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
A. Chacon
B. Dennstedt
S. Faessel
L. Fong-Sakai
R. Lefevre
J. McMillan
C. Miller
J. Morris
G. Peterson
T. Quinn
K. Seckel
T. Smith

Engineering, Operations, and Technology Committee

Meeting with Board of Directors *

September 11, 2023

9:30 a.m.

Monday, September 11, 2023 Meeting Schedule
09:30 a.m. EOT
11:30 a.m. EOP
01:30 p.m. Break
02:00 p.m. OWS

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MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012
Teleconference Locations:
Covina Irrigating Company • 146 E. College Street • Covina, CA 91723
525 Via La Selva • Redondo Beach, CA 90277
Cedars Sinai Medical Center • 8700 Beverly Blvd • Los Angeles, CA 90048
3008 W. 82nd Place • Inglewood, CA 90305

* 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 August 14, 2023 (Copies have been submitted to each Director, Any additions, corrections, or omissions) **21-2440**

Attachments: 09112023 EOT 2A (08142023) Minutes

3. CONSENT CALENDAR ITEMS - ACTION

7-1 Award a $3,895,000 contract to Miller Pipeline to furnish and install internal seals along Freda Siphon Barrel No. 1 on the Colorado River Aqueduct; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-2591**

Attachments: 09122023 EOT 7-1 B-L
09122023 EOT 7-1 Presentation

7-2 Authorize an agreement with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.8 million for Phase 1 design-build services for the Sepulveda Feeder Pump Stations project; and authorize an increase of $1.5 million to an existing agreement with Carollo Engineers Inc. for a new not-to-exceed amount of $2.49 million to serve as the owner's advisor through the Phase 1 design-build agreement; and authorize an amendment to Metropolitan's Project Labor Agreement to add the Sepulveda Feeder Pumps Project to the list of covered projects; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA (This action is part of a series of projects that are being undertaken to improve the supply reliability for State Water Project dependent areas) **21-2592**

Attachments: 09122023 EOT 7-2 B-L
09122023 EOT 7-2 Presentation

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

4. OTHER BOARD ITEMS - ACTION

8-1 Award a $15,681,000 contract to Steve P. Rados Inc. to construct an intertie between Inland Feeder and Rialto Pipeline as part of the water supply reliability improvements in the Rialto Pipeline service area; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (This action is part of a series of projects that are being undertaken to improve the supply reliability for State Water Project dependent member agencies) **21-2597**

Attachments: 09122023 EOT 8-1 B-L
09122023 EOT 8-1 Presentation

5. BOARD INFORMATION ITEMS

NONE

6. COMMITTEE ITEMS

a. Information Technology Portfolio Management Update **21-2617**

Attachments: 09112023 EOT 6a Presentation

b. Shutdown Planning at Metropolitan **21-2618**

Attachments: 09112023 EOT 6b Presentation

c. Center for Smart Infrastructure **21-2616**

Attachments: 09112023 EOT 6c Presentation

d. Capital Investment Plan Quarterly Report for Period Ending June 2023 **21-2615**

Attachments: 09112023 EOT 6d Report
09112023 EOT 6d Presentation

7. MANAGEMENT REPORTS

a. Water System Operations Manager's Report **21-2441**

Attachments: 09112023 EOT 7a Presentation

b. Engineering Services Manager's Report **21-2442**

Attachments: 09112023 EOT 7b Presentation

c. Information Technology Manager's Report **21-2443**

8. SUBCOMMITTEE REPORTS AND DISCUSSION

a. Discuss and provide direction to Subcommittee on Pure Water Southern California and Regional Conveyance **21-2630**

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

August 14, 2023

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

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

Members absent: Directors Chacon, Fong-Sakai, and Quinn.

Other Board Members present: Directors Ackerman, Armstrong, Bryant, Kurtz, and Petersen.
Committee staff present: Bednarski, Chaudhuri, Eckstrom, Carter, Parsons, and Upadhyay.

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

2. SUBCOMMITTEE REPORTS

None

CONSENT CALENDAR ITEMS --ACTION

3. CONSENT CALENDAR OTHER ITEMS - ACTION

A. Approval of the Minutes of the Engineering, Operations, and Technology Committee for July 10, 2023

4. CONSENT CALENDAR ITEMS – ACTION

7-1 Subject: Award a $1,962,691 contract to Structural Preservation Systems for urgent relining of three pipe segments on the Sepulveda Feeder; and authorize an increase of: (1) $280,000 to an agreement with HDR Engineering Inc. for a new not-to-exceed amount of $15,780,000; and (2) $240,000 to a land lease agreement with Los Angeles Community College District for a new not-to-exceed amount of $1,090,000; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA.

Presented by: None; no presentation requested

Motion: a. Award a $1,962,691 contract to Structural Preservation Systems for urgent relining of Sepulveda Feeder; b. Authorize a $280,000 increase to a professional services agreement with HDR Engineering Inc. for a new not-to-exceed amount of $15,780,000; and c. Authorize a $240,000 increase to an existing land lease agreement with Los Angeles Community College District for a new not-to-exceed amount of $1,090,000.

7-2 Subject: Authorize an agreement with Nth Generation Computing, Inc. in an amount not to exceed $367,448 for the Datacenter Backup Infrastructure Upgrade; the General Manager has determined that the proposed action is exempt or otherwise not subject to.

Presented by: None; no presentation requested

Motion: Authorize an agreement with Nth Generation Computing Inc. in an amount not to exceed $367,448 for the Datacenter Backup Infrastructure Upgrade.

No presentation was given, Director Faessel made a motion, seconded by Director Alvarez, to approve the consent calendar consisting of items 3A, 7-1, and 7-2.

The vote was:

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

The motion for Items 3a, 7-1, and 7-2 passed by a vote of 9 ayes, 0 noes, 0 abstention, and 6 absent.

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

5. OTHER BOARD ITEMS ACTION

8-2 Subject: Authorize an agreement with Computer Aid Incorporated in an amount not to exceed $1,750,000 to provide staff augmentation support services for the operation and maintenance of the Metropolitan Cybersecurity Operations Center for a period of up to one year; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [Consultation with Metropolitan Director of Info Tech Services, Information Technology, Jacob Margolis, or designated agents on threats to public services or facilities; may be heard in closed session pursuant to Gov. Code Section 54957(a)]

Presented by: None; no presentation requested

Motion: Authorize an agreement with Computer Aid Incorporated in an amount not to exceed $1,750,000 to provide staff augmentation support services for the operation and maintenance of the Metropolitan Cybersecurity Operations Center for a period of up to one year.

No presentation was given, Director Lefevre made a motion, seconded by Director Faessel to approve item 8-2.

The vote was:

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

The motion for Item 8-2 passed by a vote of 8 ayes, 1 noes, 0 abstentions, and 6 absent.

The following Directors provided comments or asked questions.

1. Faessel
2. Smith

Staff responded to Directors' questions and comments.

6. BOARD INFORMATION ITEMS

NONE

Vice Chair Camacho entered the meeting.

7. COMMITTEE ITEMS

a. Subject: Update on use of Alternate Project Delivery for Metropolitan Projects

Presented by: Doug Hathaway, Program Manager, Engineering Services Group

Mr. Hathaway reported on the following:

- Background of Assembly Bills 1845 (Calderon), Senate Bill 991 (Newman)
- Improving infrastructure to improve access to water supplies
- Upcoming Sepulveda Feeder Pump Stations progressive design-build project

Director Peterson entered the meeting.

The following Directors provided comments or asked questions.

1. Faessel
2. Lefevre
3. Camacho
4. Smith
5. Peterson
6. Seckel
7. Erdman

Staff responded to Directors' questions and comments.

Vice Chair Camacho left the meeting.
Director Dennstedt entered the meeting.

b. Subject: Update on Colorado River Aqueduct Electrical Upgrades

Presented by: Santiago Ocampo, Engineer, Engineering Services Group, Program Management Section

Mr. Ocampo reported on the following:

- CRA electrical reliability goals
- Planned work on medium & low-voltage systems
- Switch racks replacement
- Main transformers replacement
- Black Metal Mtn. electrical power upgrades

- Summary of work completed to date, and additional upcoming projects

The following Directors provided comments or asked questions.

1. Faessel
2. Peterson
3. Erdman

Staff responded to Directors' questions and comments.

c. Subject: Reservoir Management Update

Presented by: George Di Giovanni, Unit Manager-Microbiology, Water System Operations

Mr. Di Giovanni reported on the following:

- Water quality issues in reservoirs
- Reservoir management monitoring tools and actions
- Quagga mussels and cyanobacterial blooms in 2023
- Adapting to climate change including managing turbidity, runoff and spill events, and low alkalinity

The following Director's provided comments or asked questions

1. Peterson

Staff responded to Directors' questions and comments.

d. Subject: Emergency Management Program Update

Presented by: Ian Whyte, Emergency Management Program Manager, Water System Operations

Mr. Whyte reported on the following:

- Emergency Management Program overview
- Emergency Response Organization and EOC Duty Officer program
- Ensuring emergency readiness through training and exercises, planning, and partnering with member and external agencies

The following Directors' provided comments or asked questions

1. Seckel
2. Dennstedt
3. Erdman

Staff responded to Directors' questions and comments.

Director Alvarez left the meeting.

8. MANAGEMENT REPORTS

a. Subject: Water System Operations Manager's Report

Presented by: Mickey Chaudhuri, Water System Operations, Interim Group Manager

Mr. Chaudhuri reported on the following:

- Current operational conditions, maximizing SWP supplies, and Etiwanda Pipeline returned to service
- U.S. EPA proposed designation of PFAS as CERCLA hazardous substances
- Proposed Chromium 6 drinking water standard
- Proposed Direct Potable Reuse regulations released
- Apprenticeship Class of 2023 Completion Ceremony

b. Subject: Engineering Services Manager's Report

Presented by: John Bednarski, Group Manager, Engineering Services

Mr. Bednarski reported on the following:

- Construction and procurement contracts, July 2023
- Significant pipeline rehabilitations including Orange County Feeder, Etiwanda Pipeline, and Lakeview Pipeline.
- Inland Empire Industry Day September 14, 2023
- 2023 EOT Inspection Trip – November 16, 2023

c. Subject: Information Technology Manager's Report

Presented by: Charles Eckstrom, Information Technology Group Manager

Mr. Eckstrom reported on the following:

- Telecomm usage evaluation
- Cost savings to Metropolitan

9. FOLLOW-UP ITEMS

None

10. FUTURE AGENDA ITEMS

None

The next meeting will be held on September 11, 2023.

Meeting adjourned at 11:32 am.

Dennis Erdman
Chair

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

9/12/2023 Board Meeting

7-1

Subject

Award a $3,895,000 contract to Miller Pipeline to furnish and install internal seals along Freda Siphon Barrel No. 1 on the Colorado River Aqueduct; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Several leaks were detected on the three-mile-long Freda Siphon Barrel No. 1 along the Colorado River Aqueduct (CRA) conveyance system in January 2021. At that time, staff excavated around the siphon, exposed the buried conduit, and filled the cracks with a rubber sealant as a temporary measure. During a follow-up inspection of the CRA in March 2022, multiple cracks with the potential for future leakage were discovered on the Freda Siphon. While the cracks do not immediately jeopardize the structural integrity of the aqueduct, leakage over time could erode adjacent soil, undermine the siphons, and cause extensive damage to the siphon structures. This action awards a construction contract to furnish and install internal seals at 82 locations within the 3-mile-long Freda Siphon Barrel No. 1. The work will be performed during a planned CRA shutdown in March 2024.

Details

Background

The CRA is a 242-mile-long water conveyance system placed into service in 1941. It consists of five pumping plants, 124 miles of tunnels, 63 miles of canals, and 55 miles of conduits, siphons, and reservoirs. As the aqueduct traverses the desert, it must cross numerous drainage channels, ravines, and other natural depressions. At each crossing, the aqueduct's open channel transitions into a buried conduit (an inverted siphon), which drops below ground and passes beneath the natural surface feature. Water re-emerges into the open aqueduct at the downstream end of the siphon. Typically, siphons are cast-in-place reinforced concrete conduits that vary in length from 150 feet to 5 miles.

The Freda Siphon is a 148-inch diameter double-barrel monolithic concrete siphon located 20 miles east of Iron Mountain Pumping Plant. It is a 3-mile-long buried siphon that was constructed in two phases. The first barrel was part of the original CRA construction, while Barrel No. 2 was built in the early 1950s. When Barrel No. 1 was constructed in the 1930s, the original design did not include expansion joints. Expansion joints accommodate length changes caused by thermal expansion and contraction of siphon conduits, which reduces the susceptibility to cracking. As a result, Barrel No. 1 has experienced periodic cracks in the interior of the conduits. While the cracks in the liners do not compromise the structural integrity of the conduits, over time, the cracks may propagate through the siphon walls and result in subsurface leaks, which could cause damage to the siphons. The design for Barrel No. 2 included expansion joints, and it does not experience the same cracking and leakage as Barrel No. 1.

In January 2021, six new subsurface leaks were discovered on Freda Siphon Barrel No. 1. The siphon was uncovered in the area of the leaks, and the leaks were temporarily repaired by filling the cracks with an epoxy sealant. Metropolitan forces performed all work. During the February 2022 CRA shutdown, staff conducted a detailed inspection of the entire siphon. Numerous internal circumferential cracks were observed, which varied from 6- to 42-inches long, with crack widths from 1/16 inch to 1 inch. In addition, previously repaired cracks utilizing coal tar filler or mortar patching have deteriorated over time and must be resealed. Staff has identified

76 additional locations of concern besides the six identified in 2021. Installation of internal seals at the identified areas is critical to prevent further crack progression and subsurface leaks. Final design of the internal seal installation is complete, and staff recommends award of a construction contract at this time. This work is planned to be completed during an upcoming CRA shutdown in March 2024.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager authorized staff to proceed with the installation of the internal seals at Freda Siphon Barrel No. 1, pending board award of the construction contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of $5.3 million in capital funds. Approximately $5.3 million will be incurred in the current biennium and has been previously authorized. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the CRA Reliability Program.

Freda Siphon Barrel No. 1 Internal Seal Installation – Construction

The scope of the construction contract includes furnishing and installing internal seals at 82 locations in the CRA Freda Siphon Barrel No. 1. The internal seals used for this project are comprised of flexible rubber liner material that is clamped around the full inside circumference of the pipe joint with a metal band to ensure a noncorrodible, water-tight seal. In some locations, depending on the severity of the cracks, multiple seals will be installed to fill the crack gap, and staff anticipates approximately 144 seals will be installed during the construction contract. Metropolitan forces will dewater the siphon, establish safety clearances, provide access, and return the aqueduct to service.

A total of $5.3 million is allocated for this work. In addition to the amount of the contract described below, other funds to be allocated include: $468,000 for construction management and inspections; $142,000 for Metropolitan force activities, as described above; $269,000 for submittal review, technical support during construction, responding to request for information, and preparation of record drawings; $276,000 for environmental monitoring, contract administration, and project management; and $250,000 for remaining budget.

Attachment 1 provides the allocation of the required funds. The total estimated cost to complete the siphon internal seal installation, including the amount appropriated to date, and funds allocated for the work described in this action, is approximately $5.4 million.

Award of Construction Contract (Miller Pipeline)

Specifications No. 2057 for furnishing and installing internal seals along the Freda Siphon Barrel No. 1 was advertised for bids on June 29, 2023. As shown in **Attachment 2**, 3 bids were received and opened on August 8, 2023. The low bid from Miller Pipeline in the amount of $3,895,000 complies with the requirements of the specifications. The other bids ranged from $6.14 million to $6.95 million, while the engineer's estimate for this project was $3.94 million. For this contract, Metropolitan did not establish a Small Business Enterprise participation level due to the specialized nature of the work. The subcontractors for this contract are listed in **Attachment 3**.

As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction greater than $3 million is 9 to 12 percent. For this project, the performance metric goal for construction management and inspection is 11.6 percent of the total construction cost. The total cost of construction for this project is $4,037,000, which includes the amount of the contract ($3.895 million), and Metropolitan force activities and supplies ($142,000).

Alternatives Considered

Staff considered several alternatives for the rehabilitation of the Freda Siphon, including a complete relining of the tunnel using a steel liner system and concrete liner. However, this alternative would require a months' long shutdown of a portion of the CRA, ranging in cost from $30 million to $45 million, and reduce the interior diameter of the siphon, thereby reducing the flow capacity of the CRA. Staff is currently investigating other lining

options such as polyurethane or epoxy lining; however, additional time is required to determine the best combination of long-term performance, rate of application and curing, as well as installation and maintenance cost. The selected alternative has been successfully used in the past and will allow for the rehabilitation of the siphon to be completed within the planned 19-day CRA 2024 shutdown. This approach also extends the service life of the concrete siphon.

Summary

This action awards a $3,895,000 contract to Miller Pipeline for furnishing and installing internal seals in the Freda Siphon Barrel No. 1 along the CRA conveyance system. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Listing of Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

Project Milestone

April 2024 – Completion of construction

Policy

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed 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. Accordingly, the proposed action qualifies as a Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines).

CEQA determination for Option #2:

None

Board Options

Option #1

Award a $3,895,000 contract to Miller Pipeline to furnish and install internal seals in Freda Siphon Barrel No. 1 along the CRA conveyance system.

Fiscal Impact: Expenditure of $5.3 million in capital funds. Approximately $5.3 million will be incurred in the current biennium and has been previously authorized.
Business Analysis: This option will enhance reliability of the CRA and reduce the risk of unplanned outages and costly emergency repairs.

Option #2

Do not proceed with the project at this time.
Fiscal Impact: None
Business Analysis: This option would forego an opportunity to repair the siphons during a scheduled shutdown. Deferral of the repairs could result in additional leakage and damage to the siphons.

Staff Recommendation

Option #1

8/22/2023

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

8/24/2023

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Listing of Subcontractors for the Low Bidder

Attachment 4 – Location Map

Ref# es12693258

Allocation of Funds for Freda Siphon Barrel No. 1 Internal Seal Installation

	Current Board Action (Sep. 2023)
Labor	
Investigations & Conceptual Design	$ -
Final Design	
Owner Costs (Program mgmt., envir. documentation)	258,000
Submittals Review & Record Drwgs.	269,000
Construction Inspection & Support	468,000
Metropolitan Force Construction	132,000
Materials & Supplies	-
Incidental Expenses	18,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	10,000
Contracts	
Miller Pipeline	3,895,000
Remaining Budget	250,000
Total	**$ 5,300,000**

The total amount expended to date for Freda Siphon Barrel No. 1 Internal Seal Installation is approximately $133,000. The total estimated cost to complete, including the amount appropriated to date and funds allocated for the work described in this action, is $5.4 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on August 8, 2023, at 2:00 P.M.

Specifications No. 2057
Freda Siphon Barrel No. 1 Internal Seal Installation

The project consists of furnishing and installing internal seals at 82 locations along the Colorado River Aqueduct's Freda Siphon Barrel No. 1.

Engineer's estimate: $3,940,000

Bidder and Location	Total	SBE $	SBE %	Met SBE[1]
Miller Pipeline Alameda, CA	**$3,895,000**	**$0**	**0%**	**-**
Structural Preservation Systems Garden Grove, CA	$6,138,316	-	-	-
Nationwide Contracting Services Inc. Huntington Beach, CA	$6,950,000	-	-	-

[1] Small Business Enterprise (SBE) participation level not established for this contract.

The Metropolitan Water District of Southern California

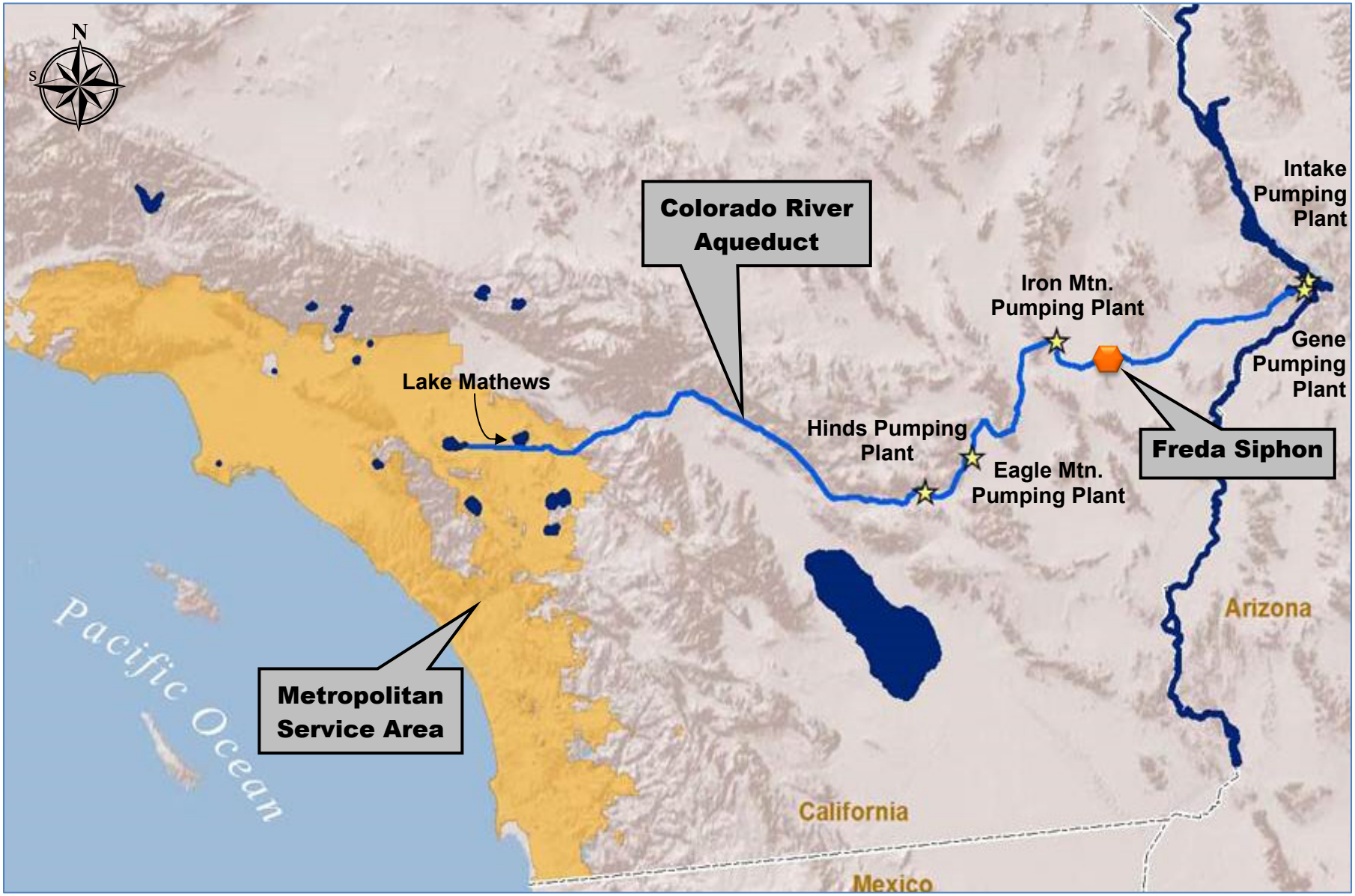
Subcontractors for Low Bidder

Specifications No. 2057
Freda Siphon Barrel No. 1 Internal Seal Installation

Low bidder: Miller Pipeline

Subcontractor	Service Category; Specialty
National Safety Services Inc. Huntington Beach, CA	Confined Space Safety Services

Location Map



Engineering, Operations, & Technology Committee

Freda Siphon Barrel No. 1 Internal Seals Installation

Item 7-1

September 11, 2023

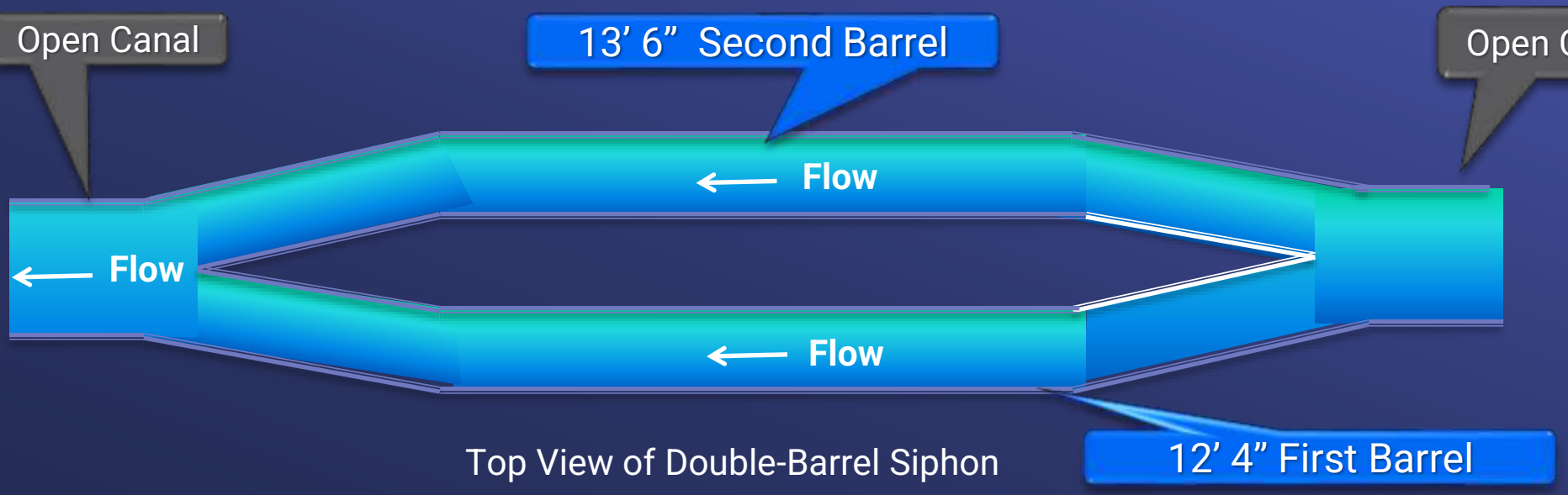
Freda Siphon Barrel No.1 Internal Seal Installation

Current Action

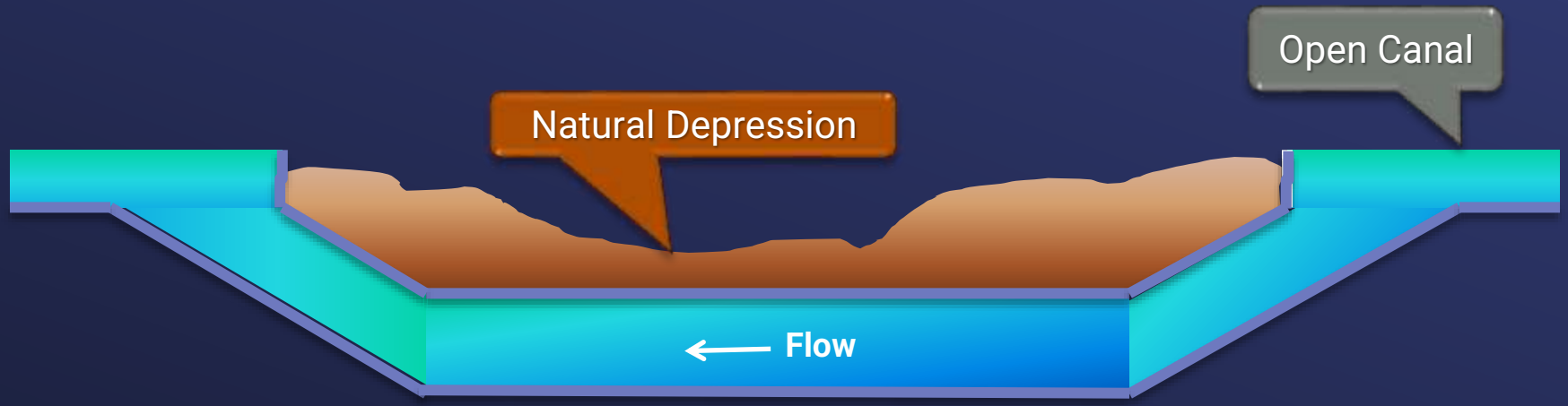
- Award a $3,895,000 contract to Miller Pipeline to install internal seals along the Freda Siphon Barrel No. 1 on the Colorado River Aqueduct

Project Location

Layout of Siphons



Top View of Double-Barrel Siphon



Side View of Double-Barrel Siphon

Freda Siphon Barrel No.1 Internal Seal Installation

Discovered Crack

Background

- Constructed in the 1930's
- 3-mile long, 148-inch diameter monolithic concrete siphon
  - No expansion joints
  - Siphon prone to cracks caused by thermal expansion
- Jan. 2021 - Six new subsurface leaks discovered
- Feb. 2022 - Internal inspection performed
  - New cracks discovered
  - Previous repairs have deteriorated
- Final design complete

Contractor – Scope of Work

- Furnish & install internal seals at 82 locations
- Planned for 2024 CRA Shutdown

Seal Installation

Previously Installed Seals

Freda Siphon Barrel No.1 Internal Seal Installation

Alternatives Considered

- Considered Alternative – Reline entire siphon using steel or concrete
  - Extended CRA shutdown required
  - Reduces interior diameter & flow capacity
- Selected Alternative – Install permanent seals at critical locations
  - Successfully installed previously at other locations
  - Work to be completed during planned 2024 CRA Shutdown

Bid Results
Specifications No. 2057

Bids Received	August 8, 2023
No. of Bidders	3
Lowest Responsible Bidder	Miller Pipeline
Low Bid	$3,895,000
Other Bids	$6.1 M - $6.9 M
Engineer's Estimate	$3,940,000

* No SBE (Small Business Enterprise) participation level set due to the specialized nature of the work

Freda Siphon Barrel No.1 Internal Seal Installation

Metropolitan - Scope of Work

- Dewatering activities, establish safety clearances & return aqueduct to service
- Construction management & inspection
- Submittals review & preparation of record drawings
- Environmental monitoring
- Project management & project controls

Allocation of Funds

Freda Siphon Barrel No.1 Internal Seal Installation

Metropolitan Labor		
Owners Costs (Proj. Mgmt., Contract Admin., Envir. Support)	$	258,000
Construction Inspection & Support		468,000
Force Construction		142,000
Submittals Review, Tech. Support, Record Dwgs.		269,000
Materials & Incidentals		18,000
Contracts		
Miller Pipeline		3,895,000
Remaining Budget		250,000
Total	$	5,300,000

Project Schedule

Board Options

- Option #1

  Award a $3,895,000 contract to Miller Pipeline to furnish and install internal seals in Freda Siphon Barrel No. 1 along the CRA conveyance system.

- Option #2

  Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

9/12/2023 Board Meeting

7-2

Subject

Authorize an agreement with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.8 million for Phase 1 design-build services for the Sepulveda Feeder Pump Stations Project; authorize an increase of $1.5 million to an existing agreement with Carollo Engineers Inc. for a new not-to-exceed amount of $2.49 million to serve as the owner's advisor through the Phase 1 design-build agreement; and authorize an amendment to Metropolitan's Project Labor Agreement to add the Sepulveda Feeder Pumps Project to the list of covered projects; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA (This action is part of a series of projects that are being undertaken to improve the supply reliability for State Water Project dependent areas)

Executive Summary

The recent statewide drought and historically low allocation of State Water Project (SWP) water supplies impacted Metropolitan's ability to deliver water to the SWP-dependent west service area. The progressive design-build (PDB) method will allow Metropolitan to expedite the development of pump stations at the Sepulveda Canyon and Venice Pressure Control Facilities, enabling greater deliveries of Colorado River Aqueduct (CRA) and Diamond Valley Lake (DVL) water supplies to the west service area, thereby mitigating the impacts of future SWP water shortages. This action authorizes an agreement with J.F. Shea Construction Inc. to develop the Sepulveda Feeder Pump Stations Project under a PDB project delivery approach. This action also authorizes an increase to an existing agreement with Carollo Engineers Inc. to serve as the owner's advisor through the Phase 1 design-build agreement. Lastly, this action authorizes an amendment to Metropolitan's Project Labor Agreement (PLA) to add the Sepulveda Feeder Pumps Project to the list of covered projects. This board action is part of a series of projects being undertaken to improve the supply reliability for the SWP-dependent areas.

Details

Background

Metropolitan's distribution system was initially constructed in the 1940s to deliver treated CRA supplies throughout its service area. The system was expanded in the 1970s to connect to and distribute SWP water supplies. The distribution system was designed to take advantage of the region's topography and primarily utilizes gravity to move water through the system. Completion of the SWP's West Branch allowed Metropolitan to serve water by gravity flow to areas further west than could be served by CRA water or stored water in DVL. While much of the service area benefits from access to both sources of supply and stored water in DVL, certain portions of the system can only receive limited DVL/CRA water due to inherent hydraulic limitations. During multi-year droughts, as California recently experienced, SWP-dependent areas rely on stored SWP supplies, transfers, and exchange deliveries.

The west service area portion of Metropolitan's distribution system typically receives SWP water via the Jensen plant, Sepulveda Feeder, and connecting pipelines. During periods of low deliveries from the West Branch of the SWP, or when the Jensen plant is out of service, the west area is served by the Weymouth plant through the East Valley Feeder and the Greg Avenue Pump Station. This backup system is limited to a maximum capacity of approximately 50 cubic feet per second (cfs). Through the recent statewide drought that ended in early 2023, the Greg Avenue Pump Station operated nearly full-time at its maximum capacity.

In February 2022, Metropolitan's Board approved planning efforts for the Sepulveda Feeder Pump Stations Project to increase delivery reliability in the west area. This project will enable Metropolitan to convey treated CRA and DVL water from its Central Pool northward along the Sepulveda Feeder to the west service area, supplementing deliveries from the Greg Avenue Pump Station. This concept requires two new pump stations along the Sepulveda Feeder: one each located adjacent to the existing Venice and Sepulveda Canyon Control Facilities. The project will be implemented in multiple stages. The initial stage of the larger project includes the construction of two pump stations capable of moving up to 30 cfs northward from the Central Pool to the west service area. However, once operational, the water supply benefits of the project to the west service area will be approximately 60 cfs of water supply as there will no longer be a need to send "operational water" southward on the Sepulveda Feeder from the Jensen plant during periods of low SWP demands. These operational water flows in the Sepulveda Feeder are currently necessary in order to maintain water quality in the feeder during low SWP allocations. Therefore, once the initial phase of this project is complete, the operational flows can be diverted to the west service area.

The capacity of the initial phase of the project is based on the current pressure limitations of the Sepulveda Feeder, which is primarily comprised of prestressed concrete cylinder pipe (PCCP). The pump station sites will be planned so that additional pumping capacity, up to a potential maximum capacity of approximately 160 cfs, could be added in future stages within Metropolitan's current property holdings. This expansion could take place after PCCP portions of the Sepulveda Feeder are relined with welded steel pipe.

The pump stations will not only enhance reliability of water supplies in the west area in times of reduced SWP supplies, but they will increase overall system flexibility by enabling facilities in the Jensen exclusive area to be easily removed from service for maintenance and repairs. During the upcoming rehabilitation of PCCP portions of the Sepulveda Feeder, the pump stations will aid in minimizing delivery impacts to member agencies as the PCCP lining work proceeds.

On September 13, 2022, the California legislature enacted Assembly Bill 1845, which enables Metropolitan to utilize alternative project delivery methods, including PDB, to implement regional recycled water projects or other water infrastructure projects undertaken to alleviate water supply shortages attributable to drought or climate change. The bill, which took effect January 1, 2023, requires that the agreement for the first phase of a PDB project be awarded based on qualifications. On March 14, 2023, the Board amended Metropolitan's Administrative Code to provide for the implementation of this legislation authorizing alternative project delivery methods.

On March 20, Metropolitan issued Request for Qualifications (RFQ) No. 1340 to select the entity to provide PDB services for the Sepulveda Feeder Pump Stations. Statements of qualification were received on May 25 and have been evaluated. In order to expedite project completion, staff recommends authorizing an agreement to J.F. Shea Construction Inc. to begin Phase 1 of the PDB process, as explained below. Staff will return to the Board at a future date for procurement of long-lead equipment and, if Metropolitan and Shea are able to negotiate a Guaranteed Maximum Price (GMP), an amendment to the agreement to cover Phase 2 work, which includes completion of design and construction.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the action described herein, pending board authorization of the agreement described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). The Phase 1 actions under this project anticipate an expenditure of $15.8 million in capital funds, and approximately $8 million will be incurred in the current biennium. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the System Flexibility/Supply Reliability Program.

Sepulveda Feeder Pump Stations – Progressive Design-Build

The PDB model utilizes a two-phase process. A design-build entity (DBE) is selected based on qualifications in response to an RFQ. Under Phase 1, the selected DBE will then progress the design in a collaborative manner

with Metropolitan to the point at which a GMP can be estimated. For this project, the design will be approximately 70 percent complete when the DBE proposes a GMP to Metropolitan. If Metropolitan and the DBE are able to negotiate a GMP for the remaining design and construction work, the DBE will complete the design and begin construction upon board approval of an amendment of the agreement to include Phase 2 work. If the parties are unable to reach an agreement on a GMP, Metropolitan would either select another DBE or complete the design and award a construction contract. This action authorizes an agreement for a Phase 1 PDB agreement for design of the Sepulveda Feeder Pump Stations.

Two pump stations are currently planned with an initial pumping capacity of 30 cfs. One pump station will be located within the boundaries of the Venice Control Facility in West Los Angeles, near Culver City. The second pump station will be located approximately seven miles north of the first pump station near Metropolitan's Sepulveda Canyon Control Facility. This site is located in an area of the Sepulveda Pass north of the Getty Center in the city of Los Angeles. Each pump station will require pumps, motors, and interconnection piping to the Sepulveda Feeder, valve control structures, mechanical equipment for surge control, and electrical modifications.

