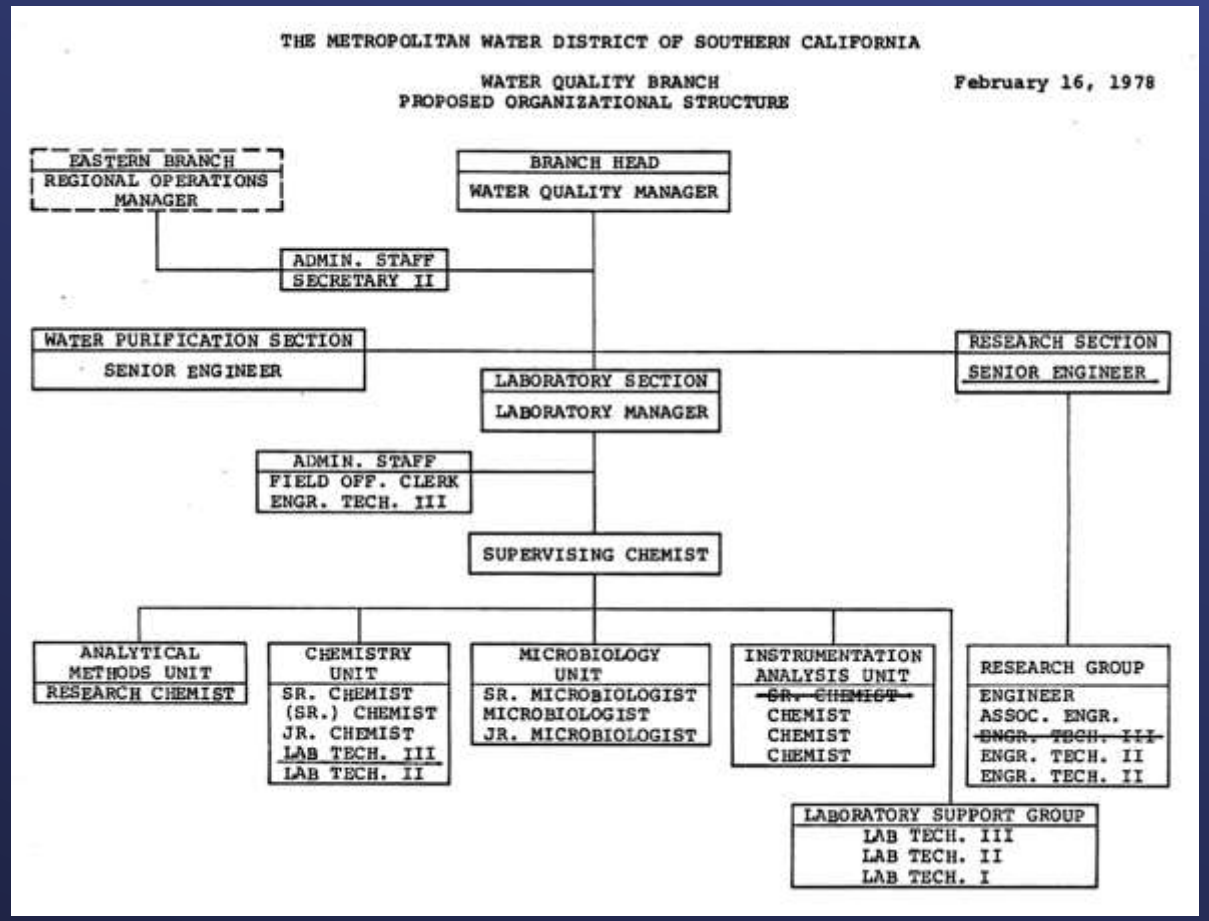
- Ten staff who were previously assigned to the Water Purification Branch of the Operations Division

Harold Pearson, WQ Engineer
Harold Sundberg, Sr. Res. Chemist
Janice Risner, Secretary
Bob Cohen, Research Chemist
Bill Mathews, Maintenance Man
Bob Jones, Sr. Chemist
Marshall Davis, Junior Chemist
Paul Evans, Sr. Chemist
Dan Bowers, Chemist
Dean Rauscher, Engineering Tech



Constant testing assures water quality (Annual Report for 1974)

Water Quality Branch Organizational Changes

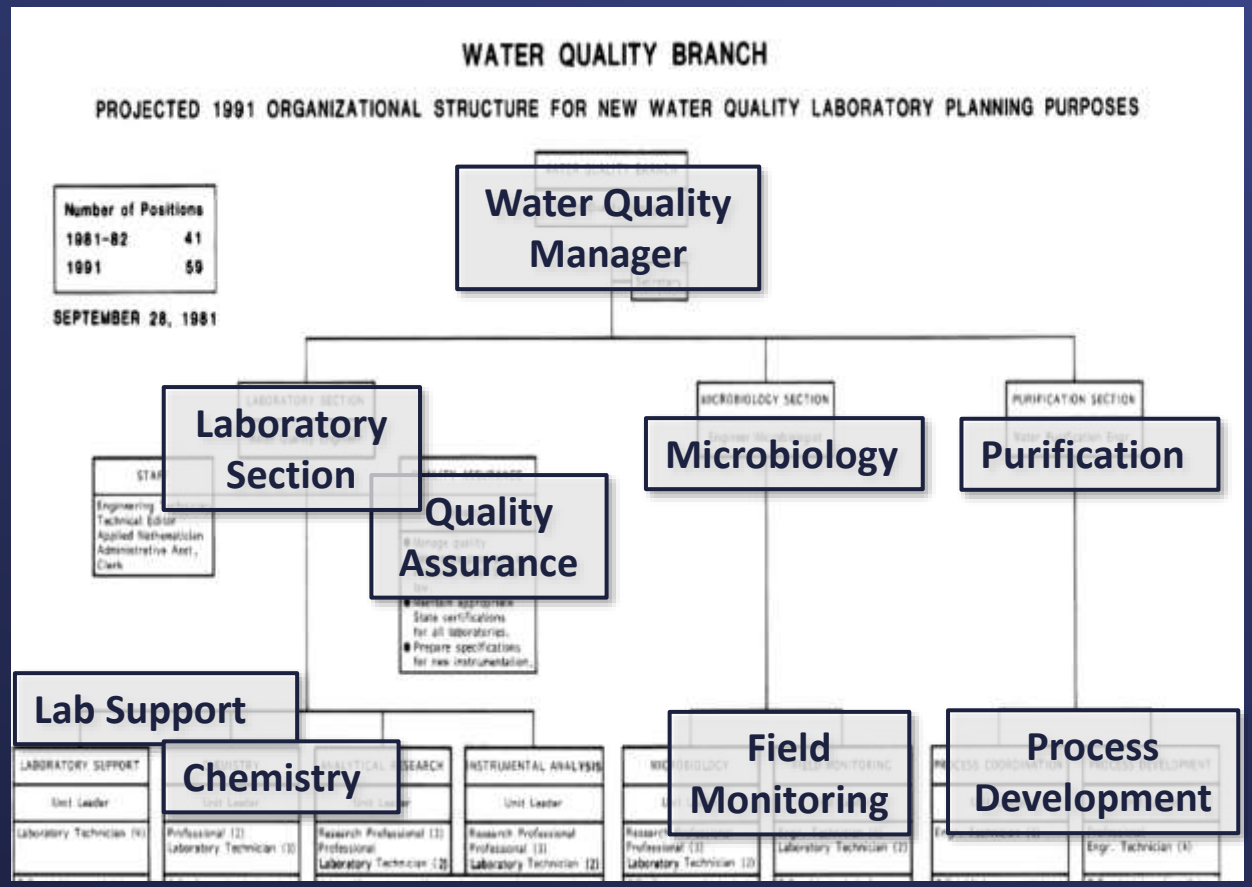


1978 – 28 staff

Water Quality Staff, 1976 and 1980

Water Quality Staff, 1982

Water Quality Branch Organizational Changes



1981 – 41 staff but projecting 59 by 1991

Water Quality Staff, 1983

Home of the Water Quality Laboratory

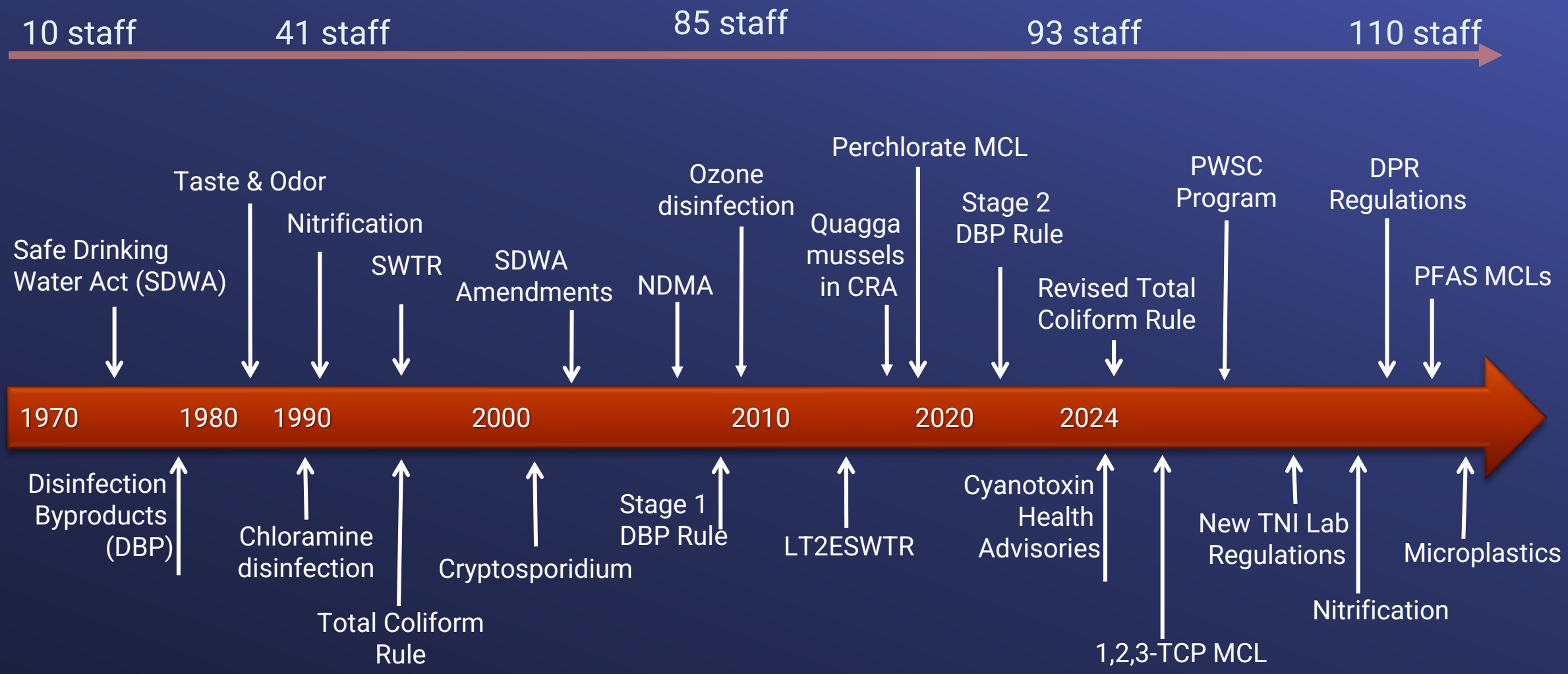
1974
Water Quality & Research Branch
Weymouth Bldg.
10 staff
22 regulated contaminants