The planned activities for the Phase 1 agreement will include investigation of the two sites; site planning to accommodate current and future pumping capacities; preliminary design; performing pre-construction services; development of design-build procurement documents; final design; equipment design and preparation of submittal documents for key long-lead equipment; and development of a GMP proposal. Metropolitan force activities include field staff participation and review of the operational aspects of the design. Phase 1 design-build services will be performed by J.F. Shea Construction Inc., as described below, under a PDB contract for the Sepulveda Feeder Pump Stations at Sepulveda Canyon and Venice Control Facilities.

A total of $15.8 million is required for this work. Allocated funds include $9.8 million for Phase 1 design-build services by J.F. Shea Construction Inc. Allocated funds also include $1.5 million for owner's advisor services through the Phase 1 design-build agreement by Carollo Engineers Inc. and $30,000 for value engineering to be performed under an existing board-authorized agreement. Allocated funds for Metropolitan staff include $2,160,000 for technical oversight, review of design builder's work, and identification of technical requirements; $1,246,000 for project management, preparation of environmental documentation, and other owner's costs; $385,000 for review of equipment submittals; and $679,000 for remaining budget. **Attachment 1** provides the allocation of the required funds.

Design will be performed by J.F. Shea Construction Inc. as part of the Phase 1 design-build services to approximately 70 percent level of completion; the below metric will be revised at the start of Phase 2. Engineering Services' performance metric target range for final design with construction more than $3 million is 9 to 12 percent. For this project, the performance metric goal for final design is estimated to be 11.4 percent of the total construction cost. The total estimated cost for final design is $9.69 million, which includes $5.6 million for J.F. Shea Construction Inc.,$1.44 million for Metropolitan staff, and $2.65 million for future design costs. The estimated construction value for this project is anticipated to range from $85 million to $95 million. The total estimated cost to complete this project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $105 million to $115 million.

Phase 1 Design-Build Services – J.F. Shea Construction Inc.

RFQ No. 1340 was issued March 20, 2023, to select the most qualified DBE to provide PDB services for the Sepulveda Feeder Pump Stations Project. Three firms submitted a Statement of Qualifications. All three firms met the mandatory minimum qualifications for bonding capacity, insurance coverage, safety record, and other statutory requirements. The firms were then evaluated based on the qualifications of the project team and key personnel, experience related to similar design-build projects, project understanding and delivery approach, and construction planning and scheduling. J.F. Shea Construction Inc. was the top-ranked DBE with the highest evaluation scores based on the evaluation criteria described above.

Staff recommends authorizing an agreement for Phase 1 PDB services for the Sepulveda Feeder Pump Stations with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.8 million. The terms of the agreement are consistent with the draft PDB contract that was drafted with the assistance of outside counsel and issued as a reference document with the RFQ. While the agreement will need to be amended for Phase 2 work once the GMP is established, the agreement contains the negotiated terms and conditions for both Phases 1 and 2. Key terms and conditions are summarized in **Attachment 4**.

The Phase 1 activities will include: (1) review of existing project documentation, (2) development of the project schedule, (3) preparation of a Basis of Design Report, procurement plan, and preliminary design deliverables, (4) site investigations including geotechnical investigations and potholing, (5) performance of pre-construction services including but not limited to environmental planning support, permitting, and constructability reviews, (6) development of final design to the 70 percent level, (7) preparation of procurement documents and design for key, long-lead equipment; and (8) development of a GMP proposal for Phase 2 services.

This action authorizes an agreement with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.80 million for Phase 1 PDB services for the Sepulveda Feeder Pump Stations. For this agreement, Metropolitan has established a Small Business Enterprise and Disabled Veteran Business Enterprise participation level of 25 percent. J.F. Shea Construction Inc. has agreed to meet this level of participation. The lead designer is Tetra Tech Inc., and the planned subconsultants are identified in **Attachment 2**.

Owner's Advisor Services – Carollo Engineers Inc.

Owner's advisor services are recommended to be performed by Carollo Engineers Inc. under an existing board-authorized agreement. Carollo Engineers Inc. was selected based on the firm's expertise in design-build contracts and its familiarity with the Sepulveda Feeder Pump Stations Project. Carollo Engineers Inc. completed the conceptual study for this project and helped with the development of the owner's engineering documents for the selection of the DBE. The planned owner's advisor services activities will include: (1) development of a formal partnering approach to identify and resolve issues; (2) facilitating project meetings and progress reviews; (3) reviewing proposed plans, procedures, schedules, guidelines, and training material associated with the implementation and deployment of new work processes at Metropolitan for the use of the PDB project delivery method; (4) providing advisement services to staff throughout the first phase of the project; and (5) developing cost estimates to be used as a basis of negotiating the GMP with the DBE.

This action authorizes an increase of $1.5 million to an existing agreement with Carollo Engineers Inc. for a new not-to-exceed amount of $2.49 million for owner's advisor services during Phase 1 of PDB for the Sepulveda Feeder Pump Stations. Due to the nature of the work and the accelerated schedule, no Small Business Enterprise participation level has been established. The planned subconsultants for this work are Stantec Inc. and Paul Hansen Engineering.

Project Labor Agreement Amendment

In October 2022, Metropolitan's Board authorized a PLA with the trade councils of Los Angeles, Orange, Riverside, San Bernardino, San Diego Counties, Tri-Counties, and the signatory unions. It approved its use as a bid condition for select construction contracts within the CIP. The PLA currently includes a list of 33 covered projects and provides a stream-lined process for adding projects to the PLA within the 5-year term of the PLA, contingent upon board approval. Based on the anticipated cost of construction, complexity of construction, and anticipated number of trades involved in construction, staff recommends adding the Sepulveda Feeder Pump Stations to the PLA's list of covered projects. See **Attachment 5** for the PLA Covered Project List. Following board approval of this amendment to the covered projects list, staff will seek similar approval by the signatory unions in accordance with the amendment procedures of the PLA.

Alternatives Considered

Alternatives considered for the Sepulveda Feeder Pump Stations included using a traditional design-bid-build project delivery process in which drawings and specifications would be developed for advertisement for competitive bidding. It was determined that this traditional project delivery approach would delay completion of the project by two years when compared to the PDB method. An expected completion date for a typical design-bid-build method would be mid-2028, whereas with design-build, completion would be expected by mid-2026. This two-year delay increases the risk that Metropolitan may not be able to meet west area demands yet again in future droughts that impact SWP water supplies. To mitigate these risks, it was determined that Metropolitan should utilize PDB delivery to expedite construction of the pump stations. This alternative is expected to provide the earliest possible completion of the project.

Summary

This action authorizes an agreement with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.8 million for Phase 1 PDB services for the Sepulveda Feeder Pump Stations at Sepulveda Canyon and Venice Pressure Control Facilities. This action also authorizes an increase of $1.5 million to an existing agreement with Carollo Engineers Inc. for a new not-to-exceed amount of $2.49 million to serve as the owner's advisor through Phase 1 of the design-build agreement; and authorize an amendment to Metropolitan's Project Labor Agreement to add the Sepulveda Feeder Pumps Project to the list of covered projects. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the List of Subconsultants, **Attachment 3** for the Location Map, **Attachment 4** for the Agreement Terms; and **Attachment 5** for PLA Covered Project List.

Project Milestones

October 2024 – Board award of a Phase 2 agreement for PDB services

July 2026 – Project closeout and completion

Policy

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

Metropolitan Water District Administrative Code Section 8148: Alternative Project Delivery

By Minute Item 52703, dated February 8, 2022, the Board authorized the West Area Water Supply Reliability Improvements.

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.

By Minute Item 52973, dated September 13, 2022, the Board authorized an increase to an existing agreement with Carollo Engineers Inc. to perform owner's advisor services for the Sepulveda Feeder Pump Stations Project.

By Minute Item 53004, dated October 11, 2002, the Board authorized the General Manager to sign a PLA with the trade councils of Los Angeles, Orange, Riverside, San Bernardino, San Diego Counties and the Tri-Counties and the signatory unions.

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

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists of basic data collection, research, experimental management, and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded. Accordingly, the proposed action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines). Additionally, the proposed action is statutorily exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action involves feasibility or planning studies for possible future actions which the agency, commission or board has not yet approved, adopted or funded (Section 15262 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

a. Authorize an agreement with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.8 million for Phase 1 design-build services for the Sepulveda Feeder Pump Stations Project.
b. Authorize an increase of $1.5 million to an existing agreement with Carollo Engineers Inc. for a new not-to-exceed amount of $2.49 million to serve as the owner's advisor through the Phase 1 design-build agreement.
c. Amend Metropolitan's Project Labor Agreement to include the Sepulveda Feeder Pump Stations Project.

Fiscal Impact: $15.8 million in capital funds. Approximately $8 million will be incurred in the current biennium and has been previously authorized. The remaining funds from this action will be accounted for in the next biennial budget.

Business Analysis: The project will expand Metropolitan's ability to serve Diamond Valley Lake and Colorado River water to a portion of the distribution system that normally receives water from the State Water Project and will provide an alternate route to deliver treated water to the west service area during emergencies or when major feeders are removed from service for rehabilitation.

Option #2

Do not authorize the project at this time.
Fiscal Impact: None
Business Analysis: This option would forego an opportunity to increase the flexibility of Metropolitan's system and reduce water supply risks associated with California's drought.

Staff Recommendation

Option #1

8/23/2023
John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

8/24/2023
Adel Hagekhalil *Date*
General Manager

Attachment 1 – Financial Statement

Attachment 2 – Listing of Subconsultants

Attachment 3 – Location Map

Attachment 4 – Agreement Terms

Attachment 5 – PLA Covered Project List

Ref# Es12689614

Allocation of Funds for Sepulveda Feeder Pump Stations Project – Phase 1

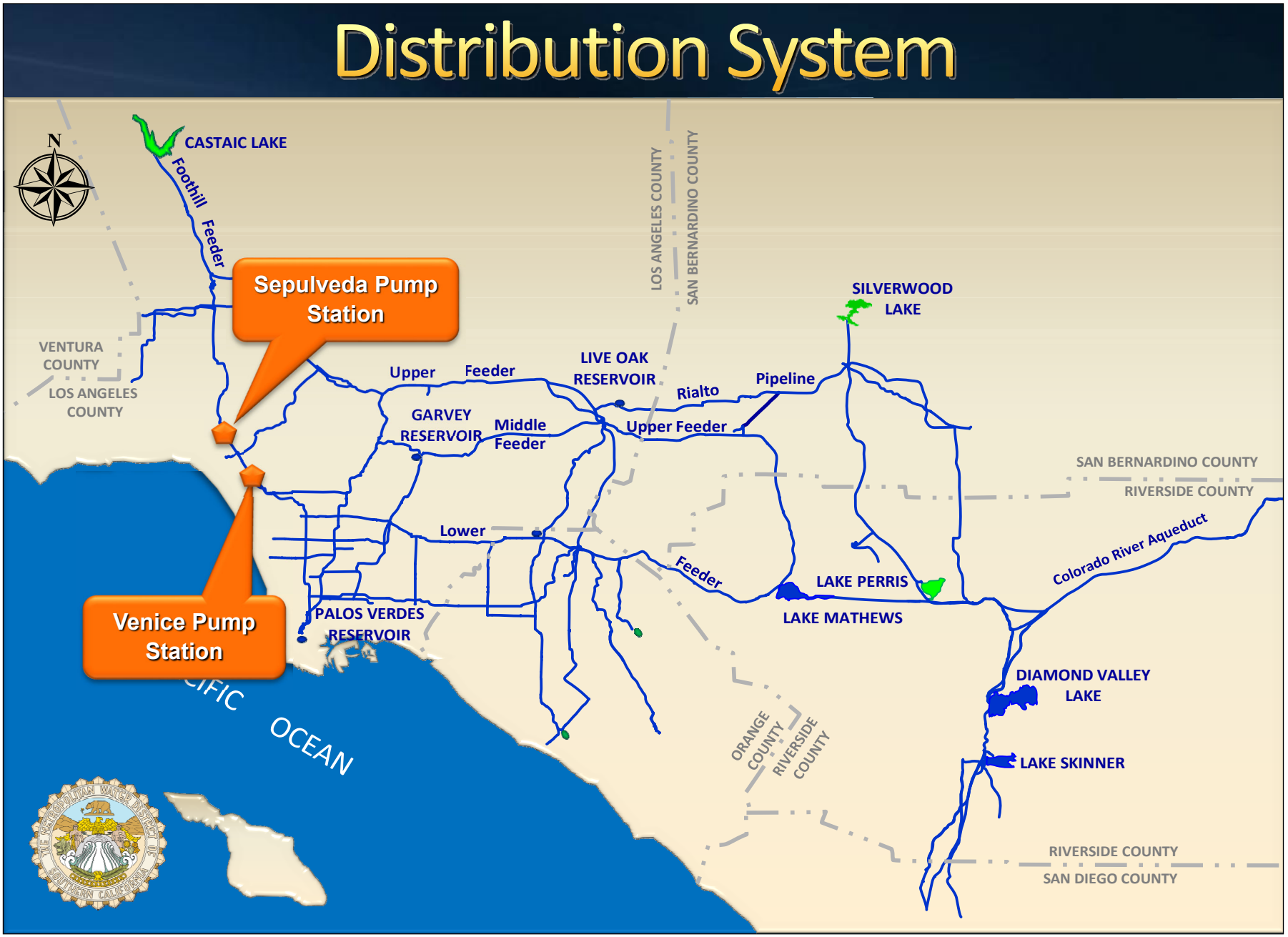
	Current Board Action (Sep. 2023)
Labor	
Studies & Investigations	$ 720,000
Final Design (Phase 1)	1,440,000
Owner Costs (Program mgmt., envir. monitoring)	1,150,000
Submittals Review & Record Drwgs.	385,000
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	96,000
Professional/Technical Services	
Value Engineering Facilitator	30,000
Carollo Engineers Inc.	1,500,000
Right-of-Way	-
Equipment Use	-
Contracts	
J.F. Shea Construction Inc.	9,800,000
Remaining Budget	679,000
Total	**$ 15,800,000**

The total amount expended to date to design the Sepulveda Feeder Pump Stations project is approximately $1.3 million. The total estimated cost to complete this project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $105 million to $115 million.

The Metropolitan Water District of Southern California

Subconsultants for Agreement with J.F. Shea Construction Inc.

Subconsultant and Location	Service Category; Specialty
Tetra Tech Inc. Irvine, California	DBE Lead Designer
Scott Foster Engineering Inc. La Canada Flintridge, California	Surge Analysis
Gillis+ Panichapan Architects Inc. Costa Mesa, California	Architectural Services
Hushmand Associates Inc. Irvine, California	Geotechnical and Earthquake Engineering
DRP Engineering Inc. Monterey Park, California	Microstation/CAD Production Services
V&A Consulting Engineers San Diego, California	Corrosion Engineering
Brierley Associates Corp. Woodland Hills, California	Trenchless Structural Design
Calvada Surveying Inc. Los Angeles, California	Surveying Services
Utah Water Research Laboratory Logan, Utah	Water Flow Modeling


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

COVERED PROJECT LIST

1. Badlands Tunnel Surge Tank Construction

Scope: Install 15-foot-high by 40-foot-diameter surge tank at south end of Badlands Tunnel, install altimeter valves and large check valves, and install a pipe connection to Inland Feeder

Location: Moreno Valley

County: Riverside

2. Colorado River Aqueduct (CRA) Housing Projects

Scope: This project replaces a total of 75 employee houses across the CRA pumping plants and includes the construction of two maintenance buildings and two storage facilities. Multiple construction contracts may be awarded to construct these facilities.

Location: CRA Pumping Plants

County: San Bernardino and Riverside

3. Colorado River Aqueduct Transformers Construction

Scope: Replace the 69 kV and 230 kV transformers at the 5 CRA pumping plants. Procurement of the transformers and bridge cranes are Metropolitan Furnished Equipment under a separate procurement contract.

Location: CRA Pumping Plants

County: San Bernardino and Riverside

4. Copper Basin Reservoir Discharge Valve Rehabilitation

Scope: Rehabilitate the discharge structure at the Copper Basin Reservoir on the Colorado River Aqueduct.

Location: Unincorporated San Bernardino

County: San Bernardino

5. Diemer Filter Rehabilitation

Scope: Rehabilitate all 48 filters at the Diemer Water Treatment Plant by replacing the filter media, surface wash system and underdrains; modifying flow distribution flumes; and raising and replacing the existing troughs.

Location: Yorba Linda

County: Orange County

6. Garvey Reservoir Rehabilitation

Scope: The Garvey Reservoir Rehabilitation project includes replacing the existing floating cover and reservoir liner, modifying the inlet and outlet reservoir facilities, upgrading the water quality lab building, improving facility erosion controls, and replacing valves in the junction structure.

Location: Monterey Park

County: Los Angeles

7. Jensen Solids Mechanical Dewatering

Scope: Modify the piping and valves in Jensen Solids Pump Room No. 2 and install motor-operated knife valves in Jensen Solids Pump Room No. 1.

Location: Granada Hills

County: Los Angeles

8. CRA Conduit Structural Protection

Scope: Provide crushed aggregate pads for crane set up and turn around areas adjacent to and above the cut and cover conduit and either install reinforced concrete protective slabs over the road crossings or realign roads away from the conduit at several locations

Location: CRA

County: San Bernardino and Riverside

9. Lake Perris Seepage Recovery Conveyance Pipeline

Scope: Construction of a new water conveyance pipeline from Perris Dam to the Colorado River Aqueduct.

Location: Perris

County: Riverside

10. CRA Sump System Rehabilitation Completion

Scope: This project will replace or repair corroded piping and pipe supports, replace isolation valves, replace access platforms and ladders, and construct new access platforms.

Location: CRA

County: San Bernardino and Riverside

11. Lakeview Pipeline Stage 2 Relining

Scope: Complete permanent repairs to approximately 3.7 miles of pipeline between the Inland Feeder Pressure Control Facility and the Lake Perris Control Facility.

Location: Riverside

County: Riverside

12. Orange County Right-of-Way and Infrastructure Protection Project - Stages 2 & 3

Scope: The projects will address access limitations, erosion-related improvement work, and security needs along the surface of Metropolitan's pipelines right-of-way.

Location: Orange County

County: Orange County

13. Mills Finished Water Reservoir Rehabilitation & Mixing Improvements

Scope: Rehabilitate finished water reservoir liners and floating covers with rainwater removal systems, rehabilitate slide gates, install new drop gates, and replace reservoir instrumentation security elements.

Location: Riverside

County: Riverside

14. CRA Storage Buildings

Scope: This project will replace sheds at Hinds, Eagle Mountain, and Iron Mountain Pumping Plants with new storage buildings. The new buildings will be insulated metal storage buildings with roll-up doors, entrance doors, electrical outlets, lights, ventilation, asphalt paving around the building perimeter, and a concrete slab and driveway.

Location: CRA Pumping Plants

County: San Bernardino and Riverside

15. San Gabriel Tower Seismic Upgrade

Scope: Seismically retrofit the San Gabriel Tower and make modifications to the Morris Dam connection and other related facilities along the Upper Feeder.

Location: Unincorporated LA County

County: Los Angeles

16. Sepulveda Feeder Prestressed Concrete Cylinder Pipe (PCCP) Rehab – Reach 1

Scope: Rehabilitate approximately 4.7 miles of PCCP portions of the Sepulveda Feeder.

Location: Los Angeles

County: Los Angeles

17. Sepulveda Feeder PCCP Rehab – Reach 2

Scope: Rehabilitate approximately 3.8 miles of PCCP portions of the Sepulveda Feeder.

Location: Los Angeles

County: Los Angeles

18. SBVMWD Foothill Pumping Station

Scope: Construction of new interties between the Inland Feeder and Citrus Reservoir and Pump Station. Includes new connecting pipes, isolation valves and vault structures, and installation of new electrical and control components for valve operation

Location: Highland

County: San Bernardino

19. CRA Pumping Plant Utilities

Scope: This project replaces utilities at the CRA pumping plant villages. It may be split into more than one construction contract.

Location: Various

County: Riverside

20. Diamond Valley Lake Apprenticeship Training Facility

Scope: This project includes the construction of a training facility at Diamond Valley Lake.

Location: Hemet

County: Riverside

21. Hinds Pumping Plant Discharge Valve Platform Replacement

Scope: This project will replace the discharge valve pit platforms in nine discharge valve pits at the Hinds Pumping Plant.

Location: Desert Center

County: Riverside

22. Diemer Chemical System & Tank Farm Upgrades

Scope: This project upgrades the chemical system and tank farm at the Diemer Water Treatment Plant.

Location: Yorba Linda

County: Orange

23. CRA 6.9kV Cables – Units 6-9

Scope: This project replaces 6.9 kV-rated, three conductor paper insulated, lead-covered (PILC) power cables for units 6 to 9 throughout the Colorado River Aqueduct's five pumping plants with 15 kV-rated, 750 kcmil, 3-conductor, polyethylene-sheathed PILC cables.

Location: Multiple aqueduct pumping plants

County: San Bernardino and Riverside

24. Foothill Hydroelectric Power (HEP) Seismic Upgrade

Scope: This project is to rehabilitate electrical, instrumentation, mechanical, and structural components of the Foothill Feeder Hydroelectric Plant.

Location: Castaic

County: Los Angeles

25. Inland Feeder – Rialto Pipeline Intertie

Construction of a new intertie pipeline and isolation valve and vault between the Inland Feeder and the Rialto Feeder

Location: San Bernardino

County: San Bernardino

26. Jensen Finished Water Reservoir Rehabilitation & Mixing Improvements

This project will rehabilitate the finished water reservoir liner and floating cover with rainwater removal system at the Finished Water Reservoir No. 2, along with modification to the inlet structure, support system, effluent weir pump system, plant domestic water system connection, and reservoir gates.

Location: Granada Hills

County: Los Angeles

27. Mills Control System Replacement

Scope: This project replaces the control system at the Mills Water Treatment Plant.

Location: Riverside

County: Riverside

28. CRA Desert Region Security Improvements

This project includes physical security improvements at all five Colorado River Aqueduct Pumping Plant facilities and the Camino Switching Station.

Location: Various

County: Riverside

29. Pure Water Southern California

Scope: The Pure Water Southern California Program includes the construction of a phased 150 MGD advanced purification center adjacent to the Los Angeles County Sanitation Districts Joint Water Pollution Control Plant in Carson, up to 60 miles of large diameter pipeline to the San Gabriel Valley, and appurtenant facilities for indirect and direct potable reuse. Work could include both conventional Design/Bid/Build and collaborative delivery project implementation methods.

Location: Carson

Counties: Los Angeles

30. Diamond Valley Lake Wave Attenuator – Stage 2

Scope: Replacement of the existing wave attenuator at Diamond Valley Lake to accommodate greater variations in water levels. Includes demolishing and removing the existing wave attenuator and furnishing and installing a post-tension concrete floating wave attenuator system.

Location: Hemet

County: Riverside

31. Wadsworth Bypass

Scope: Pipeline with an isolation valve to connect the Wadsworth Pump Plant discharge line to the Eastside Pipeline to allow continuous pumping from the Diamond Valley Lake forebay.

Location: Hemet

County: Riverside

32. Perris Valley Pipeline Tunnels

Scope: Constructing approximately 3,000 linear feet of 97-inch diameter welded steel pipe micro-tunneling and cut and cover, including connecting adit tunnel and four shafts.

Location: Riverside County

County: Riverside County

33. Second Lower Feeder – Reach 3B

Scope: The work consists of the rehabilitation of approximately 19,000 linear feet of prestressed concrete cylinder pipe (PCCP), removing portions of existing PCCP, installing Metropolitan-furnished and Contractor-furnished steel liner pipe, rehabilitating three existing isolation valve structures and two service connections, and installing and removing Palos Verdes Reservoir temporary bypass lines.

Location: Various

County: Los Angeles

34. Sepulveda Feeder Pump Stations Project

Scope: This project adds pump stations at the Venice and Sepulveda Pressure Control Stations enabling greater deliveries of Colorado River Aqueduct and Diamond Valley Lake water supplies to the west service area.

Location: Los Angeles

County: Los Angeles

The Metropolitan Water District of Southern California

Sepulveda Feeder Pump Stations Progressive Design-Build Project
Key Agreement Terms

1.	Phase 1 Progressive Design-Build Agreement: Not to exceed $9.8 million, includes engineering design and related field investigations to achieve 70 percent complete design package, design allowances, payment for key submittals on critical path equipment, and site investigations. 1. Approximately $7.1 million for investigations, design, and cost estimates 2. Approximately $1.3 million for critical path equipment submittals 3. Approximately $1.4 million for design and submittal allowance
2.	Phase 2 Design-Builders Fee: 11 percent, includes design-builder's overhead (G&A), and profit.
3.	Phase 2 construction contingency funds: Amounts of each fund listed below to be determined during negotiation of Guaranteed Maximum Price (GMP). Purpose of funds are to address unforeseen conditions and unexpected scope development that arise after negotiation of GMP. 1. Fund 1 – Metropolitan's share: Used at Metropolitan's discretion 2. Fund 2 – Design-builder's share: 50 percent of unused contingency would be returned to Metropolitan
4.	Procurement of critical path equipment: in the event that prior to 70 percent GMP negotiations, the need to commence procurement of key critical path equipment is identified, staff will return to the Board to authorize intermediate GMPs to allow Design-Builder to procure equipment.
5.	Design-Build entity agrees to terms and conditions of Metropolitan's draft construction contract that was part of RFQ No. 1340.

Engineering, Operations, & Technology Committee

Sepulveda Feeder Pump Stations Project

Item 7-2

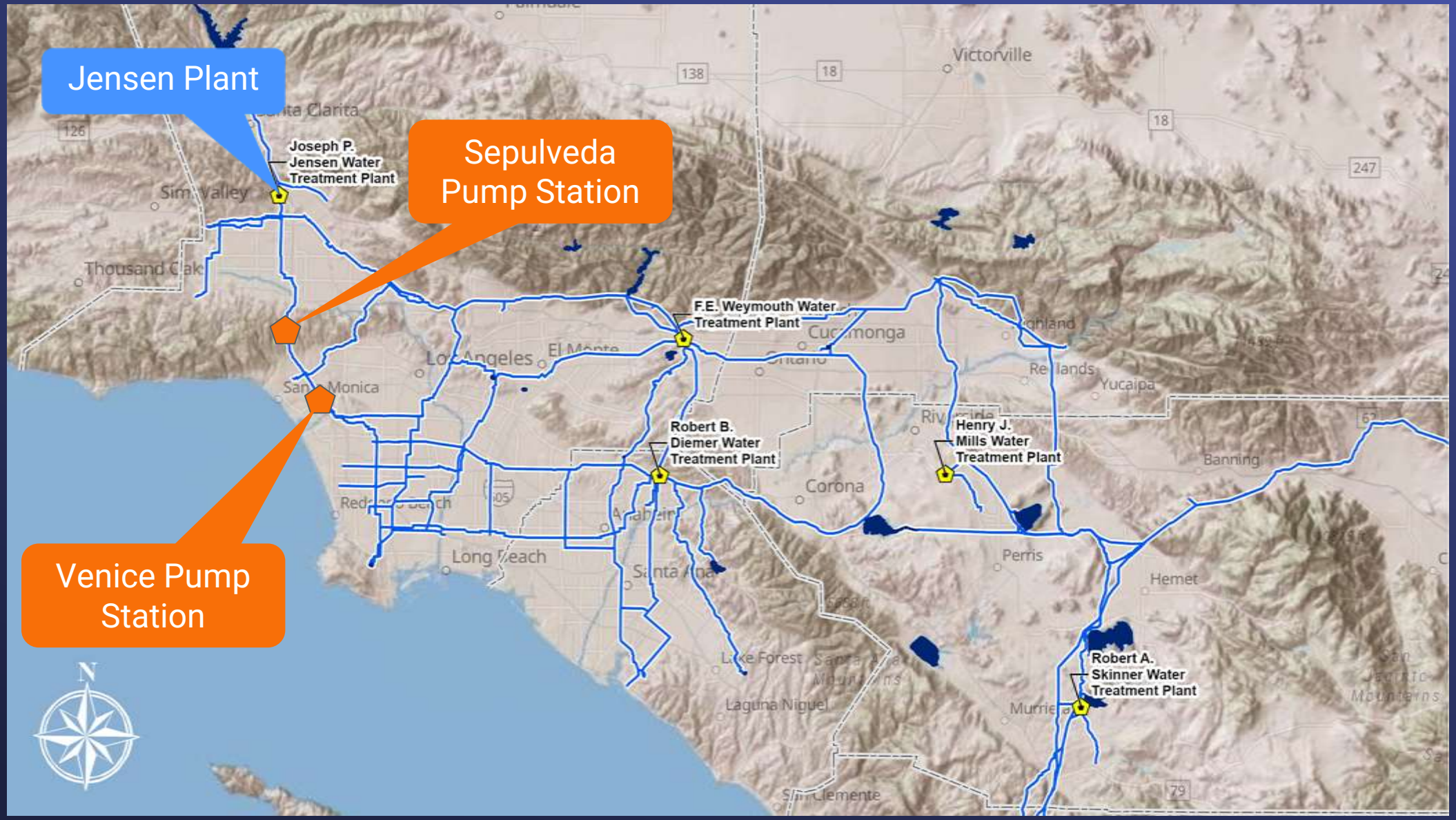
September 11, 2023

Sepulveda Feeder Pump Stations Phase 1

Current Action

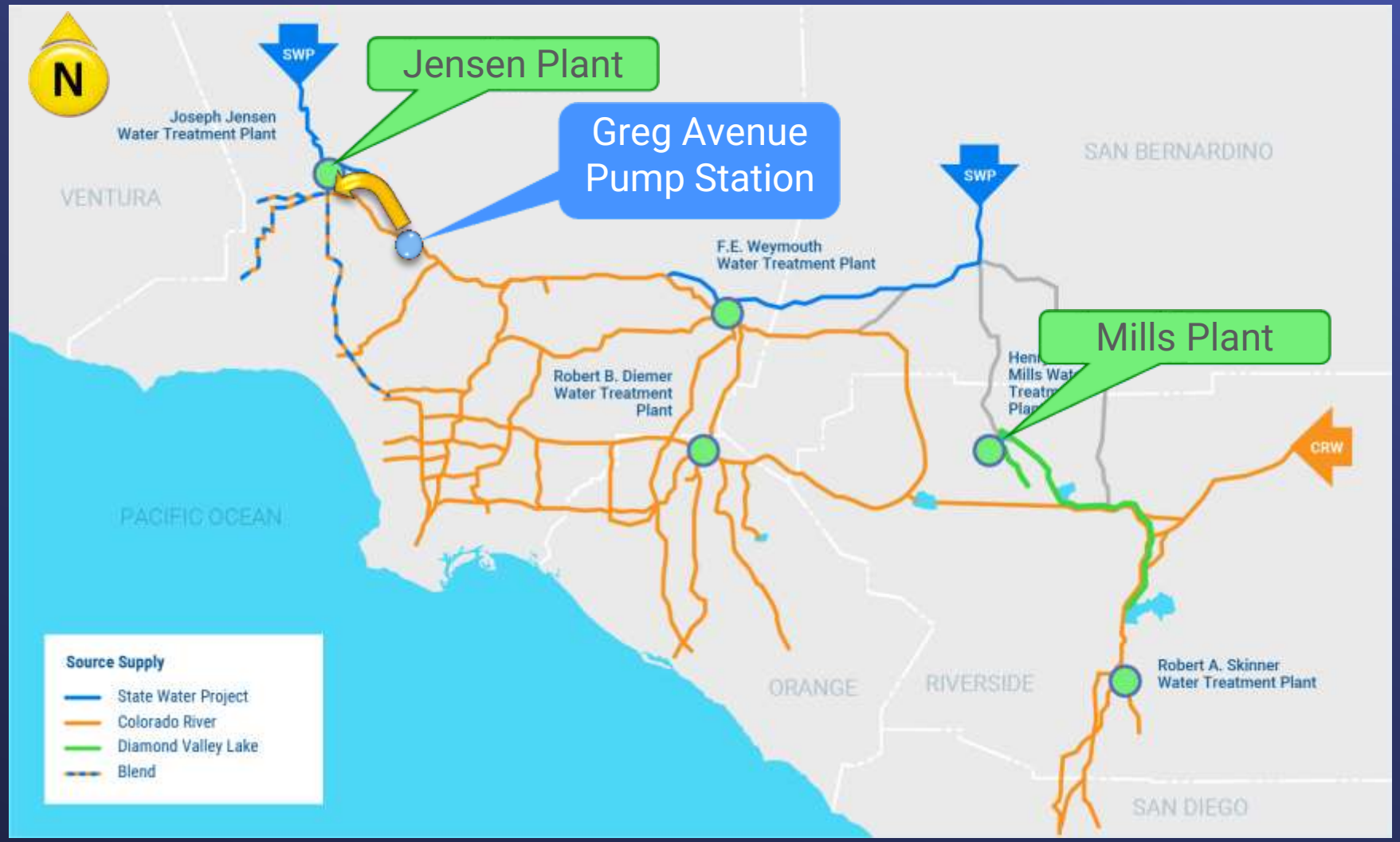
- Authorize an agreement with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.8 million for Phase 1 design-build services for the Sepulveda Feeder Pump Stations Project
- Authorize an increase of $1.5 million to an existing agreement with Carollo Engineers Inc. for a new not-to-exceed amount of $2.49 million to serve as the owner's advisor through the Phase 1 design-build agreement
- Authorize an amendment to Metropolitan's Project Labor Agreement to include the Sepulveda Feeder Pump Stations Project to the list of covered projects

Distribution System



Background

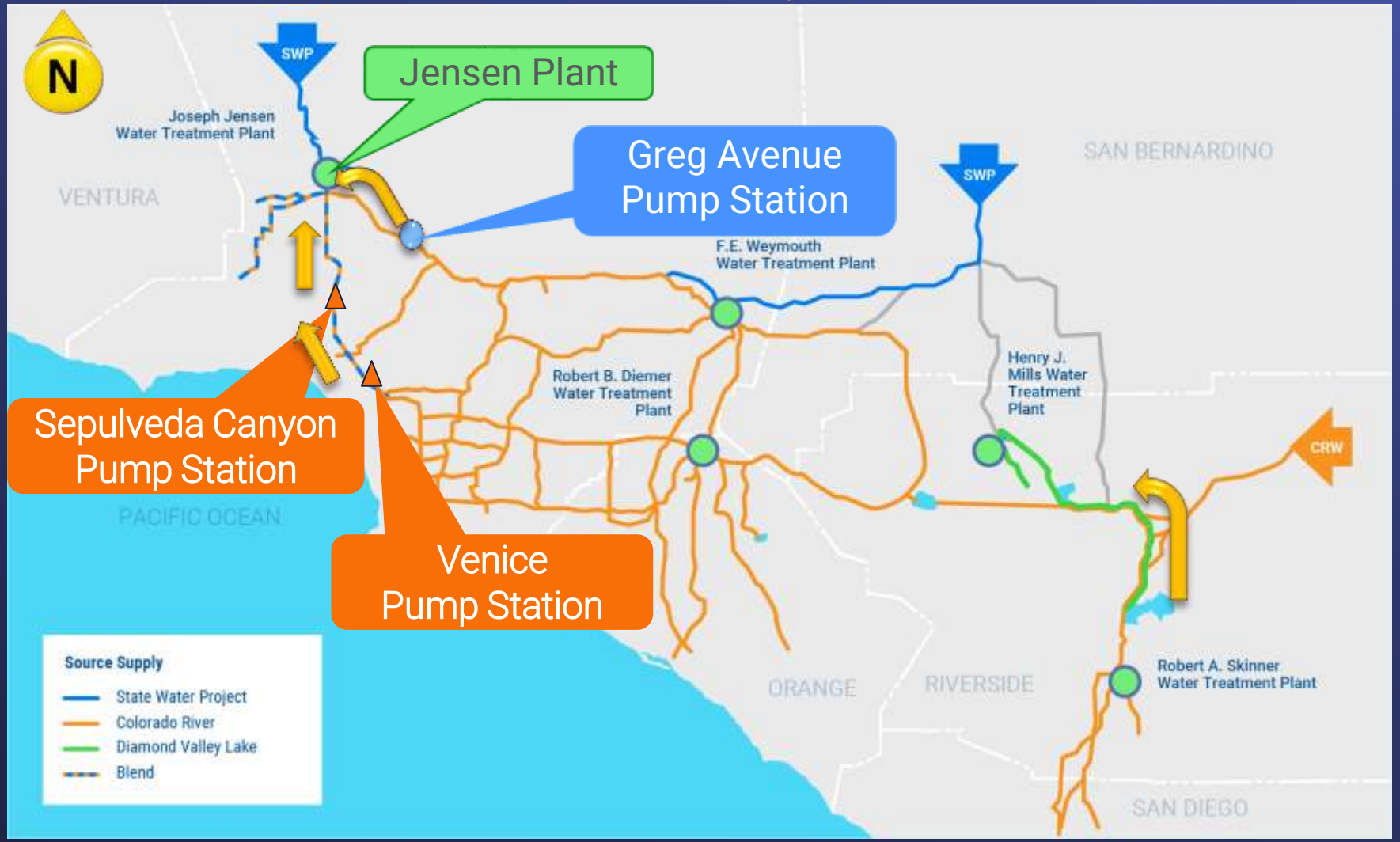
Sepulveda Feeder Pump Stations Phase 1



Pumping Water Up the Sepulveda Feeder Enhances Drought Resiliency

Sepulveda Feeder Pump Stations Phase 1

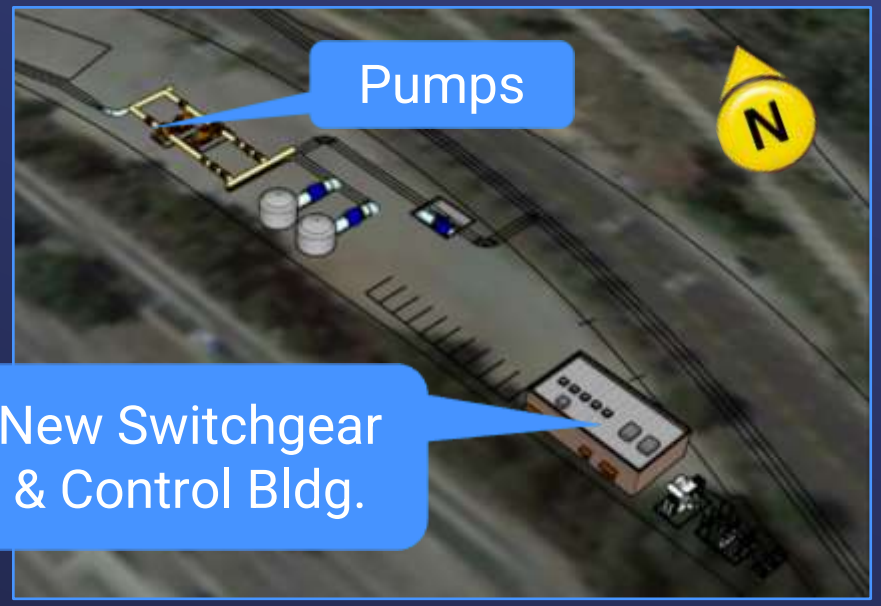
Venice Pressure Control Station



Background

- Addition of pump stations at Sepulveda Canyon & Venice Pressure Control Facilities will allow Metropolitan to reverse normal flow in the Sepulveda Feeder
  - Augments treated water deliveries to west service area
  - Initial hydraulic capacity of pump stations limited to 30 cfs
    - Offsets 60 cfs of SPW usage
  - Future capacity – up to 160 cfs

2022 E&O Inspection Trip



Proposed Sepulveda Pump Station Layout

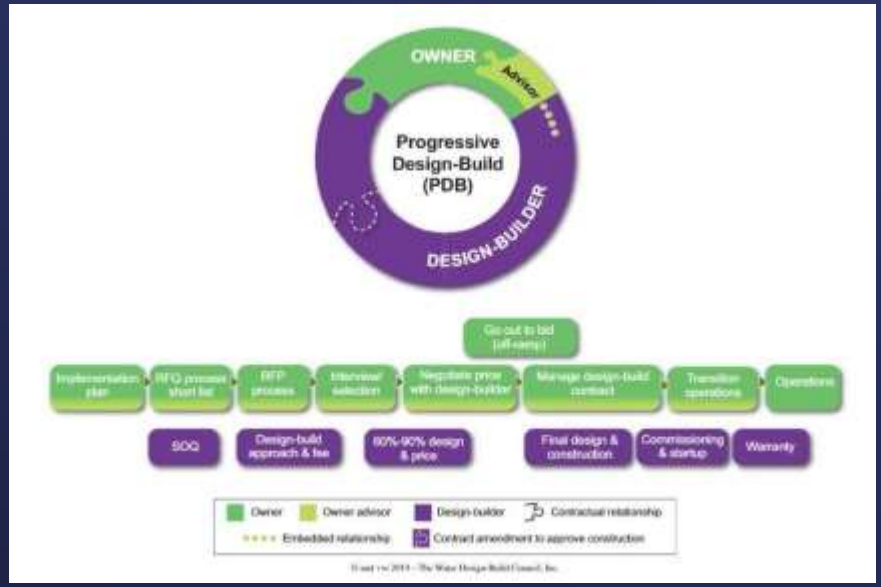
Project Scope & Goal

- Two new pumping plants on the Sepulveda Feeder
- Project components
  - Pumps, motors, & interconnection piping
  - Valve structures
  - Mechanical eqpt. for surge protection
  - Electrical modifications & switchgear
  - Electrical & control buildings
- Project Goals
  - Expedite completion
  - Maintain long-term reliability

Proposed Venice Pump Station Layout

Progressive Design Build

- PDB model utilizes a two-phase process
  - Phase 1: Design-Builder will progress the design collaboratively with Metropolitan to about 70% complete & propose a guaranteed maximum price (GMP)
  - Phase 2: Once GMP is negotiated, Design-Builder will complete design & begin construction upon board approval



Sepulveda Feeder Pump Stations
Phase 1

Alternatives Considered

- Traditional Design-Bid-Build
  - Metropolitan has experience with this project delivery process
  - Delays completion of project by two years
  - Metropolitan bears risk of equipment delays
- Progressive Design-Build
  - Expedites construction of the pump stations
  - Faster completion of project to mitigate risk of meeting west area demand during low SWP allocation

Sepulveda Feeder Pump Stations
Phase 1

Phase 1 Scope of Work

- Review of existing project documentation
- Site investigations
- Preparation of Basis of Design Report & preliminary design deliverables
- Development of the project schedule
- Preparation of procurement documents & design for key, long-lead equipment
- Development of final design to ~70%
- Development of a GMP proposal for Phase 2 services

Sepulveda Feeder Pump Stations
Phase 1

Request for Qualifications (RFQ) 1340

- Issued March 20, 2023 to select a design-build entity (DBE)
- 3 responses
- Evaluated based on qualifications
  - Project team & key personnel
  - Experience related to similar projects
  - Project understanding & delivery approach
  - Construction planning & scheduling

Sepulveda Feeder Pump Stations
Phase 1

J.F. Shea Construction Inc. – Agreement

- Selected based on qualifications
- Lead Designer is Tetra Tech Inc.
- NTE amount: $9.8 million
- Key Terms
  - T&Cs consistent w/ Metropolitan contracts & PDB best practices
  - Summarized in board letter attachment
  - SBE participation level: 25%
  - Covered under PLA

Sepulveda Feeder Pump Stations
Phase 1

Carollo Engineers Inc. – Agreement

- Owner's Advisor Services:
  - Develop a formal partnering approach to identify and resolve issues
  - Facilitate project meetings & progress reviews
  - Review proposed plans, procedures, schedules, guidelines, & training materials
  - Provide advisement services
  - Develop cost estimates
- New NTE amount: $2.49 million
  - $1.5 million increase to existing agreement

Metropolitan's Project Labor Agreement

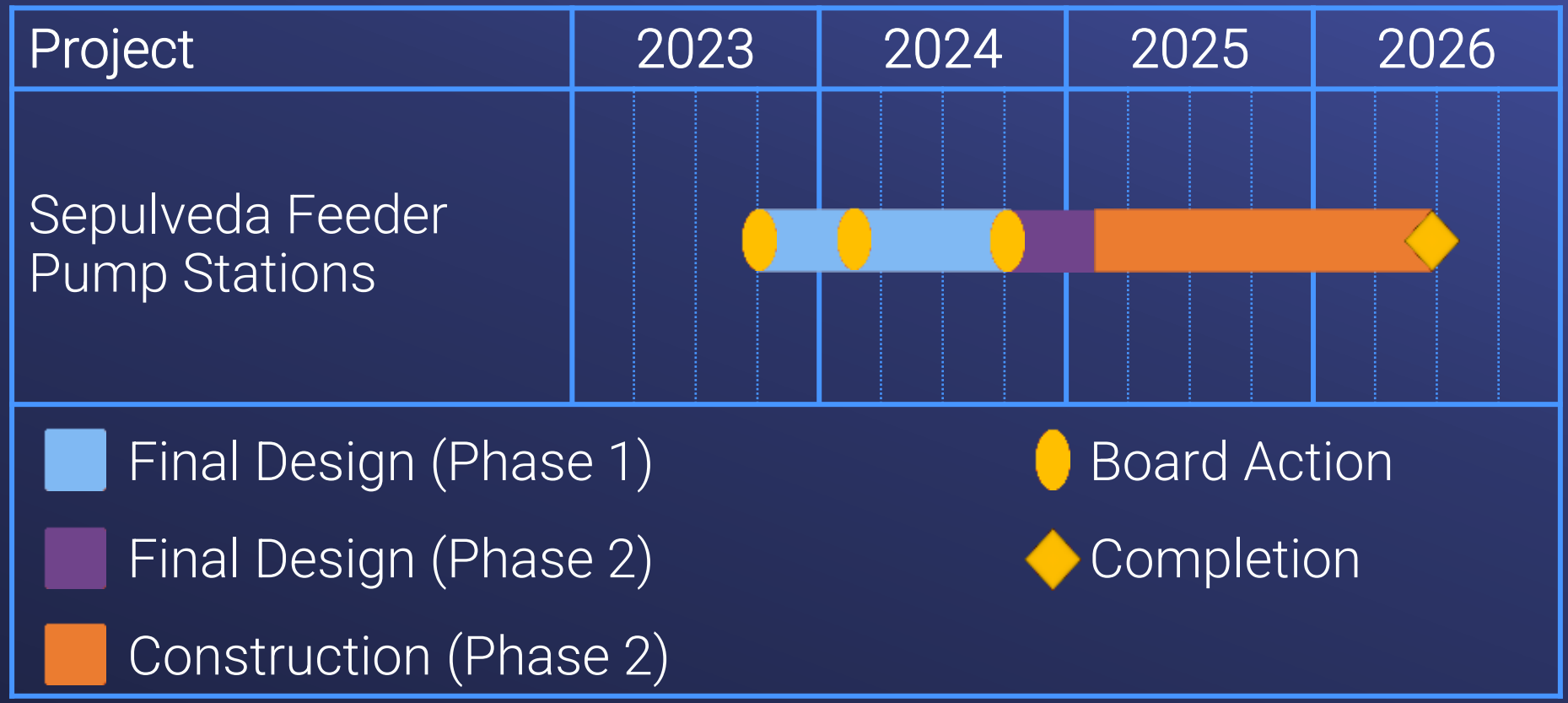
- October 22 – Board authorized PLA
- PLA includes list of 33 covered projects
  - Does not include Sepulveda Feeder Pump Stations Project
- Add the Sepulveda Feeder Pump Stations Project to the list of covered projects

Allocation of Funds

Sepulveda Feeder Pump Stations – Phase 1

Metropolitan Labor	
Studies & Investigations	$ 720,000
Final Design (Phase 1)	1,440,000
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	1,150,000
Submittals Review, Tech. Support, Record Dwgs.	385,000
Incidental Expenses	96,000
Professional/Technical Services	
Carollo	1,500,000
Value Engineering	30,000
Contracts	
J.F. Shea Construction Inc.	9,800,000
Remaining Budget	679,000
	Total $ 15,800,000

Project Schedule



Board Options

- Option #1
  a. Authorize an agreement with J.F. Shea Construction Inc. for a not-to-exceed amount of $9.8 million for Phase 1 design-build services for the Sepulveda Feeder Pump Stations Project.
  b. Authorize an increase of $1.5 million to an existing agreement with Carollo Engineers Inc. for a new not-to-exceed amount of $2.49 million to serve as the owner's advisor through the Phase 1 design-build agreement.
  c. Amend Metropolitan's Project Labor Agreement to include the Sepulveda Feeder Pump Stations Project.
- Option #2
  - Do not authorize the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

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

9/12/2023 Board Meeting

8-1

Subject

Award a $15,681,000 contract to Steve P. Rados Inc. to construct an intertie between Inland Feeder and Rialto Pipeline as part of the water supply reliability improvements in the Rialto Pipeline service area; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA
(This action is part of a series of projects that are being undertaken to improve the supply reliability for State Water Project dependent member agencies)

Executive Summary

The recent state-wide drought and resulting low allocation of State Water Project (SWP) supplies by the California Department of Water Resources (DWR) directly impacted Metropolitan's ability to deliver water to the Rialto Pipeline service area. Construction of infrastructure improvements to enable the delivery of water from Diamond Valley Lake (DVL), and the Colorado River Aqueduct (CRA), would benefit this area and preserve limited SWP supplies for the West Branch SWP member agencies. This action awards a construction contract to construct a pipeline interconnecting the Inland Feeder and Rialto Pipeline. This project is the second of four associated projects which are currently underway to enable the direct delivery of water from DVL to the Rialto Pipeline through the Inland Feeder to improve water supply reliability for SWP-dependent member agencies.

Details

Background

The Rialto Pipeline, constructed in 1972, is approximately 30 miles long with a diameter ranging from 96 inches to 144 inches. It conveys untreated water from DWR's Lake Silverwood to Metropolitan's Live Oak Reservoir and ultimately into the F.E. Weymouth Water Treatment Plant in La Verne. Member agencies with service connections on the Rialto Pipeline include the Inland Empire Utilities Agency, Three Valleys Municipal Water District, and the Upper San Gabriel Valley Municipal Water District. These agencies use the untreated water for groundwater replenishment or as the source water to their water treatment plants.

Metropolitan's DVL provides emergency storage in the event of a major earthquake, carryover storage as a reserve for drought conditions, and seasonal storage to meet annual member agency demands. DVL is Metropolitan's largest reservoir, with a maximum storage capacity of 810,000 acre-feet. At this time, the Rialto Pipeline is unable to access the water stored in DVL due to infrastructure and operational constraints and hydraulic limitations.

In December 2021, the Board authorized amending the Capital Investment Plan (CIP) to include water supply reliability improvements in the Rialto Pipeline service area. The improvements include the Wadsworth Pumping Plant Bypass Pipeline, the Inland Feeder Rialto Pipeline Intertie, the Inland Feeder Badlands Tunnel Surge Protection Facility, and a connection between the Inland Feeder and San Bernardino Valley Municipal Water District's (SBVMWD) Foothill Pump Station near the city of Highland. When the Rialto Pipeline Water Supply Reliability Improvements are completed, Metropolitan will be able to deliver up to 107 cfs of water from DVL or the CRA to the Rialto Pipeline. These infrastructure improvements would significantly increase operational flexibility and enhance the water supply reliability to member agencies with service connections on the Rialto Pipeline. These projects will indirectly benefit West Branch SWP member agencies during times of drought by

allowing limited SWP supplies to be allocated to the West Branch of the SWP facilities while DVL water complements supplies to East Branch-dependent areas.

Work activities on the projects are currently underway, either in the design or construction phases. In January 2023, the Board awarded a construction contract for the Wadsworth Pumping Plant Bypass Pipeline. Design activities for the Inland Feeder Rialto Pipeline Intertie are complete, and staff recommends proceeding with construction. Design and right-of-way acquisition for the Badlands Tunnel Surge Protection Facility and SBVMWD Foothill Pump Station Intertie is anticipated to be completed by Fall 2023.

Budget Impact

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with construction of the Inland Feeder Rialto Pipeline Intertie, pending board award of the construction contract described below. Based on the current CIP expenditure forecast, funds for the work to be performed pursuant to the subject contracts during the current biennium are available within the CIP Appropriation for fiscal years 2022/23 and 2023/24 (Appropriation No. 15525). This action anticipates an expenditure of $20 million in capital funds, of which approximately $3.2 million will be incurred in the current biennium. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Supply Reliability Program.

Inland Feeder/Rialto Pipeline Intertie – Construction

The scope of the construction contract consists of installing approximately 250 feet of 96-inch-diameter steel pipe near DWR's Devil Canyon Second Afterbay facility to connect the Inland Feeder to the Rialto Pipeline. The project also includes concrete encasement of the connecting tees, construction of a partially buried isolation valve structure, installation of a large-diameter valve, and construction of a buried electrical duct bank and associated wiring. Metropolitan forces will dewater the pipelines, establish clearances, and return the system to service. The interconnection work will be conducted during a planned shutdown scheduled in early 2025.

A total of $20 million is required to do this work. In addition to the contract amount, allocated funds for work by Metropolitan staff include: $1,524,000 for construction management and inspection; $632,000 for Metropolitan force shutdown activities; $626,000 for submittals review, responding to requests for information, and preparation of record drawings; $155,000 for Metropolitan-furnished materials and incidental expenses; $365,000 for contract administration, environmental monitoring support, Project Labor Agreement (PLA) administration, and project management; and $1,017,000 for remaining budget.

Award of Construction Contract (Steve P. Rados Inc.)

Specifications No. 2021 for the construction of the Inland Feeder/Rialto Pipeline Intertie was advertised on June 2, 2023. As shown in **Attachment 2**, three bids were received and opened on August 9, 2023. The apparent low bidder requested to be released from its bid in accordance with the Public Contract Code due to an inadvertent clerical error made during the bidding process, which materially changed its bid. The second low bid from Steve P. Rados in the amount of $15,681,000 complies with the requirements of the specifications. The engineer's estimate for this project was $14 million. Staff investigated the difference between the engineer's estimate and the low bid. The key differences are attributed to the increased cost for pipe fabrication and concrete encasement around the pipe, as well as electrical and instrumentation material costs which were higher than staff's estimates due to inflation and supply chain trends that were identified by the contractor. For this contract, Metropolitan established a Small Business Enterprise participation level of at least 20 percent of the bid amount. Steve P. Rados Inc. has committed to meeting this participation level. The subcontractors for this contract are listed in **Attachment 3**. This contract will be conducted under the terms of Metropolitan's PLA.

As described above, Metropolitan staff will perform construction management and inspection. The total cost of construction for this project is $18,441,000, which includes the amount of the contract ($15,681,000), a Metropolitan-furnished 84-inch diameter butterfly valve and other previously procured materials ($1,988,000), and Metropolitan force activities and materials ($772,000). Engineering Services' performance metric goal for inspection of projects with construction greater than $3 million is 9 to 12 percent. For this project, the performance metric for inspection is 8.3 percent of the total construction cost.

Alternatives Considered

Staff considered awarding the Inland Feeder/Rialto Pipeline Intertie Project without the task to install the isolation valve. Instead, the contractor would use bulkheads and spool pieces to isolate and direct flows until the valve is delivered. This option would move forward with the infrastructure necessary to provide water from DVL to the Rialto Pipeline service area and defer the installation of the valve until it is delivered. Staff would return to the Board later to award a separate construction contract, or utilize Metropolitan forces to install the valve, which would likely result in additional costs due to design costs for a new contract and mobilization and inspection costs for a new project.

The selected alternative includes the installation of an 84-inch diameter isolation butterfly valve in the Inland Feeder/Rialto Pipeline Intertie Project. The Board awarded a procurement contract for the valve in August 2022, and delivery is expected by June 2024. The valve was procured in advance since the valves have a long fabrication and delivery cycle. The valve manufacturing industry continues to struggle with supply chain complexities; however, given the estimated construction completion date of March 2025, there is a high likelihood that the valve will be available for installation, which would result in the lowest overall contract cost and an accelerated completion date. If valve delivery is delayed, Metropolitan would proceed with the fabrication of bulkheads and spool pieces to minimize contract delays.

Summary

This action awards a $15,681,000 contract to Steve P. Rados Inc. to construct the Inland Feeder/Rialto Pipeline Intertie. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Listing of Subcontractors for the Low Bidder, and **Attachment 4** for the Location Map.

Project Milestone

March 2025 – Complete construction of the Inland Feeder Rialto Pipeline Intertie

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 52622, dated December 14, 2021, the Board authorized amending the Capital Investment Plan to include infrastructure improvements that would enhance water delivery capabilities to member agencies that can only receive State Project Water.

By Minute Item 52938, dated August 16, 2022, the Board authorized procurement of three 84-inch diameter butterfly valves.

By Minute Item 53095, dated January 10, 2023, the Board awarded a construction contract for the Wadsworth Pumping Plant Eastside Pipeline Intertie.

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

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists of the installation of a new pipeline or the maintenance, repair, replacement, removal, or demolition of an existing pipeline of less than one mile in length within a public right-of-way. Accordingly, the proposed actions qualify under a statutory exemption (Section 21080.21 of the California Public Resources Code and Section 15282(k) of the State CEQA Guidelines). Additionally, the proposed actions are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. In particular, the proposed action consists of the minor alterations and of construction and location of limited numbers of new, small facilities or structures with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Further, the proposed action consists of public or private alterations in the condition of land, water, and/or vegetation,

which do not involve removal of healthy, mature, scenic trees. Accordingly, the proposed action qualifies under Class 1, Class 3, Class 4 Categorical Exemptions (Sections 15301, 15303, and 15304 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a $15,681,000 contract to Steve P. Rados Inc. to construct an intertie pipeline between the Inland Feeder and Rialto Pipeline. This project is part of water supply reliability improvements in the Rialto Pipeline service area.

Fiscal Impact: Expenditure of $20 million in capital funds. Approximately $3.2 million will be incurred in the current biennium and have been previously authorized. The remaining funds from this action will be accounted for in the next biennial budget.

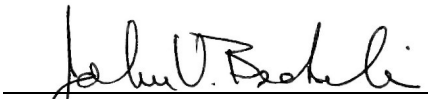
Business Analysis: This option will improve the operational reliability of water deliveries to member agencies with connections to the Rialto Pipeline.

Option #2

Do not proceed with the project at this time.
Fiscal Impact: None
Business Analysis: This option would forego improving the reliability of service to those member agencies with connections to the Rialto Pipeline.

Staff Recommendation

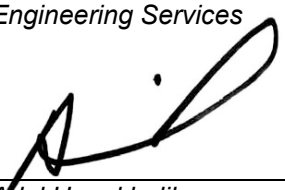
Option #1



8/24/2023

John V. Bednarski
Manager/Chief Engineer
Engineering Services

Date



8/28/2023

Adel Hagekhalil
General Manager

Date

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# es12690144

Allocation of Funds for Inland Feeder/Rialto Pipeline Intertie

	Current Board Action (Sep. 2023)
Labor	
Studies & Investigations	$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	365,000
	-
Submittals Review & Record Drwgs.	626,000
Construction Inspection & Support	1,524,000
Metropolitan Force Construction	632,000
Materials & Supplies	140,000
Incidental Expenses	15,000
Professional/Technical Services	-
Right-of-Way	-
Contracts	
Steve P. Rados Inc.	15,681,000
Remaining Budget	1,017,000
Total	**$ 20,000,000**

The total amount expended for the Inland Feeder/Rialto Pipeline Intertie is approximately $2,800,000. The total estimated cost to complete this project, including funds spent to date and funds allocated for the work described in this action, is $22.8 million.

The Metropolitan Water District of Southern California

Abstract of Bids Received on August 9, 2023, at 2:00 P.M.

Specifications No. 2021
Inland Feeder Rialto Pipeline Intertie

The work consists of furnishing and installing approximately 250 linear feet of 96-inch diameter welded steel pipe; construction of a valve structure; installation of Metropolitan-furnished valves; removal and disposal of pipe coating material.

Engineer's estimate: $14 million

Bidder and Location	Total	SBE $	SBE %	Met SBE[1]
James W. Fowler Dallas, OR[2]	$12,831,977	-	-	-
Steve P. Rados Inc. **Santa Ana, CA**	**$15,681,000**	**$3,136,000**	**20**	**Yes**
Mladen Buntich Construction Co. Inc. Upland, CA	$17,954,000	-	-	-

[1] Small Business Enterprise (SBE) participation level established at 20% for this contract.
[2] James W. Fowler requested to be released from its bid in accordance with the Public Contract Code due to an inadvertent clerical error made during the bidding process, which materially changed its bid.

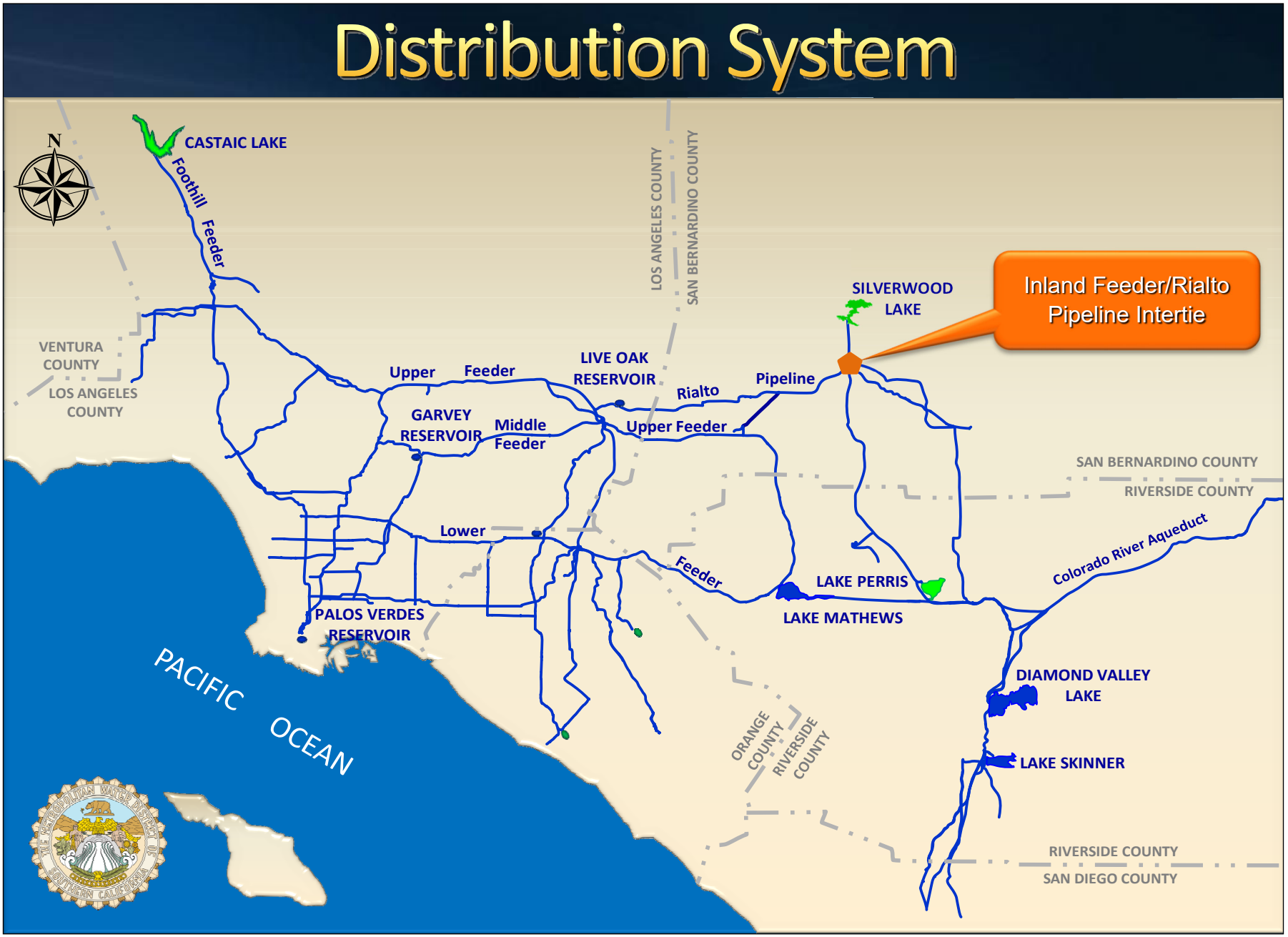
The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

Specifications No. 2021
Inland Feeder/Rialto Pipeline Intertie

Low bidder: Steve P. Rados Inc.

Subcontractor and Location	Service Category, Specialty
Deans Certified Weilding Inc. Temecula, CA	Welding
CMC Rebar San Bernardino, CA	Rebar
Southern Contracting Company San Marcos, CA	Electrical
Southwest V-Ditch Riverside, CA	Concrete, V-Ditch
Capital Industrial Coatings Huntington Beach, CA	Painting
Matrix Environmental Long Beach, CA	Asbestos/Coal Tar Removal


Distribution System
N
CASTAIC LAKE
Foothill Feeder
VENTURA COUNTY
LOS ANGELES COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
Inland Feeder/Rialto Pipeline Intertie
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

Inland Feeder Rialto Pipeline Intertie

Item 8-1

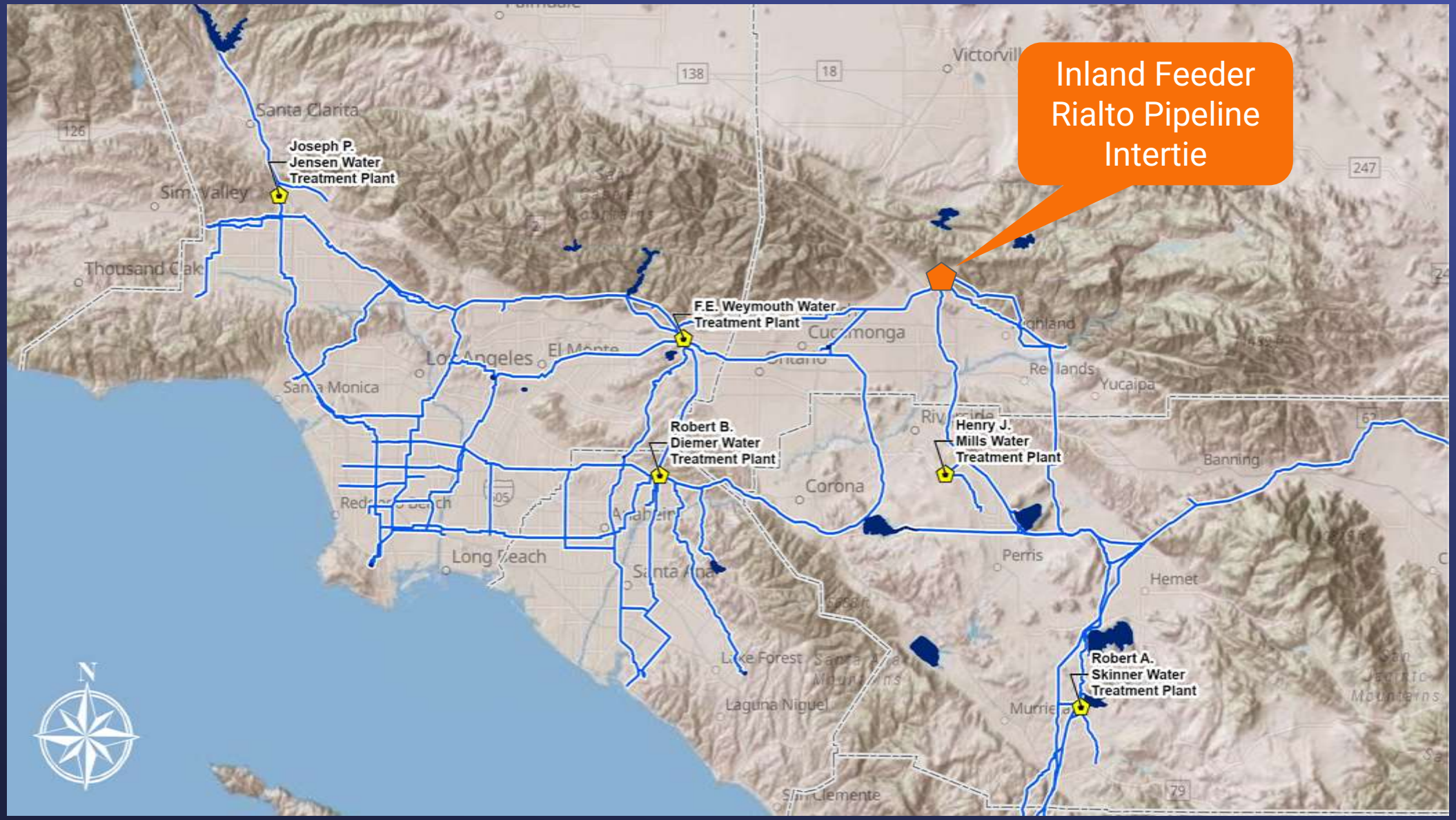
September 11, 2023

Inland Feeder Rialto Pipeline Intertie

Current Action

- Award a $15,681,000 contract to Steve P. Rados Inc. to construct an intertie between the Inland Feeder & Rialto Pipeline as part of the water supply reliability improvements in the Rialto Pipeline service area
  - Part of a series of projects to improve supply reliability for SWP-dependent member agencies

Distribution System



Inland Feeder Rialto Pipeline Intertie

Background

- Rialto Pipeline conveys SWP supplies to Inland Empire Utilities Agency, Three Valleys MWD & Upper San Gabriel Valley MWD
- DVL is Metropolitan's largest reservoir
  - DVL helps meet member agency demands under normal, drought, & emergency conditions
- Rialto Pipeline unable to access water stored in DVL or from CRA due to infrastructure & operational constraints

Background – On-going Water Supply Reliability Improvements

- Four projects initiated to improve supply reliability of SWP-dependent areas
- Wadsworth Bypass in construction
- IF/RP Intertie – this action
- Final design ongoing for remaining two projects

Inland Feeder Rialto Pipeline – Normal Operations

Inland Feeder-Rialto Pipeline Intertie – Pumping Operations

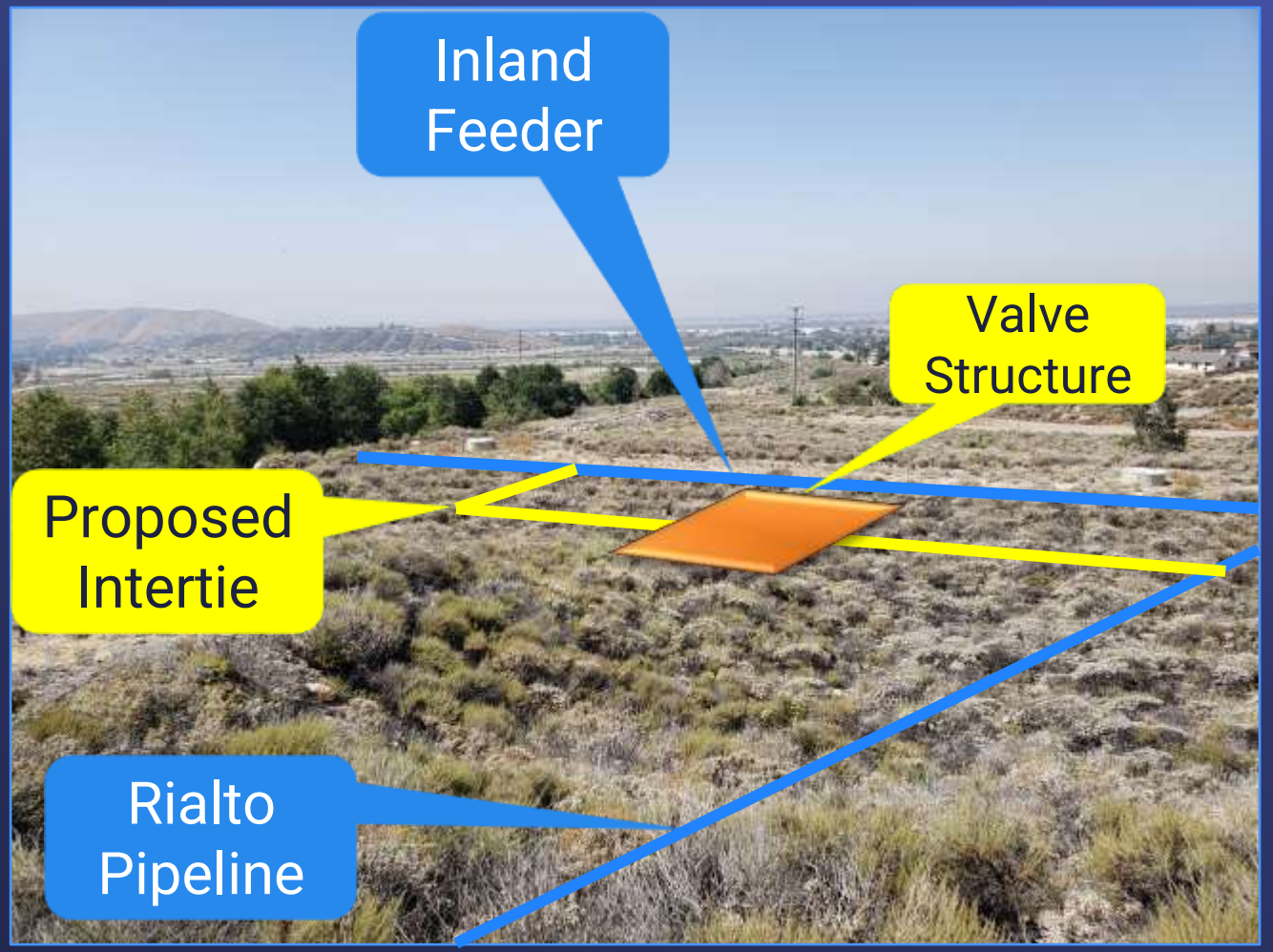
Inland Feeder Rialto Pipeline Intertie

Alternatives Considered

- Background – In Aug. 2022, Board awarded procurement contract for 84-inch isolation valve
  - Delivery of valve expected by June 2024
- Considered Option - Isolation valve installed under a separate contract
  - Pipe spool with internal bulkhead for isolation until valve is delivered
- Selected Option – Isolation valve installed under construction contract
  - Most cost-effective option
  - Aligns project with other projects to utilize same shutdown of pipelines
  - Slight risk valve will not be delivered in timely manner

Scope of Work – Contractor

- Install approx. 200 feet of 96-inch pipe & connecting tees
- Construct valve structure
- Construct 600 feet of buried electrical duct bank
- Relocate drainage channel
- Restore access roads, as required



Project Site: Looking southward

Scope of Work – Metropolitan

- Metropolitan Construction
  - Remove & replace valves & blind flanges for pipe access
  - Coordinate shutdown & dewatering of pipelines
- Field inspection & construction management
- Submittal review & technical support
- Administer Project Labor Agreement
- Respond to requests for information
- Environmental monitoring, project management, & contract administration

Bid Results

Specifications No. 2021*

Bids Received	August 9, 2023
No. of Bidders	3
Lowest Responsible Bidder	Steve P. Rados Inc.
Low Bid	$15,681,000
Other Bid	$17,954,000
Engineer's Estimate	$14 M
SBE Participation**	20%

* This contract will be conducted under the terms of Metropolitan's project labor agreement

** SBE (Small Business Enterprise) participation level set at 20%

Inland Feeder
Rialto
Pipeline
Intertie

Relief of James W. Fowler's Bid

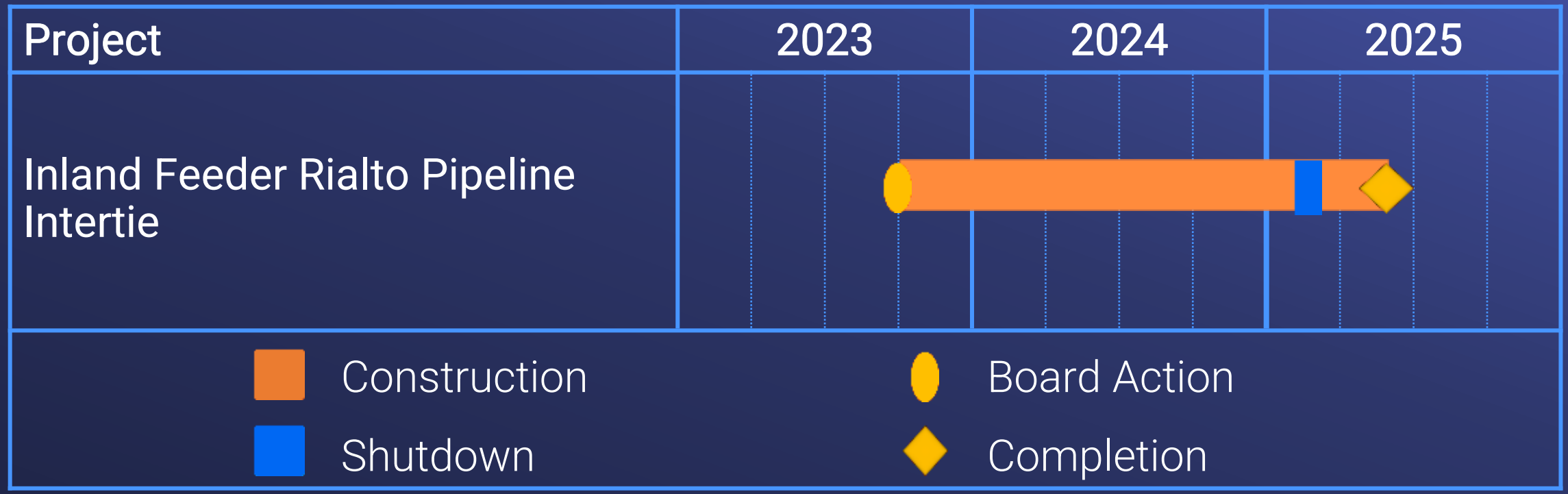
- California Public Contract Code Section 5100, et seq. allows an awarding agency to relieve a bidder of their bid if a material clerical error was made when submitting the bid
  - James W. Fowler informed Metropolitan of this discrepancy shortly after bid opening
  - Metropolitan met with the contractor to discuss the error
  - Bid did not account for the earthwork & construction water
  - Successfully demonstrated a clerical error estimated to be over $1 M
  - The contractor was released from their bid

Allocation of Funds

Inland Feeder Rialto Pipeline Intertie

Metropolitan Labor	
Owner Costs (Proj. Mgmt., Contract Admin., Envir. Support)	$ 365,000
Construction Inspection & Support	1,524,000
Force Construction	632,000
Submittals Review, Tech. Support, Record Dwgs.	626,000
Materials & Incidentals	155,000
Contract	
Steve P. Rados Inc.	15,681,000
Remaining Budget	1,017,000
Total	$ 20,000,000

Project Schedule



Board Options

- Option #1

  Award a $15,681,000 contract to Steve P. Rados Inc. to construct an intertie pipeline between the Inland Feeder and Rialto Pipeline. This project is part of water supply reliability improvements in the Rialto Pipeline service area.