1976
Water Quality & Research Branch
Materials Testing Lab
19 staff
22 regulated contaminants

1985
Water Quality Branch
New Water Quality Lab
47 staff
23 regulated contaminants

1998
Water Quality Division
Expanded WQ Lab
87 staff
102 regulated contaminants

Water Quality's Expanded Functions



Home of the Water Quality Laboratory – Another 50 Years

Engineering, Operations, & Technology Committee – 2023 Water Quality Lab Inspection Trip

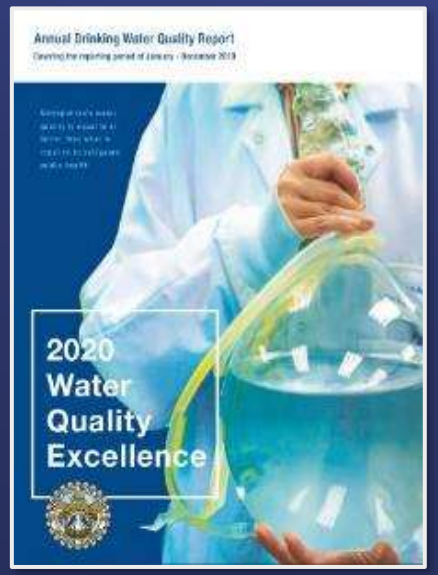
Artist Conceptual Renderings of Upgraded WQ Lab Front Entrance and Lobby

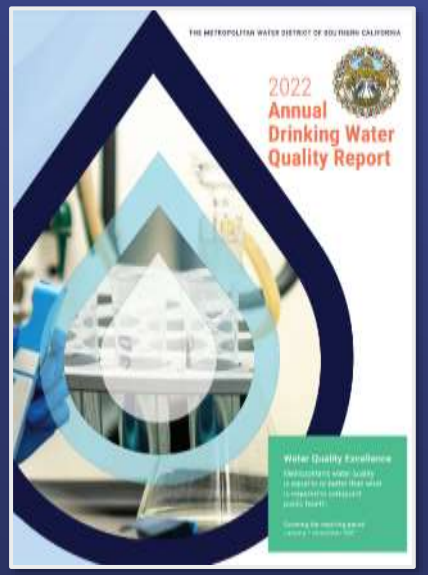
2024
Water Quality Section
110 staff
122 regulated contaminants
Lab upgrade preliminary design

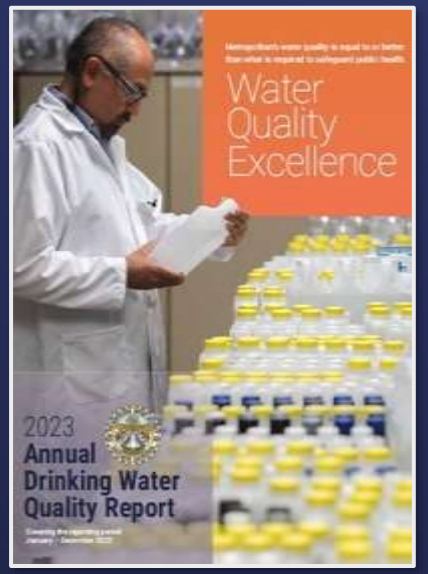
Water Quality's Mission

To safeguard the public's drinking water

100% Compliance With Drinking Water Regulations







- About 70,000 samples per year
- More than 400 constituents monitored
- Over 200,000 test results per year

Metropolitan's water quality meets or surpasses the standards required to safeguard public health

Research and Innovation





1980s
- DBPs
- Chloramine disinfection
- Taste & Odor
- Nitrification

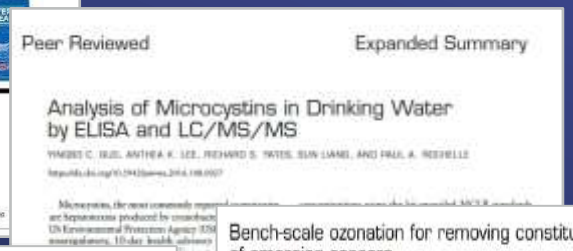
1990s
- Ozone disinfection
- *Cryptosporidium*

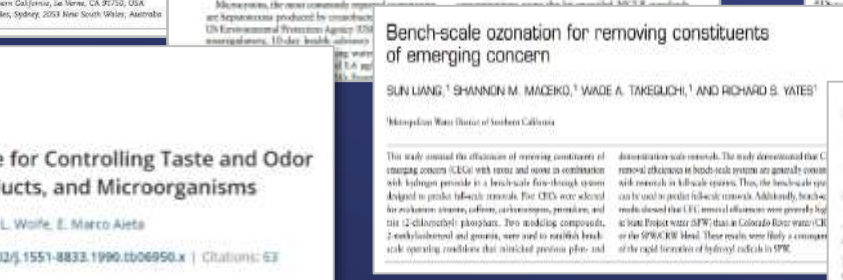
2000s
- Water security
- Desalination
- Quagga mussels

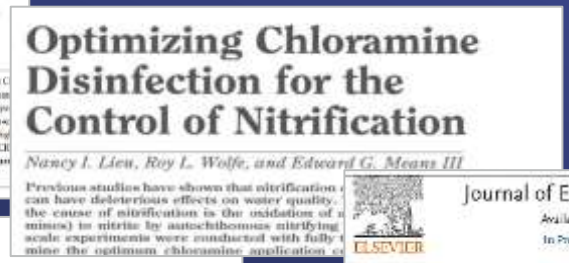
2010s
- Cyanotoxins
- Nitrosamines

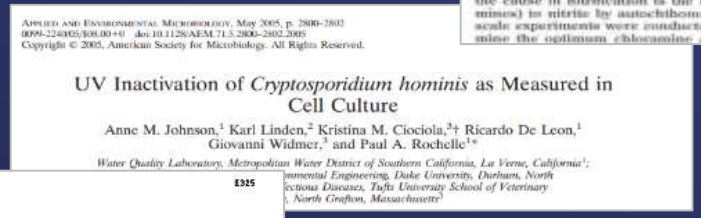
2020s
- PWSC
- Emerging contaminants

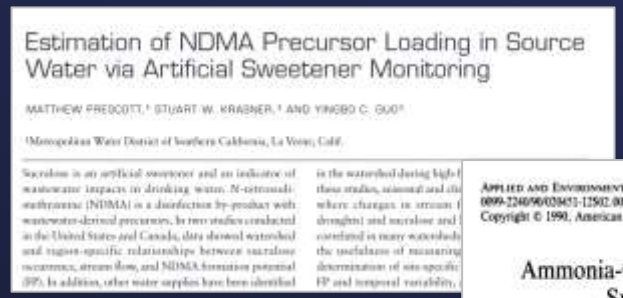
Published Research (>400 technical publications)

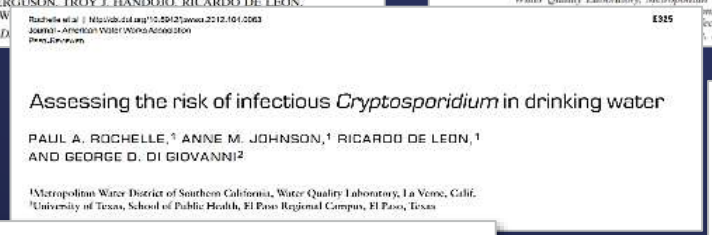


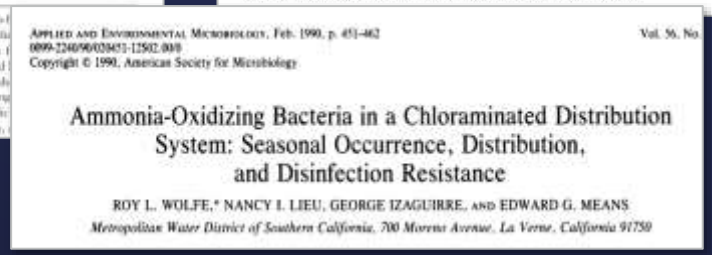


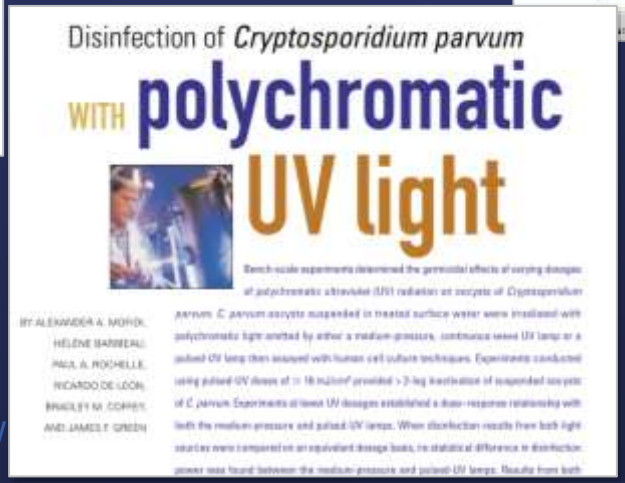










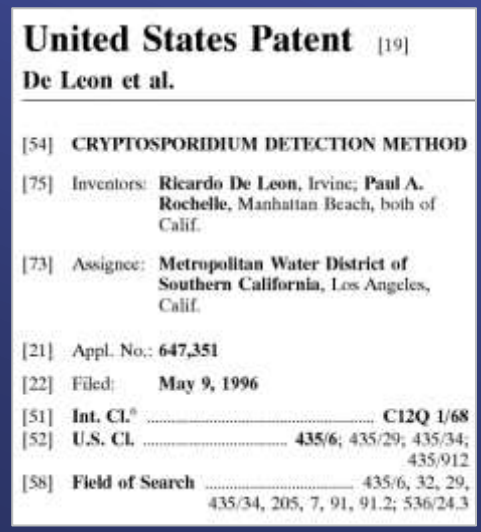


Water Quality Tools

Closed Loop Stripping Analysis

SCUBA Diving

Flavor Profile Analysis



United States Patent [19]
De Leon et al.

[54] CRYPTOSPORIDIUM DETECTION METHOD

[75] Inventors: Ricardo De Leon, Irvine; Paul A. Rochelle, Manhattan Beach, both of Calif.

[73] Assignee: Metropolitan Water District of Southern California, Los Angeles, Calif.