- Option #2

  Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

Information Technology

Portfolio Management Update

Engineering, Operations & Technology Committee

Item 6a

September 11, 2023

Information Technology

Project Management Office

Information Technology (IT) Project Management Office (PMO) is entrusted with the overall governance and management of IT programs, projects and special initiatives. With a team of program and project managers, the PMO is responsible for implementing processes, policies, methodologies, and managing the overall execution of all assigned engagements.

Portfolio includes Infrastructure, Business Systems, Engineering Systems and Operational Technology (OT) projects in support of all Departments and functions within Metropolitan.

Welcome to Information Technology

Project Management Office - Portfolio Overview

Information Technology
Project Management Office

August 2023

4th Thu of the month

Portfolio Overview

Active Capital	40
Active O&M *No Budget Assigned*	16
Total Active	56

Sources:
- *PMO Monthly Status Reports*
- *Prioritization Managers Meeting*
- *Procurement Activities Tracker*
- *IT Board dates site*

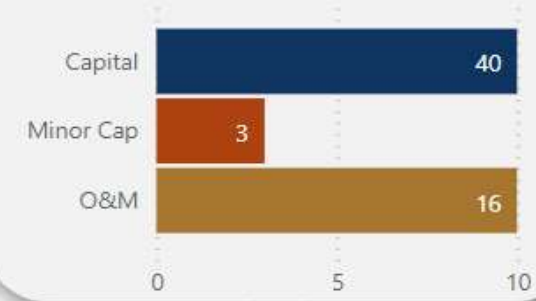
Active Capital Projects - General Health

24	11	5	3 Hold

O&M and other status

16 Active	12 Queue

Active Projects by Funding Classification



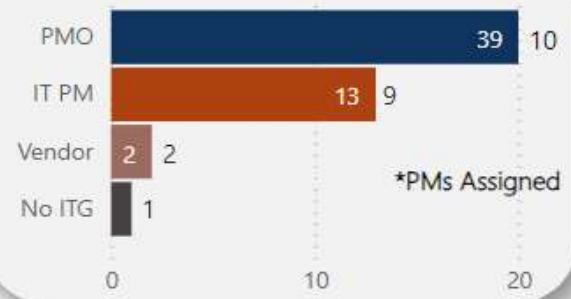
Projects Over 90%: 4

Projects Over 80%: 8

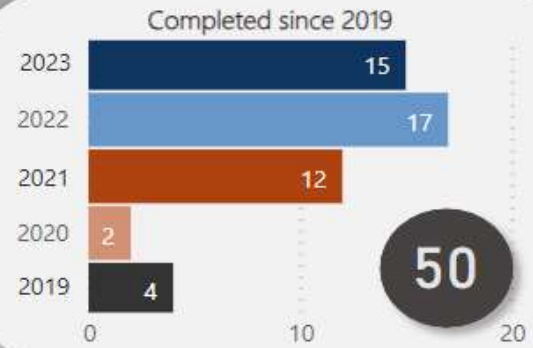
Ending Next 3 Months: 16

90% Project Name	%
Fiber Installation at Iron Mountain, Eagle Mountain & Hinds Pump Plants	90.00%
SOC - Yubikey / MFA	95.00%
Boardroom (Fire Alarm for Cafeteria to Boardroom)	99.00%
Microsoft Azure Commercial move from San Jose to Phoenix	99.00%

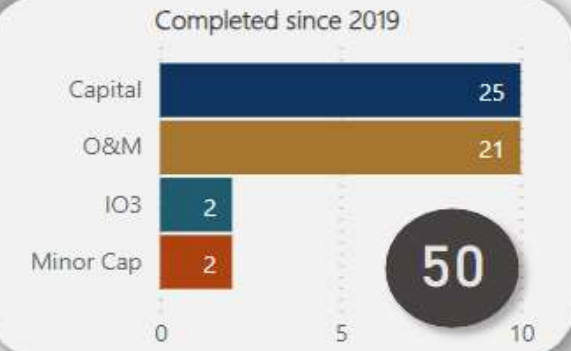
Active Project by PMs Class



Completed since 2019



Completed since 2019



Portfolio Financial Overview

Information Technology
Project Management Office

August 2023

4th Thu of the month

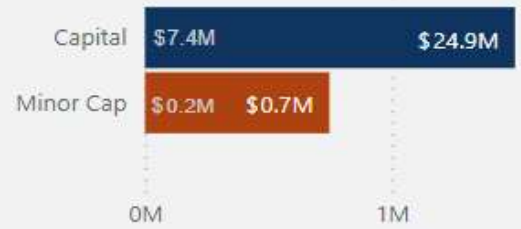
Active Capital	40
Active O&M *No Budget Assigned*	16
Total Active	56

Sources:
- *PMO Monthly Status Reports*
- *Prioritization Managers Meeting*
- *Procurement Activities Tracker*
- *IT Board dates site*

Active Capital Projects - General Health

O&M and other status

Active Projects - Biennium Spent / Budget



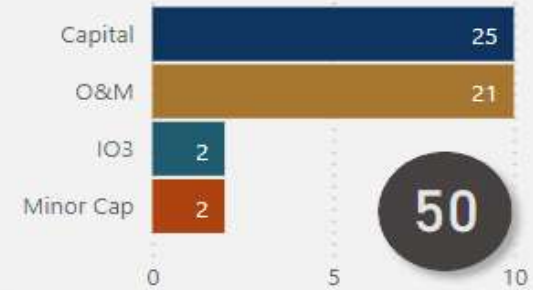
METCON Only

Including METCON

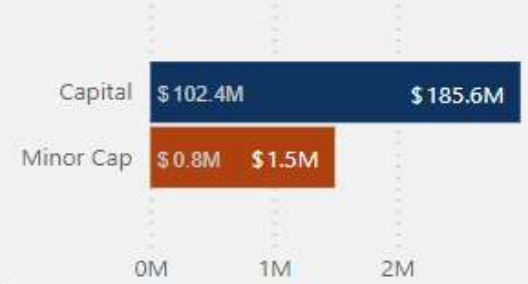
METCON - SCADA

$149M Project Budget	$19.56M Budget Current Bie...
$6.87M Total Spent TD	4 Planned Phases

Completed since 2019



Since 2019, Spent to date / Total CIP Budget



80%+

All

0 8 10

Capital 7
O&M 1

Project Status	Project Name	% Completed	Est End Date	General Status	PM / Responsible
Active	CIP Budget System Improvement (Enhacement approach)	80.00%	09/01/2023	Green	F. Wen
Active	Real Property Group Business System Replacement	80.00%	09/29/2023	Yellow	J. Wingate
Active	Emergency Radio Communications System Upgrade (Two-Way R...	82.00%	08/30/2023	Green	R. Kolodji
Active	MWDH2O.com Redesign (+Micro Sites)	85.00%	12/10/2023	Yellow	F. Soto
Active	Fiber Installation at Iron Mountain, Eagle Mountain & Hinds Pum...	90.00%	10/10/2023	Green	F. Soto
Active	SOC - Yubikey / MFA	95.00%	09/30/2022	Yellow	Z. Kasilag
Active	Boardroom (Fire Alarm for Cafeteria to Boardroom)	99.00%	06/30/2024	Green	V. Konanur
Active	Microsoft Azure Commercial move from San Jose to Phoenix	99.00%	01/31/2022	Yellow	Z. Kasilag

Look Ahead

August 2023

Description

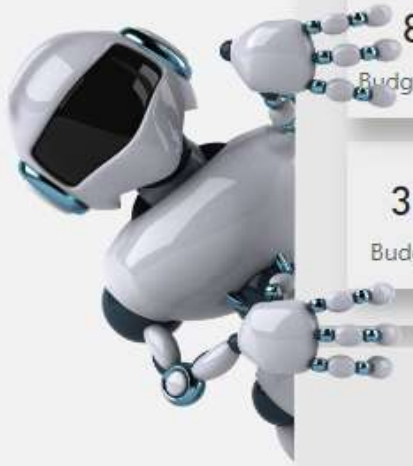
- Deploy Yubico YubiKey's to entire district
- Enforce Domain and O-365 Two-Factor Authentication with YubiKey
- Part of Cybersecurity Security Operations Center CIP

- Implement enhancements of the current CIP budgeting system for the following biennium proposal preparation process
- Update forms to meet current business needs,
- Modification to current workflows,
- Implementation of validations and notifications.

Connect Iron Mountain Pump Plant, Eagle Mountain Pump Plant, and Hinds Pump Plant to the public telecommunications network using fiber optic cable. This single mode 96 fibers optic cable would follow the paths of existing power transmission lines and terminate in the areas near switchyards and will require a repeater stations.

Replace existing Real Property application for lease management with a new application covering both Acquisitions and Property Management. Build Cognos based dashboard reports.

Replace the current MWDH2o.com with a new innovative website and design. Emphasize Metropolitan's past, present and future role in Southern California.



234
IT Priority

8.80M
Budget

31.37M
Budget Total CIP

105019-X2
CIP Project No

1618-12
CIP Index No

15378
Appropriation

Capital
Funding Source

PM / Responsible: All

General Status: All

% Completed: 50.00% – 75.00%

Est End Date: Next 6 Months

9/5/2023 - 3/4/2024

Portfolio Overview

August 2023

Project Status	Project Name	% Completed	Est End Date	General Status	PM / Responsible
Active	Fuel Management System Upgrade	75.00%	10/31/2023	Green	R. Murdock
Active	Asset Monitoring and Management System	70.00%	10/13/2023	Yellow	B. Brenhaug
Active	G5 Microsoft Defender for Identity	70.00%	11/15/2023	Green	C. Parada
Active	Maximo Mobile Computing Upgrade	70.00%	11/30/2023	Green	R. Murdock
Active	G5 Microsoft Defender for Cloud Apps (CASB)	60.00%	09/30/2023	Green	D. Saunders
Active	Legacy application remediation (VDI replacement)	60.00%	09/30/2023	Yellow	R. Murdock
Active	ServiceNow - Offboarding and Onboarding Process Requirements	60.00%	09/30/2023	Green	S. Hernandez

Procurement Activities

Project Status: All

Buyer: All

PM: All

Priority	Team	AssocProject	Title	Buyer	Sourcing Strategy	Status
1.0	Procurement		LV.NET		Other (see notes)	04- Procurement
1.0	Procurement	Serivces Procurement	Oracle Module for Services Procurement for ESG		RFP	04- Procurement
2.0	Prof Services	CIP Budget Sys Improvements	CIP Budget Sys Improvements RFP		RFP	04- Procurement
5.0	Prof Services	Data Analytics	RFP Request for Data Analytics Phase 4		RFP	04- Procurement
6.0	Prof Services	Windows (2003/2008) Applications and S...	RFP for Legacy app upgrade vendor		RFP	04- Procurement
7.0	Prof Services	Maximo Mobile Interface Software	RFP for Maximo Mobile Interface Software		RFP	04- Procurement
8.0	Prof Services	101C - ECM Phase II	ECM Phase II RFP (Design)		RFP	04- Procurement
9.0	Prof Services	105150 - Datacenter Backup Infrastructur...	Datacenter Backup Infrastructure Upgrade	Martin Dun	RFP	04- Procurement
10.0	Procurement	105038 - Fuel Management System Upgra...			--EMPTY--	04- Procurement
40.0	Procurement	105361 - Replacement of Network Switch...			Direct Purchase	04- Procurement
50.0	--EMPTY--	105042 - Desert Tower Microwave Project			--EMPTY--	03- IT Started
50.0	Prof Services	105044 - Security Operations Center	RFQ 1303 On-Call Services (1Cyber)		RFQ	03- IT Started
50.0	--EMPTY--	105053 - AMR Pilot Upgrade Project			--EMPTY--	03- IT Started
50.0	Procurement	105053 - AMR System RTUs & Radio Mod...	Network switches and firewalls for four AMR master ...		RFB	03- IT Started
50.0	--EMPTY--	Diemer Ozone Network Upgrade Project			--EMPTY--	03- IT Started
50.0	Prof Services	RFQ1303 On-Call PM Services	RFQ1303 - Z Consulting		RFQ	03- IT Started
50.0	--EMPTY--	Zero Emission Vehicle			--EMPTY--	03- IT Started
51.0	--EMPTY--	EGIS Disaster Recovery	Support VDI DR		RFB	03- IT Started
53.0	Procurement	105116 - Wifi Upgrade	Network Hardware for WiFi CIP (LA Basin, Riverside, ...		RFB	03- IT Started
54.0	Procurement	IT Infrastructure Upgrade for Security Ca...	IT Infrastructure for Security Cameras			03- IT Started
55.0	Procurement		Field Network Refresh		RFP	03- IT Started
56.0	--EMPTY--	105042-Desert Tower Microwave Project	Redundant Cisco Routers for Desert Sites		--EMPTY--	03- IT Started
57.0	--EMPTY--	105042 - Desert Tower Microwave Project	Western Region twelve sites microwave equipment r...		--EMPTY--	03- IT Started
58.0	--EMPTY--	Emergency Radio Communications Upgra...	Batteries and Newmar Battery Rectifier and Panel wit...		--EMPTY--	03- IT Started
59.0	--EMPTY--	105042 - Desert Tower Microwave Project	Fiber Optic cable installation at Eagle Mtn Head Gate		Direct Purchase	03- IT Started
60.0	--EMPTY--	105053 - AMR RF Upgrade Project Ph 2	Antenna cables and lightning arrestors		--EMPTY--	03- IT Started
62.0	--EMPTY--	105053 - AMR RF Pilot Project	Enhanced Upgraded Enterprise licenses for 900 MHz ...		Sole Source	03- IT Started
70.0	Prof Services	104851 - System-wide Control System Up...	SCADA Prime Consultant RFP	David Hei	RFP	05- Delivery Stag

Prioritization

August 2023

Active PMO Projects

By PM --> Projects

No Priority Assigned

All Capital, O&M, Status

PM / Responsible	Projects
A. Robertson	1
B. Brenhaug	6
C. Parada	2
D. Lee	3
D. Ross	1
D. Saunders	2
E. Siy	2
ESG	3
F. Soto	7
F. Wen	4
G. Kwong	1
J. Khalid	2
J. Margolis	2
J. Wingate	6
M. Arakji	1
M. Ti	1
R. Kolodii	7
Total	**88**

Prio	H-M-L	Project	PM / Responsible
1	H	Windows Applications and Servers Upgrade (2003/2007/2008)	Z. Kasilag
2	H	Microsoft Azure Commercial move from San Jose to Phoenix	Z. Kasilag
3	H	JAVA upgrade for EBS	S. Natarajan
4	H	METCON/SCADA Control System Upgrade (Phases 1/2/3)	B. Brenhaug
5	H	METCON/SCADA Control System Upgrade (Phases 4/5) Mills	B. Brenhaug
6	H	WINS Water Billing System Upgrade (Water Information System)	D. Lee
7	H	Wifi Upgrade - HQ, P1, P2 and Courtyard	Z. Kasilag
8	H	Asset Monitoring and Management System	B. Brenhaug
9	H	Desert Microwave Tower Site Upgrades (Phase 1 of 2), East side	R. Kolodji
10	H	Gene Communication System Upgrade (Poles/Fiber installation, Desi...	ESG
11	H	Roth 401K and Roth 457	S. Natarajan
12	H	Secure 2.0	S. Natarajan
13	H	Real Property Group Business System Replacement	J. Wingate
14	H	MWDH2O.com Redesign (+Micro Sites)	F. Soto
15	H	MWD Intramet Upgrade	A. Robertson
16	H	Emergency Radio Communications System Upgrade (Two-Way Radio...	R. Kolodji
17	H	Pasadena Microwave Tower	F. Soto
18	H	Data Center Backup Infrastructure Upgrade	J. Khalid
19	H	SOC - IBM Manage Services Contract	J. Margolis
20	H	Oracle Services Procurement	V. Konanur
21	H	Maximo 7.6.1.3 upgrade & web services enabling	G. Kwong
22	H	Enterprise GIS Disaster Recovery	J. Wingate
23	H	IBM QRadar – QNI (QRadar Network Insights)	D. Saunders
24	H	SOC - Yubikey / MFA	Z. Kasilag
25	H	ServiceNow - Offboarding and Onboarding Process Requirements	S. Hernandez
26	H	Oracle DB Upgrade	F. Wen
27	H	C&D SCADA Network Switches & Router Replacements	F. Soto
28	H	Oracle EBusiness Suite EBS Upgrade [adding Apex, couple others]	S. Huang
29	M	WIN 11 Upgrade	R. Murdock
30	M	Replacement of Network Switches at MWD HQ	F. Wen
31	M	Fuel Management System Upgrade	R. Murdock
33	M	AMR System Radio Modem Upgrade (Phase 2 of 2)	R. Kolodji

Project Status: All | Funding Source: All | Customer Group: All

IT Customers

August 2023

Projects Tracked
2019 - Today

176

Projects by Group

Project Name	PM / Responsible	% Completed	Project Status	Est End Date
SCADA Control System Upgrade Phase 8 and beyond (Water System Control Master Plan)	B. Brenhaug	0.00%	Queue	12/31/2029
Gene Communication System Upgrade (Poles/Fiber installation, Design)	ESG	1.00%	Active	05/01/2028
Wifi Upgrade - Riverside (Lake Matthews, Skinner, Mills, DVL)	F. Soto	1.00%	Active	05/31/2026
SCADA Control System Upgrade (Phases 4/5) Mills	B. Brenhaug	1.00%	Active	01/31/2026
Migrate OCI Apps (beyond EBS, data marts)	S. Huang	39.00%	Hold	08/14/2025
Wifi Upgrade - San Bernardino (Eagle Mountain , Hinds, Iron, Gene)	F. Soto	0.00%	Active	03/31/2025
Dam Monitoring System - starting with the Diamond Valley Lake (DVL)	J. Wingate	1.00%	Active	12/31/2024
Enterprise Data Analytics (Part 3 - Implementation 1 RFP (Top 25 cases))	S. Vannadil	0.00%	Active	12/31/2024
IT Infrastructure Upgrade (Physical Security Camera Program) - East	Z. Kasilag	1.00%	Active	12/31/2024
IT Infrastructure Upgrade (Physical Security Camera Program) - West	Z. Kasilag	1.00%	Active	12/31/2024
Windows Applications and Servers Upgrade (2003/2007/2008)	Z. Kasilag	10.00%	Active	12/31/2024
Pasadena Microwave Tower	F. Soto	10.00%	Active	12/15/2024
Payroll and Timekeeping Improvements	V. Konanur	40.00%	Active	10/30/2024
WINS Water Billing System Upgrade (Water Information System)	D. Lee	53.00%	Active	10/08/2024
Oracle EBusiness Suite EBS Upgrade [adding Apex, couple others]	S. Huang	0.00%	Hold	10/01/2024
Oracle Services Procurement	V. Konanur	10.00%	Active	09/30/2024
AMR System Radio Modem Upgrade (Phase 2 of 2)	R. Kolodji	32.00%	Active	06/30/2024


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering, Operations, & Technology Committee

Shutdown Planning at Metropolitan

Item 6b

September 11, 2023

The Need for Shutdowns

- Inspect and address aging infrastructure
- Upgrade facilities and add improvements
- Respond to emergencies

Valve/Meter Maintenance	*Pipeline Repair/Rehabilitation*	*Emergency Repair*
		

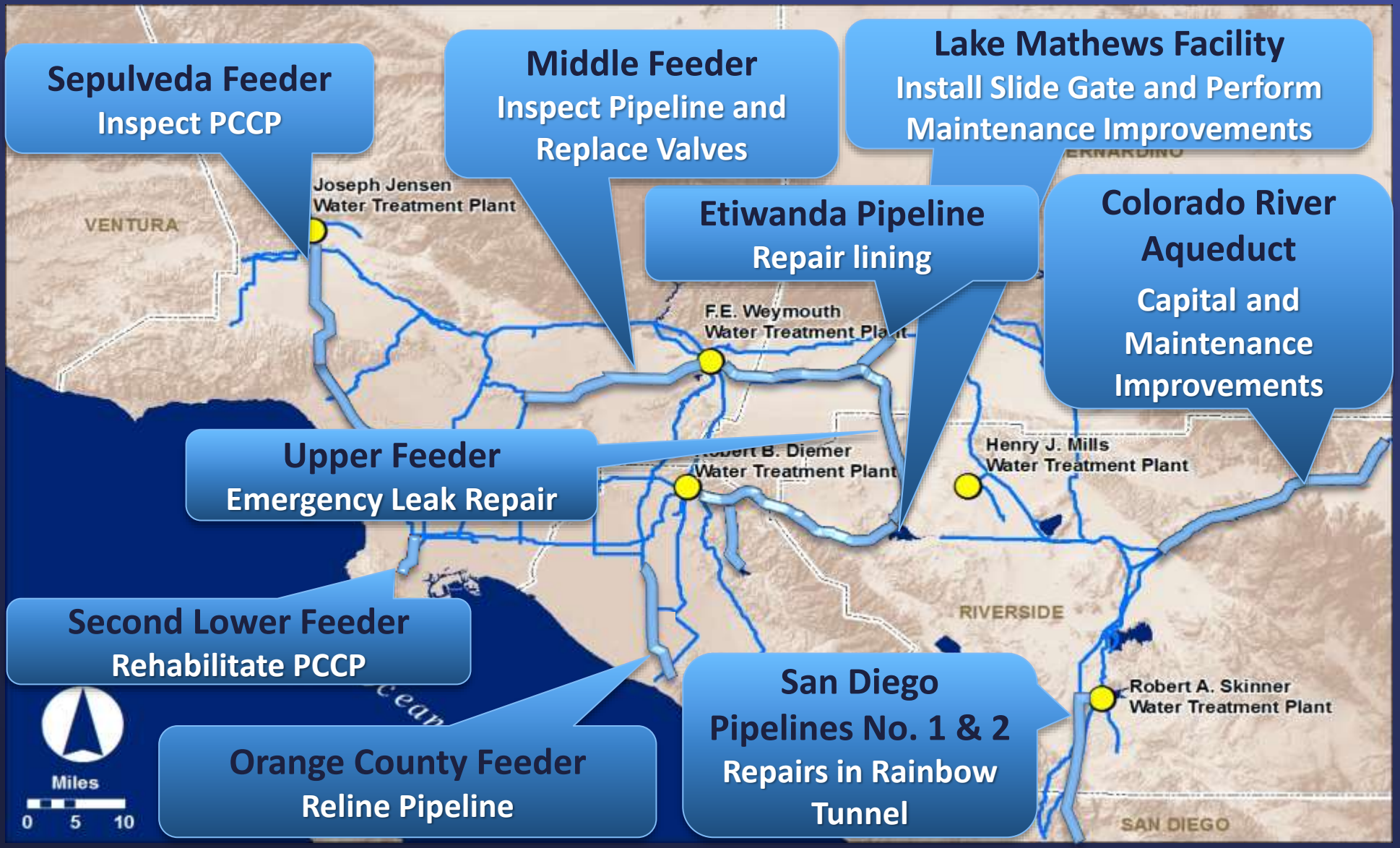
Shutdowns are Increasing in Complexity

Large "off-line" projects with short shutdown tie-in periods

Weymouth Ozone Retrofit Project

Diamond Valley Lake

Shutdowns are Increasing in Complexity



FY 2022/23

- 27 shutdowns
- Longest Duration
  - Orange County Feeder: 286 days
- Average Length
  - 40 days

Meeting Goals Through a Collaborative Shutdown Planning Process

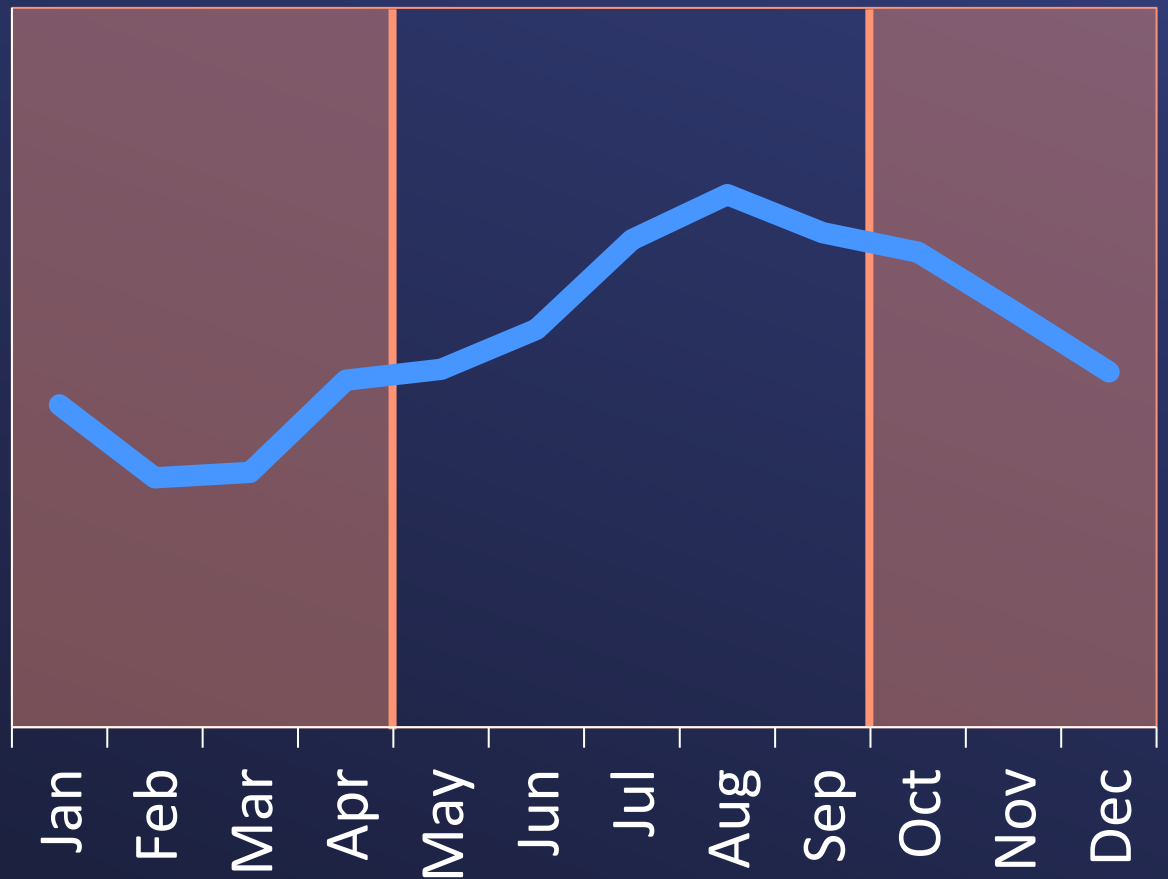
- Ensure safety
- Maintain reliability to our Member Agencies
- Return to service on or before schedule

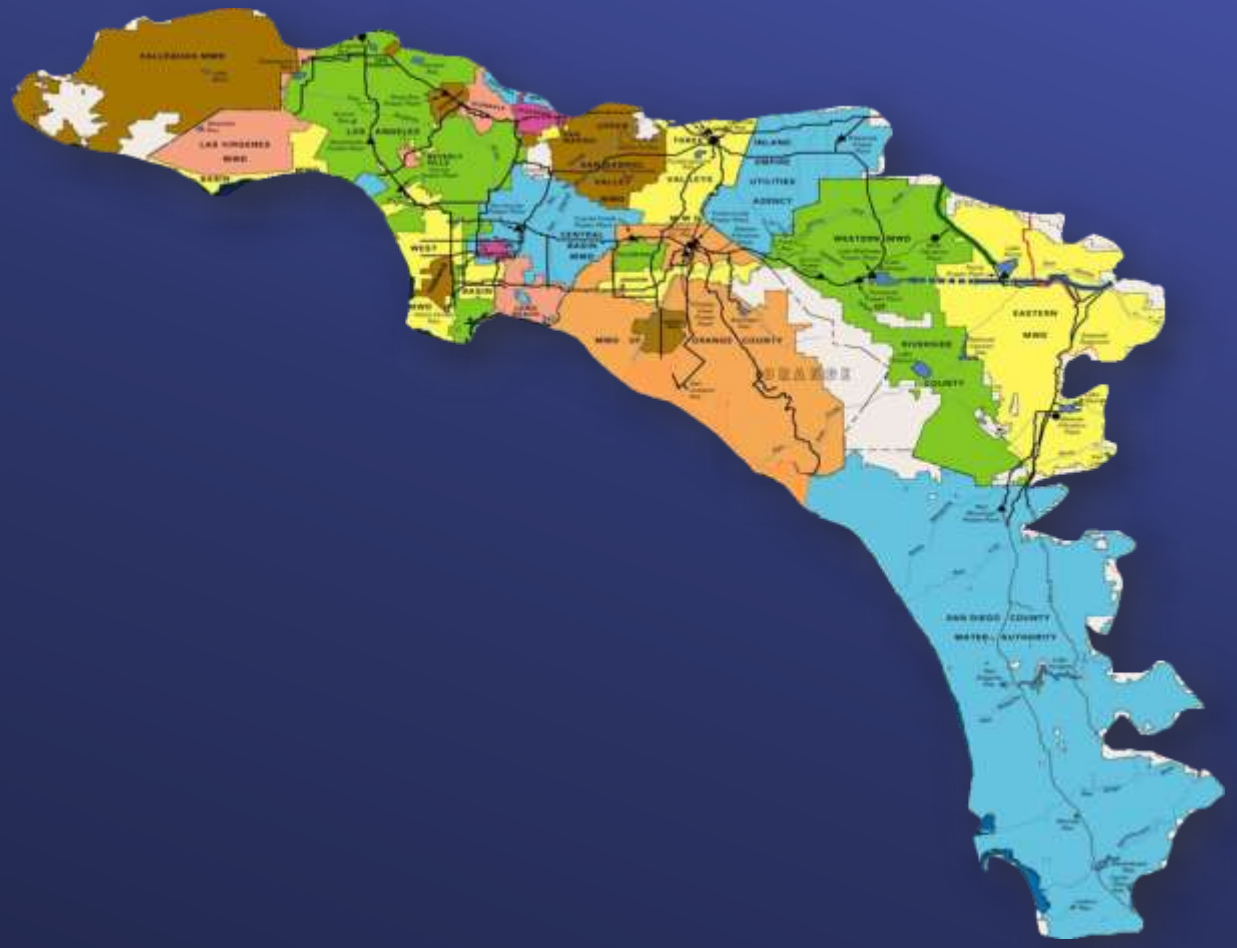
Safety Briefing

Reviewing a Dewatering Plan

Minimize Impacts to Member Agencies

Average Monthly Deliveries to Member Agencies





Changing Conditions May Affect Shutdown Timing

Water Supply Conditions
High State Water Project
Allocation

(For illustrative purposes only)

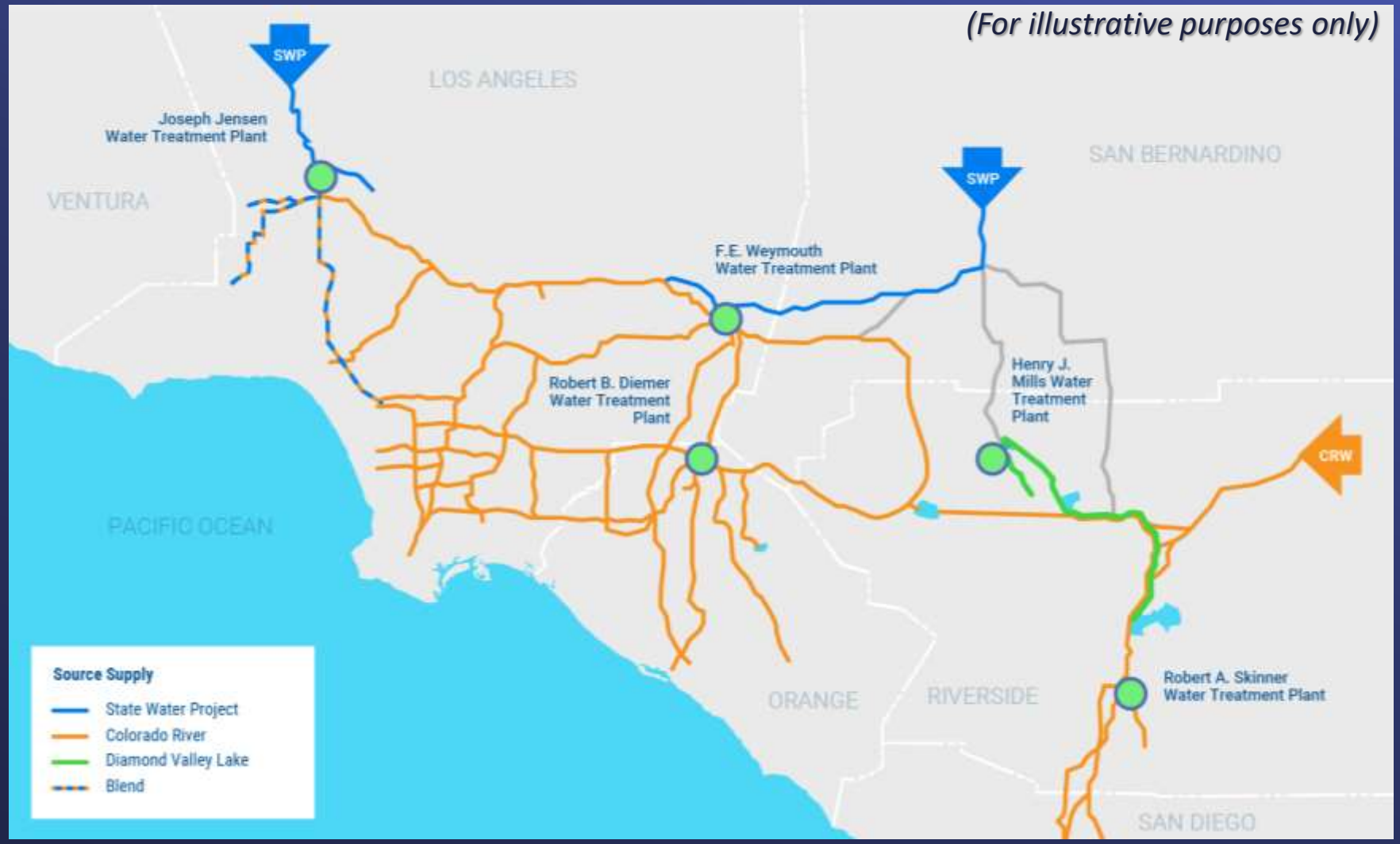
Changing Conditions May Affect Shutdown Timing

(For illustrative purposes only)

Changing Conditions May Affect Shutdown Timing

Water Supply Conditions
Low State Water Project
Allocation

(For illustrative purposes only)

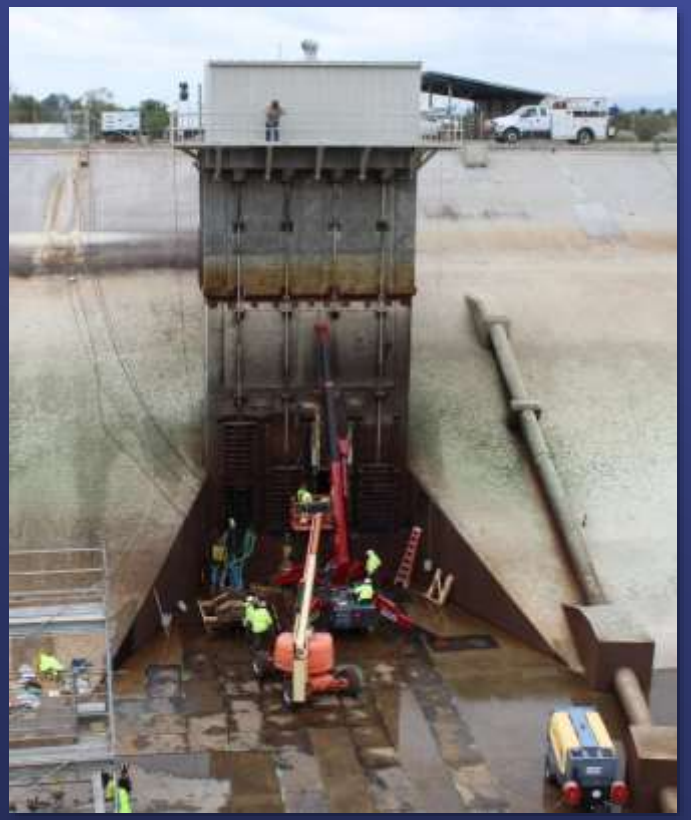


Changing Conditions May Affect Shutdown Timing

(For illustrative purposes only)

Shutdown Challenges: More than Meets the Eye
Finite Resources and Complex Logistics

Installing Butterfly Valve in the Foothill Feeder



Installing Lake Mathews Forebay Gate

Colorado River Aqueduct Shutdown Logistics

Capital and Maintenance Improvements

Shutdown Location

(For illustrative purposes only)

Middle Feeder Shutdown Logistics

Shutdown Challenges: More than Meets the Eye
Dewatering and Water Quality Testing

Quagga Mussel Filtration during Dewatering

Water Quality Sampling

Collaborative Planning: Long Term

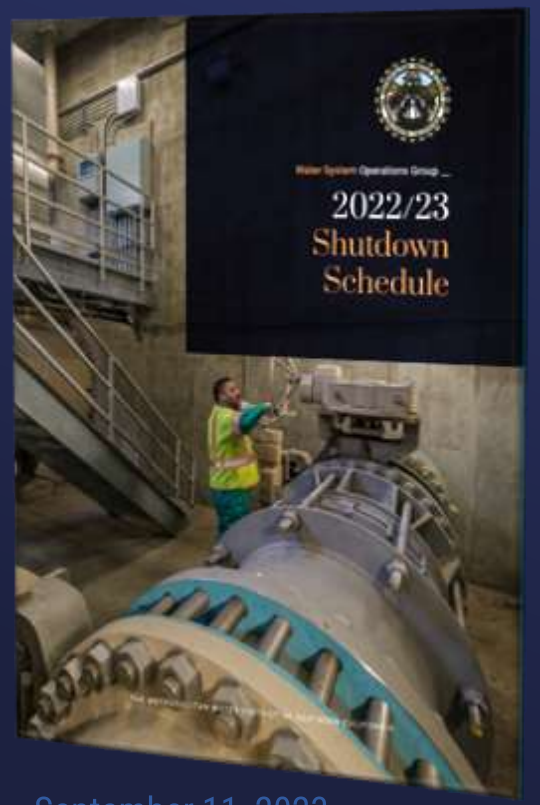
Second Lower Feeder PCCP Relining

Long Duration Shutdowns are Planned Years in Advance

- Prestressed Concrete Cylinder Pipe shutdowns are major endeavors
- Shutting down an entire feeder for long periods of time is not feasible
- Break up work into manageable segments that consider:
  - Member Agency Needs
  - Community impacts
  - Budget and staffing constraints

Focusing on the Year Ahead

Collaborative Planning: Short Term



March-April

- Determine shutdown needs for the season

May

- Hold internal meetings to coordinate shutdowns
  - Combine work with member agencies
  - Operational constraints

June

- Coordinate with member agencies
- Coordinate with other external agencies

September

- Send out shutdown schedule

Collaborative Planning: Short Term

Focusing on the Months Ahead

- Member agency shutdown letters – at least 60 days in advance
- Final member agency coordination meeting – 20 to 30 days prior
- Shutdown Plan
  - Detailed description of work performed
  - Dewatering plan
  - Contact info

Collaborative Planning: Short Term

Second Lower Feeder PCCP Relining

Executing the Shutdown

- Logistics/resource management
- Permits
- Safety plans
- Community relations
- Operational work
- Water quality testing
- Member agency updates

Upper Feeder: Putting it all Together

Ensuring Continued Infrastructure Reliability

Operations and Maintenance

Construction Services

Safety

Engineering

Water Quality and Environmental

Manufacturing

External Affairs

Board and Member Agencies


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering, Operations, & Technology Committee

Center for Smart Infrastructure

Item 6c

September 11, 2023

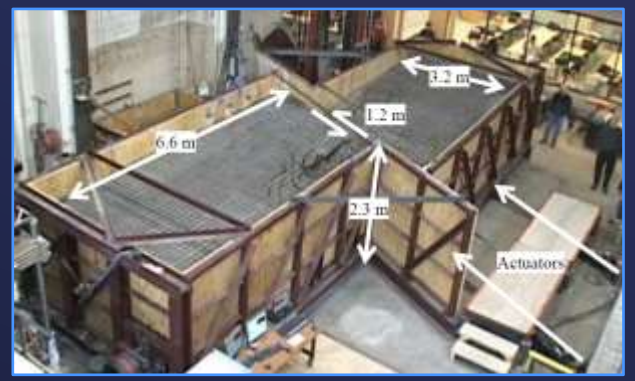
Metropolitan Innovation, Yesterday and Today

Background - Innovation

Fig. 7 Working Floor Looking South, Showing Dynamometer in the Foreground

- MWD Engineering has a long history of innovation
  - Main pumps developed at Caltech in the 1930s
  - Pressure Control/Sleeve Valve designs in the 1970s/80s
- Currently innovating across the organization. Just this year:
  - Instrumentation monitoring the condition of those same CRA pumps
  - Installed earthquake-resistant ductile iron (ERDIP) pipe across a fault at our Casa Loma siphon

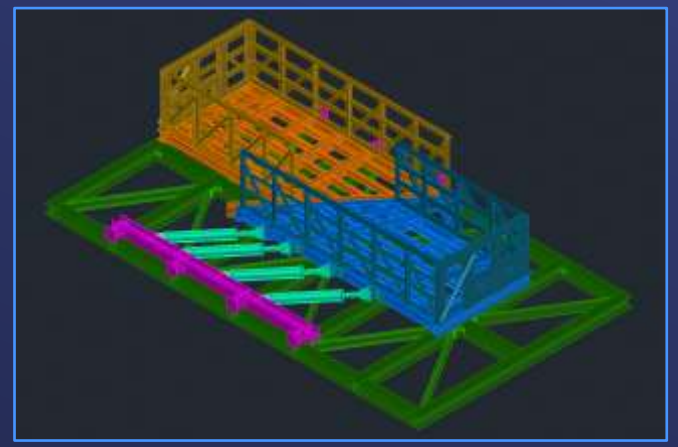
Background - Innovation



Slip Plane Box at Cornell University

Cornell University ERDIP Pipe Development

- Seismic slip plane box allowed shaking and observing buried pipe
- Foundational data collected validated earthquake-resistant pipe design
- MWD used this data to design Casa Loma project
- Cornell lab closed a few years ago and shipped the equipment to UC Berkeley

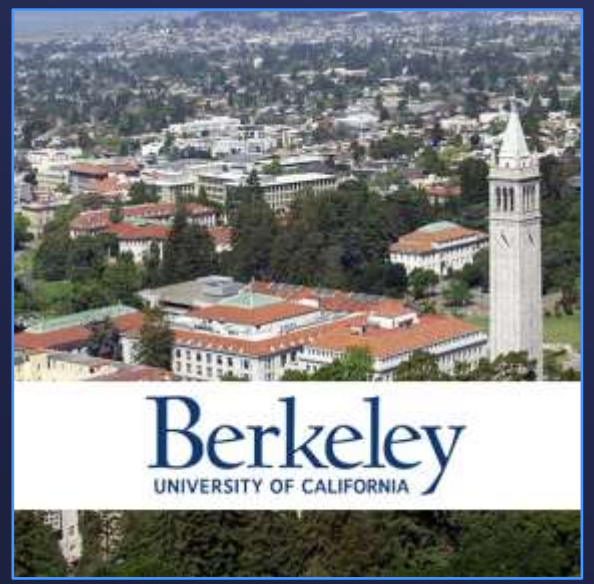


Model of Slip Plane Box

New Opportunity - CSI

Berkeley CENTER FOR Smart Infrastructure

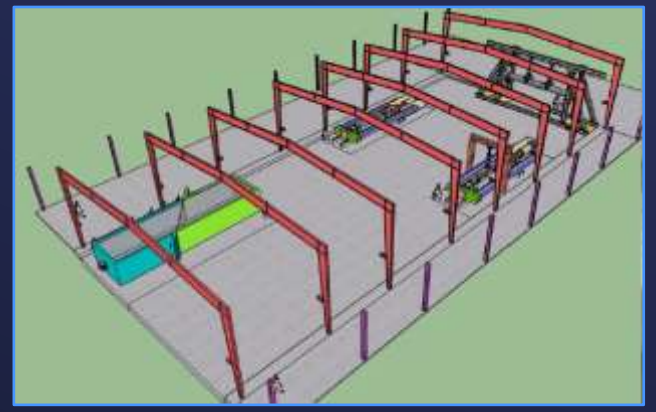
Center for Smart Infrastructure



- Located at UC Berkeley, launched in 2021, has the seismic pipe testing box
- Partnership between infrastructure owners, academia & industry to solve problems through innovation
- Mission: Develop resilient systems through state-of-the-art lab/field testing equipment, smart sensors and robotics, gig data & machine learning/multi-scale computer modeling & simulation
- Only pipe testing facility on west coast
- 100% supported by outside funding

"Owner" Collaborators

CSI Startup



CSI Building Layout

Activities – Phase 1

- Initial organizational development & staffing
- Capital improvements to facility
  - Install seismic slip plane box
  - Pipe bending equipment
  - Strong floor
  - Overhead crane
  - Other facility upgrades

Peer Funding

- EBMUD - $1.5 M
- LADWP - $1.5 M
- SFPUC (tentative) - $1.0 M

Pre-Phase 1 CSI Building

Examples of Innovation Research

- Fiber optic condition monitoring
- Pipeline performance in landslide zones
- Automatic Metering Infrastructure (AMI) testing
- Post-earthquake dam inspection criteria
- Spillway subdrain performance
- Different materials, designs, and manufacturer testing for bending, tension

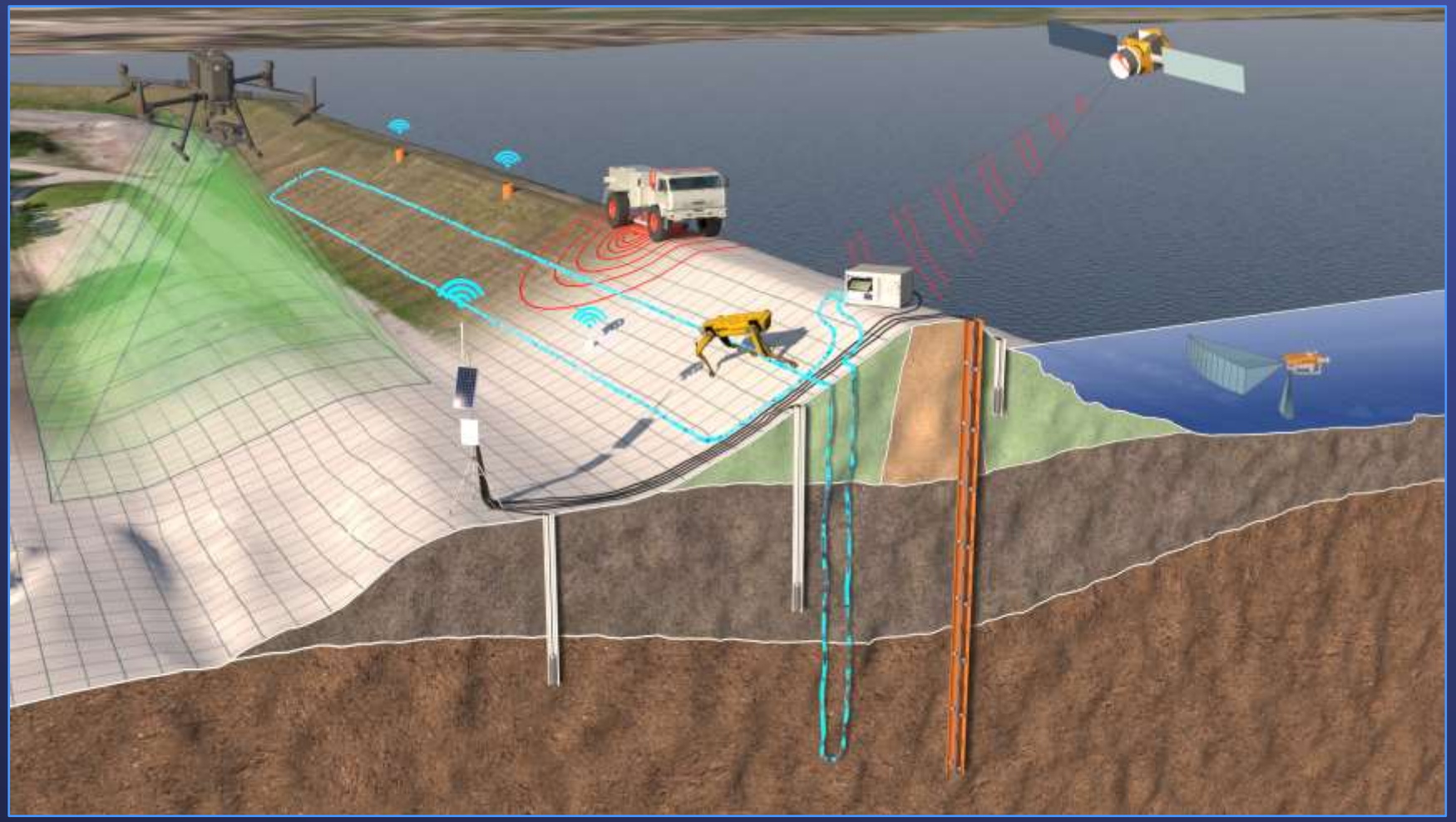
MWD and Member Agency Benefits

Polymer Pipe Testing

Levee Condition Monitoring

Research & Innovation Projects

- Levee condition assessments using satellites, ground penetrating radar, smart sensors and drones
- Metropolitan currently piloting this tech with WaterStart in the Bay-Delta

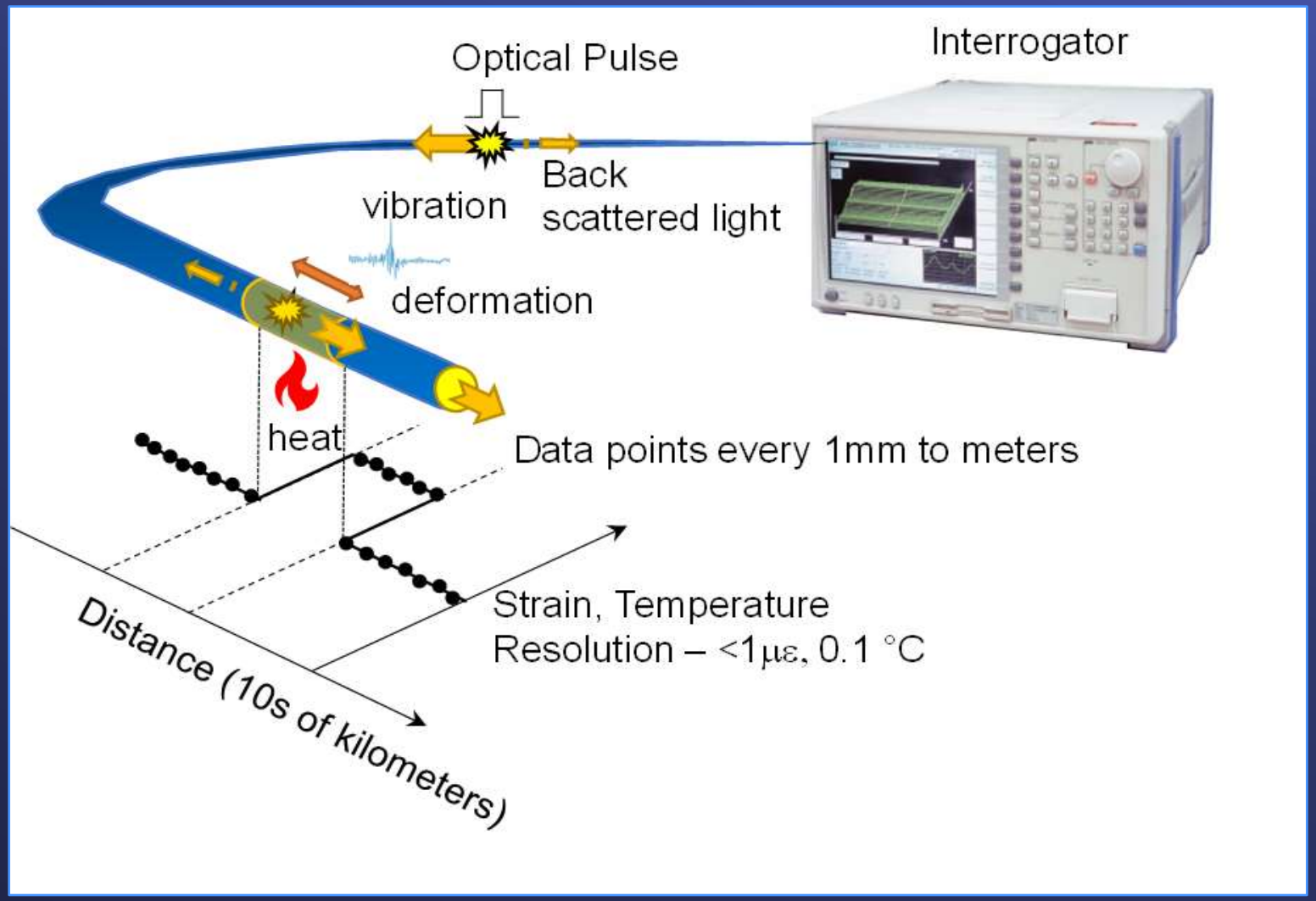


Technologies Used for Dam Assessment

Smart Infrastructure

Research & Innovation Projects

- Real-time fiber optic pipeline monitoring for water leaks, failures, wire breaks
- CSI discussed this tech at Member Agency Engineering Managers annual meeting at IEUA on June 1 this year



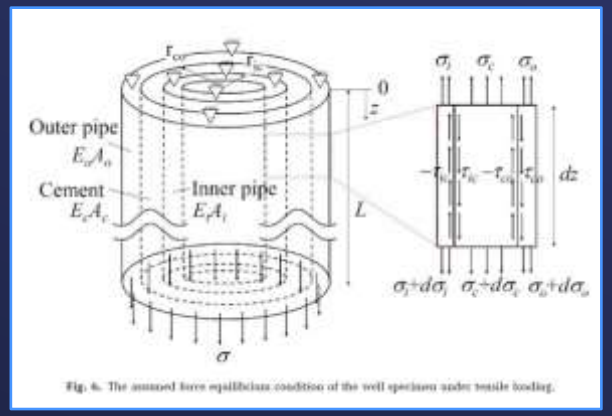
Fiber Optic Condition Monitoring

Earthquake Resistant Ductile Iron Pipe

Research & Innovation Projects

- Earthquake Resistant Ductile Iron Pipe (ERDIP) Testing
- Further development of technology

Center for Smart Infrastructure

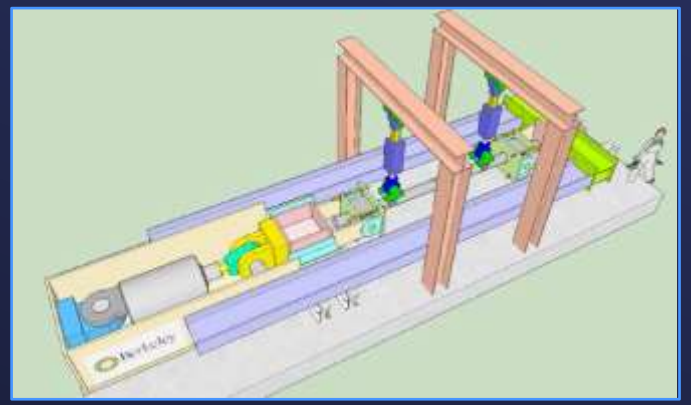


Steel-lined PCCP Pipe in a Slide Zone

Other Ongoing and Potential Future Projects

- Testing other ERDIP designs, fabricators, and products
- Engineering working to develop test on PCCP slip-lining structure
- Analyzing MWD service area water pipeline network for post-earthquake condition/response
- Developing advanced sensors, tools and analytics to monitor asset condition over time
- Recalibrating climate change and supply impact models with the latest climate data
- Evaluating emergency response system interdependencies to mitigate cascading failures and assist with recovery plans

Center for Smart Infrastructure



Model of Bi-axial Pipe Test Apparatus

Staff Recommendation

- Metropolitan to become a funding partner
  - $250k/year for 4 years to fund Center startup funded through Engineering Services O&M
  - Additional agreement authority to fund specialized research to support Metropolitan or Member Agency activities
- Will return to the Board in the near future for board authorization

Future Workforce Development

Center for Smart Infrastructure

UC Berkeley developing curriculum specific to the water business

Looking at participating in their program, and developing partner programs in MWD service area

UC Berkeley Students at CSI


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Report

Engineering Services Group

- **Capital Investment Plan Quarterly Report for Period Ending June 30th, 2023**

Summary

The attached report provides a summary of actions and accomplishments on the Capital Investment Plan (CIP) during the fourth quarter of fiscal year 2022/23. 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 April to June 2023, the fourth quarter of fiscal year 2022/23, and the fourth 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.

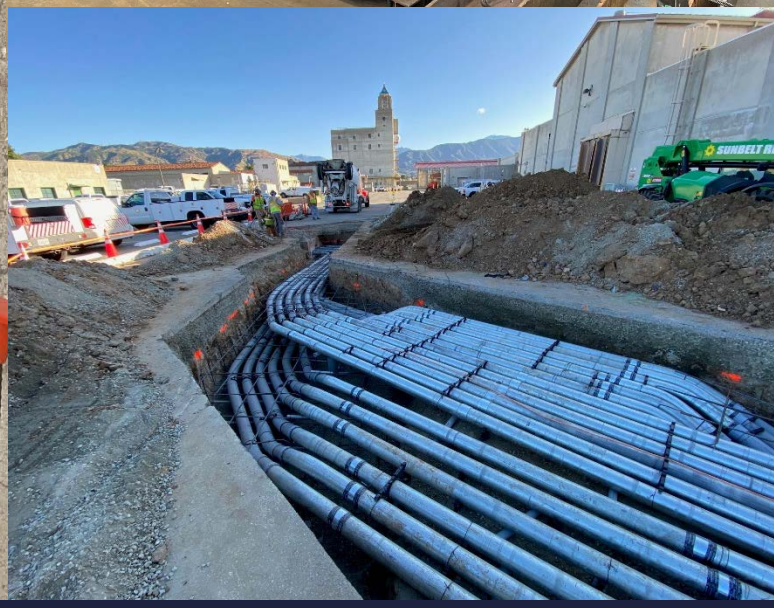
Section 8122(c) of Metropolitan's Administrative Code requires the General Manager to report on the execution of any relocation agreement under the General Manager's authority involving an amount in excess of $100,000.

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 June 2023

Date of Report: 9/12/2023



The Metropolitan Water District of Southern California

Capital Investment Plan
Quarterly Report

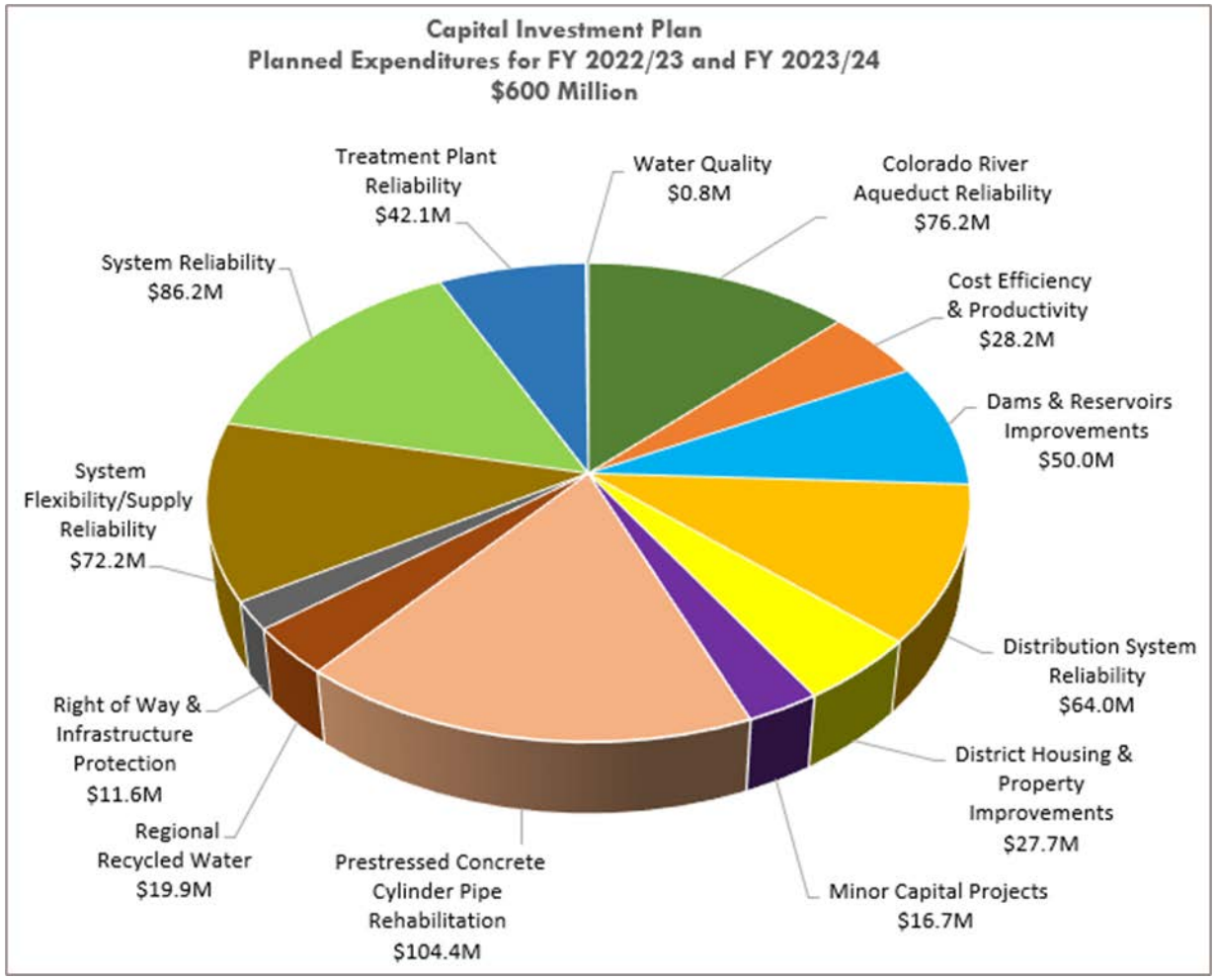
April - June 2023

Table of Contents

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

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

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



[Cover photos: (left to right; top to bottom): *Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation* – reinforcing steel embeds are epoxied into place; *Wadsworth, Inland Feeder, and Badlands Interconnections Butterfly Valve Procurement – inspection of 84-inch diameter butterfly valve body performed at Ebara Corporation fabrication shop in Tokyo, Japan; La Verne Shops Buildings Completion–Stage 5 – duct bank for new electrical unit substation is prepared for concrete pour*]

Executive Summary

This report provides a summary of the Capital Investment Plan (CIP) activities and accomplishments during the 4th Quarter of Fiscal Year (FY) 2022/23, which ended in June 2023. CIP expenditures through the 4th Quarter totaled $247.7 million and the expenditures are projected to stay near but under the planned expenditures through the end of the biennium. The CIP funds allocated through the reporting quarter totaled $568.9 million, leaving approximately $31.1 million available to be allocated during the remainder of the current biennium.

During the quarter, thirteen project-specific board actions were heard in open sessions. Five construction contracts and three procurement contracts were awarded by the Board during the reporting period with a total contract amount of approximately $26.3 million. During the same time, two construction and one procurement contracts were completed with a total of approximately $46.6 million in contract payments authorized, reflecting construction progress on projects such as Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement, Colorado River Aqueduct Pumping Plants – Sump Rehabilitation, Etiwanda Pipeline North Relining – Stage 3, La Verne Shops Building Completion – Stage 5, MWD HQ Building Fire Alarm & Smoke Control Improvements, Orange County Feeder Relining – Reach 3, Perris Valley Pipeline Interstate 215 Tunnel Crossing, Second Lower Feeder PCCP Rehabilitation – Reaches 3A and 3B, and Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation.

Board Action Summary

During the 4th Quarter, board actions heard in open session included thirteen project-specific actions summarized in Table 1 below. These actions awarded eight contracts totaling approximately $26.3 million, authorized one new procurement & installation agreement in an amount not-to-exceed approximately $2.0 million, authorized three new professional/technical services agreements for a total amount not-to-exceed approximately $2.7 million, authorized an increase to two professional/technical services agreements for a total amount not-to-exceed approximately $6.9 million, authorized an agreement in an amount not-to-exceed approximately $0.3 million for environmental mitigation credits, and authorized an amendment to an existing lagoon use agreement. Information on the awarded contracts can be found in Table 10 of this report. The table below excludes information on board items heard in closed session.

Table 1: 4th Quarter Board Actions

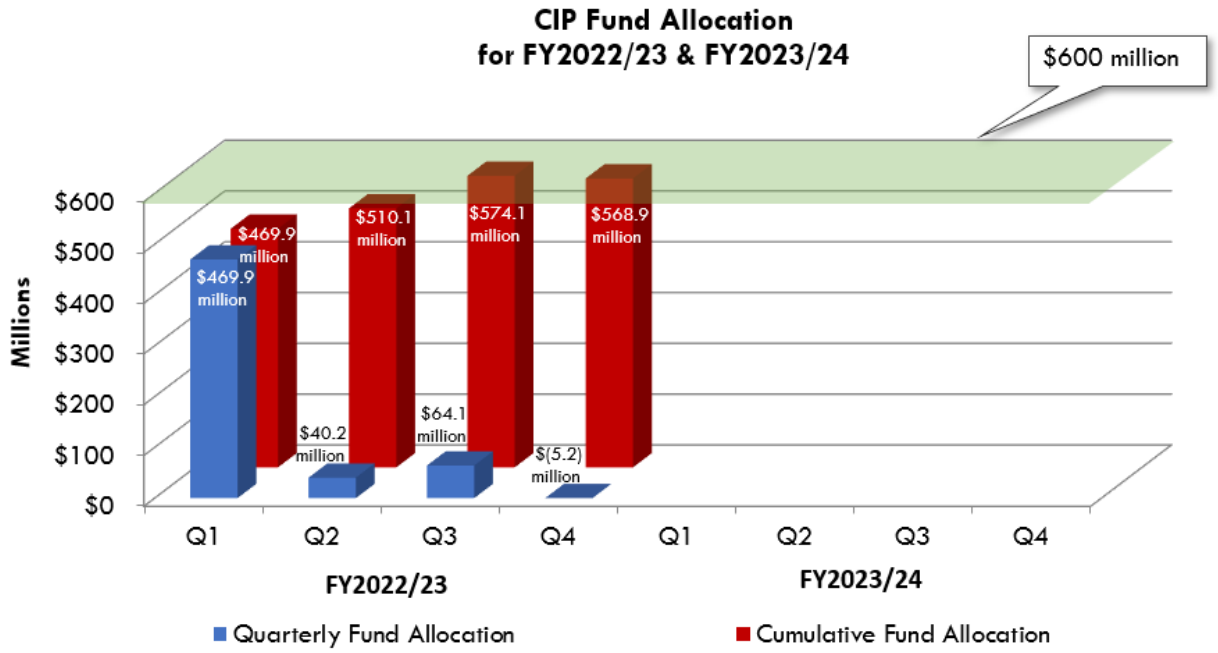
Month	Board Letter Item No.	Project	Action taken
April	7-1	CRA Conduit Structural Protection	Awarded $8,656,568 construction contract, authorized an agreement not-to-exceed $1,200,000 for biological survey and environmental monitoring, and authorized an agreement not-to-exceed $325,000 for environmental mitigation credits
April	7-2	Foothill Hydroelectric Plant and Control Building Seismic Upgrade	Awarded $6,174,000 construction contract
April	7-3	Lake Skinner Outlet Tower Seismic Upgrade	Awarded $1,174,475 procurement contract and authorized an agreement not-to-exceed $900,000
April	7-5	Garvey Reservoir Rehabilitation	Authorized an increase of $5,400,000 to an existing agreement

Month	Board Letter Item No.	Project	Action taken
April	7-6	Diamond Valley Lake Dam Monitoring System Upgrades - Stages 3 & Garvey Reservoir Dam Monitoring System Upgrades	Authorized a procurement and installation agreement not-to-exceed $1,950,000
May	7-1	Headquarters Video Room Upgrades	Awarded a $637,520 construction contract
May	7-2	CIP Budgeting System Improvements	Authorized an agreement not-to-exceed $550,000
May	7-3	Jensen Solids Mechanical Dewatering Facility	Authorized an increase of $1,500,000 to an existing agreement and authorized an amendment to an existing lagoon use agreement
May	7-4	Diemer Helicopter Hydrant Facility	Authorized an unplanned project
May	7-5	San Diego Pipeline Nos. 3 and 5 Air Release/Vacuum Valve Replacement	Awarded $1,466,665 procurement contract
May	8-1	Inland Feeder/Foothill Pump Station Intertie	Awarded $2,601,437 procurement contract
May	8-2	CRA Conveyance System Flow Monitoring Stations	Awarded $5,266,000 construction contract
June	7-2	Jensen Administration Building Column Panel Replacement, Skinner Chemical Storage Tank Replacement, and Auld Valley and Red Mountain Control Structures Upgrades	Awarded $281,900 construction contract and authorized three unplanned projects

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 4th Quarter, the Board amended the CIP to include four new CIP projects. These projects were Auld Valley and Red Mountain Control Structures Upgrades, Diemer Helicopter Hydrant Facility, Jensen Administration Building Column Panel Replacement, and Skinner Chemical Storage Tank Replacement.

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 $568.9 million, leaving approximately $31.1 million available to be allocated during the remainder of the current biennium. This amount includes allocation of $10 million to the Minor Capital Projects Program, approximately $38.4 million for work authorized during the 4th Quarter, and approximately $43.6 million reallocated back to the CIP Appropriation 15525. Details of the allocations for work authorized during the reporting quarter and from the prior biennium can be found in the **Project Actions** section.

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



*Numbers may not sum due to rounding

Information on construction and procurement contracts activities for the 4th Quarter of FY 2022/23 is presented in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the 4th Quarter totaled approximately $46.6 million and primarily reflect construction progress on Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement, Colorado River Aqueduct Pumping Plants – Sump Rehabilitation, Etiwanda Pipeline North Relining – Stage 3, La Verne Shops Building completion – Stage 5, MWD HQ Building Fire Alarm & Smoke Control Improvements, Orange County Feeder Relining – Reach 3, Perris Valley Pipeline Interstate 215 Tunnel Crossing, Second Lower Feeder PCCP Rehabilitation – Reaches 3A and 3B, and Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation.