[21] Appl. No.: 647,351

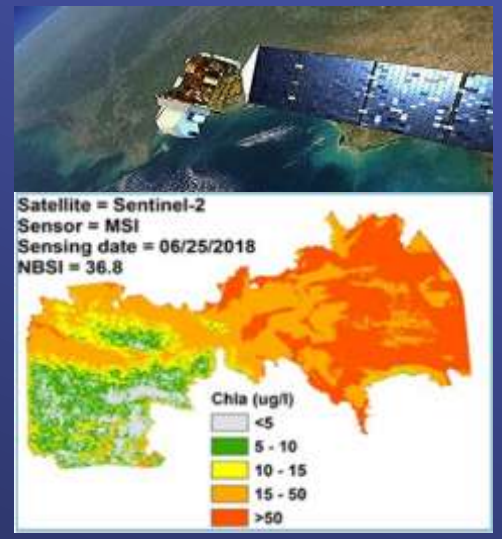
[22] Filed: May 9, 1996

[51] Int. Cl.[6] C12Q 1/68

[52] U.S. Cl. 435/6; 435/29; 435/34; 435/912

[58] Field of Search 435/6, 32, 29, 435/34, 205, 7, 91, 91.2; 536/24.3

Molecular Pathogen Detection



Lake Monitoring by Satellite

Analytical methods development for:

- Disinfection byproducts
- Taste & odor compounds
- Cryptosporidium detection and infectivity
- Virus quantification
- Cyanotoxin detection and identification

Water Quality 50 Year Anniversary

Redesigned Lobby at Water Quality Laboratory

Member Agency Water Quality Managers Meeting

Retiree Lunch

Additional events to commemorate 50-year anniversaries of Water Quality Section and SDWA planned for later in the year

Continuing the Legacy of Water Quality

Celebrating 50 YEARS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

WATER QUALITY LAB

1974 – 2024


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering, Operations, & Technology Committee

Report on U.S. Environmental Protection Agency Climate Pollution Reduction Grant Memorandum of Agreement with Coalition Members to fund proposed Targeted Zero-Emission Vehicles and Infrastructure for Water Utilities Program

Item 6c
June 10, 2024

Item 6c

Overview of Report

Subject

Report on U.S. Environmental Protection Agency (EPA) Climate Pollution Reduction Grant Memorandum of Agreement with Coalition Members

Purpose

Provide update on grant funding opportunity for Zero-Emission Vehicles (ZEVs) and Infrastructure for Water Utilities Program

Next Steps

Awaiting grant award notification

Environmental Protection Agency

2024 Climate Pollution Reduction Grant Overview

- Authorized by the Inflation Reduction Act
- January 2024: EPA released Notice of Funding Announcement
- April 1, 2024: Application due
- $4.6 B in funding available
- Grant awards in the amount of $2 M to $500 M
- No match requirements
- October 1, 2024: Work start date
- Up to five years to implement the program

Environmental Protection Agency

2024 Climate Pollution Reduction Grant Requirements

- Support the goals of local or state's Priority Climate Action Plans created with EPA planning grant funds
- Green House Gas (GHG) emission reductions
- Justice40 – Climate & Economic Justice Screening Tool or Climate Justice Screen from EPA
  - Metropolitan's service area is 37.5 percent disadvantaged
- Outreach to disadvantaged communities

California Regulatory Timeline & Impacts to Fleet Vehicles

Medium Duty, Heavy-Duty & Construction

Diverse Pool of Fleet Assets

Environmental Protection Agency CPRG Proposed Program

Unique Coalition Approach

- March 2024: Invitation to join coalition sent to all Metropolitan member agencies
- Coalition structure with ten other water utilities & Metropolitan as the lead applicant

Environmental Protection Agency CPRG Proposed Program

Scope of Program

- Marginal cost of 440 medium-duty & heavy-duty trucks
- GHG emission reduction: over 41,000 MT CO_2 e through 2045
- Metropolitan staff capacity
- Training & education
- Monitoring & evaluation
- Final report with details for a reproducible program

Proposed Coalition Program Grant Funding Requested

Budget Item	
440 ZEVs marginal cost	$35,494,207
Chargers cost & installation	0
Personnel - Metropolitan fleet, engineering & outreach staff	5,028,299
Personnel fringe benefits	3,997,498
Travel - audits, site inspections, outreach events & conferences	386,794
Supplies	25,000
Contractual - consultant to manage reimbursements, track performance & compile data for final report	3,676,340
Total	$48,608,138

ZEVs for Water Utilities Program

Program Benefits

- GHG emission reduction for the residents of the Coalition
- Reimbursement of marginal cost of medium & heavy-duty vehicles
  - 280 vehicles ~ $20 M for Metropolitan
- Creation of a regional ZEVs workgroup
- Funding to support the purchase of the vehicles, training, tracking & infrastructure development
- Provides a pioneering, replicable & scalable model

Next Steps

- Submit a Coalition Memorandum of Agreement to EPA by July 1, 2024
- Award announcement expected by September 2024
- Board approval to enter into agreement with EPA & accept funds, if awarded


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Engineering Services Group

- **Engineering Services Monthly Activities for May 2024**

Summary

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

- Distribution System Reliability Program
- Prestressed Concrete Cylinder Pipe (PCCP) Reliability Program
- Colorado River Aqueduct (CRA) Reliability Program
- Treatment Plant Reliability Program
- System Reliability Program
- Safety of Dams
- Value Engineering Program
- Pure Water Southern California Program
- System Flexibility/Supply Reliability
- Partner with Interested Parties and the Communities We Serve

Purpose

Informational

Attachments

Attachment 1: Detailed Report - Engineering Services Group's Monthly Activities for May 2024

Date of Report: 6/10/2024

Engineering Services Key Activities Report

May 2024

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

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

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

Distribution System Reliability Program

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

- Garvey Reservoir Rehabilitation—This project will replace the aging reservoir floating cover and liner, structurally strengthen the inlet/outlet tower, upgrade the on-site water quality laboratory building, rehabilitate the junction structure, and replace the existing standby generator and a portion of the security perimeter fence. The draft Environmental Impact Report (EIR) for this rehabilitation effort, is scheduled to be released in July 2024, which will be followed by a presentation to the Monterey Park City Council. Final design is approximately 28 percent complete and is scheduled to be complete in April 2025.
- Foothill Hydroelectric Plant and Control Building Seismic Upgrade—This project rehabilitates and strengthens the Foothill Hydroelectric Plant and Control Building to withstand a major earthquake and retain its functionality as an essential facility. A construction contract was awarded in April 2023. The contractor completed the structural strengthening of the roof and began installation of shoring soldier piles around the building. Construction is approximately 55 percent complete and is scheduled to be complete in December 2024.

- Upgrades at Three Sepulveda Feeder Structures—This project replaces deteriorated electrical components, makes other upgrades at three Sepulveda Feeder underground structures, and installs two blind flanges after removing a spool on the West Valley Feeder No. 1. The contractor completed installation of the power pedestal, lighting, and receptacles in all vaults and cutover of electrical devices to the new power pedestal. Construction is complete and a notice of completion was issued in May 2024.
- Santa Monica Feeder Cathodic Protection—This project will install cathodic protection for the Santa Monica Feeder to address corrosion observed during a 2018 inspection of the pipeline. This project will install two 400-foot-deep anode wells along with rectifiers and remote monitoring equipment along the feeder. The project has been advertised and a construction contract is scheduled for board award in June 2024.

Prestressed Concrete Cylinder Pipe (PCCP) Reliability Program

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

- Allen-McColloch Pipeline Urgent PCCP Rehabilitation—This project will perform urgent relining of approximately three miles of distressed PCCP segments of the Allen-McColloch Pipeline (AMP) that were discovered during an inspection in 2023. Relining of the AMP is being performed in stages to minimize impacts to member agencies by installing a bulkhead and returning the northern portion of the pipeline to service while the southern portion remains under construction. Stage 1 includes carbon fiber reinforced polymer (CFRP) lining of four segments and steel relining of approximately 4,500 feet of pipeline. Construction of the CFRP and 2,100 feet of steel liner within the northern portion of the AMP was successfully completed in April 2024. The remaining 2,300 feet of steel liner installation in the southern portion is underway and will be completed by October 2024. Stage 2 work consists of 12,600 feet of steel liner installation and appurtenant work. The Board awarded the Stage 2 contract in May 2024, and pipeline work is planned to be complete by December 2024.
- Valve Warehouse—This project constructs an 18,160 square-foot pre-engineered metal building on a reinforced concrete slab at Lake Mathews for valve and equipment storage related to the PCCP relining program. The contractor has completed the assembly of the building structure, the water line tie-in for the building, and installation of the fire water pipe and building sprinkler system. Construction is 98 percent complete and is scheduled to be complete by June 2024.
- Electromagnetic Inspections—Regular inspections of the PCCP feeders are a critical step in evaluating the condition of each pipeline and assist staff in prioritizing the relining work on each feeder. This project conducts the fifth cycle of electromagnetic and visual inspections of Metropolitan's approximate 146.4 miles of PCCP pipelines. The San Jacinto Pipeline was inspected in March 2024. The results were recently analyzed and indicate that no urgent repairs are needed.

Colorado River Aqueduct (CRA) Reliability Program

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

- Conduit Structural Protection—This project consists of installing new reinforced concrete slab protection crossings over portions of the cut-and-cover conduits on the Colorado River Aqueduct. Metropolitan's Board awarded a construction contract in April 2024. The contractor is currently performing grading and installing protective crossings and retaining walls at the remaining two sites, as well as installing load restriction signs and Caltrans markers at all sites. Construction is 90 percent complete. While the contractual completion date is January 2025, all work is currently expected to be complete ahead of schedule in June 2024.
- Overhead Cranes—This project consists of replacing the overhead bridge cranes and retrofitting the support structures within the pump bays located at all five of Metropolitan's Colorado River Aqueduct pumping plants. The contractor has completed the installation of the new cranes at the Gene, Iron Mountain, Eagle Mountain, and Hinds pumping plants. Installation of the new crane at the Intake pumping plant began in April 2024. Testing and startup of the crane at Intake is underway. Construction is 97 percent complete and is scheduled to be complete in June 2024.
- Main Pump Access Improvements—This project will enhance access for maintenance activities on the main pumps at each of the five CRA pumping plants. Improvements will consist of new platform systems, fixed ladders, elevated walkways, and guardrails for pump plant staff to perform both routine and as-needed maintenance. Preliminary design is 60 percent complete and is scheduled to be complete in December 2024.