Planned Expenditure and Budget

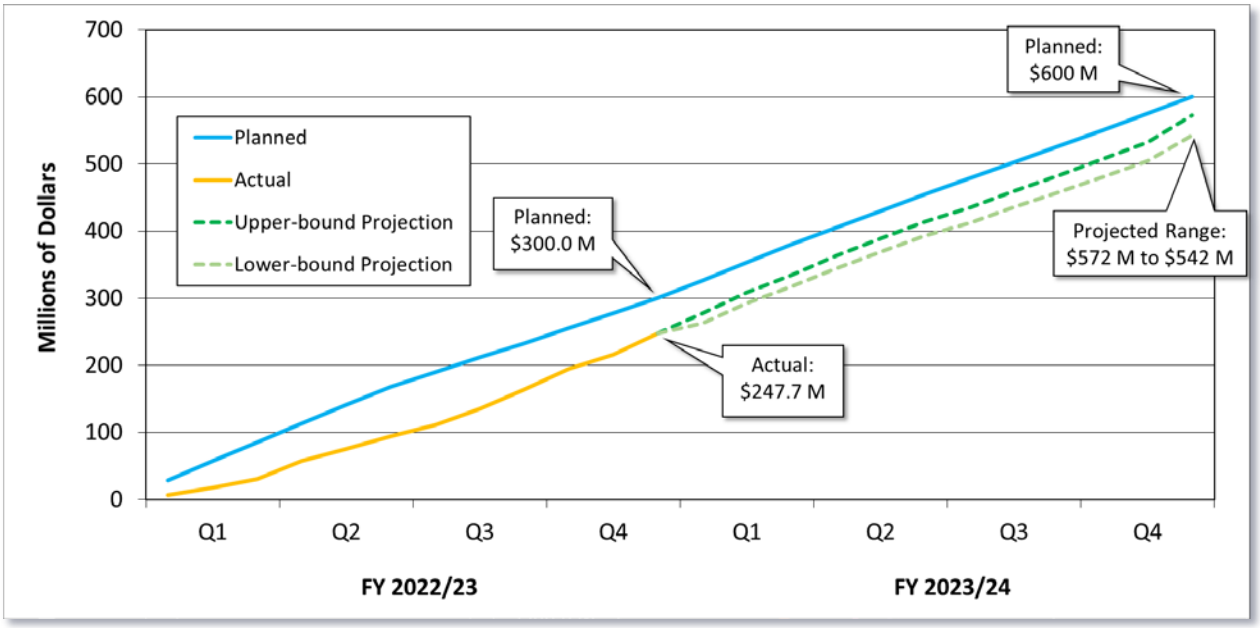
Table 2 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 4th Quarter of FY 2022/23, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 4th Quarter of FY 2022/23 were approximately 83% 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
Totals	**$300.0**	**$247.7**

* 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 $542 million and $572 million with the actual expenditures 25% higher than the planned expenditures during the 4th Quarter of FY 2022/23. This negative variance below the planned expenditures for the first fiscal year is mainly due to a concerted effort during the last quarter of the last fiscal year to accelerate the work that was planned for the 1st Quarter of FY 2022/23, including the O&M work on the drought projects; staff redeployment to work on non-CIP projects such as Pure Water Southern California; and shift in the timing of the contract awards and delays in completing some construction and procurement contracts due to difficulties in obtaining permits within the planned timeline, equipment/materials delivery delays due to manufacturing and supply chain issues, and other factors that add time to awarding and completing contracts.

Some of the key projects that significantly contribute to the less than planned expenditures for the current biennium are (1) desert housing improvements, which have not yet transitioned from the planning to design phase as staff are investigating additional options with desert staff; (2) Lakeview Pipeline Relining – Stage 2, which was delayed to keep the pipeline in operation so that water deliveries to the Mills plant from DVL could continue during the recent drought; (3) CRA Transformer Replacement, which has been delayed after discovering that manufacturing and delivery of the large transformers will take longer than planned due to the global market conditions for this type of equipment and limited manufacturing capacities, (5) Second Lower Feeder PCCP Rehabilitation – Reach 3B, which the contract award was delayed due to longer than planned coordination and permitting with local entities; and (6) right-of-way and infrastructure protection, cathodic protection, and other R&R projects that were delayed due to staff redeployment to work on Pure Water Southern California and drought mitigation projects.

Funding of Capital Projects with Outside Sources

This section provides information on select grants and other outside sources of funds that Metropolitan receives to support capital 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. Staff anticipates that the State funds will be used to support the environmental planning and implementation phases of the program.

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. Per AB 211, the $50 million fund will be available for encumbrance or expenditure until June 30, 2024, 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 to make its entire jurisdiction resilient to fluctuating water supplies from each of its imported water sources and to allow conveyance of water throughout all its jurisdiction. Unlike the funds received for Pure Water discussed above, under this grant, staff will be required to submit invoices to DWR to receive reimbursement of expenditures that comply with the grant requirements. The use of these funds is considered as part of Metropolitan's overall CIP expenditures. Funding agreement with DWR was executed on June 15, 2023. The first quarterly progress report and cost reimbursement documents for the work performed through June 2023 will be submitted to DWR at the end of August 2023.

Major Capital Programs Overview

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

- Program
- Project Group/Appropriation
- Project

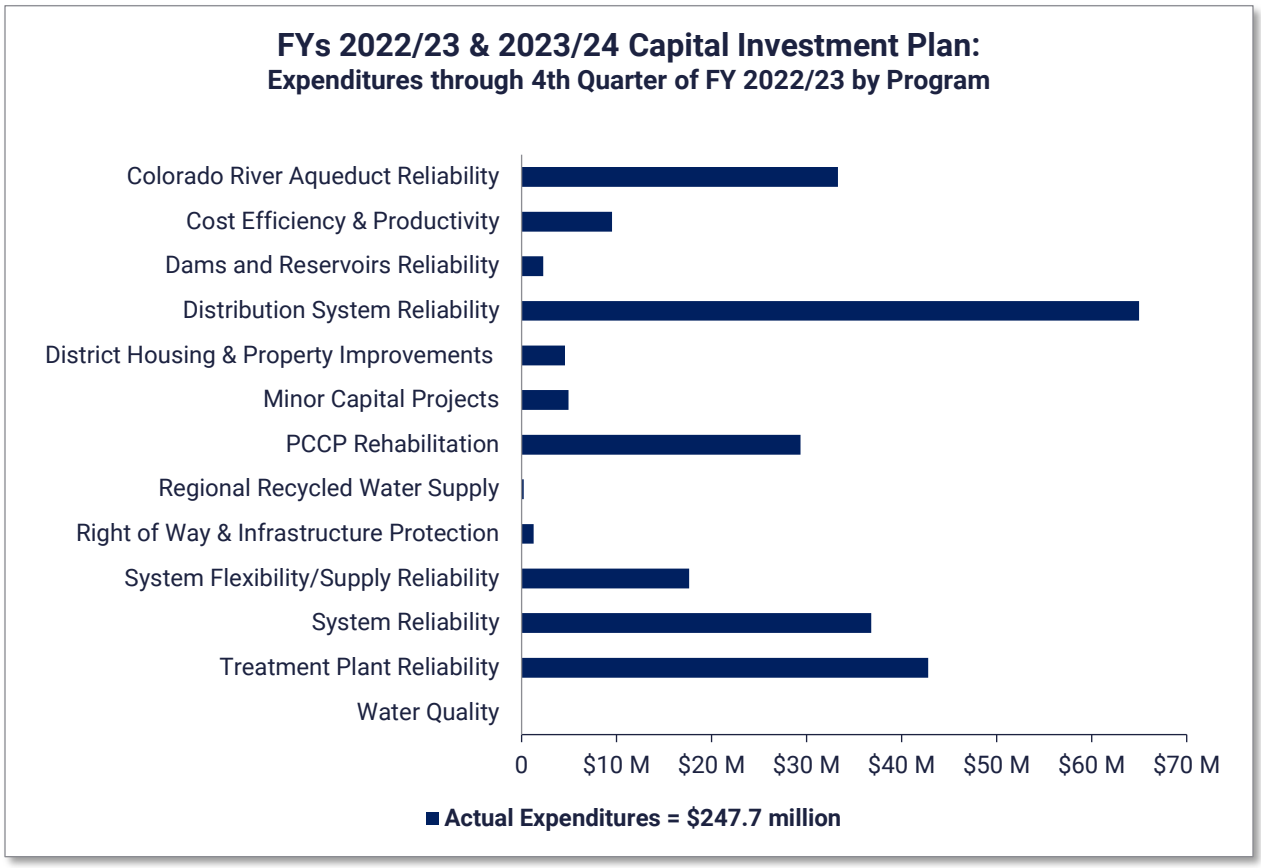
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more project groups/appropriations, and project group/appropriations are comprised of one or more projects. The status 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 17 at the end of this report.

Figure 4 below shows actual expenditures for the 13 capital programs for 4th Quarter of FY 2022/23.

Figure 4: Biennium-to-date Actual Expenditures through 4th Quarter FY 2022/23



Major Capital Project Programs – Highlights

This section provides 4th 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 4th Quarter of FY 2022/23 or are scheduled to achieve major milestones in the next quarter.

Table 3: Major Capital Projects Programs

Program	Project
Colorado River Aqueduct (CRA) Reliability	CRA Pumping Plants Crane Improvements
Cost Efficiency & Productivity	Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2
Dams and Reservoirs Improvements	Program highlights only
Distribution System Reliability	Orange County Feeder Relining – Stage 3
District Housing & Property Improvements	Program highlights only
Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation	Second Lower Feeder PCCP Rehabilitation - Reach 3B
Regional Recycled Water Supply	Program highlights only
Right-of-Way & Infrastructure Protection	Program highlights only
System Flexibility/Supply Reliability	Inland Feeder/Rialto Pipeline Intertie
System Reliability	Lake Mathews Facility Wastewater System Replacement
Treatment Plant Reliability	Mills Electrical Upgrades – Stage 2
Water Quality	Program highlights only

Colorado River Aqueduct (CRA) Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $33.31 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 (4th Quarter)

Accomplishments

- Awarded Construction Contracts for the following projects:
  - CRA Conduit Structural Protection
  - CRA Conveyance System Flow Level Sensor Installation
  - Hinds Pumping Plant Village Paving Replacement
- Continued construction activities for the following contracts:
  - CRA 6.9 kV Power Cable Replacement
  - CRA Domestic Water Treatment System Upgrades at all five pumping plants
  - CRA Mile 12 Flow Meter Upgrades
  - CRA Pumping Plants Overhead Cranes Replacement
- Completed material procurement for the following project:
  - CRA Pumping Plant Sump System Rehabilitation
- Continued final design of the following projects:
  - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
  - CRA Pumping Plant Sump System Rehabilitation
  - CRA Pumping Plant Village Utility Replacement
  - Gene Communication Reliability Upgrades
- Completed final design of the following projects:
  - CRA Freda Siphon Barrel No. 1 Internal Seal Installation
  - CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain
  - Eagle Mountain Pumping Plant Village Paving Replacement
- Continued preliminary design of the following projects:
  - Black Metal Mountain 2.4 kV Electrical Power Upgrades
  - CRA Desert Region Security Improvements - Stage 2
  - CRA Main Transformer Replacement
  - Hinds Pumping Plant Discharge Valve Platform Replacement
  - CRA Erosion Control Protection
  - CRA Pumping Plants 2.3 kV Switchrack Rehabilitation – Iron Mountain Pumping Plant
- Completed preliminary design of the following projects:
  - CRA Desert Region Security Improvements - Stage 1
  - CRA Main Pump Motor Rehabilitation
- Advertised procurement package for the following projects:
  - CRA Main Transformer Replacement
- CRA Main Pump Motor Rehabilitation:
  - Continued preparation of procurement package for pilot exciter system for Gene Pumping Plant
  - Continued study to install variable frequency drive pumps at Gene and Intake Pumping Plants

Upcoming Activities

Upcoming work for the next quarter will include:

- Award the following construction contracts:
  - CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain
  - Eagle Mountain Pumping Plant Village Paving Replacement
  - Freda Siphon Barrel No. 1 Seal Installation
- Continue construction activities planned for the following contracts:
  - CRA Conduits 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
  - Hinds Pumping Plant Village Paving Replacement
- Complete construction of the CRA Mile 12 Flow Meter Upgrades
- Continue final design of the following projects:
  - Copper Basin Reservoir Discharge Valve Structure Rehabilitation
  - CRA Pumping Plant Sump System Rehabilitation
  - CRA Pumping Plant Village Utility Replacement
- Initiate final design of the following projects:
  - CRA Desert Region Security Improvements - Stage 1
- Complete final design of Gene Communication Reliability Upgrades
- Continue preliminary design of following projects:
  - Black Metal Mountain 2.4 kV Electrical Power Upgrades
  - CRA Desert Region Security Improvements - Stage 2
  - Hinds Pumping Plant Discharge Valve Platform Replacement
- Complete preliminary design for the following projects:
  - CRA Main Transformer Replacement
  - CRA Pumping Plants 2.3 kV Switchrack Rehabilitation – Iron Mtn. Pumping Plant
- CRA Main Pump Motor Rehabilitation:
  - Advertise procurement package
  - Complete study to install variable frequency drive pumps at Gene and Intake Pumping Plants

CRA Pumping Plants Crane Improvements

Total Project Estimate:
$19.7 million

Total Project Cost to Date:
$10.0 million

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

Phase	Construction
% Complete for Construction	30%
Construction Contract Award Date	September 2020
Estimated Construction Completion Date	September 2023
Contract Number	1946

Completed fabrication of the Iron Mountain overhead crane and continued design of the modifications to the Eagle Mountain crane girders. In the upcoming quarter, fabrication of the Intake crane will continue, modifications of the Eagle Mountain crane will continue, and the Iron Mountain crane replacement will be completed.

Newly fabricated overhead crane for Iron Mountain Pumping Plant

Cost Efficiency and Productivity Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $9.51 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 (4th Quarter)

Accomplishments

- CIP Budget System Improvements
  - Authorized agreement with consultant for design, development, and deployment
- DVL to Lake Skinner Trail
  - Completed 95% design
- Enterprise Content Management Phase II
  - Selected vendor and prepared for board authorization of agreement with consultant
- Oracle Database Upgrade
  - Continue execution of the migration plan
- Payroll-Timekeeping Reimplementation
  - Initiated design
- WIFI Implementation project
  - Authorized agreements for design, development, and deployment of the Los Angeles Basin and Riverside regional sites

Upcoming Activities

Upcoming work for the next quarter will include:

- Battery Energy Storage Systems at Jensen, Weymouth, and Skinner Plants
  - Continue construction
- CIP Budget System Improvements
  - Initiate design
- DVL to Lake Skinner Trail
  - Complete final design and prepare to advertise a construction bid package
- Enterprise Content Management Phase II
  - Authorize agreement with consultant for design, development, and deployment
- Oracle Database Upgrade
  - Continue database migration
- Payroll-Timekeeping Reimplementation
  - Continue design
- Real Property Group Business System Replacement
  - Continue system replacement
- WINS Water Billing System Upgrade
  - Continue system upgrade

Diamond Valley Lake Floating Wave Attenuator System Improvements – Stage 2

Total Project Estimate:
$10.5 million

Total Project Cost to Date:
$0.6 million

This project will improve the wave attenuator system at Diamond Valley Lake by moving the existing wave attenuator to a new location where the existing attenuator is better suited and add a new 1,100 foot long wave attenuator in its place to improve the protection of the marina from wind generated waves.

Phase	Final Design
% Complete for Current Phase	95%
Current Phase Authorized	March 2021
Estimated Construction Contract Award Date	November 2023

Completed final design of construction bid package. In the upcoming quarter, the bid package will be advertised.

Existing floating wave attenuator at Diamond Valley Lake: Looking from West to East

Dams and Reservoirs Improvements Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $2.29 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 (4th Quarter)

Accomplishments

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Authorized a professional services agreement for design, procurement, and installation of the dam monitoring system
- Garvey Reservoir Dam Monitoring System Upgrades
  - Authorized a professional services agreement for design, procurement, and installation of the dam monitoring system
- Garvey Reservoir Rehabilitation
  - Authorized a professional services agreement for final design
- Lake Skinner Outlet Tower Seismic Upgrade
  - Authorized a professional services agreement to perform the detailed structural analysis of the outlet tower
  - Awarded a procurement contract for two replacement valves

Upcoming Activities

Upcoming work for the next quarter will include:

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Initiate final design
- Garvey Reservoir Dam Monitoring System Upgrades
  - Initiate final design
- Garvey Reservoir Rehabilitation
  - Initiate final design
- Lake Mathews and Lake Skinner Dam Monitoring System Upgrades
  - Initiate preliminary design
- Lake Skinner Outlet Tower Seismic Upgrade
  - Initiate the detailed structural analysis of the outlet tower
  - Continue valve procurement

Distribution System Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $65.00 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 (4th Quarter)

Accomplishments

- Foothill Hydroelectric Power Plant Seismic Upgrade
  - Awarded a construction contract
- San Diego Pipeline Nos. 3 & 5 Air Release & Vacuum Valve Replacement
  - Awarded a procurement contract for replacement air release and vacuum valves

Upcoming Activities

Upcoming work for the next quarter will include:

- Complete construction for the following projects:
  - Casa Loma Siphon Barrel No. 1 Seismic Upgrade
  - Etiwanda Pipeline North Relining – Stage 3
- Continue construction activities planned for the following projects:
  - Foothill Hydroelectric Power Plant Seismic Upgrade
  - Orange County Feeder Relining – Stage 3
  - OC-88 Pump Station Chiller Replacement
  - Sepulveda, West Valley, and East Valley Feeders Interconnection Electrical Upgrades
- Continue design for following projects:
  - Auld Valley and Red Mountain Pressure Control Structures Upgrades
  - Hollywood Tunnel North Portal
- Continue valve and slide gate procurement for following projects:
  - Rialto Pipeline Rehabilitation at STA 2986+30
  - San Diego Pipeline Nos. 3 & 5 Air Release & Vacuum Valve Replacement
  - San Jacinto Diversion Structure Slide Gates V-01, V-02, V-03, and V-04 Rehabilitation

Orange County Feeder Relining – Stage 3

Total Project Estimate:
$23.8 million

Total Project Cost to Date:
$16.1 million

This project will replace approximately 4 miles of deteriorated internal coal-tar enamel liner with cement mortar lining, weld all joints, and construct new accessways on the Orange County Feeder Extension within the cities of Costa Mesa and Newport Beach.

Phase	Construction
% Complete for Construction	76%
Construction Contract Award Date	April 2022
Estimated Construction Completion Date	September 2023
Contract Number	1961

Removal of the existing coal tar, welding of the joints, and application of new mortar lining have been completed. In the upcoming quarter, the pipeline will be returned to service after the completion of construction, which will include building of an access structure and restoration of the access sites to the original condition.

Welding closure pipe piece at one of the Orange County Feeder Relining sites

District Housing & Property Improvements Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $4.57 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 (4th Quarter)

Accomplishments

- Completed selection of a consultant to provide community planning services for the village enhancements at four CRA pumping plants (Hinds, Eagle Mountain, Iron Mountain, and Gene)

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue supplementary housing alternative analysis by holding site meetings with the community planner and Metropolitan Desert staff
- Initiate an alternative analysis report to provide multiple options with the most optimal recommendation for the housing, recreational amenities and the lodges and kitchens with associated costs at four pumping plants (Hinds, Eagle Mountain, Iron Mountain and Gene)

Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $29.37 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 (4th Quarter)

Accomplishments

- Allen-McColloch Pipeline
  - Continued evaluating a member agency cost-sharing proposal that may facilitate rehabilitation work
- Calabasas Feeder
  - Continued validating assumptions on pipeline hydraulic capacity necessary to reline the entire approximately nine-mile-long Calabasas Feeder PCCP pipeline
- PCCP Rehabilitation Valve and Equipment Storage Building
  - Continued construction of the pre-engineered metal building
- Second Lower Feeder
  - Reach 3A – Completed relining and rehabilitation of approximately 1.2 miles of Second Lower Feeder PCCP pipeline from Oak Street Pressure Control Structure south through City of Rolling Hills Estates to the Palos Verdes Reservoir
  - Reach 3B – Completed delivery of HDPE pipe, which will be used for the Palos Verdes Reservoir temporary bypass line, and continued reviewing contractor submittals. This project will reline approximately 3.6 miles of Second Lower Feeder PCCP pipeline from the intertie with Sepulveda Feeder south to Oak Street PCS, through the cities of Torrance, Los Angeles, and Lomita, and replace three 48-inch diameter sectionalizing valves at the intertie with Sepulveda Feeder.
  - Isolation Valve Procurement – Continued fabrication and inspection of the remaining six 54-inch valves. To date, Metropolitan has received seven of thirteen large-diameter conical plug valves and actuators, including three 48-inch and the four 54-inch valves.
- Sepulveda Feeder
  - Reach 1 – Continued final design to rehabilitate approximately three miles of Sepulveda Feeder PCCP pipeline, from just north of the Inglewood Lateral south to the West Coast Feeder, through the cities of Inglewood and Hawthorne, and unincorporated Los Angeles County
  - Reach 2 – Continued final design to rehabilitate approximately 3.8 miles of Sepulveda Feeder PCCP pipeline, from the Dominguez Gap Channel south to the intertie with Second Lower Feeder, through the cities of Torrance and Los Angeles
  - North Reach – Continued preliminary design of the northern 20-mile portion of the Sepulveda Feeder, including both steel and PCCP portions of the pipeline and appurtenances
  - Urgent Carbon Fiber Lining –Completed final design for urgent relining at three locations, prequalified carbon fiber lining contractors, and advertised construction bid package

Upcoming Activities

Upcoming work for the next quarter will include:

- Allen-McColloch Pipeline
  - Continue evaluating member agency's cost-sharing proposal
- Calabasas Feeder
  - Meet with affected member agency to discuss pipeline hydraulic capacity assumptions
- PCCP Rehabilitation Valve and Equipment Storage Building
  - Complete construction of the pre-engineered metal building at the Lake Mathews site
- Second Lower Feeder
  - Reach 3B - Continue reviewing contractor submittals and initiate procurement and fabrication of materials
  - Isolation Valve Procurement - Continue fabrication of remaining valves
- Sepulveda Feeder
  - Reach 1 - Continue final design and permitting process for long-lead permits from Caltrans, City of Los Angeles, and City of Torrance
  - Reach 2 - Continue final design and permitting process
  - North Reach – Continue preliminary design
  - Urgent Carbon Fiber Lining – Award a construction contract

Second Lower Feeder PCCP Rehabilitation - Reach 3B

Total Project Estimate:
$105.6 million

Total Project Cost to Date:
$16.4 million

This project will rehabilitate approximately 3.6 miles of PCCP segments of the Second Lower Feeder with steel liner and replace three existing large diameter sectionalizing valves within the cities of Lomita, Los Angeles, and Torrance.

Phase	Construction
% Complete for Construction	4%
Construction Contract Award Date	January 2023
Estimated Construction Completion Date	September 2025
Contract Number	2026

The contractor completed delivery of high density polyethylene (HDPE) pipe and continued preparation of submittals for review. In the upcoming quarter, the contractor will complete the construction of Palos Verdes Reservoir Bypass Line; complete potholing activities in the cities of Lomita, Los Angeles, and Torrance; and continue coordination of submittals.

Third-party inspector and Metropolitan construction inspector performing inspection of 54-inch diameter valve

Regional Recycled Water Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $0.21 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 (4th Quarter)

Accomplishments

- Advanced Water Treatment Demonstration Facility
  - Continued baseline testing and monitoring of the secondary membrane bioreactor (MBR)
  - Continued with site and equipment improvements to support the secondary MBR testing
  - Received comments from independent scientific advisory panel on the Phase 1 draft tertiary MBR testing report
  - Received final grant reimbursement from the State Water Resource Control Board for the project construction
- Direct Potable Reuse (DPR) Demonstration Facility
  - Completed draft technical memorandum for desktop modeling and bench test plan

Upcoming Activities

Upcoming work for the next quarter will include:

- Advanced Water Treatment Demonstration Facility
  - Complete baseline testing and monitoring of the secondary MBR system
  - Finalize and submit the tertiary MBR testing report to Division of Drinking Water for review
  - Initiate site and system improvements for tertiary MBR optimization to facilitate planning and design of the full-scale advanced purification facility
  - Update record drawings to incorporate recent site improvements
- Direct Potable Reuse Demonstration Facility
  - Finalize technical memorandum for desktop modeling and bench test plan
  - Finalize the DPR bench testing plan and initiate bench scale testing
  - Review draft DPR regulation for pilot testing and full-scale implementation

Right-Of-Way and Infrastructure Protection Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $1.28 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 (4th Quarter)

Accomplishments

- Western San Bernardino County Region – Stage 2
  - Completed final design

Upcoming Activities

Upcoming work for the next quarter will include:

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

System Flexibility/Supply Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $17.62 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 (4th Quarter)

Accomplishments

- Inland Feeder/Rialto Pipeline Intertie
  - Completed final design and advertised for bids
- Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pump Station Intertie
  - Awarded a valve procurement contract
  - Continued final design and right-of-way acquisition
- Perris Valley Pipeline I-215 Tunnel Crossing
  - Continued reviewing contractor submittals
  - Continued permitting and installation of temporary groundwater conveyance pipelines and a treatment facility
- Sepulveda Feeder Pump Stations
  - Received Statements of Qualifications (SOQ) in response to RFQ No. 1340 for Stage 1 progressive design-build services
  - Evaluated SOQs and held interviews with respondents
- Wadsworth Pumping Plant Bypass Pipeline
  - Completed mobilization and started construction
- West Area Supply and Delivery Alternatives
  - Continued a series of workshops with member agencies to further develop and evaluate alternatives for a potential east-west conveyance

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue progress on four individual projects to allow the delivery of water from Diamond Valley Lake to the Rialto Pipeline
  - Badlands Tunnel Surge Tank Facility: Complete final design and advertise for bid
  - Inland Feeder/Rialto Pipeline Intertie: Award a construction contract
  - Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Foothill Pump Station Intertie: Continue final design and right-of-way acquisition.
  - Wadsworth Pumping Plant Bypass Pipeline: Continue construction
- Perris Valley Pipeline I-215 Tunnel Crossing
  - Continue construction
- Sepulveda Feeder Pump Stations
  - Select a design-build entity and complete negotiations for Stage 1 progressive design-build services

Inland Feeder/Rialto Pipeline Intertie

Total Project Estimate:
$17.9 million

Total Project Cost to Date:
$2.5 million

This project will construct a 250-foot-long pipe to connect the Inland Feeder to the Rialto Pipeline, including an 84-inch butterfly valve housed within a partially buried structure for isolation, allowing water to be pumped from Diamond Valley Lake (DVL) into the Rialto Pipeline.

Phase	Final Design
% Complete for Current Phase	95%
Current Phase Authorized	March 2022
Estimated construction contract award date	September 2023

The final design was completed, and the project was advertised for bids. Procurement of an 84-inch diameter butterfly valve is ongoing, and the delivery of the valve is scheduled for installation by the construction contractor. In the upcoming quarter, the construction contract will be awarded.

Inland Feeder/Rialto Pipeline Intertie project site looking in the northwesterly direction towards DWR's Devil Canyon Afterbay No. 2 Embankment

System Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $36.78 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 (4th Quarter)

Accomplishments

- Control System Upgrade – Phase 3
  - Continued receiving submittals for the pilot project at Mills Water Treatment Plant
- Datacenter Backup Infrastructure Upgrade
  - Completed vendor selection and prepared a board letter for authorization of consulting agreement
- Enterprise Data Analytics
  - Published request for proposals (RFP)
- Headquarters Fire Alarm & Smoke Control Upgrades
  - Continued construction of the smoke control portion of the project
- Headquarters Network Switch Replacement
  - Completed vendor selection
- Headquarters Security Upgrade Stage 3
  - Continued construction - began bollard installation around Headquarters Building
- Headquarters Video Room Upgrades
  - Awarded construction contract

Upcoming Activities

Upcoming work for the next quarter will include:

- AMR System RTU and Radio Modem Upgrade
  - Continue receiving radio modem equipment
- Applications-Servers Upgrade
  - Continue to migrate and upgrade applications in batches
- Datacenter Backup Infrastructure Upgrade
  - Authorize an agreement with consultant for design, development, and deployment
- Desert Microwave Site Tower Upgrades
  - Continue customer witnessed testing
- Enterprise Data Analytics
  - Complete vendor selection
- Headquarters Fire Alarm & Smoke Control Upgrades
  - Continue construction and obtain fire department sign-off of new fire alarm and smoke control system
- Headquarters Fire Sprinkler Level P1 Replacement
  - Complete final design and award construction contract

- Headquarters Network Switch Replacement
  - Authorize consulting agreement
- Headquarters Security Upgrade Stage 3
  - Continue construction including completing bollard installation and beginning courtyard fencing installation
- Headquarters Video Room Upgrades
  - Begin construction
- Maximo Mobile Upgrade
  - Continue deployment of devices to field staff
- Security Operations Center MWD Cyber Security Upgrade – Stage 1
  - Complete Security Operations Center cyber security upgrades

Lake Mathews Facility Wastewater System Replacement

Total Project Estimate:
$5.9 million

Total Project Cost to Date:
$5.4 million

This project will replace the on-site wastewater septic system that serves the maintenance buildings, administrative offices, and repair shops at the Lake Mathews facility with a permanent sewer system that connects to the Western Municipal Water District's sewer system. The septic tanks and leach field of the wastewater system have been in operation for 80 years and are no longer reliable.

Phase	Construction
% Complete for Construction	92%
Construction Contract Award Date	October 2021
Estimated Construction Completion Date	October 2023
Contract Number	1944

The contractor installed the new sewer line and continued pipe testing and site restoration. In the upcoming quarter, the contractor will remove septic tanks, coat the accessway covers, and begin construction of the sewer laterals to the building connections.

Preparing subgrade for paving over the newly installed sewer line near Lake Mathews Building 6

Treatment Plant Reliability Program

Actual Biennium Expenditures (Jul. 2022 through Jun. 2023) $42.79 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 (4th Quarter)

Accomplishments

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

Upcoming Activities

Upcoming work for the next quarter will include:

- Complete construction for the following projects:
  - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades
  - Mills Ozone PLC Control and Communication Equipment Upgrade
- Began construction for the following projects:
  - Jensen Administration Building Column Panel Replacement
  - Skinner Chemical Storage Tank Replacement

- Continue construction of the following projects:
  - Jensen Ozone PSU Replacement – Stage 1
  - Mills Electrical Upgrades – Stage 2
  - Skinner Ozone Contactor Structure Rehabilitation
  - 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
- Continue preliminary design of the following projects:
  - Diemer Filter Rehabilitation
  - Diemer Washwater Reclamation Plant Improvements & Slope Stabilization
  - Jensen Finished Water Reservoir Rehabilitation
  - Jensen Reservoir Bypass Gate Replacement
  - La Verne Water Quality Laboratory Building Upgrades
  - Mills Finished Water Reservoir Rehabilitation
  - Mills Perimeter Security & Erosion Control Improvements
- Begin preliminary design of the following project:
  - Jensen Solids Mechanical Dewatering Facility

Mills Electrical Upgrades – Stage 2

Total Project Estimate:
$18.5 million

Total Project Cost to Date:
$6 million

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

Phase	Construction
% Complete for Construction	28%
Construction Contract Award Date	November 2021
Estimated Construction Completion Date	February 2025
Contract Number	1990

The contractor completed installation of electrical accessway structures, demolition of the existing storm drain, and demolition of a portion of the ozone switchgear building so that the building may be expanded. In the upcoming quarter, the contractor will begin forming the Riverside Public Utility switchyard concrete equipment pads and backfill the excavation by the ozone switchgear building.

Installation of foam bond breakers for the existing electrical duct bank and reinforcing steel for the new Mills ozone switchgear building

Water Quality Program

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

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

Program Highlights (4th 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 bienniums, the minor cap budget was included in the CIP appropriation. To be considered for inclusion in the Minor Cap Program, a project must have a planned budget of less than $400,000. The $400,000 project budget cap was first established by the June 2018 board action Item 8-3 and the same cap is applied for the new minor caps that are approved for the current biennium. Prior to that action, the budget cap for minor cap projects was $250,000.

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

For the past three bienniums, the two-year budgets for the Minor Cap Program have been $10 million, $15.5 million, and $20 million respectively. In April 2022, the Board appropriated funds for the projects identified in the CIP appendix for the current biennium, FYs 2022/23–2023/24, including the Minor Cap Program. $10 million has been allocated for the current biennium to date.

Minor Cap Program Historical Summary

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

Table 4: Minor Capital Projects Program

	Fiscal Year				Totals*
	2016/17–2017/18	2018/19–2019/20	2020/21–2021/22	2022/23–2023/24	
Amount Appropriated	$10M	$15.5M	$20M	$10M	$55.5M
Expenditures (through June 2023)	$7.2M	$12.4M	$8.3M	$2.4M	$30.2M
Number of Projects Approved	41	48	53	32	174
Number of Projects Completed (through June 2023)	40	40	7	0	87
Number of Projects with Durations of Over 3 Years	1	7	0	0	8

* Numbers may not sum due to rounding.

Through June 2023, 87 of the 174 projects have been completed, and eight active projects have exceeded three years in duration, as described below.

- Central Basin CNB-48 Service Connection Access Improvement was impacted by ongoing supply chain delays. Procurement of the valves is underway. The project is scheduled to be completed by September 2023.
- East Valley Feeder Vaults Upgrades has been experiencing delays due to additional time required to acquire permits from an external agency. The project is scheduled to be completed by March 2024.
- Garvey Reservoir Sodium Hypochlorite Tank Replacement experienced delays due to the Texas deep freeze event of 2021, which caused power and resin supply chain disruptions, and delivery of the new tank was delayed. The tank has been installed and is now in service. Metropolitan force construction is currently fabricating brackets for the installation of the tank canopy roof. The project is scheduled to be completed by September 2023.
- 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 force construction plans to complete the project by September 2023.
- Gene Pool Refurbishment has experienced delays due to a shortage of local contractors for this type of work due to increased construction activity in the region. Metropolitan force construction will complete the work and the project is scheduled to be completed by September 2023.
- Lower Feeder Blow-Off Drain Line Replacement experienced delays in obtaining a Caltrans permit for Highway 90. Construction is underway and the project is scheduled to be completed by September 2023.
- Rialto Feeder STA 3820+00 Manhole Replacement has completed construction. Additional time is required to complete record drawings and project closure documents. The project is scheduled to be completed by August 2023.
- Sepulveda Feeder Stray Current Drain Station Installation & Rehabilitation has experienced delays due to longer than anticipated time for review/approval of permit applications by the City of Los Angeles and Los Angeles Department of Transportation. The project is scheduled to be completed by March 2024.

Actual biennium expenditures to date (July 2022 through June 2023) for the Minor Capital Projects Program were $4.94 million.

Minor Cap Projects, 4th Quarter

Authorized Projects

Three projects were authorized under the Minor Cap Program during the 4th Quarter of fiscal year 2022/23 (April through June 2023). The total amount authorized for these projects was $880,000.

- Skinner Plant Flow Meter Upgrade – This project will replace three obsolete flow meters, which exceeded their service life. Two of the three flow meters are located in the Lake Skinner Bypass Vault Nos. 2 and 3, which will be relocated from underground vaults to aboveground for safety and ease of maintenance. The third meter is one of the three influent flow meters for the Skinner plant's finished water reservoir influent flow meters. The project budget is $300,000
- Skinner Plant Infrared Window Installation – This project will install infrared windows on equipment housing high-voltage circuits at the Skinner plant to allow specialized infrared cameras to scan high-voltage equipment for inspection during maintenance without opening the equipment housing while electrically charged. These windows will improve safety and increase productivity of the staff maintaining the high-voltage electrical equipment. The project budget is $330,000.

- WB-06 Flow Meter Structure Drainage Improvements – This project will install an underground infiltration basin next to WB-06 Flow Meter Structure, which houses chlorine analyzers, to capture chlorine analyzer effluent discharge water from the structure to allow water to percolate into the ground and prevent water from discharging onto the street. The structure is located in the City of Rolling Hills Estates. The project budget is $250,000.

Completed Projects

Five projects were completed under the Minor Cap Program during the 4th Quarter of fiscal year 2022/23 (April through June 2023):

- CRA Canal Sidewall Replacement at Mile Marker 33
- Diamond Valley Lake Marina Boat Launch Docks Refurbishment
- OC-88 Fire Protection System Upgrades
- Orange County Region RTU Air Conditioning Unit Replacement
- Sunset Garage Security Upgrades

Cancelled Projects

One project was cancelled under the Minor Cap Program during the 4th Quarter of fiscal year 2022/23 (April through June 2023)

- La Verne Fabrication Shop Arc Quencher Installation was originally initiated in FYs 2020/21 and 2021/22 minor cap appropriation. The project was canceled to be addressed by the La Verne Shops Stage 5 Building Completion project.

Project Actions

Table 5 lists capital project actions authorized by the General Manager along with funding allocation amounts during the 4th Quarter of FY 2022/23, through the authority delegated by the Board in April 2022. The total funding amount authorized during the 4th Quarter is $38,395,185 through thirty-eight 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 4th Quarter

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
CIP Budgeting System Improvements	Design, Development, & Deployment	$721,000	$865,000
CRA Pumping Plants 6.9 kV Power Cable Replacement[1]	Additional Legal Services	$800,000	$800,000
CRA Conduit Structural Protection	Construction	$9,500,000	$13,300,000
CRA Conveyance System Level Sensor Installation[2]	Met Force Construction and Additional Final Design	$640,000	$640,000
Delta Properties Infrastructure Improvements - Phase 5	Final Design	$75,000	$75,000
Diamond Valley Lake Dam Monitoring System Upgrades - Stage 3	Design, Procurement, and Installation	$2,458,000	$2,650,000
Eagle Rock Security Upgrade - Stage 1	Preliminary Design and Final Design	$358,000	$422,000
Eastern Region Security Camera System Upgrade - Area 1	Preliminary Design	$350,000	$400,000
Eastern Region Security Camera System Upgrade - Area 2	Preliminary Design	$585,000	$630,000
Eastern Region Security Camera System Upgrade - Area 3	Preliminary Design	$256,000	$300,000

[1] Additional funds were required for legal services authorized per February 2023 Boar letter Item 7-4 heard in closed session.

[2] Additional funds were required for final design to add a new flow monitoring facility and installation of eight of the twelve transducers and associated improvements by Metropolitan forces. This was to take advantage of the 2023 CRA shutdown and prior to the contractor's mobilization to ensure timely completion for the next 8-pump flow demand.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Eastern Region Security Camera System Upgrade - Area 4	Preliminary Design	$226,000	$250,000
Eastern Region Security Camera System Upgrade – IT Infrastructure Upgrades	Preliminary Design	$135,000	$140,000
Foothill Hydroelectric Plant and Control Building Seismic Upgrade	Construction	$6,365,000	$8,650,000
Garvey Reservoir Dam Monitoring System Upgrades	Design, Procurement, and Installation	$766,000	$830,000
Garvey Reservoir Rehabilitation	Final Design	$7,200,000	$8,900,000
Headquarters Video Room Upgrades	Study, Design, and Construction	$1,330,520	$1,450,0000
Jensen Control Room Wildfire Smoke Mitigation	Final Design	$266,800	$307,000
Lake Mathews Dam Erosion Control[3]	Additional Preliminary Design	$170,000	$170,000
Rialto Feeder Rehabilitation at STA 2986+30	Procurement of 20-inch Ball Valve	$534,200	$558,000
San Diego and Auld Valley Canals Concrete Liner Replacement	Final Design	$440,000	$460,000
San Diego Pipelines 3 and 5 Air Release/Vacuum Valve Replacement[4]	Procurement	$1,614,665	$1,700,000
Service Connection EM-14 Flowmeter Replacement	Procurement	$90,000	$90,000
Service Connection EM-21 Flowmeter Replacement	Procurement	$90,000	$90,000
Services Procurement Implementation	Preliminary Design	$300,000	$300,000
Upper Feeder Expansion Joint Upgrade	Study	$40,000	$40,000
Western Region Security Camera System Upgrade - Area 1	Preliminary Design	$226,000	$250,000

[3] Additional preliminary design funds were required to complete the preliminary design, as the scope of the work changed due to differing site conditions.

[4] Additional funds were required due to the increased price for procurement of 72 valves.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Western Region Security Camera System Upgrade - Area 2	Preliminary Design	$416,000	$445,000
Western Region Security Camera System Upgrade - Area 3	Preliminary Design	$256,000	$300,000
Western Region Security Camera System Upgrade - Area 4	Preliminary Design	$420,000	$450,000
Western Region Security Camera System Upgrade - Area 5	Preliminary Design	$226,000	$250,000
Western Region Security Camera System Upgrade - Area 6	Preliminary Design	$310,000	$350,000
Western Region Security Camera System Upgrade - Area 7	Preliminary Design	$226,000	$250,000
Western Region Security Camera System Upgrade Area 8	Preliminary Design	$310,000	$360,000
Western Region Security Camera System Upgrade - Area 9	Preliminary Design	$146,000	$175,000
Western Region Security Camera System Upgrade - Area 10	Preliminary Design	$118,000	$150,000
Western Region Security Camera Upgrade - IT Infrastructure Upgrades	Preliminary Design	$200,000	$205,000
Weymouth Hazardous Waste Staging and Containment[5]	Additional Preliminary and Final Design	$230,000	$230,000
	Total	**$38,395,185**	**$47,432,000**

[5] Additional preliminary and final design funds were required to address changes that impact the project design and incorporate updated safety standards for hazardous waste management.

Due to changes to the project implementation schedules or completion of projects under budget, $43,605,000 was reallocated back to the CIP Appropriation (Appropriation No. 15525) from the previously authorized projects listed in Table 6 below. The reallocated funds were used to fund the projects listed in Table 5 and will be used to support the upcoming projects in the current biennium.

Table 6: General Manager Actions to Reallocate Capital Project Funds

Project Authorized (Title)	Amount Authorized for Reallocation to CIP Appropriation
Applications-Servers Upgrade from Old Windows Operating Systems	($3,000,000)
CRA - Reliability for FY2012/13 through FY 2017/18 Remaining Budget	($1,000,000)
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12 Remaining Budget	($500,000)
Iron Mountain and Gene Pumping Plant Utility Replacement	($900,000)
Payroll and Timekeeping System Upgrade	($1,200,000)
Perris Valley Pipeline Interstate 215 Tunnel Crossing	($10,000,000)
Second Lower Feeder PCCP Rehabilitation - Reach 3B	($10,000,000)
Water Information System	($1,175,000)
Water Operations Control Remaining Budget	($1,083,000)
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12 Remaining Budget	($4,747,000)
Weymouth Treatment Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation	($10,000,000)
Total:	**($43,605,000)**

CEQA Determinations

Table 7 lists CEQA exemption determinations made by the General Manager during the 4th Quarter. 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. This table excludes information on board items.

Table 7: CEQA Exemption Determinations

Projects
Freda Siphon Barrel No. 1 Repairs
Inland Feeder/Rialto Pipeline Intertie
Lake Mathews Administration and Warehouse Building Roof Replacement
Sepulveda Feeder Urgent Relining at Stations 569+40, 760+33, and 921+69

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 9, Table 11, and Table 12. Total contract earnings for the 4th Quarter were approximately $46.63 million.

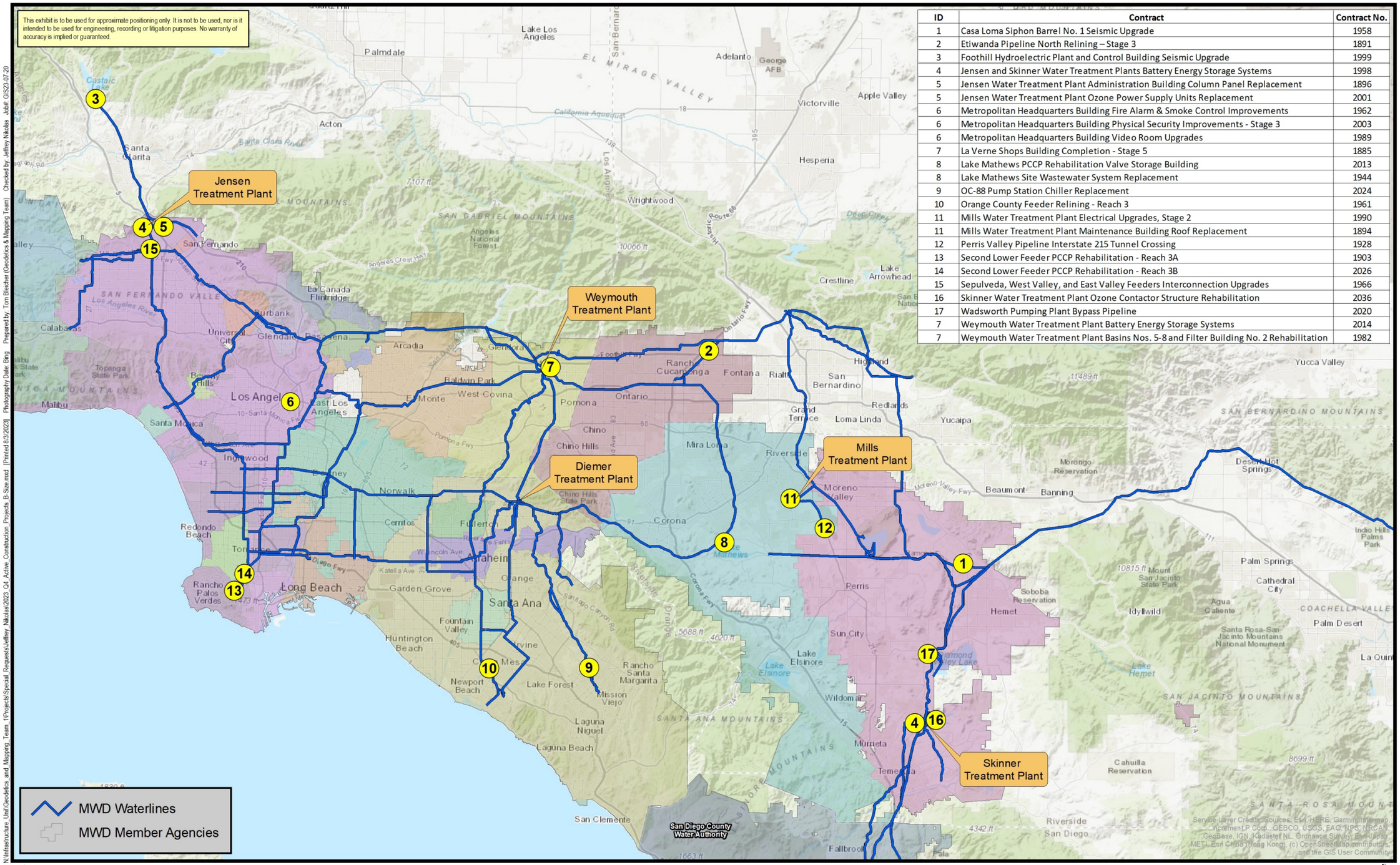
Table 8: 4th Quarter Contract Action

Contract Actions during Q4 for FY 2022/2023, April 2023 through June 2023	
Contracts Awarded by Board	5 construction contracts totaling $21.01 million (Table 10) 3 procurement contracts totaling $5.24 million (Table 10)
Total Payments Authorized	$46.63 million
Construction Contracts Completed	Notice of Completion was filed for 2 construction contracts (Table 9)
Procurement Contracts Completed	One procurement contract was completed
Active Contracts at end of Q4[6]	29 construction contracts, totaling $453.21million (Table 11) 17 procurement contracts, totaling $55.66 million (Table 12) $508.88 million total value*

*Numbers may not sum due to rounding.

The figures on the next two pages show the locations of the twenty-nine construction contracts that were active through the end of the 4th Quarter.

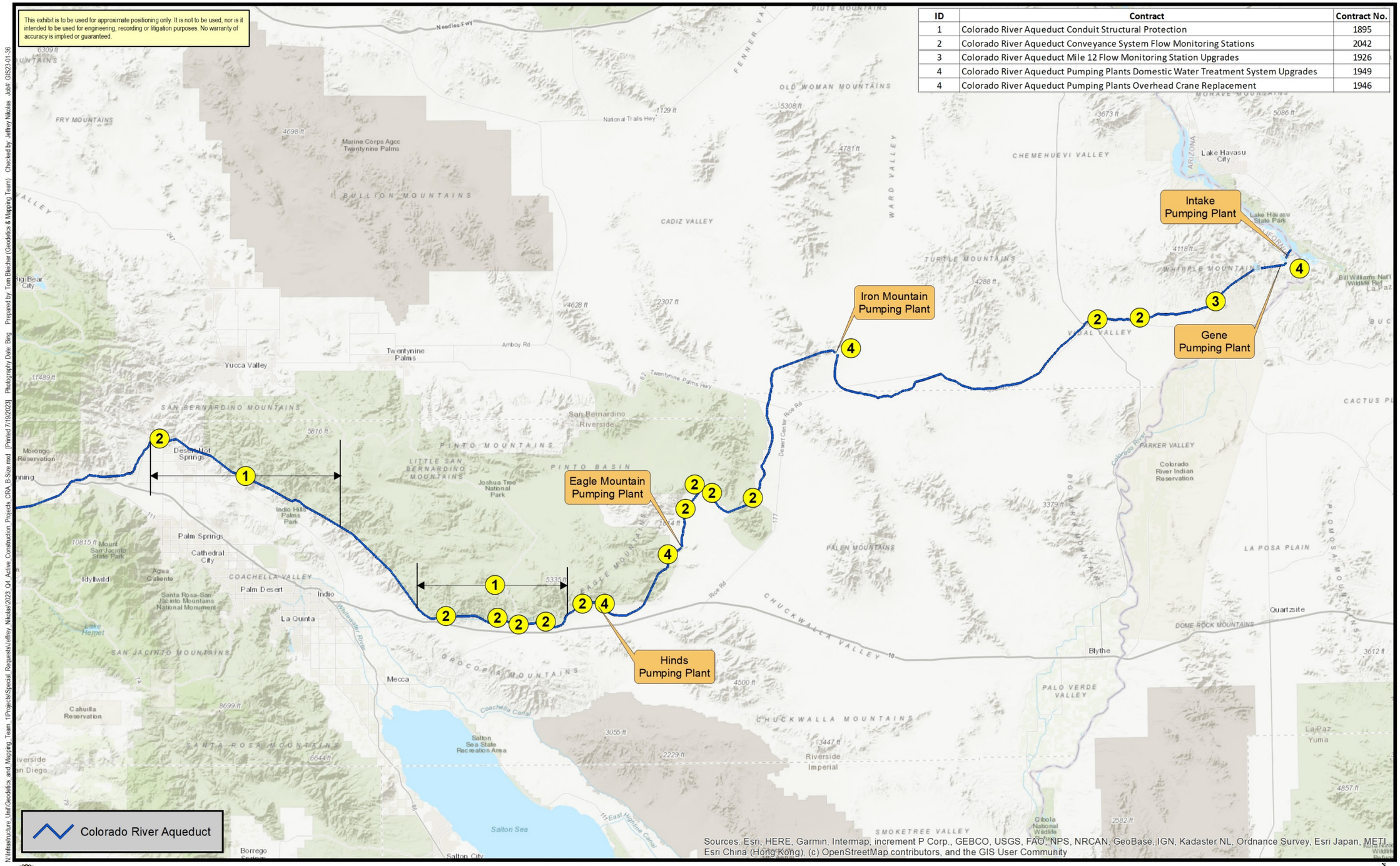
[6] Active contracts at the end of the 4th Quarter are those that are ongoing at the end of June 2023 and have not filed Notice of Completion with the county where the work was performed.



ID	Contract	Contract No.
1	Casa Loma Siphon Barrel No. 1 Seismic Upgrade	1958
2	Etiwanda Pipeline North Relining – Stage 3	1891
3	Foothill Hydroelectric Plant and Control Building Seismic Upgrade	1999
4	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	1998
5	Jensen Water Treatment Plant Administration Building Column Panel Replacement	1896
5	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	2001
6	Metropolitan Headquarters Building Fire Alarm & Smoke Control Improvements	1962
6	Metropolitan Headquarters Building Physical Security Improvements - Stage 3	2003
6	Metropolitan Headquarters Building Video Room Upgrades	1989
7	La Verne Shops Building Completion - Stage 5	1885
8	Lake Mathews PCCP Rehabilitation Valve Storage Building	2013
8	Lake Mathews Site Wastewater System Replacement	1944
9	OC-88 Pump Station Chiller Replacement	2024
10	Orange County Feeder Relining - Reach 3	1961
11	Mills Water Treatment Plant Electrical Upgrades, Stage 2	1990
11	Mills Water Treatment Plant Maintenance Building Roof Replacement	1894
12	Perris Valley Pipeline Interstate 215 Tunnel Crossing	1928
13	Second Lower Feeder PCCP Rehabilitation - Reach 3A	1903
14	Second Lower Feeder PCCP Rehabilitation - Reach 3B	2026
15	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	1966
16	Skinner Water Treatment Plant Ozone Contactor Structure Rehabilitation	2036
17	Wadsworth Pumping Plant Bypass Pipeline	2020
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

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 Mile 12 Flow Monitoring Station Upgrades	1926
4	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Upgrades	1949
4	Colorado River Aqueduct Pumping Plants Overhead Crane Replacement	1946

N:\Infrastructure Unit\Geodetics and Mapping Team 1\Projects\Special Requests\Jeffrey Nikolas\2023_Q4_Active Construction Projects_GRA_B-Size.mxd [Printed 7/19/2023] Photography Date: Bing Prepared by: Tom Bleicher (Geodetics & Mapping Team) Checked by: Jeffrey Nikolas Job#: GIS23-01-36

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 4th Quarter, the Board did not authorize any increases to the General Manager's change order authority.

Notices of Completion during 4th Quarter:

The following table shows the two Board awarded construction contracts for which Metropolitan accepted the contract as completed during the 4th Quarter of FY 2022/23 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 9: Notices of Completion Filed This Quarter

Contract No.	Construction Contract	Notice of Completion	Original Bid Amount	Final Contract Costs	Change Order	Change Order %
1908	CRA Pumping Plants - Sump Rehabilitation	May 2023	$26,900,000	$16,690,970	-$13,209,030	-49.1%
1964	Live Oak Reservoir Pipelines Cathodic Protection	April 2023	$182,800	$182,800	$0	0%
Totals:			**$27,082,800**			

For the 4th Quarter, the total bid amount of the completed construction contracts was approximately $27 million.

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 (July 2022 through June 2023) is 4.18 percent[7].

[7] Original amount of construction contracts completed (Jul. 2022 through Jun. 2023) = $ 14,940,178
Change orders for completed construction contracts (Jul. 2022 through Jun. 2023) = $ 625,202
Change order percentage (Jul. 2022 through Jun. 2023) = 4.18%

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

Contracts Awarded by the Board during 4th Quarter:

During the period of April through June 2023, five construction contracts totaling $21,015,998 and three procurement contracts totaling $5,242,577, were awarded by the Board.

Table 10: Construction and Procurement Contracts Awarded This Quarter

Construction Contracts	
Colorado River Aqueduct Conduit Structural Protection	
Contract Number	1895
Contractor	Granite Construction Company
Amount	$8,656,568
Jensen Administration Building Entrance Glass Fiber Reinforced Concrete Panels Replacement	
Contract Number	1896
Contractor	MMJ Contracting, Inc.
Amount	$281,900
Metropolitan Headquarters Building First Floor Video Suite Renovation	
Contract Number	1989
Contractor	Acro Constructors
Amount	$637,520
Foothill Hydroelectric Power Plant Seismic Upgrade	
Contract Number	1999
Contractor	West Valley Investment Group, Inc.
Amount	$6,174,000
CRA Conveyance System Solar Level Sensor Installation	
Contract Number	2042
Contractor	LEED Electric, Inc.
Amount	$5,266,000
Procurement Contracts	
Furnishing Butterfly Valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie	
Contract Number	2048
Contractor	Sojitz Machinery Corporation of America
Amount	$2,601,437
Furnishing Two Butterfly Valves for the Lake Skinner Outlet Tower Valve Replacement	
Purchase Order Number	214904
Contractor	B&K Valves and Equipment, Inc.
Amount	$1,174,475
Furnishing Air Release and Vacuum Valves for San Diego Pipeline Nos. 3 and 5	
Purchase Order Number	214941
Contractor	B&K Valves and Equipment, Inc.
Amount	$1,466,665

The table on this page lists the 29 ongoing construction contracts through the end of the 4th Quarter. This list contains construction contracts awarded by the Board.

Table 11: Active Construction Contracts at the End of 4th Quarter

	Cont. No.	Contract Title	Contractor	Contract Amount[8]	Earnings Through June 2023[9]	Start Date	Est. Completion Date	Est. Percent Complete
1	1885	La Verne Shops Building Completion – Stage 5	Woodcliff Corporation, Inc.	$18,930,000	$9,378,590	6/10/22	6/24	50%
2	1891	Etiwanda Pipeline North Relining - Stage 3	Mladen Buntich Construction Co., Inc.	$25,631,519	$23,281,069	8/19/22	9/23	91%
3	1894	Mills Plant Maintenance Building Roof Replacement	Bishop, Inc.	$341,130	$291,452	10/12/22	8/23	85%
4	1895	Colorado River Aqueduct Conduit Structural Protection	Granite Construction Company	$8,656,568	$129,849	5/11/23	1/25	2%
5	1896	Jensen Admin. Bldg. Entrance Glass Fiber Reinforced Concrete Panels Replacement	MMJ Contracting, Inc.	$281,900	$0	7/14/23	1/24	0%
6	1903	Second Lower Feeder PCCP Rehabilitation – Reach 3A	J. F. Shea Construction, Inc.	$11,884,700	$11,647,383	6/6/22	6/23	100%
7	1926	CRA Mile 12 Flow Monitoring Station Upgrades	R2 Engineering dba R2Build	$2,067,096	$2,051,656	6/16/21	8/23	99%
8	1928	Perris Valley Pipeline Interstate 215 Tunnel Crossing	James W. Fowler, Company	$59,489,720	$4,670,057	2/13/23	2/25	8%
9	1944	Lake Mathews Reservoir Wastewater System Replacement	Creative Home dba CHI Construction	$3,815,000	$3,515,471	12/13/21	10/23	92%
10	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	$13,611,460	$6,464,015	10/14/20	9/23	47%

[8] 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.

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

	Cont. No.	Contract Title	Contractor	Contract Amount[8]	Earnings Through June 2023[9]	Start Date	Est. Completion Date	Est. Percent Complete
11	1949	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement	J.F. Shea Construction, Inc.	$32,869,737	$9,310,138	1/20/22	3/25	28%
12	1958	Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1	J.F. Shea Construction, Inc.	$11,759,319	$11,627,319	1/20/22	7/23	99%
13	1961	Orange County Feeder Relining – Reach 3	Spiniello Infrastructure West, Inc.	$17,226,250	$12,386,595	5/11/22	10/23	72%
14	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements	Bernards Bros. Inc.	$14,172,027	$12,618,720	9/24/20	9/23	89%
15	1966	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	Blois Construction, Inc.	$3,143,592	$1,708,670	7/7/22	9/23	54%
16	1982	Weymouth Water Treatment Plant Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation	J. F. Shea Construction, Inc.	$94,324,423	$31,896,293	6/10/22	5/25	34%
17	1989	Metropolitan Headquarters Building First Floor Video Suite Renovation	Acro Constructors	$637,520	$0	6/15/23	2/24	0%
18	1990	Henry J. Mills Water Treatment Plant Electrical Upgrades, Stage 2	CSI Electrical Contractors, Inc.	$9,246,064	$2,633,221	12/13/21	2/25	28%
19	1998	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems[10]	Ameresco, Inc.	$11,604,521	$4,239,443	10/7/21	11/24	37%
20	1999	Foothill Hydroelectric Power Plant Seismic Upgrade	West Valley Investment Group, Inc.	$6,174,000	$150,120	4/27/23	9/24	2%
21	2001	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	Leed Electric, Inc.	$2,257,897	$1,033,200	7/20/22	12/23	46%
22	2003	Metropolitan Headquarters Building Exterior Physical Security Improvements	Caltec, Corp.	$2,165,000	$551,115	1/12/23	1/24	25%

	Cont. No.	Contract Title	Contractor	Contract Amount[8]	Earnings Through June 2023[9]	Start Date	Est. Completion Date	Est. Percent Complete
23	2013	Lake Mathews PCCP Rehabilitation Valve Storage Building	Facility Builders & Erectors, Inc.	$4,766,776	$3,948,620	3/10/22	9/23	83%
24	2014	Weymouth Plant Battery Energy Storage System[10]	Siemens Industry, Inc.	$6,176,521	$2,647,731	7/18/22	8/23	43%
25	2020	Wadsworth Pumping Plant Bypass Pipeline	Steve P. Rados, Inc.	$14,820,500	$839,294	2/2/23	6/24	6%
26	2024	OC-88 Pump Station Chiller Replacement	Mehta Mechanical Co., Inc. dba MMC Inc.	$2,654,000	$549,810	6/6/22	1/24	21%
27	2026	Second Lower Feeder PCCP Rehabilitation - Reach 3B	J.F. Shea Construction, Inc.	$68,847,000	$3,532,881	2/13/23	9/25	5%
28	2036	Skinner Water Treatment Plant Ozone Contactor Structure Rehabilitation	Slater Waterproofing, Inc.	$394,534	$17,368	4/12/23	12/23	4%
29	2042	CRA Conveyance System Solar Level Sensor Installation	LEED Electric, Inc.	$5,266,000	$0	6/15/23	5/24	0%
Total contract value for active construction contracts:				**$453,214,774**				

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

The following table lists the 17 ongoing procurement contracts at the end of the 4th Quarter.

Table 12: Active Procurement Contracts at the End of 4th Quarter

	Cont. No.	Contract	Contractor	Contract Amount[11]	Earnings Through June 2023[12]	Start Date	Est. Delivery Completion Date	Est. Percent Complete[13]
1	1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	$2,380,909	$2,362,968	9/11/17	D[14]	99%
2	1867[15]	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1	Crispin Valve, LLC	$5,066,975	$2,752,936	12/18/17	12/23	54%
3	1868	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2	DeZurick, Inc.	$771,984	$761,584	12/18/17	D[14]	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[14]	97%
5	1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	$23,750,060	$17,562,939	12/24/18	1/25	74%
6	1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	$2,193,356	$2,170,295	9/17/18	D[14]	99%
7	1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limitorque	$3,370,402	$3,027,804	2/16/19	9/24	90%
8	1955	Furnishing Membrane Filtration Systems for the CRA Domestic Water Treatment Systems	Wigen Water Technologies	$1,244,535	$599,970	5/28/20	7/25	48%

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

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

[13] 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.

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

[15] 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[11]	Earnings Through June 2023[12]	Start Date	Est. Delivery Completion Date	Est. Percent Complete[13]
9	1965	Furnishing Equipment for the Jensen Ozone Power Supply Units Upgrades	Suez Treatment Solutions, Inc.	$4,141,194	$3,229,976	3/30/20	D[14]	78%
10	1969	Furnishing Inlet Valve Gearboxes for Skinner Module No. 7	R&B Automation, Inc.	$224,510	$207,035	4/29/20	2/24	92%
11	2012	Furnishing Electrical Panels for Diemer Treatment Plant	Integrated Power System, LLC	$247,789	$165,439	11/30/22	8/23	67%
12	2022	Furnishing Butterfly Valves for the Wadsworth Bypass Pipeline, Inland Feeder-Rialto Pipeline Intertie, and Badlands Tunnel Isolation Surge Tanks	Sojitz Machinery Corp. of America	$5,647,405	$0	10/3/22	9/25	0%
13	2028	Furnishing Slide Gates for the San Jacinto Diversion Structure	Whipps, Inc.	$820,853	$0	12/8/22	6/24	0%
14	2046	Furnishing a 20-inch Triple Offset Ball Valve for Service Connection CB-11	Cascade Consultants, LLC	$407,800	$0	3/8/23	8/24	0%
15	2048	Furnishing Butterfly Valves for the Inland Feeder/SBVMWD Foothill Pump Station Intertie - Schedule 1	Sojitz Machinery Corp. of America	$2,601,437	$0	6/15/23	5/25	0%
16	PO #214904	Furnishing Two Butterfly Valves for the Lake Skinner Outlet Tower Valve Replacement	B&K Valves and Equipment, Inc.	$1,174,475	$0	TBD	2/25	0%
17	PO #214941	Furnishing Air Release and Vacuum Valves for San Diego Pipeline Nos. 3 and 5	B&K Valves and Equipment, Inc.	$1,466,665	$0	TBD	6/24	0%
Total contract value for active procurement contracts:				**$55,662,219**				

Project Labor Agreement

Project Labor Agreement

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

Major Provisions of Metropolitan's Project Labor Agreement

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

- A 60 percent goal for employment of local workers. Although the local worker provision covers the entirety of Metropolitan's service area, the PLA can also be customized on a contract-by-contract basis using first-tier zip codes, which would benefit those who are near the project sites.
- A 15 percent goal for employment of transitional workers
- Metropolitan's PLA strikes an important balance with Metropolitan's Business Outreach Program – ensuring coverage of a substantial portion of Metropolitan's public works construction contracts, while preserving the integrity of its robust Small Business Program.
- A unique core employee carveout, which allows three core employees per craft, providing flexibility for non-union, small, or micro-small businesses with 25 or fewer employees
- Workforce development benefits including the required use of the nationally recognized Helmets to Hardhats Program, Construction Career Pipeline Program (CCPP), and the Multi-Core Craft (MC3) Apprenticeship Readiness Programs.
- Ability to add projects in the future, upon agreement by the Board and the associated trade councils

Active PLA Contracts

As of June 2023, five construction contracts totaling approximately $158 million were awarded by the Board which are covered by the PLA.

Table 13: Active PLA Contracts

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

Contract Number	Contract Title	Contractor	Contract Amount ($ million)	Board Award Date
1999	Foothill Hydroelectric Power Plant Seismic Upgrade	West Valley Investment Group, Inc.	$6.17	04/23
		Total value of contracts under PLA:	**$157.99**	

At the end of this reporting quarter, PLA administration costs have totaled 2.4% of the total contract costs incurred to date. These administrative costs include both Metropolitan staff and consultants that routinely work with the contractors on the PLA. While this percentage represents the initial costs associated with the PLA, the number is not indicative of long-term PLA administration costs, as there were upfront costs in setting-up the PLA templates that will be used on future Metropolitan projects. Staff continuously monitors the costs for PLA administration, as well as any impacts to biddability of projects, and will update the Board annually in a stand-alone PLA Annual Report.

Major Achievements of the PLA

The PLA has allowed Metropolitan to better engage with the contracting community. Major achievements since the inception of the PLA include:

- Performed reoccurring contractor training on Metropolitan's PLA and labor compliance requirements
- Conducted various outreach events, providing information and educating them about Metropolitan's upcoming projects and business practices:
  - March 3, 2023: Helmets to Hardhats – PLA Orientation
  - March 21, 2023: PLA Orientation with the Inland Empire Building Trades Council
  - March 22, 2023: MetWorks PLA and Construction Overview to Small Businesses in Moreno Valley
  - April 18, 2023: General PLA & CCPP, Overview to MC3 Programs
  - April 28, 2023: MetWorks PLA and Construction Overview to Small Businesses in Irvine
  - May 15, 2023: MC3 Meeting with Center for Employment Training - Colton Campus
  - May 15, 2023: MC3 Meeting with San Bernardino Community College
  - May 18, 2023: MC3 Meeting with Norte Vista High School in Riverside
- Two micro SBEs are taking advantage of the carve-out for core employees.

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 14 and Table 15 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 14: Performance Metric Actuals, Construction Costs > $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
CRA Conduit Structural Protection	Final Design	$1,154,211	11,436,568	9% to 12%	10.1%
CRA Conveyance System Flow Monitoring Stations	Final Design	$735,547	$6,100,000	9% to 12%	12.1%
CRA Pumping Plant Sump Rehabilitation	Inspection	$888,884	$11,297,697	9% to 12%	7.9%
Foothill Hydroelectric Plant and Control Building Seismic Upgrade[16]	Final Design	$784,000	$6,300,000	9% to 12%	12.4%

[16] Final design costs for Foothill Hydroelectric Plant and Control Building Seismic Upgrade were higher than the target range due to additional design efforts required to modify structural columns, control room wiring bundles, and a walkway bridge ramp to enhance safety and reduce cost.

Table 15: Performance Metric Actuals, Construction Costs < $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Headquarters Video Room Upgrades	Final Design	$37,955	$968,520	9% to 15%	3.9%
Jensen Administration Building Column Panel Replacement	Final Design	$35,073	$308,900	9% to 15%	11.4%
Live Oak Reservoir Pipelines Cathodic Protection[17]	Inspection	$28,730	$182,800	9% to 15%	15.7%

[17] Inspection costs for Live Oak Reservoir Pipelines Cathodic Protection were higher than the target range due to weather delays, which required additional inspection.

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 (April through June 2023).

Relocations

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

Projects Expensed to Overhead

Progress, costs, and future plans for the projects listed below were evaluated by Engineering Services, Finance, Water System Operations, and Real Property. This assessment determined that no further work on Diamond Valley Lake East Marina, Phase 2 is warranted. The project received the necessary authorization for various levels of effort conducted. However, no Metropolitan capital asset was ever placed into service. Accrued costs have been expensed since no capital asset will be constructed in the foreseeable future. As for Desert Housing Improvements, a portion of the project expenditures were later determined to be not capitalizable and were expensed.

Table 16: Projects Expensed to Overhead

Project	Expensed Amount
Diamond Valley Lake East Marina, Phase 2	$150,385
Desert Housing Improvements	$2,075,209

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 17: 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 June 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Colorado River Aqueduct Reliability Program	**Total**	**$546,785**	**$458,846**	**$39,270**	**$33,309**
Cabazon Radial Gate Facility Improvements	15320	$2,456	$914	$0	$209
White Water Siphon Protection	15341	$15,585	$14,501	$2,650	$17
CRA - Conveyance Reliability	15373	$117,828	$117,181	$1,750	$805
CRA Pumping Plant Reliability	15374	$24,467	$24,011	$0	$8
CRA - Electrical/Power Systems Reliability	15384	$59,465	$53,387	$1,507	$4,897
CRA – Discharge Containment	15385	$8,129	$7,977	$0	$2
CRA - Reliability for FY2006/07 through FY2011/12	15438	$134,194	$122,462	$11,130	$2,990
CRA Main Pump Reliability	15481	$75,000	$63,263	$10,005	$10,205
CRA - Reliability for FY2012/13 through FY2017/18	15483	$90,805	$47,599	$10,532	$11,719
CRA - Reliability for FY2018/19 through FY2023/24	15507	$18,856	$7,550	$1,696	$2,456
Cost Efficiency & Productivity Program	**Total**	**$161,688**	**$113,181**	**$15,610**	**$9,512**
DVL Recreation Facilities	15334	$87,004	$60,106	$2,650	$721
Yorba Linda Power Plant Modifications	15446	$17,125	$17,109	$0	$18
Business Operations Improvement	15484	$17,716	$12,154	$1,820	$1,916

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Project Controls and Reporting System	15490	$6,440	$6,292	$0	-$10
Enterprise Content Management	15500	$3,600	$3,595	$3,330	$0
DVL Recreation Rehabilitation & Refurbishment	15515	$1,898	$1,236	$150	$324
Energy Sustainability Improvements	15521	$27,905	$12,688	$7,660	$6,544
Dams and Reservoirs Reliability Program	**Total**	**$90,888**	**$71,274**	**$5,300**	**$2,286**
Reservoir Cover and Replacement	15417	$76,830	$61,248	$740	$1,879
Dam Rehabilitation & Safety Improvements	15419	$14,058	$10,026	$4,560	$407
Distribution System Reliability Program	**Total**	**$495,952**	**$433,123**	**$51,250**	**$64,996**
Conveyance and Distribution System - Rehabilitation	15377	$125,961	$115,891	$9,310	$14,147
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12	15441	$154,412	$142,499	$170	$27,011
Hydroelectric Power Plant Improvements	15458	$34,976	$17,962	$4,760	$686
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	$138,942	$125,552	$29,220	$11,900
Pipeline Rehabilitation and Replacement	15482	$1,143	$1,081	$210	$48
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	$40,518	$30,138	$7,580	$11,205
District Housing & Property Improvements Program	**Total**	**$12,285**	**$11,120**	**$12,000**	**$4,570**
Employee Village Enhancement	15513	$12,285	$11,120	$12,000	$4,570

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Minor Capital Projects Program	**Total**	**$55,500**	**$30,238**	**$8,700**	**$4,939**
Capital Program for Projects Costing Less Than $400,000 For Fiscal Years 2018/19 And 2019/20	15498	$10,000	$7,176	$0	$5
Capital Program for Projects Costing Less Than $400,000 for FY2018/19 through FY2019/20	15504	$15,500	$12,358	$2,050	$934
Capital Program for Projects Costing Less Than $400,000 for FY2020/21 through FY2021/22	15518	$20,000	$8,308	$4,580	$1,605
Capital Program for Projects Costing Less Than $400,000 for FY2022/23 through FY2023/24	15526	$10,000	$2,395	$2,070	$2,395
Prestressed Concrete Cylinder Pipe Rehabilitation Program	**Total**	**$370,391**	**$297,034**	**$51,210**	**$29,367**
PCCP Rehabilitation and Replacement	15471	$26,966	$24,249	$510	$1,575
Sepulveda Feeder PCCP Rehabilitation	15496	$38,813	$30,848	$3,900	$2,925
Second Lower Feeder PCCP Rehabilitation	15497	$288,927	$229,562	$43,500	$23,198
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	$15,685	$12,375	$3,300	$1,669
Regional Recycled Water Supply Program	**Total**	**$24,350**	**$20,514**	**$3,860**	**$214**
Demonstration-Scale Recycled Water Treatment Plant	15493	$24,350	$20,514	$3,860	$214
Right of Way & Infrastructure Protection Program	**Total**	**$31,715**	**$28,336**	**$7,770**	**$1,276**
Right of Way & Infrastructure Protection	15474	$31,715	$28,336	$7,770	$1,276

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
System Flexibility/Supply Reliability Program	**Total**	**$740,315**	**$659,170**	**$31,590**	**$17,622**
Hayfield and Lake Perris Groundwater Recovery	15402	$1,500	$1,128	$740	$15
Perris Valley Pipeline	15425	$170,500	$137,206	$14,208	$6,089
Water Delivery System Improvements	15488	$106,420	$80,522	$13,141	$10,917
Verbena Property Acquisition	15492	$264,000	$262,148	$3,450	$200
Delta Wetlands Properties (Delta Islands)	15494	$197,894	$178,166	$51	$401
System Reliability Program	**Total**	**$457,064**	**$343,715**	**$48,500**	**$36,784**
Information Technology System - Infrastructure	15376	$51,306	$47,806	$50	$88
Information Technology System - Security	15378	$12,351	$11,714	$0	$898
La Verne Shop Facilities Upgrade	15395	$71,348	$55,388	$1,750	$8,069
Water Operations Control	15467	$67,441	$44,613	$5,970	$2,531
Union Station Headquarters Improvements	15473	$109,552	$93,634	$8,330	$7,408
IT Infrastructure Reliability	15487	$56,667	$41,577	$6,870	$4,784
Operations Support Facilities Improvement	15495	$35,721	$23,936	$14,000	$4,394
Metropolitan Security System Enhancements	15499	$24,516	$12,292	$4,365	$1,240
Infrastructure Reliability Information System	15501	$17,221	$6,541	$95	$3,675
System-Wide Paving & Roof Replacements for FY 2018/19 through FY 2019/20	15516	$4,791	$4,092	$5,050	$2,498