Conduit Structural Protection—Concrete girder installation at aqueduct tunnel portal access road

Treatment Plant Reliability Program

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

- Weymouth Basins 5–8 and Filter Building No. 2 Rehabilitation—This project rehabilitates major mechanical and structural components of Basins 5–8 and Filter Building No. 2 at the Weymouth plant, including the flocculation/sedimentation equipment, sludge pumps, baffle boards and walls, launders, inlet gates, and outlet drop gates. Rehabilitation work also includes seismic upgrades of basin walls and inlet channel, hazardous material abatement, and replacement of filter valves and actuators in Filter Building No. 2. The contractor completed all rehabilitation work in Basins 7 and 8, and continued construction activities in Basins 5 and 6 and Filter Building No. 2. Overall construction for this contract is approximately 65 percent complete and is scheduled to be complete in June 2025.
- Weymouth Administration Building Upgrades—This project upgrades the Weymouth Administration Building to withstand a significant earthquake. The planned upgrades include structural strengthening consistent with current seismic standards for essential facilities as well as accessibility and fire/life safety improvements, architectural modifications near the areas of structural upgrades, and improvements associated with the preservation of historic architectural features. Final design is approximately 45 percent complete and is scheduled to be completed in April 2025.
- Mills Electrical Upgrades—This project upgrades the electrical system with dual-power feeds to key process equipment to comply with current codes and industry practice, improve plant reliability, and

enhance worker safety. Stage 1 construction is complete. Stage 2 improvements will add a second incoming 12 kV service from Riverside Public Utilities, reconfigure the existing 4160-volt switchgear, and replace the standby generator switchgear and the emergency generator programmable logic controller. The contractor completed installation of the electrical conduits at the standby generator building, cable trays and fixtures inside the ORP Switchgear Building, and continued the fiber optic cable and electrical conduit installation. Construction is approximately 55 percent complete and is scheduled to be complete in August 2025.

- Jensen Ozone PSUs Replacement—This project rehabilitates the ozone generation system at the Jensen plant by replacing four existing ozone power supply units (PSUs) and four sets of generator dielectrics. The project also makes required modifications to the associated electrical, control, and cooling water systems. Metropolitan's Board awarded a construction contract in June 2022. All PSUs and dielectrics have been manufactured and delivered. Replacement of the PSUs has been staged to ensure continuous use of ozone during construction. The contractor completed replacement of two PSUs and the ozone generator dielectrics and is currently finishing installation and startup testing of the two remaining PSUs and PSU chiller pipeline modifications. Construction is approximately 95 percent complete and is scheduled to be complete in July 2024.

Termination of Power Supply Control Wires

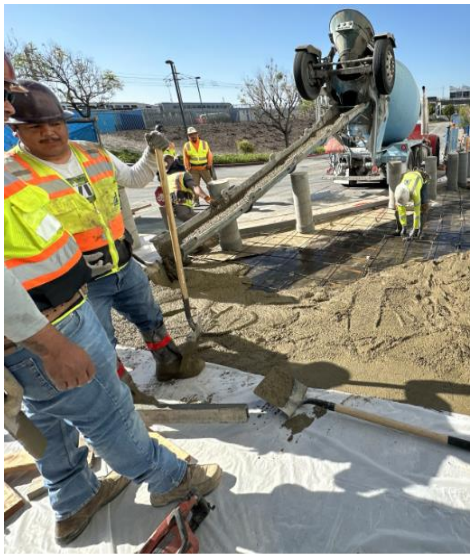
Weymouth Basins 5–8 and Filter Building No. 2 Rehabilitation Coating abatement at Basin 6 clarifier bridges

Weymouth Basins 5–8 and Filter Building No. 2 Rehabilitation
Dismantling backwash piping at filter gallery for installation of new 30-inch backwash valve

System Reliability Program

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

- Headquarters Physical Security Upgrades—This project implements comprehensive security upgrades for the Metropolitan Headquarters Building. These upgrades are consistent with federally recommended best practices for government buildings. The work has been prioritized and staged to minimize rework and impacts on day-to-day operations within the building. Stage 1 work is complete and provides enhanced security related to perimeter windows and doors. Stage 2 work is complete and provides security system upgrades inside the building with a focus on the main entry rotunda area, boardroom, executive dining lounge, and security control room. Construction of Stage 3 improvements is underway and will provide security system upgrades around the perimeter of the building. The contractor continued installation of the ornamental fence within the courtyard and concrete placement for the fixed bollards. Construction is 80 percent complete and is scheduled to be complete in August 2024.
- Headquarters Building Fire Alarm and Smoke Control System Upgrades—This project upgrades the Metropolitan Headquarters Building fire life safety systems, which includes replacement of the fire detection and alarm system and HVAC system improvements for smoke control. The fire alarm and smoke control systems in Metropolitan's Headquarters Building provide detection, notification, and control of building functions so that occupants and visitors can safely exit in the event of a fire. The contractor continued final testing and sign-off of the fire alarm and smoke control systems by the LAFD and Los Angeles Department of Building and Safety. Construction is 99 percent complete and will be complete upon final certification by these agencies.
- SCADA System Upgrades—This project will upgrade Metropolitan's entire control system in incremental stages, spanning the Colorado River Aqueduct, the five water treatment plants, and the conveyance and distribution system. The first stage of this project replaces the control system at the Mills plant, starting with a pilot effort on one of the plant's remote terminal units to demonstrate the proposed technology and the consultant's approach for the plant and the overall project. Staff continued evaluating the results of the recently installed pilot equipment. The pilot phase is approximately 99 percent complete and is scheduled to be complete in July 2024. The system upgrades at the Mills plant are scheduled to be complete in October 2026.



Headquarters Physical Security Upgrades—Exterior Security-Slab Concrete Placement Bollards

Protecting the Public and Metropolitan's Assets—Safety of Dams

Metropolitan and Dam Safety Program Manager Bashar Sudah were recognized for dam safety excellence during the 2024 United States Society on Dams (USSD) annual conference in Seattle during the last week of April. USSD is the one of the largest dam associations in the US, and the conference was attended by approximately 800 dam safety professionals from the US and around the world. Both Bashar and Metropolitan received USSD's 2024 annual award for Public Safety, Security, and Emergency Management.

Dam Safety Program Manager at USSD Conference

Value Engineering Program

CRA Power Cable Units 6–9 Replacement—Contracting Workshop

In early May, Engineering completed an internal Contracting Workshop to determine the best contracting strategy and construction work schedule to successfully complete the CRA Power Cable Units 6–9 Replacement Project. This 3-day hybrid workshop, including a trip to the Hinds Pumping Plant, involved Metropolitan staff from Engineering, General Counsel, and Operations.

Hinds Pumping Plant Switch House

Diemer Water Treatment Plant Filter & Chemical Systems Rehab—VE-CR Workshop

In late May, Engineering began a joint Value Engineering (VE) and Constructability Review (CR) workshop for four projects at the Diemer Water Treatment Plant. Three projects, including (1) Filter Rehabilitation, (2) Filter Valve Actuator Refurbishment, and (3) Chemical Tank Farm Improvements, are in final design and are expected to be in construction concurrently; the fourth project, Chemical Feed System Improvements, is in preliminary design. This VE-CR workshop examined strategies to best coordinate these four projects over three construction contracts with overlapping construction schedules, limited access, and available laydown areas. The VE-CR team included Metropolitan and consultant staff specializing in construction management, construction costs, and scheduling. This 5-day hybrid workshop included on-site meetings at the Diemer plant.

Robert B. Diemer Water Treatment Plant

Adapt to changing climate and water resources

Pure Water Southern California

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

- Demonstration Testing: Demonstration testing began in 2019 with N-only tertiary membrane bioreactor (tMBR) testing completed in 2021 and secondary MBR (sMBR) testing completed in 2023. Modifications for tMBR optimization testing have been completed. The system is online and currently operating in the nitrification/denitrification mode.
- Environmental Planning: The Environmental Planning Phase began in 2020 with the goal of preparing an Environmental Impact Report (EIR) for approval in 2025. Various technical studies have been prepared to support the effort. The draft EIR is currently scheduled for publication in late 2024 or early-2025, with board certification of the document in the third quarter of 2025. Staff continues to review individual draft technical sections and to prepare the few remining technical studies.
- Program Management: PWSC program management efforts lead the planning for the Program, including project controls, scheduling, budget development, risk management, coordination with Program partners and stakeholders, grants and funding, and preparation of various plans and studies.
    - A PWSC cost estimate update was presented to the PWSC/Regional Conveyance Subcommittee in November 2023 with a cost estimate methodology technical memorandum documenting cost methodology details developed for the AWPF and conveyance systems and provided to the Subcommittee in January 2024.
    - A draft construction sequencing memorandum has been prepared to identify the milestones and construction contracts needed to meet the projected completion of the AWPF, the backbone pipeline, and full delivery for IPR in 2032. The memorandum will be finalized after the impacts of the Large-Scale Water Recycling (LSWR) grant and Los Angeles County Sanitation Districts' (LACSD's) MBR responsibilities are determined.
    - An LSWR grant application requesting $125 million was submitted to the US Bureau of Reclamation (USBR) in November 2023. Successful applicants are expected to be notified in May 2024. To receive funding, Metropolitan prepared and submitted a feasibility study in January 2024 to meet the USBR requirements. A single comment was received, and a response has been submitted.

- A summary of LSWR funding and budget impacts was presented to the Subcommittee in March 2024. Up to $500 million in total PWSC spending will be required if the full $125 million grant request is provided.

- Advanced Water Purification Facility: The AWPF will purify wastewater from LACSD's A.K Warren facility (formerly the JWPCP) using membrane bioreactors (MBRs), reverse osmosis (RO), and ultraviolet/advanced oxidation (UV/AOP).
    - A draft conceptual facilities plan has been prepared to document key assumptions of AWPF components. The draft plan has been reviewed and a final draft is currently being prepared.
    - The progressive design build implementation methodology will be employed to design and construct the treatment plant facilities.
    - A proposed Request for Qualifications (RFQ) from qualified firms to design and construct the AWPF is scheduled for the third quarter of 2024. Authorization of this procurement is planned for late 2024, pending award of federal grant funds.
    - The AWPF team has finalized the Method of Services (MOS) study agreements with Southern California Edison (SCE) for SCE to evaluate SCE infrastructure needed to meet AWPF power requirements. The MOS investigation should be complete in the next four to five months.
    - The AWPF team met with several water districts to discuss relevant operational practices and lessons learned for product water stabilization.
- Direct Potable Reuse (DPR): The California Division of Drinking Water (DDW) published the final DPR regulations in December 2023. Metropolitan has completed bench-scale testing to screen the potential DPR treatment processes that could be used for the program. Planning of pilot-scale testing is in progress. A technical workshop was held with the Independent Scientific Advisory Panel (ISAP) on March 5 and 6, 2024, to discuss bench-scale testing data and proposed DPR treatment train. A DPR white paper is being developed to establish Metropolitan's DPR implementation approach via the PWSC Program. The white paper is currently in review. Potential opportunities for treated water augmentation (TWA) are also be investigated and a technical memorandum is being prepared.
- Conveyance Pipeline System: The program's backbone conveyance system consists of over 40 miles of pipeline and two pump stations. Metropolitan's Board authorized consulting agreements for preliminary design of the first two pipeline reaches in March 2023. Metropolitan surveyors used a new high-definition mobile LiDAR system, which is mounted to the back of a truck, to survey all 14 miles of the proposed alignment for Reaches 1 and 2 in one day. This device captures over 500,000 survey measurements per second. The data is being processed and will assist with project planning and preliminary design.
    - Reach 1—This reach is approximately 6 miles long and runs through the city of Carson. Current work includes utility field investigation and geotechnical work, as well as the completion of the draft preliminary design report and associate engineering drawings. Preliminary design is 60 percent complete and is scheduled to be complete by late 2024.

- Reach 2—This reach is approximately 8 miles long and runs through the cities of Long Beach and Lakewood. Current work includes utility field investigation and geotechnical work, as well as coordination with Caltrans and other permitting entities for the major tunnel crossing of the I-710 and Los Angeles River. Preliminary design is 25 percent complete and is scheduled to be complete by late 2024.

System Flexibility | Supply Reliability Program

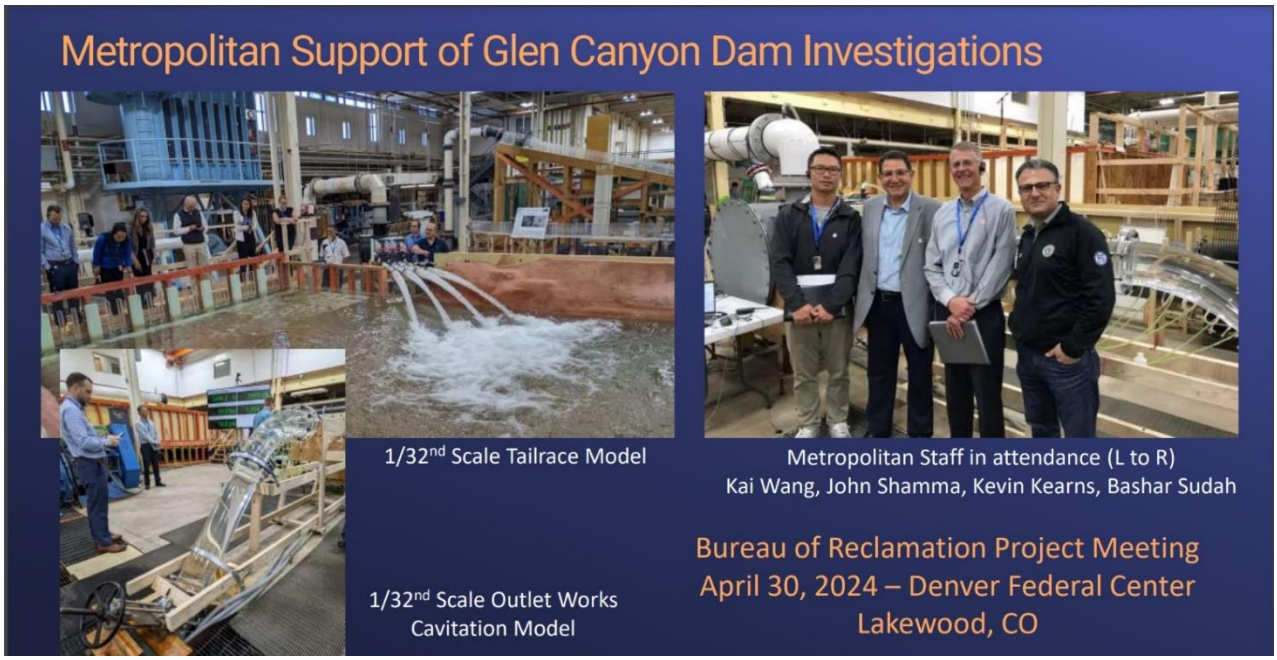
Projects under this capital program will enhance the flexibility and/or increase the capacity of Metropolitan's water supply and delivery infrastructure to meet current and projected service demands. Projects under this program address climate change affecting water supply, regional drought, and alternative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

- Wadsworth Pumping Plant Bypass—This project installs a bypass pipeline and an isolation valve to interconnect the Wadsworth Pumping Plant with the Eastside Pipeline. This is one of several projects needed to deliver water from Diamond Valley Lake (DVL) to the Rialto Pipeline. The contractor completed all pipeline tie-in work during a shutdown in April 2024. Remaining work consists mostly of installing long-lead electrical items. Construction is approximately 85 percent complete and is scheduled to be complete in July 2025.
- Inland Feeder-Badlands Tunnel Surge Protection—This project installs a new open-to-atmosphere surge tank at the south portal of the tunnel, which will protect the Inland Feeder from hydraulic transients when pumping water from DVL to the Rialto Pipeline through the Inland Feeder. The contractor has mobilized and started foundation excavation. Construction is approximately 5 percent complete and is scheduled to be complete in August 2025.
- Inland Feeder-Rialto Pipeline Intertie—This project installs an interconnection pipeline and isolation valve structure between the Inland Feeder and Rialto Pipeline, so that water can be delivered from DVL to the Rialto Pipeline. The contractor has mobilized and started shoring installation. Construction is approximately 10 percent complete and is scheduled to be complete in March 2025.
- Sepulveda Feeder Pumping Stations, Stage 1—This project installs new pump stations at the existing Venice and Sepulveda Canyon pressure control facilities, providing the ability to reverse flow in the Sepulveda Feeder and deliver 30 cubic feet per second from the Central Pool to portions of the Jensen plant-exclusive area. This project utilizes a progressive design-build (PDB) project delivery method. The Board awarded a Phase 1 PDB agreement in September 2023. The contractor and Metropolitan are coordinating with both Southern California Edison and the Los Angeles Department of Water and Power on upgrades to the incoming power service at both locations. Phase 1, which includes site investigation, design to the level needed to develop a guaranteed maximum price, environmental planning, and preparation of long-lead-item procurement documents, is scheduled to be complete in September 2024. The design-build firm is obtaining procurement bids on the long-lead equipment. Summer and Fall 2024 board actions are planned to procure this equipment.

Partner with interested parties and the communities we serve

Bureau of Reclamation—Glen Canyon Dam Support

Glen Canyon Dam, which forms Lake Powel, is a concrete arch dam constructed as one of the storage units of the Colorado River Storage. Water can be released from Glen Canyon Dam through the penstocks, river outlet works, and spillways. At lower lake elevations, the river outlets must be used. However, these outlets were not initially designed for long-term water conveyance. Metropolitan assembled a team of twelve engineers to review and assist the Bureau of Reclamation address concerns with low-water operation of the Glen Canyon Dam. Two primary concerns were outlined in the discussion. The potential for cavitation damage in the river outlet works and the impact of sediment scour, and sediment deposition generated from the operation of the river outlet works on the powerplant. On April 30, 2024, four team members attended a meeting at the Denver Federal Center in Lakewood, Colorado. They learned that the Bureau has constructed two models to study the system. Based on this information, the Bureau plans to consider physical system modifications or operational modifications to sustain long-term releases through Glen Canyon Dam's river outlets. As operation at low elevations is essential for Metropolitan's ability to receive water supplies in the future, Metropolitan staff will remain engaged with Bureau of Reclamation technical staff to understand and vet the best approaches to allow reliable and sustainable water deliveries from Lake Powell.



Engineering News Record's Ground Braking Women in Construction Conference

At Engineering News Record's Ground Braking Women in Construction Conference, over 700 hundred attendees shared the latest developments, innovative practices, and emerging trends in the construction industry with a focus on empowering women in all sectors of the construction industry. Mai Hattar, Assistant Group Manager for Engineering Services, moderated a panel which discussed the role of the public sector in addressing the challenges of climate change and infrastructure management. Panel members from US General Services Administration Region 9, the Port Authority of New York and New Jersey, Los Angeles World Airports, and the City of South Bend, highlighted the generational projects and transformational policies underway at their agencies.

Assistant Group Manager Mai Hattar (seated far right) at Groundbreaking Women in Construction Conference

From left to right: Yvette Roque, Mai Hattar, Elisha Alejandre, and Valerie Maciel
Groundbreaking Women in Construction Conference

Member Agency Engineering Manager Annual Meeting

Engineering staff planned and held our Member Agency Engineering Manager annual meeting at Long Beach Utilities on May 9. The meeting was attended by more than 40 engineering managers from 20 Member Agencies. The attendees discussed ongoing challenges, Metropolitan's coatings and construction management expertise, Long Beach Utility's water replenishment program, City of San Fernando's recently completed stormwater capture project, and tips for engineers when communicating with our elected and appointed governing boards. The group will meet next year at Western Municipal Water District's offices in Riverside.

Member Agency Engineering Managers Forum

2024 State Apprenticeship Contest

As part of outreach efforts associated with the Project Labor Agreement, John Bednarski, John Vrsalovich, and Doaa Aboul-Hosn attended the 2024 State Apprenticeship Contest on April 25 at A & J `Training Center in Santee, California, sponsored by the A & J Training trust for pipe trades. Top apprentices from United Association local unions from across California competed in the contest, which took place on April 24 and 25 in the categories of HVAC-R, irrigation pipefitting, general pipefitting, plumbing, sprinkler fitting, and welding. The winners from each category compete in a regional contest to display their talents all in one place.

2024 State Apprenticeship Contest

Operations—Engineering Partnership

Since 2019, Engineering and Operations staff have conducted a formal partnering program to foster open and frequent communication at all levels, proactively enhance our business processes, and collaborate as a team to provide the best possible solutions for Metropolitan. The partnering working group is committed to the values of safety, communication, reliability, teamwork, and stewardship. The ninth workshop was hosted by Conveyance and Distribution's Western Region Unit at Soto Street and focused topics of interest in this area. The attendees from Engineering, Operations, and Safety, Regulatory, and Training Services discussed safety, system operations, project prioritization, Engineering's lessons learned program, and the success of the recent Upper Feeder San Gabriel Tower inspections. Breakout sessions in five topic areas allowed small groups to brainstorm process enhancements and prioritize projects.

Engineering and Operations Partnering—Western Region Workshop

Information Technology Group

- **Information Technology Group Monthly Activites for May 2024**

Summary

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

Purpose

Informational

Detailed Report

Earlier this year, the Information Technology Group successfully deployed the Rubrik data center backup system, replacing the old magnetic tape-based system.

Key features of the new solution:

- It eliminates the complexity of legacy backup solutions and the associated high degree of administrative overhead.
- It provides high-speed backup and restores capability because of its use of the latest and most efficient medium.
- It offers robust and effective monitoring and anomaly detection of cyber attacks.
- It presents real-time key performance indicators and user-friendly dashboards.

The Information Technology Group’s next step is to expand the Rubrik storage to address application data growth and the Microsoft Azure application hosting cloud backup.

Date of Report: 6/10/2024

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Board Report

Water System Operations Group

- **Operations Monthly Activities for May 2024**

Summary

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

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

Purpose

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

Attachments

Attachment 1: Detailed Report – Water System Operations Group's Monthly Activities for May 2024

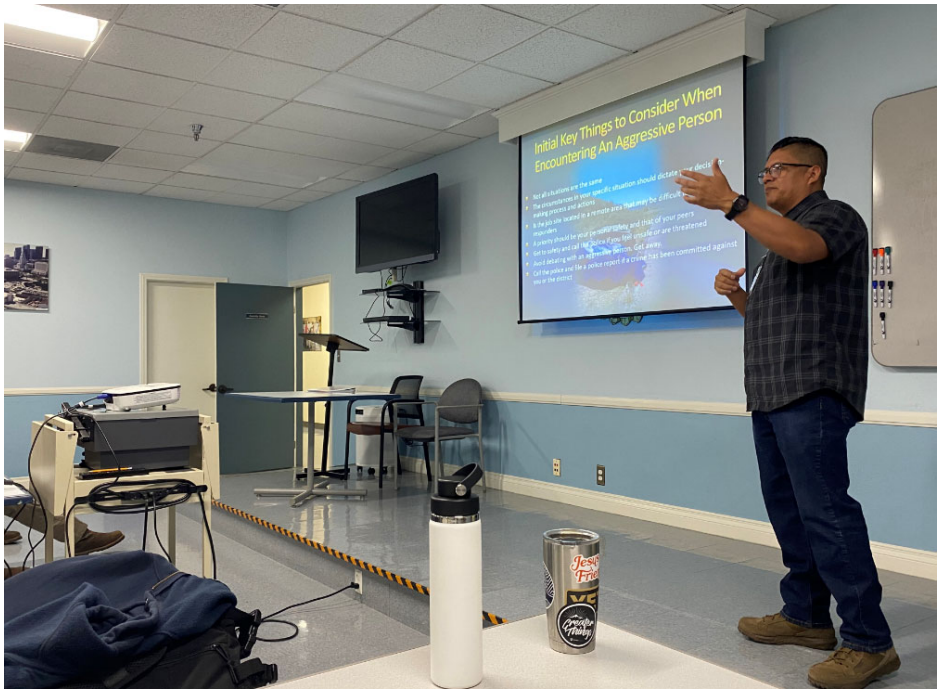
Date of Report: June 11, 2024

Water System Operations

Core Business Objectives

Enhance Workforce Safety

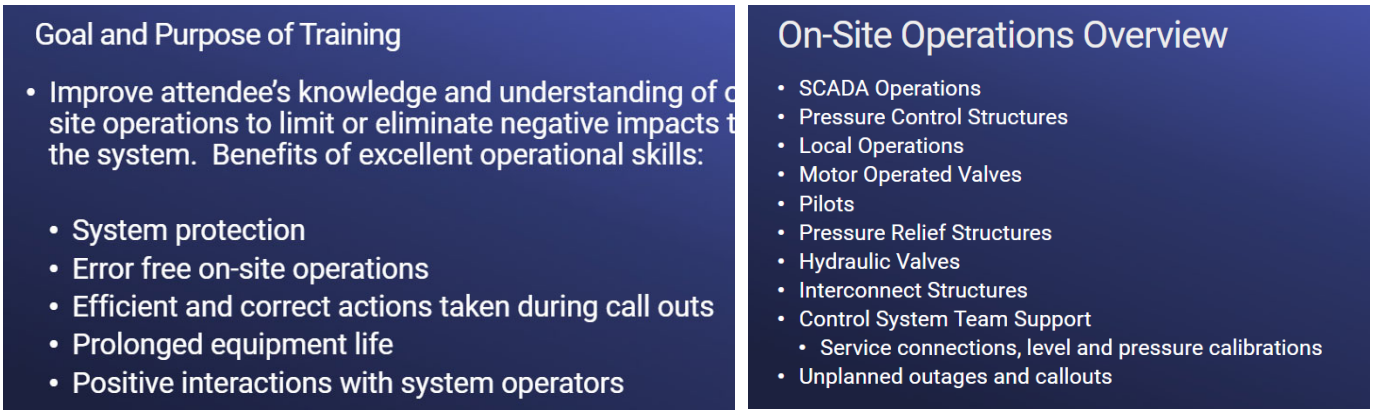
While maintaining the distribution system throughout Southern California, staff may have encounters with others that could potentially escalate to violence. Training was provided to enhance situational awareness and identify, prevent, and de-escalate potential conflicts. A Metropolitan instructor presented several scenarios and advised staff on how to handle such situations to help ensure their safety, while remaining courteous, respectful, and professional while performing their critical job duties.



Staff provided training on Conflict De-escalation

Develop Workforce and Prepare Employees for New Opportunities

A formal On-Site Operator training session was prepared and added to the Hydroelectric Training Class for the first time. The class was attended by employees who operate and maintain conveyance and distribution system facilities. The curriculum included an overview of pipeline hydraulics, such as hydraulic grade calculations, pilot valve, and relief valve operations. On-site training was also provided with a trip that demonstrated various SCADA screens and system operations at the Eagle Rock Operations Control Center . Class participants also visited other facilities such as pressure control structures and hydroelectric power plants.



On-Site Operator training goal and course overview

Manage Business Operations, Budget, and Staffing

Business Management Team staff is continuing to prepare for the end of the fiscal year 2023/24 and the beginning of the new fiscal year 2024/25. With approval of the operating equipment budget for FY2024/25, WSO is preparing to begin purchasing equipment at the start of the new year. With the fiscal year drawing to a close, staff is also preparing for the upcoming evaluation season, including offering information and Q&A sessions for managers to highlight current processes and assist in meeting Human Resources deadlines.

WSO filled one vacancy in May.

Ensure Accurate Billing and Support Revenue Generation

WSO staff is working with staff from Finance, Information Technology, and a consultant team to develop the WINS 2.0 application that will eventually replace the current application for invoicing member agencies monthly for water transactions. System Operations staff has been testing the Automatic Meter Reading and Meter Maintenance modules. Staff has been working with the project group to review various components. One of the new modules completed this month allows for efficient set up and invoicing of water delivered under Metropolitan's various current and potential future water programs. Staff will start user acceptance testing of this module next month.

Provide Reliable Water Deliveries and Manage Storage

Metropolitan member agency water deliveries were 95,000 acre-feet (AF) for May with an average of 3,060 AF per day, which was about 400 AF per day higher than in April. As a result of the increased SWP Allocation, Metropolitan has recently started Cyclic and Conjunctive Use Program deliveries. Treated water deliveries were 8,200 AF higher than in April for a total of 52,200 AF, or 55 percent of total deliveries for the month. The Colorado River Aqueduct (CRA) pumped a total of 87,000 AF in May. State Water Project (SWP) imports averaged 980 AF per day, totaling about 30,400 AF for the month. The target SWP blend was 0 percent for Weymouth, Diemer, and Skinner plants for most of the month and increased to 25 percent at the end of the month.

Metropolitan expects to have sufficient SWP and Colorado River supplies to meet demands in 2024. Water continues to be managed according to Water Surplus and Drought Management (WSDM) principles and operational objectives with an emphasis to position SWP supplies to meet future demands in the SWP-dependent area. Metropolitan has resumed deliveries to Desert Water Agency and Coachella Valley Water District because of the improved supply conditions. Metropolitan is prioritizing the use of Table A supplies this year to meet demands and improve reserves and future drought reliability for the SWP-Dependent Area. Some Table A supplies are also available for blending to help manage salinity levels.

Develop New Supplies and Optimize System Flexibility

During May, staff continued baseline monitoring for tertiary membrane bioreactor (MBR) nitrification-denitrification testing at the Pure Water Southern California Napolitano Innovation Center demonstration plant and maintained stable MBR and reverse osmosis (RO) process performance at target operating conditions. Staff also continued to optimize the carbon dosing system to efficiently achieve MBR filtrate nitrate targets. Comprehensive monitoring of source water, RO concentrate, product water, and key intermediate process locations was completed to characterize performance of the treatment train.

Staff collects samples to evaluate performance of the MBR-based treatment train at the NIC Demonstration Plant

Manage Power Resources and Energy Use in a Sustainable Manner

Energy markets in May 2024 reflected the relatively mild winter of 2023–24 and relatively plentiful natural gas supplies. Natural gas prices fell from their normal winter price range of $5–10 per Metric Million British Thermal Unit (MMBtu) range into the $2-5 per MMBtu range, with electricity prices in the CAISO market following suit. Sunshine and longer daylight hours driving increased solar generation, coupled with relatively low springtime electricity demands, helped keep electricity prices on average in the $20–-40 per megawatt-hour (MWh) range, and pushing prices strongly negative during the high solar hours from 10 am to 4 pm. No significant energy pricing events occurred either in the western US or nationwide. Metropolitan power scheduling staff, in conjunction with Metropolitan's scheduling coordinator ACES Power LLC, coordinated the scheduling of CRA load and USBR hydro generation for maximum efficiency, resulting in negative CAISO invoices over several weeks of May. Summer electric and capacity price forecasts are also trending lower.

The CRA resumed full operation following the March shutdown, averaging about seven pumps. The CRA energy cost budget for fiscal year 2023/24 is $82.6 million; however, the current cost forecast for the 2023/24 fiscal year is significantly lower than budgeted at $43.4 million because of reduced pumping and lower forward cost curves. Monthly costs are forecast to increase as energy prices increase in anticipation of summer.

Metropolitan staff attended the annual meeting of the Arizona Electric Power Co-Operative (AEPCO), the entity that serves as Metropolitan's Transmission Operator for the CRA transmission system. The meeting was held on May 8 in Tucson, Arizona.

Protect Source Waters and Ensure Water Quality Compliance

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

On May 15–16, staff participated in the Topock Chromium-6 Groundwater Remediation Project Orientation at the Pipa Aha Macav Cultural Center in Mohave Valley, Arizona. The two-day training included presentations on tribal and cultural history, regulatory background, groundwater and soil investigations and remediation, and archaeology. The training also featured a guided tour of key sites within the project area. Since 2003, Metropolitan has supported cleanup of the project site to ensure continued water quality protection of Colorado River supplies.

Optimize Water Treatment and Distribution

The SWP target blend entering the Weymouth and Diemer plants was increased from zero percent to approximately 25 percent on May 28. Coagulant dosages were adjusted accordingly. The SWP blend entering Lake Skinner remained at zero percent, while the blend leaving Lake Skinner continued trending down to below 20 percent.

Flow-weighted running annual averages for total dissolved solids from March 2023 through February 2024 for Metropolitan's treatment plants capable of receiving a blend of supplies from the SWP and the CRA were 345, 430, and 470 mg/L for the Weymouth, Diemer, and Skinner plants, respectively.

Because of the configuration of the Lower Feeder, air entrainment occurs in the source water at Diemer plant. Air entrainment causes several operational challenges. Diemer plant is collaborating with Engineering Services Group to conduct an Air Entrainment Study. Staff recently upgraded vacuum relief valves for the ozone contactors. This will allow the plant to conduct full-scale testing of the effectiveness of using the ozone destruct blowers to remove dissolved gas in the source water.

Staff upgrading vacuum relief valves for the ozone contactor at the Diemer plant

Protect Infrastructure and Optimize Maintenance

This month staff completed large valve maintenance on a 42-inch conical plug valve at the Sepulveda Feeder in the City of Gardena. The Sepulveda Feeder runs 43 miles from the Jensen plant to the city of Torrance interconnecting with several pipelines through the San Fernando Valley and Los Angeles areas. During this maintenance, staff operated the valve to inspect mechanical and electrical components and confirm system reliability.

Staff inspecting the operation of a 42-inch valve during routine preventive maintenance at the Sepulveda Feeder

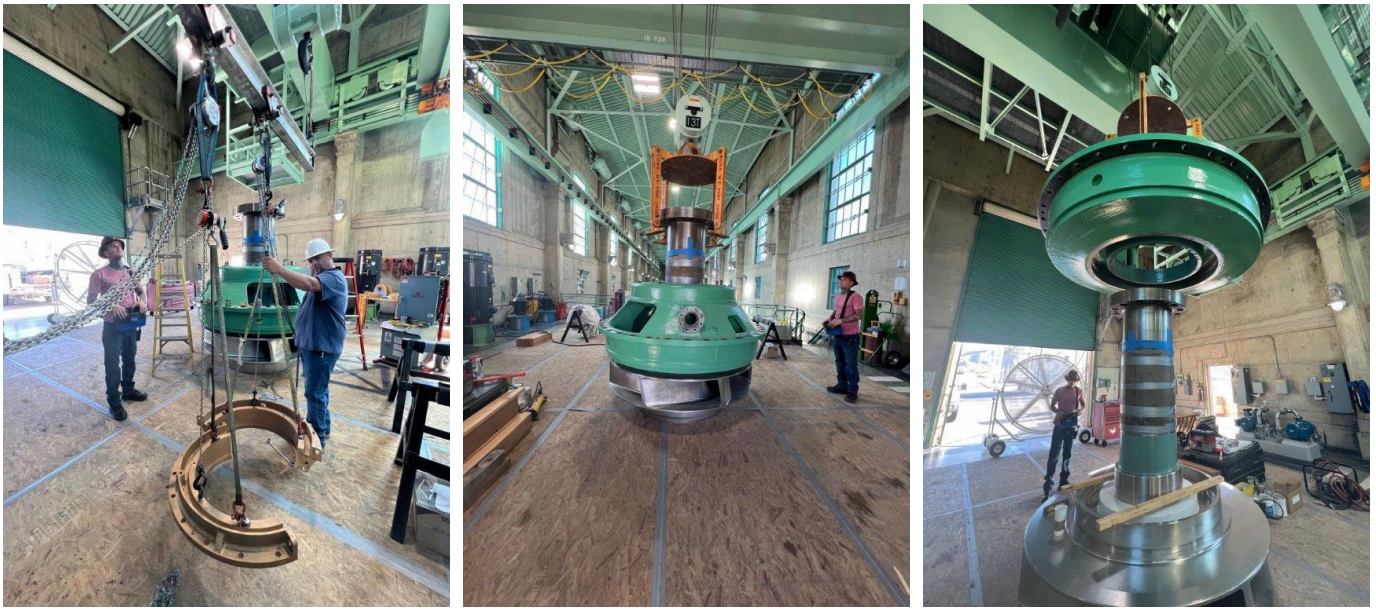
At the Mills plant during a routine plant check, a leak from the ammonia solution piping that feeds the plant's influent control structure (ICS) was found. Staff used a crane to pull the concrete trench covers to help determine the exact location of the leak. At this location, ammonia is used in combination with chlorine to suppress bromate formation. Mills plant remained online while repairs were performed with all water quality goals and objectives being met.

Staff in personal protective equipment investigating the exact location of the ammonia leak at the Mills plant

Staff investigated a potential leak at the EM-17 Service Connection in Murrieta when water was found entering a valve structure. After potholing the 60" encased pipeline between the valve structure and the downstream manhole structure, nuisance water was found; however, a leak could not be confirmed. Staff worked with a contractor to install two monitoring wells and are conducting daily water samples and monitoring the site as part of this continued investigation.

Contractor assisting with vacuum excavation at the EM-17 service connection

The Iron Unit 5 Discharge Valve repair project involves the removal of the discharge plug and headcover. Staff inspected and refurbished the pump components before reassembly.



Staff reassembling pump components at Iron Mountain pumping plant

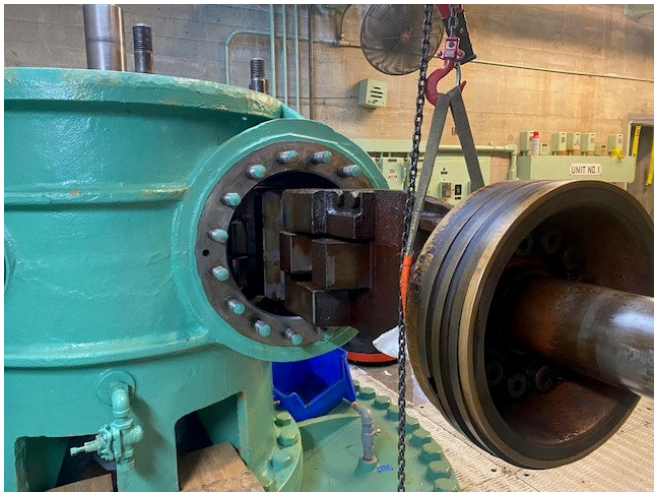
Staff installed a new HVAC unit at the Hinds pumping plant control room. Air conditioning provides a critical function during the extreme summer temperatures by ensuring that personnel and critical equipment remain at optimal temperatures.

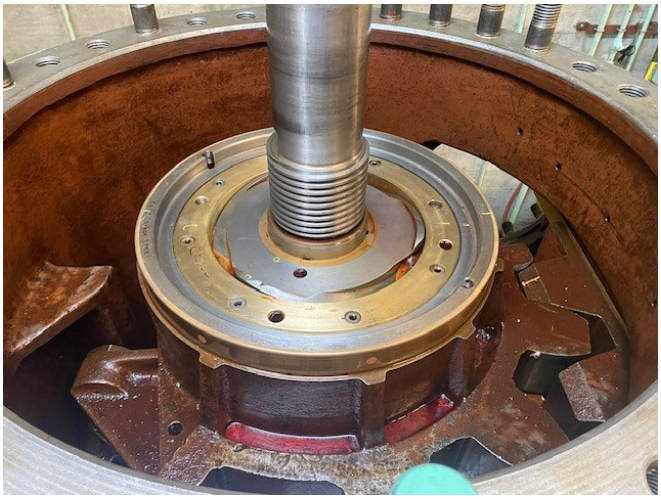
New HVAC installation at Hinds pumping plant

Staff continue work on a major project to repair the transition joint at the Eagle Mountain headgate structure. As the leak originates internally from the structure, work can be performed only during the annual CRA Shutdown. The project addressed leaks at the joint between the steel delivery lines and the concrete structure.

Headgate structure before repair in November 2021 (left) and after repair in May 2024 (right) during seven-pump CRA flow at Eagle Mountain pumping plant

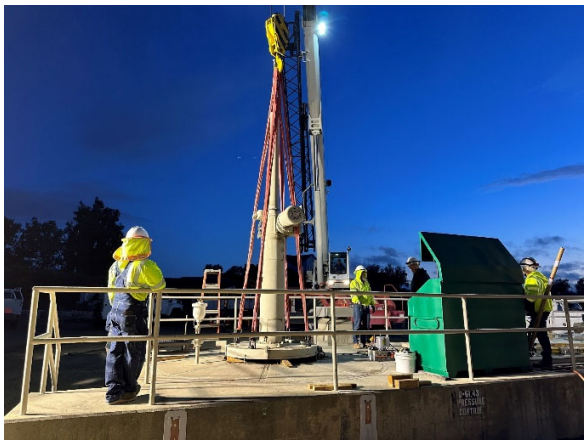
At the Gene pumping plant, staff began disassembly and repair of the Unit 1 Discharge Valve. Before disassembly, an isolator fitting was installed to secure the unit from the delivery line. Staff has removed and stored the oil for the actuating mechanism, with teardown and assessment in progress.





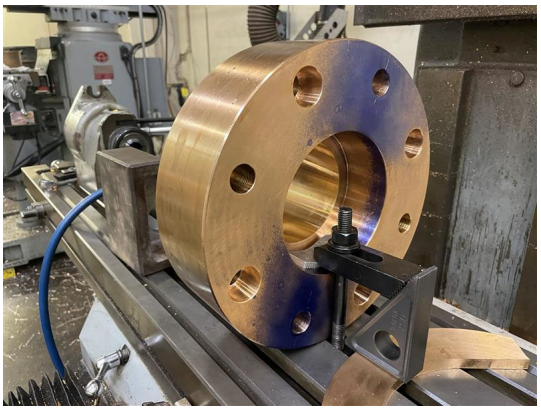
Repair of Unit 1 Discharge Valve at Gene pumping plant

Staff replaced a disabled 42-inch sleeve valve at Auld Valley Control Structure. This structure consists of two sleeve valves that control flow on San Diego Pipeline No. 3. Last year, one of the valves seized and would not operate. During a November 2023 shutdown, staff removed the broken valve and sent it to the La Verne Shops for refurbishment. Staff quickly determined that the problem was within the valve operator. In addition to refurbishing the operator, staff manufactured and repaired several valve components. During the recent shutdown, staff reinstalled the refurbished valve and removed the second valve, which will be similarly refurbished to ensure reliability of the pipeline.



Staff removing a 42-inch sleeve valve at Auld Valley Control Structure on San Diego Pipeline No. 3


Troubleshooting of Auld Valley Control Structure valve operator (left) and shaft (right)

Machining of existing valve cover (left) and manufacturing new bronze stem bearing (right)


Repaired valve gate and new stem (left) and refurbished operator pedestal (right) for Auld Valley Control Structure on San Diego Pipeline No. 3

Communication sites throughout Metropolitan's service area enable the various facilities to communicate with each other and ensure no service interruptions to the member agencies. One of these communication sites is Detention Peak in Oak Glen. An upgraded fiber optic line will be added to the site that will ensure reliability. Staff will complete the necessary work to route the fiber optic cable approximately 1,300 feet from a nearby service road to the communication site.

Detention Peak Communication Site

Enhance Emergency Preparedness and Response

On May 7, the Water Quality Incident Command Post (ICP) collaborated with Metropolitan's Emergency Operations Center in a simulated earthquake response exercise with downed network and phone lines. This provided staff with essential hands-on training in alternative emergency communications and additional experience in emergency response.

Prepare for Future Legislation and Regulations

On April 16, EPA released updated Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances—Version 2 for public comment. The updated guidance provides information on technologies that may be feasible and appropriate for the destruction or disposal of PFAS and PFAS-containing materials. The 2024 interim guidance also identifies key data gaps and uncertainties that must be resolved before the EPA can issue more definitive recommendations about PFAS destruction and disposal technologies. Staff is reviewing the Guidance; the comment deadline is October 14, 2024.

On April 17, State Water Resources Control Board, Division of Drinking Water adopted a 10 µg/L maximum contaminant level (MCL) for hexavalent chromium. The rule was adopted as proposed (with minor language changes):

- 10 µg /L MCL
- Detection limit for purposes of reporting (DLR) of 0.1 µg/L
- 2–4 yr. compliance timelines, depending on system size
- Need for a compliance plan, etc.

If approved by the Office of Administrative Law, the rule will be effective on October 1, 2024. Staff will track the implementation of the rule.

On April 26, EPA published final drinking water standards for six PFAS. EPA set individual maximum contaminant levels (MCLs) for PFOA and PFAS at 4.0 parts per trillion (ppt) and 10 ppt for PFNA, PFHxS, and GenX. EPA will also regulate PFAS mixtures containing at least two or more PFHxS, PFNA, GenX, and PFBS using a unitless Hazard Index of one. Lastly, EPA finalized health-based, non-enforceable Maximum Contaminant Level Goals for PFOA and PFOS at 0 ppt and 10 ppt for PFNA, PFHxS, and GenX. Staff is evaluating these new standards on how they will affect Metropolitan and its member agencies.

On May 3, staff submitted comments to CARB on its proposed amendments to the Advanced Clean Fleets (ACF) regulation. These amendments were in response to recently passed legislation sponsored by CMUA (Assembly Bill 1594 [Garcia, 2023]—Medium- and heavy-duty zero-emission vehicles: public agency utilities). Staff requested that CARB define the term "traditional utility-specialized vehicles" such that Metropolitan's specialized/customized vocational utility trucks are eligible for the exemptions under the ACF. Staff also supported the elimination of the 13-year minimum age requirement from select exemptions, as well as amending the daily usage exemption for medium- or heavy-duty vehicles. Staff will continue to track and engage in any changes to the ACF that affect Metropolitan's vehicle fleet.

On May 8, EPA published its final rule designating PFOA and PFOS, including their salts and structural isomers, as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Despite EPA's April 19, 2024, enforcement discretion policy that emphasized that EPA will not target water utilities, staff is still concerned that the final rule may encumber water utilities with potential liability under CERCLA for the disposal of water treatment residuals that may contain PFAS. To alleviate this concern, staff is supporting H.R. 7944—the Water Systems PFAS Liability Protection Act, which offers exemptions for water and wastewater systems from potential liability under CERCLA for the lawful disposal of PFAS.

Advance Education and Outreach Initiatives

Staff hosted a tour at the Iron Mountain pumping plant for a club that works closely with Bureau of Land Management (BLM) on the preservation of western history.

Tour at Iron Mountain pumping plant

This month, Jensen plant hosted a tour for students from College of the Canyons, a local junior college that provides a water technology program for operator training. The tour provided a chance for students to learn about Metropolitan and see a water treatment plant in operation to provide context for their academic program.

Students from the College of the Canyons Water Technology Program touring the Jensen plant

Engage with Member Agencies and Other Stakeholders on Technical Matters

On May 29, Metropolitan hosted its regular quarterly meeting with the State Water Resources Control Board's Division of Drinking Water. Discussion topics included updates on regulations, capital projects, treatment and distribution system water quality, nitrification action levels and responses, and an update on replacement of the domestic water systems at the CRA pumping plants and permit amendment application.

Engineering, Operations, & Technology Committee

Management Announcements and Highlights

Item 7a

June 10, 2024

Engineering Services

Correction Reporting

Correction Reporting

- Due to an inadvertent clerical error, a recent Board letter has erroneously referenced RFP 1168 rather than RFQ 1305:
  - Sepulveda Feeder PCCP Rehabilitation (Reach 9)
    - Final Design; Item 7-2 approved on April 9, 2024

May 15, 2024

Engineering Services & Water System Operations Partnering Session

- ±40 individuals from Engineering, Operations, and Safety & Regulatory Services in attendance at Soto Street Facility
- 9th workshop since formal partnering started in 2019

Engineering & Operations Partnering—Western Region Workshop

May 9, 2024

Member Agency Engineering Managers Annual Workshop

- Co-hosted by Long Beach Utilities
- 20 Member Agencies represented
- 40+ people in attendance
- Multiple agencies made presentations

Member Agency Engineering Managers Forum

CRA Overhead Crane Replacement Project

Project Completion Milestone

May 2024

- Contract Awarded: September 2020
- Contract Value: $13.42 M
- Contractor: JF Shea Construction, Inc.

Load Testing New Crane at Gene Pumping Plant

Water System Operations

Managing State Water Project Supplies

Current Operational Conditions

DVL, 5/29/24

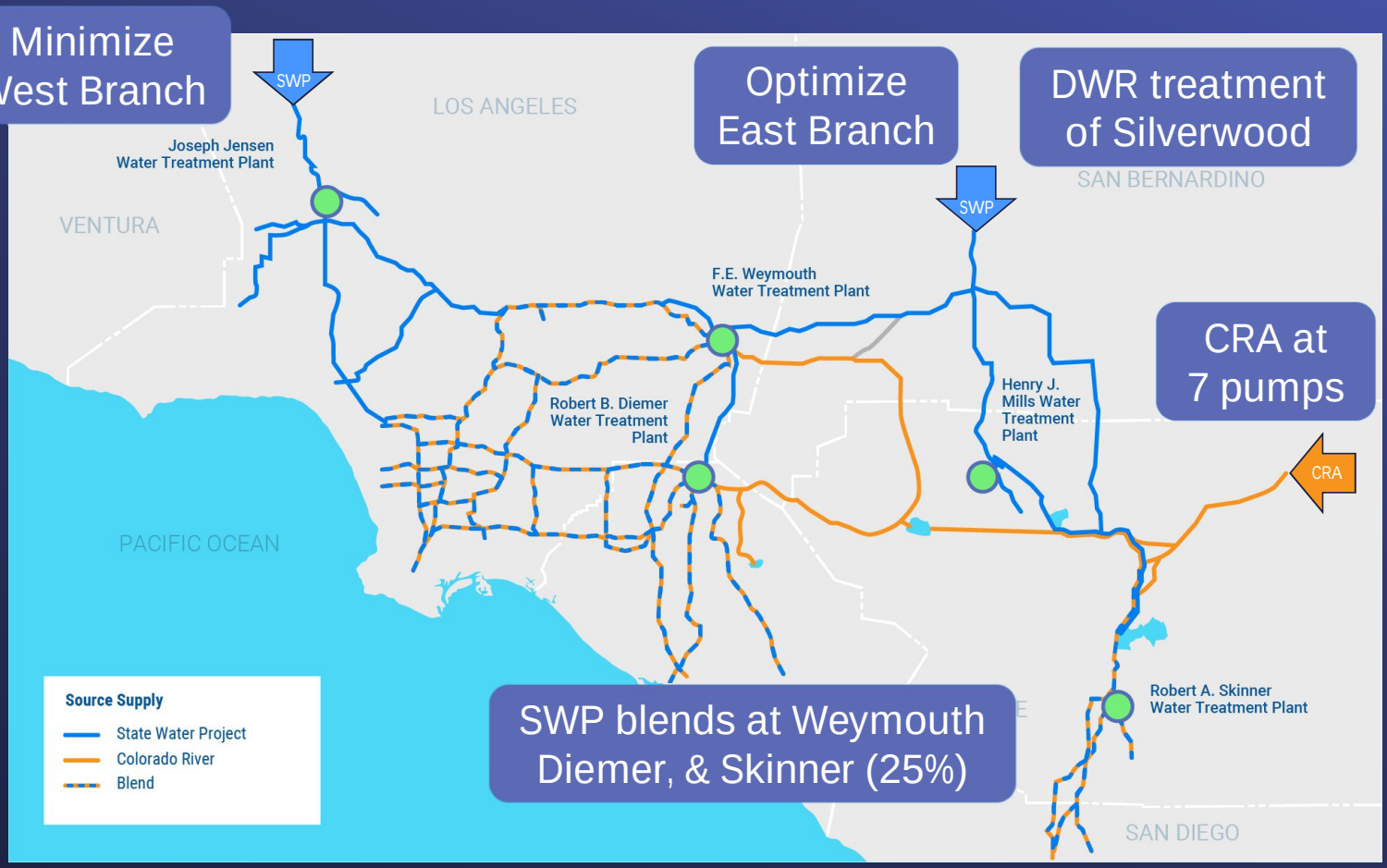
- 2024 SWP Allocation at 40%
- CRA at 7-pump flow
- Deliveries to DWCV at ~700 cfs
- Deliveries to CUP and Cyclic ongoing
- SWP blend targets are 25% at Weymouth, Diemer, and Skinner
- May 2024 deliveries of 95 TAF were 1 TAF higher than May 2023

Managing State Water Project Supplies

June 2024 Operations

Manage SWP supplies to meet storage goals

Increased SWP blends (~25%)



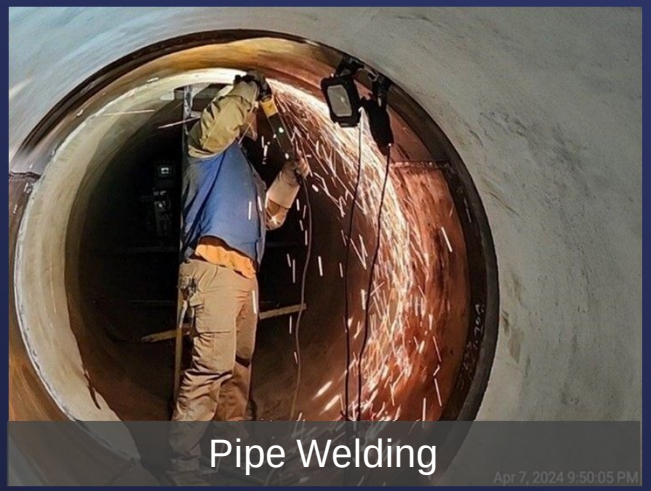
Allen-McColloch Pipeline Relining

Current Shutdown

AMP Relining
(April-December 2024)


Pipe Access Site


Pipe Installation



Pipe Welding

Bulkhead Near OC-88

June 27, 2024

Member Agency Water Quality Managers
Nitrification Workshop

Nitrite Analysis at Metropolitan's Water Quality Lab

- Invitations distributed to Member Agencies, sub-agencies, and regulators
- In-person at Metropolitan's Water Quality Laboratory in La Verne and virtual option
- Information on causes, consequences, and control of distribution system nitrification
- Presentations by Water Quality staff and an industry expert, including lessons learned from 2023 nitrification event

Water System Operations Aligned into Three New Groups

Conveyance and Distribution Group

Group Manager
JR Rhoads

Regional Conveyance & Distribution
Silvia Perez

Desert Conveyance & Distribution
Scott McMullen (Interim)

Treatment and Water Quality Group

Group Manager
Mickey Chaudhuri

Water Treatment
Heather Collins

Water Quality
Paul Rochelle

Integrated Operations, Planning, and Support Services Group

Group Manager
Keith Nobriga

Water Ops. & Planning
Tae Yun (Interim)

Power Ops. & Planning
John Jontry

Operations Support Services
Sergio Escalante

Facilities & Fleet Management
Victor Ramirez (Interim)

Information Technology


THE METROPOLITAN WATER DISTRICT OF
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1928