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	$2,461	$2,045	$930	$1,126
Enterprise Data Analytics	15522	$3,690	$78	$1,090	$73
Treatment Plant Reliability Program	**Total**	**$895,722**	**$790,871**	**$24,940**	**$42,788**
Weymouth Water Treatment Plant Improvements	15369	$195,711	$189,310	$5,000	$1,169
Jensen Water Treatment Plant Improvements	15371	$47,062	$46,681	$310	$43
Diemer Water Treatment Plant Improvements	15380	$216,907	$208,500	$3,320	$170
Mills Water Treatment Plant Improvements	15381	$5,525	$5,284	$0	$7
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15436	$74,207	$67,858	$3,660	$2,187
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	$101,332	$52,628	$2,159	$25,111
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	$91,376	$85,468	$3,670	$771
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	$39,852	$27,512	$92	$2,919
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	$77,539	$77,244	$39	$286
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15478	$2,955	$1,788	$120	$352

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2023 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	$2,664	$1,033	$0	$186
Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15486	$8,339	$7,482	$0	-$2
Weymouth Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15505	$915	$755	$0	$453
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	$19,662	$11,275	$5,090	$6,069
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	$3,758	$2,203	$0	$1,448
Skinner Water Treatment Plant, Improvements for FY 2020/21 Through FY 2023/24	15512	$5,239	$4,130	$1,460	$493
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	$2,631	$1,633	$20	$1,036
Chlorine System Improvements	15523	$50	$88	$0	$88
Water Quality Program	**Total**	**$10,240**	**$9,615**	**$0**	**$0**
Enhanced Bromate Control	15472	$10,240	$9,615	$0	$0
Total CIP		**$3,892,895**	**$3,267,037**	**$300,000**	**$247,663**

Notes on the above table:

- Numbers may not sum due to rounding.
- Numbers are based on the general ledger information downloaded on 07/25/2023.
- $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 June 2023

Item 6d

September 11, 2023

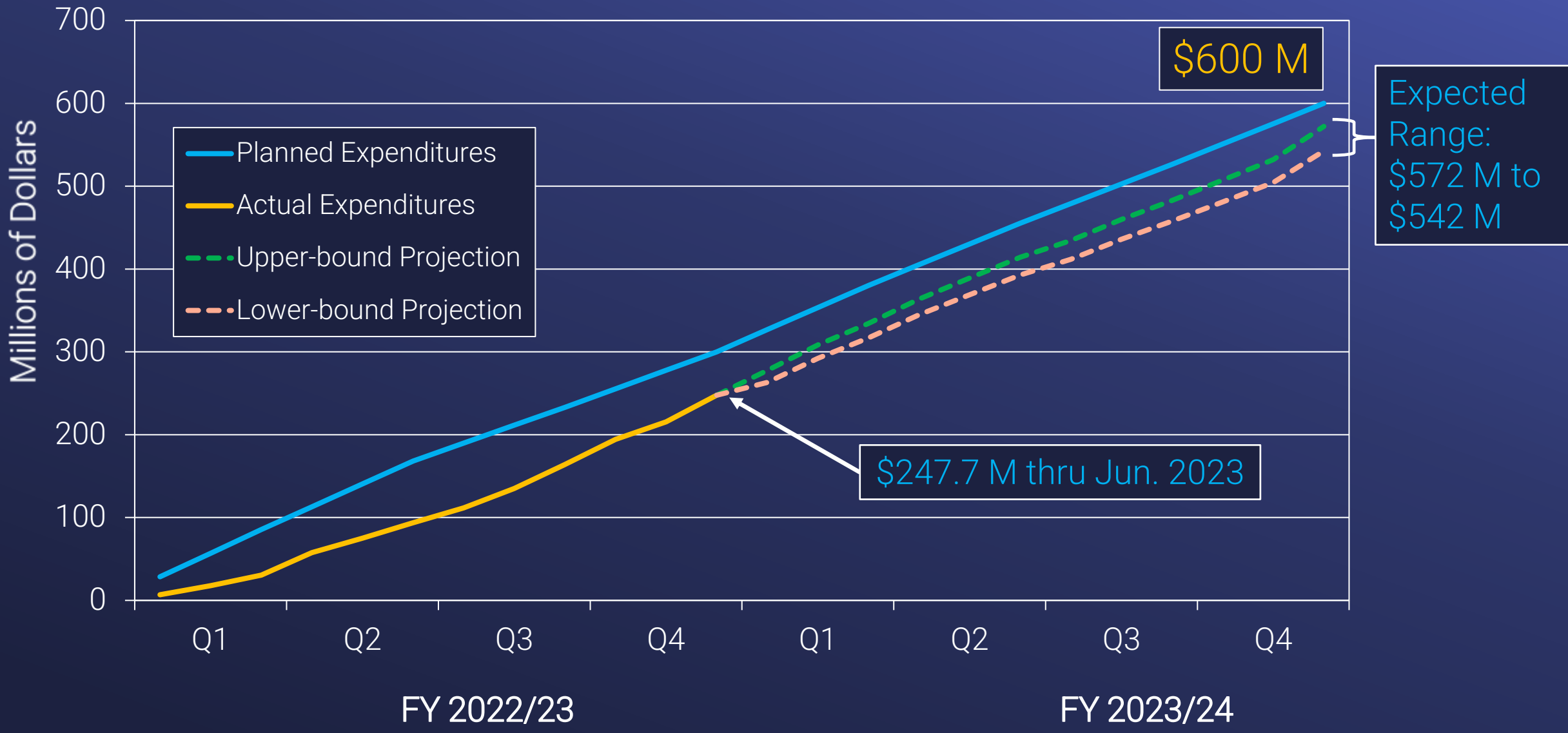
Capital Investment Plan Quarterly Report

Period Ending June 2023

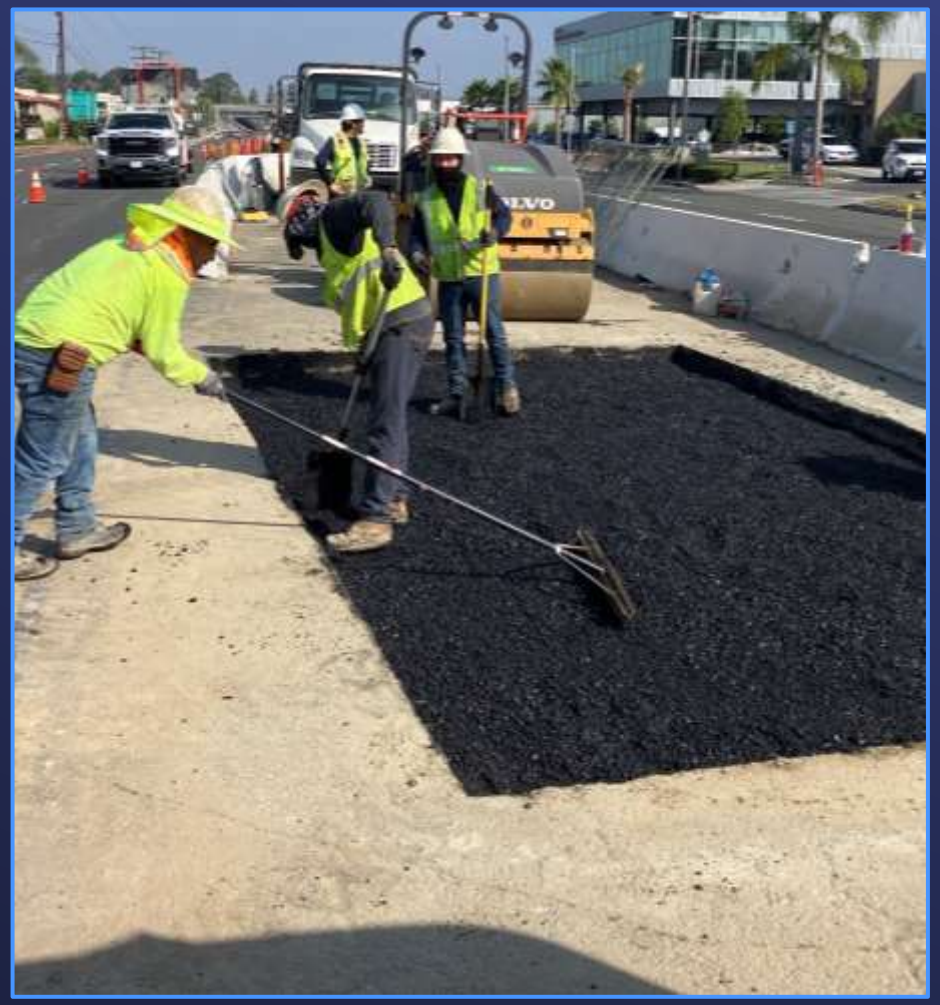
4th Quarter Summary for Fiscal Year 2022/23

- Board awarded contracts – $26.3 M
  - 5 Construction contracts awarded
  - 3 Procurement contracts awarded
- Contracts currently underway – $508.9 M
  - 29 Construction
  - 17 Procurement

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



Orange County Feeder Relining – Stage 3



Street Restoration in Costa Mesa

- Contract awarded in April 2022
  - Expected construction completion in September 2023
- Total Project Estimate: $23.8 M
- Total Project Cost through June: $16.1 M

Second Lower Feeder PCCP Rehabilitation – Reach 3B

- Contract awarded in January 2023
  - Expected construction completion in September 2025
- Total Project Estimate: $105.6 M
- Total Project Cost through June: $16.4 M

54-inch Diameter Valve Inspection (Japan)

Construction Contract Completion and Change Orders

Contract	Original Contract Amount	Contract Change Orders	Change Order %
CRA Pumping Plants – Sump Rehabilitation	$26,900,000	-$13,209,030	-49.1%
Live Oak Reservoir Pipelines Cathodic Protection	$182,800	$0	0.0%
Total	$27,082,800		

Performance Metrics – 4th Quarter of FY 2022/23

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	11.2%	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	5.7%	15.7%

Minor Capital Projects

Fiscal Year Appropriation	2016/17 2017/18	2018/19 2019/20	2020/21 2021/22	2022/23 2023/24
Amount Appropriated	$10.0 M	$15.5 M	$20.0 M	$10.0 M
Amount Allocated	$7.8 M	$13.6 M	$16.0 M	$8.8 M
Expenditures Through June 2023	$7.2 M	$12.4 M	$8.3 M	$2.4 M
# of Projects Approved	41	48	53	32
# of Projects Completed Through June 2023	40	40	7	0
% of Work Complete	99%	94%	50%	14%

8 projects exceeded 3 years in duration


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering, Operations, & Technology Committee

Water System Operations Manager's Report

Item 7a
September 11, 2023

Current Operational Conditions

Colorado River Aqueduct
August 30

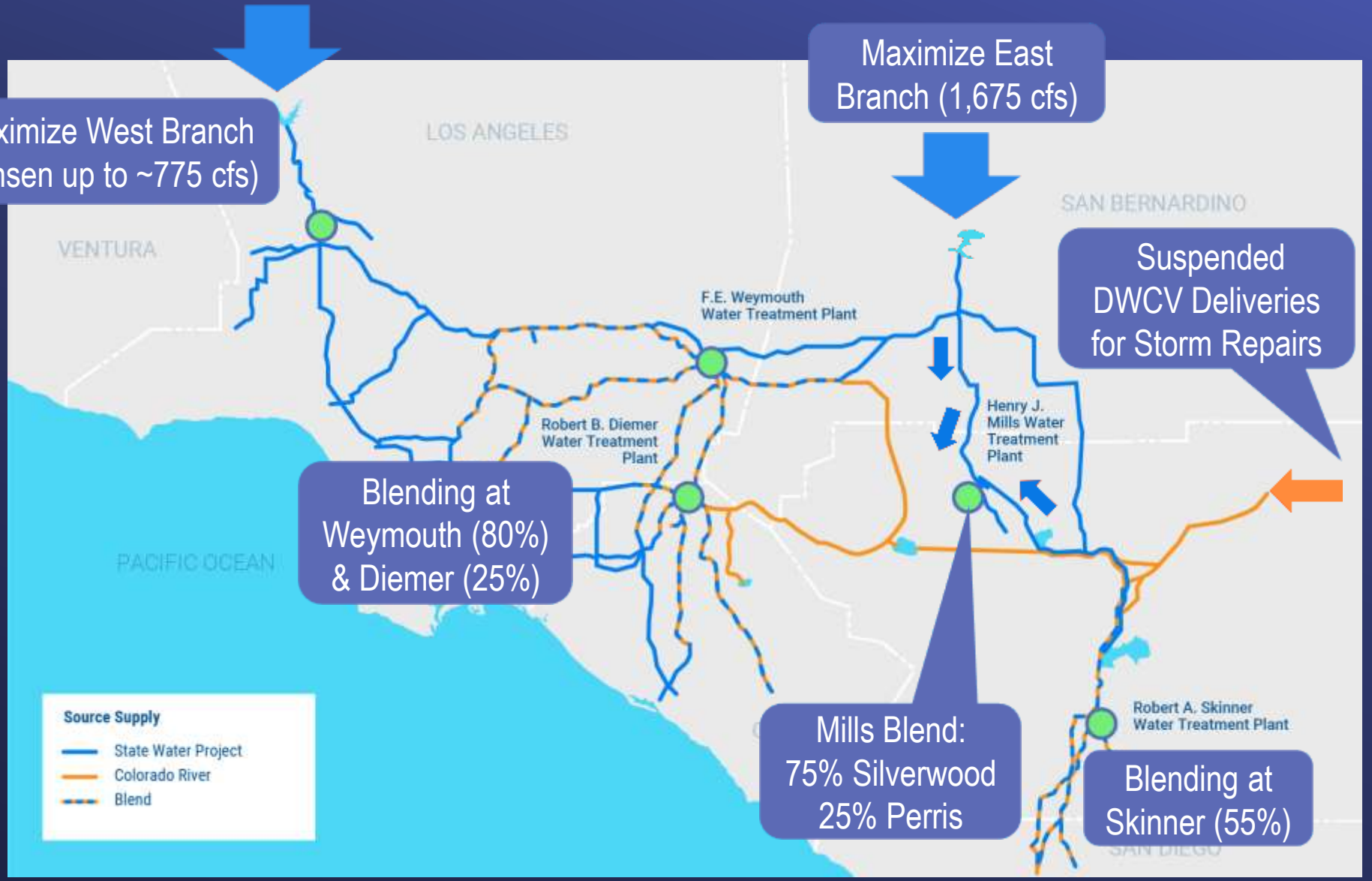
Managing Surplus Conditions

- 2023 SWP Allocation at 100%
- CRA at 3-pump flow
- Suspended deliveries to DWCV storage due to recent storm event
- SWP blend targets are 80% at Weymouth, 25% at Diemer, and 55% at Skinner
- August 2023 deliveries of 110 TAF were 53 TAF lower than August 2022; lowest August demand on record

Maximizing SWP Supplies

Current Surplus Operations

Balancing water supply, quality, and system constraints



Emergency Preparedness and Response

Tropical Storm Hilary
August 2023

- Activated Emergency Operations Center at Level 3
  - Preparations to elevate to Level 2 if needed
  - Incident Command Posts activated in Desert and Eastern Regions
- Coordinated extensively with emergency partners
- Sent MetAlert message to all member agencies to coordinate emergency contacts
- Utilized WebEOC for situational awareness and internal communications
  - Tested alternate communication equipment

Emergency Preparedness and Response


Exposed section of CRA

Tropical Storm Hilary
August 2023

No major impacts to Metropolitan facilities or operations

- Reduced from 5 to 3-pump flow on CRA as precautionary measure
- Prepared facilities and staged equipment at key locations to facilitate repairs
- Prepared for potential power outages
- Assessed dams & reservoirs
- Performed aerial & ground patrols following storm
- Minor erosion and localized flooding in areas

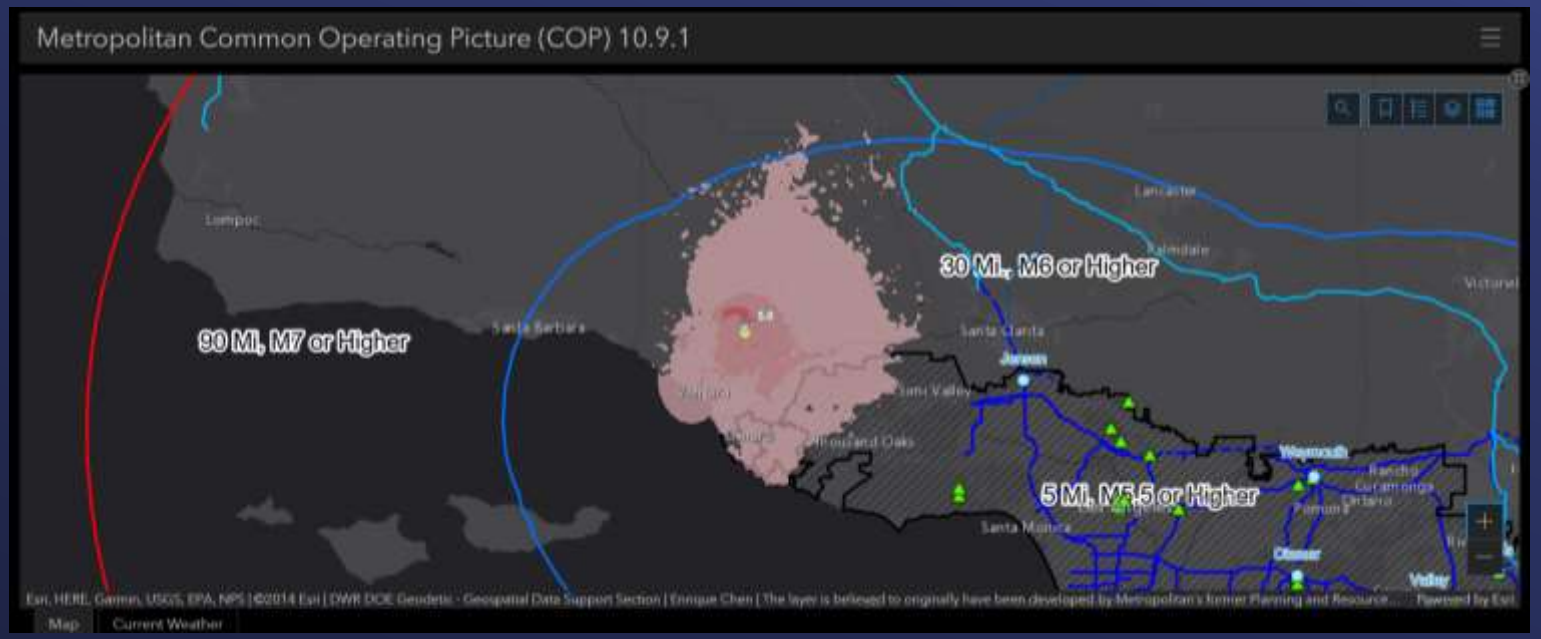
Photo by Nicholas Weiss
Equipment Operator on Aqueduct Maintenance Team

Emergency Preparedness and Response

Ojai Earthquake August 2023

- 5.1-magnitude earthquake felt in portions of Southern California
- Patrols conducted at treatment plants and western distribution system area
- Member agencies contacted

No damage to Metropolitan facilities



Whitewater Erosion Protection Structure Successfully Sustained Effects of Tropical Storm

MWD Service Connections *(yellow)*

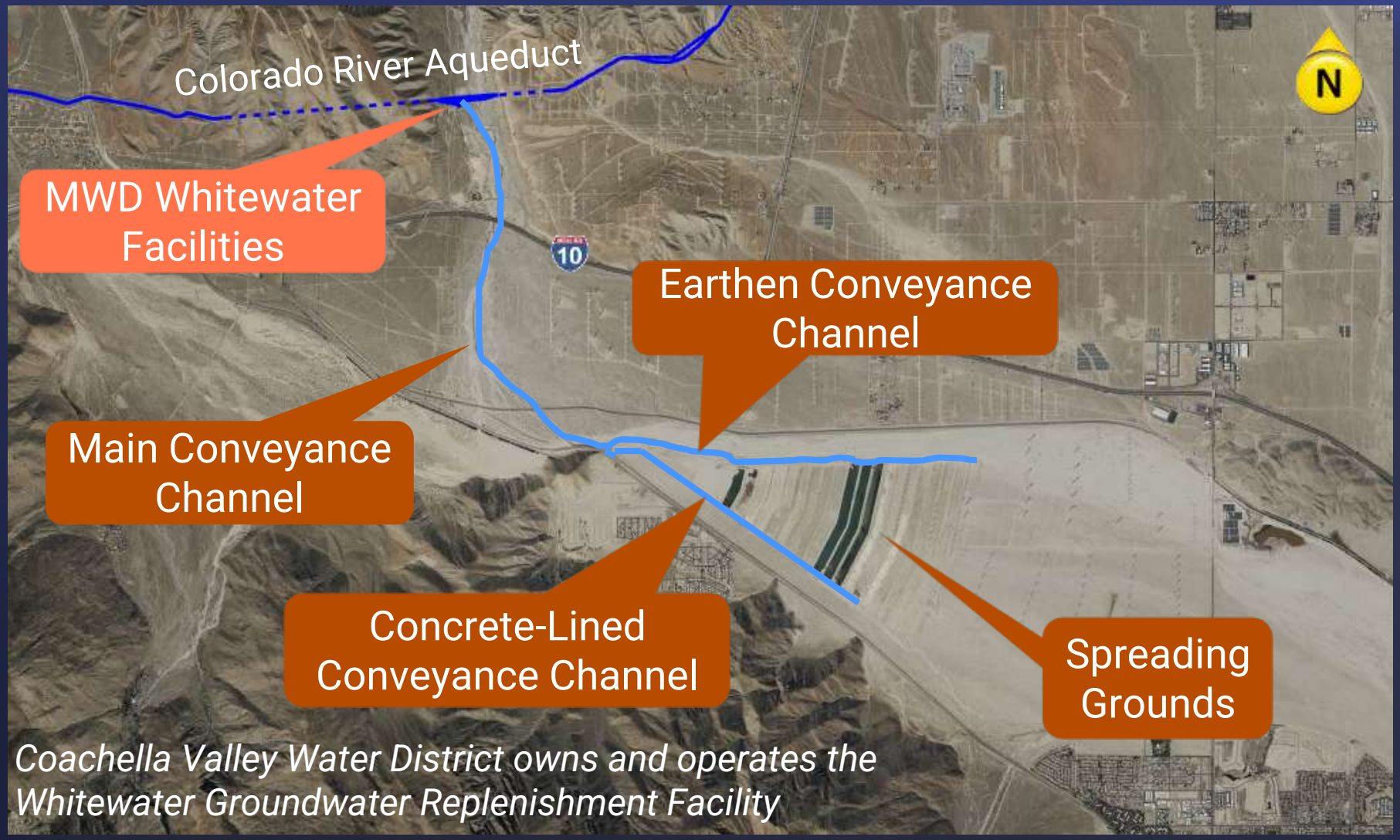
Natural River Flow

CRA Whitewater Siphons

Release to Groundwater Replenishment Facilities

MWD Erosion Protection Structure

Significant Damage Sustained at Downstream Whitewater Groundwater Replenishment Facility



Coachella Valley Water District owns and operates the Whitewater Groundwater Replenishment Facility

Damage to Earthen Channel

Damage to Main Channel

Partnering on Facility Repairs

Whitewater Replenishment Facilities

- Estimated repair schedule to restore delivery channels and spreading facilities
  - Mid-October: 400 cfs
  - Mid-December: 400-700 cfs
- Up to ~100,000 AF reduction in DWCV recharge capability in 2023
  - Water not stored in DWCV will be stored in Lake Mead
- Metropolitan providing resources (staff, equipment) to support work and advance schedule
  - Mutual assistance under CalWARN
  - Coachella seeking FEMA/CalOES reimbursement for repairs

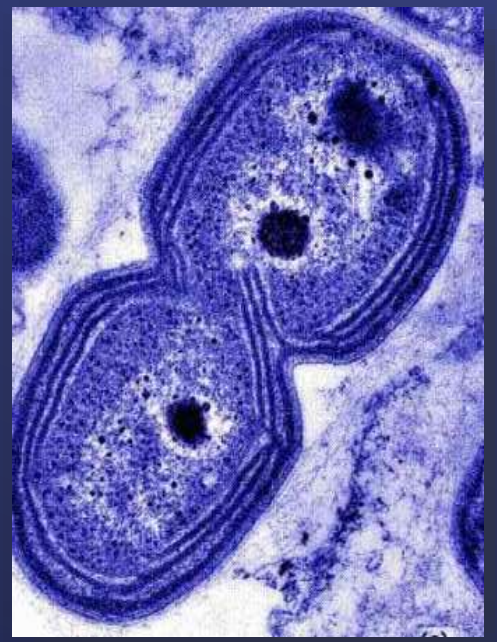
Metropolitan staff repairing Main Channel

Background on Nitrification

Nitrification Event Summer 2023

- *Naturally occurring bacteria*
- *Not contaminants, not pathogens*
- *Normally present in aquatic systems*

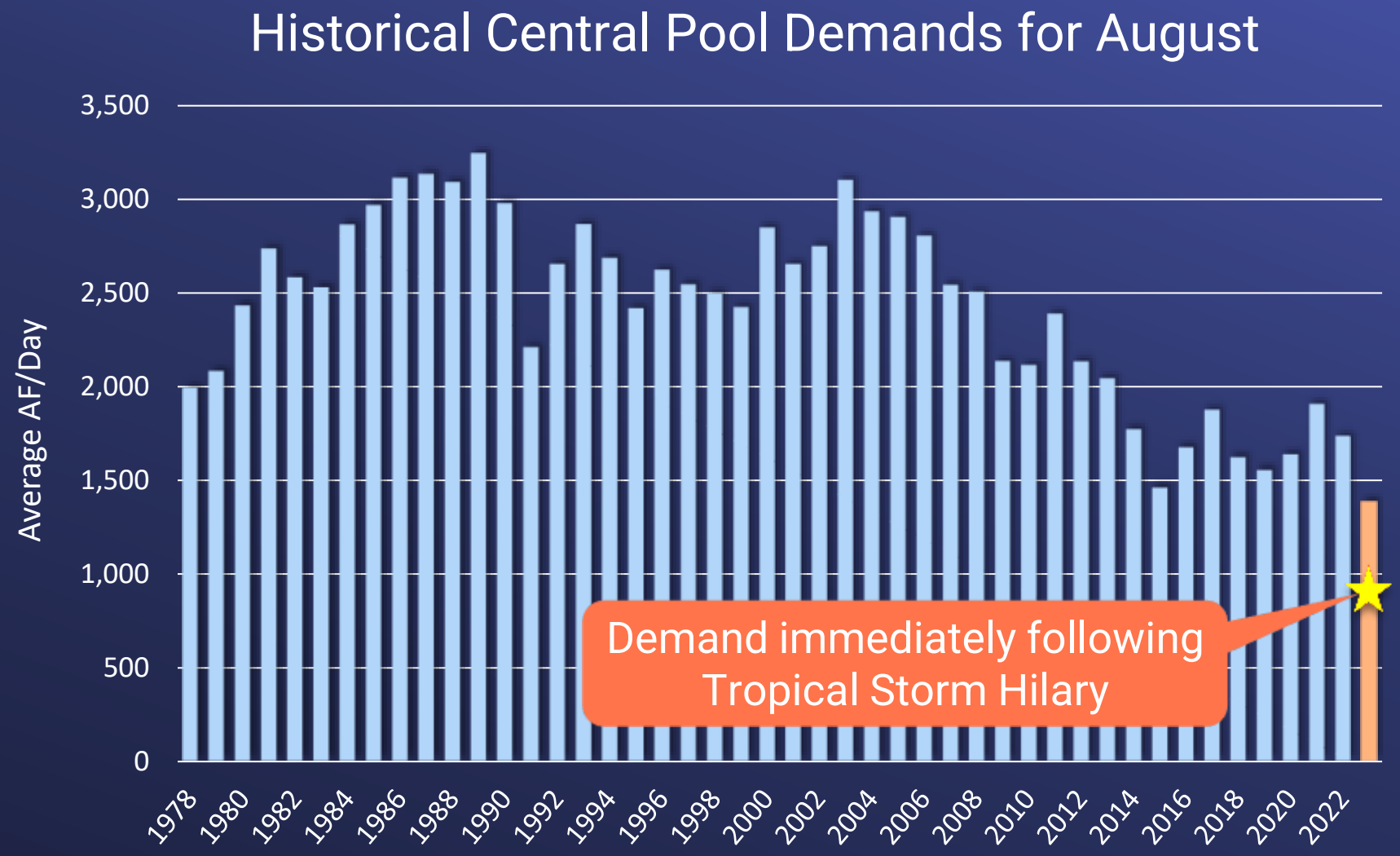
- Nitrifying bacteria are always present in chloraminated systems
  - Sequentially convert ammonia to nitrite and nitrate
- Conditions that influence nitrification
  - Long detention times
  - Warm water
  - Excess free ammonia
  - Low or no disinfectant
  - Dead-end configurations
  - Poor circulation in reservoirs
  - Biofilm on pipe surfaces



Record Low August Demands

Nitrification Event Summer 2023

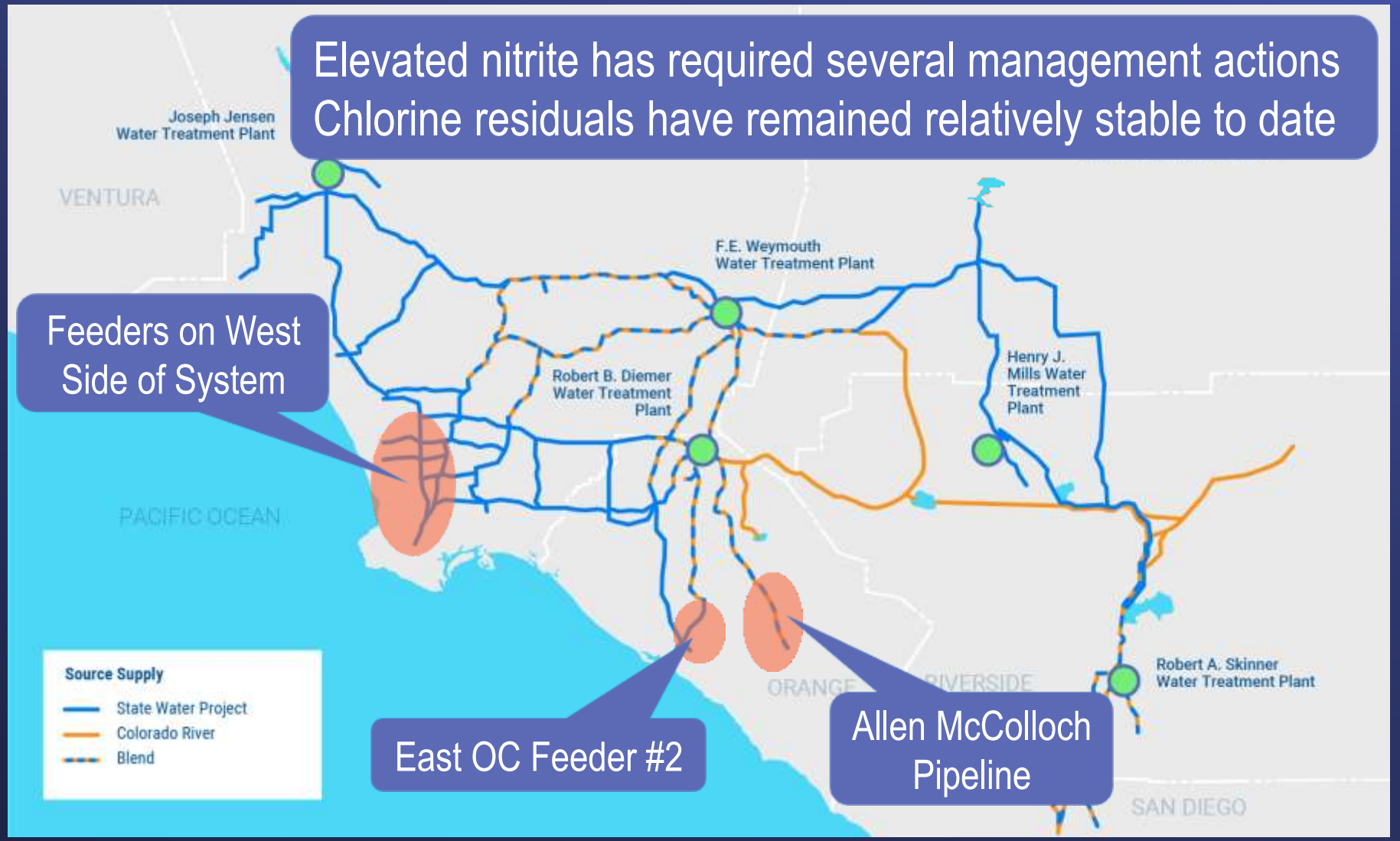
2023 August summer demand is lower than average February winter demands prior to 2014



Affected Areas in LA and Orange Counties

Nitrification Event Summer 2023

Extensive coordination with member and retail agencies



Nitrification Management Actions

Nitrification Event
Summer 2023

- Continued operational changes to increase flow in affected areas
- Monitoring water quality daily throughout system
- Increased pH at treatment plant effluents
- 24/7 flushing at multiple pipelines starting Aug. 22
  - Social media, door-to-door, and targeted outreach in impacted communities
- Reduced SWP blend at Diemer plant
- Updated Division of Drinking Water
- Coordinating daily with affected member agencies

Upcoming Actions

Nitrification Event
Summer 2023

- Next Steps
  - Continuing system changes to increase flows in affected areas
  - Evaluating further chemical and/or blend adjustments at treatment plants
  - Continuing pipeline flushing as needed
  - Considering targeted shutdowns, if necessary, for pipeline disinfection
- Update on Nitrification Management to EO&T Committee planned for Fall 2023

Submitted Joint Comment Letter

California Direct Potable Reuse (DPR) Regulations

- Updated draft DPR criteria released on July 21
  - Proposed Regulations
  - Initial Statement of Reasons
- Workshop held on September 7
- Submitted joint comment letter with Los Angeles County Sanitation Districts on September 8
  - Comment letter to be posted on PWSC webpage
- Final regulations anticipated by end of 2023
  - Potential action to adopt at Dec. 22 SWRCB meeting
  - Estimated effective date mid-2024


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

Engineering, Operations, & Technology Committee

Engineering Services Manager's Report

Item 7b

September 11, 2023

Construction and Procurement Contracts July 2023

Construction and Procurement Contracts Through July 2023	
Number of Active Contracts at end of month	61
Total Bid Amount of Contracts in Progress at end of month	$613 M
Contracts Awarded in month	4
Contracts With Notice To Proceed Issued in month	5
Contracts Completed in month	0
Contract Gross Earnings in month	$21.7 M

Whitewater Siphon Performance in Hurricane Hillary

- Over 15 inches of rainfall in watershed on August 20, 2023
- Estimated 5,000 cfs flowed across the siphon
  - YouTube video of storm flows:
    (892) INCREDIBLE HILARY DEBRIS FLOODS - Coachella Palm Springs Area - YouTube
- Structure performed well
  - Upstream side berms breached - no damage to structure

2019 Storm Damage

Video of 2023 storm flows

2023 view of siphon post-storm event

Rescheduled CIP Projects - Impact on Planned CIP Expenditures

- CRA Housing and Village Utilities
  - Ensuring that housing and utilities reflect desert community needs
- Lakeview Pipeline Relining
  - Pipeline necessary to deliver DVL water to the Mills Plant during drought
  - Rehabilitation contract delayed due to unavailability of pipeline for a shutdown
- CRA Transformer Replacement
  - Procurement contract award delayed to solicit more manufacturer interest
- Right-of-Way and Infrastructure Protection Program
  - Delayed due to staff assignment to higher priority projects

Desalination Studies – Update

- State Guidelines for seawater desalination
  - State guidance document issued: July 12, 2023
  - Metropolitan provided comments: July 28, 2023
  - Expected timeline for final document: TBD
- Path forward on studies
  - Revised consultant's scope
    - Apply State criteria to So. California sites
    - Assess off-shore desalination technologies
    - Deemphasize focus on large seawater desalination plants
  - October 2023 informational item to EOT Committee
  - Anticipate November 2023 Board Action

2023 EOT Inspection Trip

- Revised Date:
  - Thursday - November 16, 2023
- Locations to be visited:
  - La Verne
    - Water Quality Laboratory
    - Weymouth Water Treatment Plant
    - La Verne Shops
  - Lake Mathews
  - Perris Valley Pipeline project

2022 Inspection Trip

Inland Empire Industry Day

- Date: September 14, 2023
- In-Person Event
- Location: Moreno Valley, CA

2022 Event at Carson, CA

Subcommittee Meeting on Pure Water Southern California and Regional Conveyance – September 26, 2023

- Draft Agenda for purposes of discussion under EOT Committee Item 8a
  - Drought Mitigation Actions Update
    - Regional E/W Conveyance Study
    - Integrated Regional Solutions
  - Pure Water Southern California Quarterly Update
  - Assessment of Reuse Alternatives for Pure Water Southern California
  - Discussion of CEQA process for Pure Water Southern California and Regional E/W Conveyance


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA