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.

E&O Committee
T. Smith, Chair
S. Blois, Vice Chair
R. Apodaca
S. Blois
M. Camacho
D. De Jesus
L. Dick
S. Faessel
L. Fong-Sakai
R. Lefevre
J. Morris
G. Peterson
H. Repenning
H. Williams

Engineering and Operations Committee

Meeting with Board of Directors *

September 12, 2022

9:30 a.m.

Monday, September 12, 2022 Meeting Schedule

09:30 a.m. E&O
12:30 p.m. C&L
01:00 p.m. IW

Teleconference meetings will continue until further notice. Live streaming is available for all board and committee meetings on mwdh2o.com (Click Here)

A listen only phone line is also available at 1-877-853-5257; enter meeting ID: 831 5177 2466. Members of the public may present their comments to the Committee on matters within the committee's jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference (833) 548-0276 and enter meeting ID: 815 2066 4276.

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

* 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 and Operations Committee held August 15, 2022 **21-1480**

Attachments: 09132022 EO 2A Minutes

3. CONSENT CALENDAR ITEMS - ACTION

Zoom Online and Boardroom

7-1 Determine that there is a need to continue the emergency action of executing a no-bid contract for the Upper Feeder expansion joint replacement (Requires four-fifths vote of the Board); the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-1469**

Attachments: 09132022 EO 7-1 B-L
09122022 EO 7-1 Presentation

7-2 Authorize an increase of $1,200,000 to an existing agreement with IBI Group, for a new not-to-exceed total of $1,830,000 for design services, and an agreement with Fugro, in an amount not-to-exceed $450,000 for geotechnical engineering services for the Weymouth Administration Building seismic upgrade project; the General Manager has determined that this proposed action is exempt or otherwise not subject to CEQA **21-1468**

Attachments: 09132022 EO 7-2 B-L
09122022 EO 7-2 Presentation

7-3 Award a $287,824 contract to Bishop, Inc. for replacement of the maintenance building roof at the Henry J. Mills Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-1467**

Attachments: 09132022 EO 7-3 B-L
09122022 EO 7-3 Presentation

7-4 Authorize an increase of $690,000 to an existing agreement with Carollo Engineers, Inc., for a new not-to-exceed amount of $990,000, to serve as the owner's advisor for development of the Sepulveda Feeder Pump Stations project with the alternative delivery approach referred to as progressive design-build; 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) **21-1471**

Attachments: 09132022 EO 7-4 B-L
09122022 EO 7-4 Presentation

7-5 Authorize an agreement with Calpine Energy Solutions, LLC for the sale of renewable energy from the Phase I-II hydroelectric power plants; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **21-1472**

Attachments: 09132022 EO 7-5 B-L
09132022 EO 7-5 Presentation

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

4. OTHER BOARD ITEMS - ACTION

NONE

5. BOARD INFORMATION ITEMS

NONE

6. COMMITTEE ITEMS

a. Capital Investment Plan quarterly report for period ending June 2022 **21-1482**

Attachments: 09132022 EO 6a Report
09122022 EO 6a Presentation

b. State Water Project Dependent Area Solutions: Drought Action/Project Portfolios Update **21-1483**

Attachments: 09122022 EO 6b Presentation

c. Pure Water Southern California Program Update **21-1484**

Attachments: 09122022 EO 6c Presentation

7. MANAGEMENT REPORTS

a. Water System Operations Manager's Report **21-1503**

Attachments: 09122022 EO 7a Presentation

b. Engineering Services Manager's Report **21-1502**

Attachments: 09122022 EO 7b Presentation

8. FOLLOW-UP ITEMS

NONE

9. FUTURE AGENDA ITEMS

10. 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. Agendas for the meeting of the Board of Directors may be obtained from the Board Executive Secretary. 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 http://www.mwdh2o.com.

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

ADJOURNED ENGINEERING AND OPERATIONS COMMITTEE

August 15, 2022

Chair Smith called the teleconference meeting to order at 10:51 a.m.

Members present: Chair Smith, Directors Apodaca (entered after roll call), Blois, Camacho, De Jesus, Dick, Faessel, Fong-Sakai, Lefevre, Morris, and Peterson (entered after roll call), and Williams

Members absent: Director Repenning

Other Board members present: Directors Abdo, Atwater, Cordero, Dennstedt, Erdman, Goldberg, Gray, Jung, Kurtz, McCoy, Miller, Pressman, Record, Sutley, and Tamaribuchi

Committee staff present: Bednarski, Chapman, Hagekhalil, Okano, Parsons, and Yamasaki

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

Tony Trembley, City Council, City of Camarillo for action item 7-3

CONSENT CALENDAR ITEMS -- ACTION

2. CONSENT CALENDAR OTHER ITEMS - ACTION

A. Approval of the Minutes of the Engineering and Operations Committee held July 12, 2022

3. CONSENT CALENDAR ITEMS - ACTION

7-2 Subject: Determine that there is a need to continue the emergency action of executing a no-bid contract for the Upper Feeder expansion joint replacement (Requires four-fifths vote of the Board); the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Motion: Determine that there is a need to continue the emergency action of executing a no-bid contract for construction of pipe joint repairs on the Upper Feeder. (Requires four-fifths vote of the Board.)

7-3 Subject: Authorize the following new agreements with: (1) Pure Technologies U.S. Inc. in an amount not to exceed $7 million for inspection and monitoring services for prestressed concrete cylinder pipe; and (2) Brown and Caldwell in an amount

not to exceed $900,000 for preliminary design to rehabilitate the prestressed concrete cylinder pipe Calabasas Feeder; and authorize an increase of $6 million to an existing agreement with HDR Engineering, Inc. for preliminary design to rehabilitate the Sepulveda Feeder; and adopt CEQA determination that the Calabasas Feeder and Sepulveda Feeder rehabilitation project was previously addressed in the certified 2017 Prestressed Concrete Cylinder Pipe Rehabilitation Program Final Programmatic Environmental Impact Report. (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)

Motion: Adopt the CEQA determination that the Calabasas Feeder and Sepulveda Feeder rehabilitation projects were previously addressed in the certified 2017 Prestressed Concrete Cylinder Pipe Rehabilitation Program Final Programmatic Environmental Impact Report, and:

a. Authorize an agreement with Pure Technologies U.S. Inc. in an amount not to exceed $7 million to perform PCCP pipeline inspections.
b. Authorize an agreement with Brown and Caldwell in an amount not to exceed $900,000 to provide preliminary design engineering services to rehabilitate PCCP portions of Calabasas Feeder.
c. Authorize a $6 million increase to an agreement with HDR Engineering, Inc. for a new not-to-exceed amount of $12.5 million to rehabilitate PCCP and steel portions of the Sepulveda Feeder.

7-4 Subject: Authorize a professional services agreement with HDR Engineering, Inc. in an amount not to exceed $1,300,000 for design of the Inland Feeder/San Bernardino Valley Municipal Water District Foothill Pump Station Intertie; the General Manager has determined the project to be 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)

Motion: Authorize an agreement with HDR Engineering, Inc. for a not-to-exceed amount of $1,300,000 for final design of the Inland Feeder/Foothill Pump Station Intertie.

7-5 Subject: Award a $5,647,405 procurement contract to Sojitz Machinery Corporation of America for three 84-inch diameter butterfly valves to be installed as part of water supply reliability improvements in the Rialto Pipeline service area; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA (This action is part of a series of projects that are being undertaken to improve the supply reliability for State Water Project dependent member agencies)

Motion: Award a $5,647,405 contract to Sojitz Machinery Corporation of America to furnish three 84-inch diameter butterfly valves to improve the water supply reliability of the Rialto Pipeline.

7-6 Subject: Authorize annual increases of $200,000 to existing, five-year on-call agreements with RHA, LLC; Strategic Value Solutions, Inc.; and Value Management Strategies, Inc., for new annual not-to-exceed totals of $440,000, for value engineering and other technical services in support of Capital Investment Plan projects; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Motion: Authorize annual increases of $200,000 to existing, five-year on-call agreements with RHA, LLC; Strategic Value Solutions, Inc.; and Value Management Strategies, Inc. for a new annual not-to-exceed total of $440,000, for value engineering and technical engineering services.

7-7 Subject: Authorize a five-year reimbursable agreement with the California Department of Water Resources to provide services for the State Water Project operations and maintenance activities for an amount not to exceed $3 million per year ($15M total); the General Manager has determined that this action is exempt or otherwise not subject to CEQA

Motion: Authorize a five-year reimbursable agreement with the California Department of Water Resources to provide services for the State Water Project operations and maintenance activities for an amount not to exceed $3 million per year ($15 million total).

No presentations were given, Director Morris made a motion, seconded by Director Lefevre, to approve the consent calendar consisting of items 2A, 7-2, 7-3, 7-4, 7-5, 7-6 and 7-7.

The vote was:

Ayes:	Directors Apodaca, Blois, Camacho, De Jesus, Dick, Faessel, Fong-Sakai, LeFevre, Morris, Peterson, Smith, Williams
Noes:	None
Abstentions:	Director Williams on item 2A
Absent:	Director Repenning

The motion for Item 2A passed by a vote of 12 ayes, 0 noes, 1 abstention, and 1 absent.

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

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

4. OTHER BOARD ITEMS - ACTION

NONE

5. BOARD INFORMATION ITEMS

NONE

6. COMMITTEE ITEMS

a. Subject: Clean Air Fleet Initiatives

Presented by: Carol Kaufman, Principal Environmental Specialist, Water System Operations

Ms. Kaufman reported on the following:

- Regulatory drivers to reduce greenhouse gas emissions that direct California's transition to clean-air fleet vehicles and equipment
- Metropolitan's transition efforts toward a zero-emission (ZE) fleet under the Climate Action Plan
- Transition challenges, including the need for reliable emergency response across MWD's expansive service area, fueling/charging infrastructure, cost, and commercial suitability/availability of vehicle technology
- Actions taken including partnering on advocacy with industry organizations and external agencies to achieve practical regulations, piloting and

demonstrating new ZE vehicles, and initiating a study to develop a transition plan for implementation in 2023

The following Directors provided comments or asked questions

1. Dick
2. Peterson
3. LeFevre

b. Subject: Reservoir Management Update

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

Mr. Di Giovanni reported on the following:

- Metropolitan's comprehensive reservoir management program
- How reservoir water quality issues are monitored, identified, and managed
- Monitoring new reservoir operational challenges brought on by the record drought, including the new DVL to Mills Plant operation
- Quagga mussel monitoring and control efforts
- Staying at the forefront of reservoir management science

The following Directors provided comments or asked questions

1. Smith
2. Fong-Sakai
3. Peterson
4. Miller

Staff responded to the Directors questions and comments.

7. MANAGEMENT REPORTS

a. Subject: Water System Operations Manager's Report

Presented by: Brent Yamasaki, Water System Operations, Group Manager

Mr. Yamasaki reported on the following:

- Continuing drought operations
- Ongoing efforts to maintain 8-pump flows on the CRA
- Hoover Dam transformer fire and impact to Metropolitan's CRA energy costs
- Upper Feeder Shutdown update. Ready for the 15-day shutdown beginning Sept. 6th.

b. Subject: Engineering Services Manager's Report

Presented by: John Bednarski, Engineering Services Group, Chief Engineer and Group Manager

Mr. Bednarski reported on the following:

- West Region Drought Action
- Project Labor Agreement Update
- Edmonston Pump Plant Workshop
- Engineering and Operations Inspection Trip - 2022

The following Director provided comments or asked questions:

1. Director Peterson

Staff responded to the Directors questions and comments.

8. FOLLOW-UP ITEMS

NONE

9. FUTURE AGENDA ITEMS

NONE

The next meeting will be held on September 12, 2022.

Meeting adjourned at 1:12 pm.

Tim Smith
Chair

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

9/13/2022 Board Meeting

7-1

Subject

Determine that there is a need to continue the emergency action of executing a no-bid contract for the Upper Feeder expansion joint replacement **(Requires four-fifths vote of the Board)**; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

This action authorizes the continuation of an emergency contract executed by the General Manager to replace the damaged expansion joint on the Upper Feeder. A shutdown of the Upper Feeder is currently underway to replace the expansion joint at the Santa Ana River crossing and is scheduled to be complete this month. It is anticipated that staff will provide a final progress update to the Board on this work and obtain the necessary board approvals in October 2022.

Details

Background

The Upper Feeder was constructed in 1936 as part of Metropolitan's original water delivery system. The 116-inch-diameter welded-steel pipeline extends approximately 60 miles from Lake Mathews to the Eagle Rock Control Facility in Los Angeles. The feeder conveys untreated Colorado River Water (CRW) from Lake Mathews to the F. E. Weymouth Water Treatment plant, and then delivers treated water to the Central Pool portion of the distribution system.

The Upper Feeder crosses the Santa Ana River with a 1,010-foot-long steel truss bridge in the cities of Jurupa Valley and Riverside. The feeder previously had a bellows-type expansion joint at the bridge's mid-span that allows for the pipeline's thermal expansion and contraction. The bellows expansion joint was installed in January 2018.

On April 13, 2022, a leak was discovered at the bellows expansion joint. A steel bracket was installed as a temporary measure to stop the leak, and flow in the pipeline was reduced to approximately 525 cfs to decrease the pipeline's internal pressure. Staff regularly monitored the crack length and effectiveness of the short-term repair prior to the removal of the bellows joint. The bellows joint is now being replaced with a new slip-type expansion joint during the current shutdown on the Upper Feeder.

Due to the critical nature of the feeder, the location of the expansion joint above environmentally sensitive areas, and the historically low State Water Project (SWP) allocations, the General Manager executed an emergency contract with PCL Construction, Inc. in June 2022 for installation of the new joint consistent with Section 8122(b) of Metropolitan's Administrative Code. This section of the Administrative Code, which mirrors Sections 21567 and 22050 of the California Public Contract Code, allows for the General Manager to waive competitive bidding requirements and execute contracts over the amount of $250,000 in response to an emergency condition.

An emergency is defined as a sudden, unexpected occurrence that requires immediate action to prevent or mitigate the loss or substantial impairment of life, health, property, or essential public services. Executing an emergency contract was necessary to allow adequate time for the contractor to plan, staff, and mobilize for construction so that the installation of the new expansion joint could take place during the current shutdown on the Upper Feeder. Prior to the shutdown, the Upper Feeder was operating at a reduced flow to reduce the risk of

pipe failure. After the joint is replaced, the feeder can be returned to full flow in support of drought actions and operational shifts that could save SWP supply use in 2022.

In July 2022, Metropolitan's board amended the Capital Investment Plan for fiscal years 2022/2023 and 2023/2024 to include replacement of an expansion joint on the Upper Feeder at the Santa Ana River Bridge; and authorized the emergency action to execute a no-bid contract for the expansion joint replacement. In August 2022, Metropolitan's board voted to continue the emergency contract actions. The Board must determine by a four-fifths vote at subsequent meetings whether there is a need to continue the action or ratify the construction contract.

Upper Feeder Expansion Joint Replacement – Construction

The construction contract includes removal of bridge structural members to access the pipe and joint; removal of the existing bellows expansion joint; installation of the new slip-type expansion joint; removal and reinstallation of the steel cage that provides lateral restraint at the joint; and minor adjustments to the bridge truss isolators. PCL Construction, Inc. was selected to perform the work on a time-and-materials contract to conduct this work. To date, the contractor has prepared contract submittals, developed a work plan, acquired key equipment, mobilized on-site, removed the bellows joint, and is currently installing the new slip joint. Metropolitan forces have completed the fabrication of the new slip joint; installation of a new 36-inch accessway; installation of a new 6-inch drain valve for improved dewatering of this pipe segment; grading, clearing, and grubbing of an area adjacent to the bridge for the contractor's crane pad and other construction activities.

Staff expects that the emergency contracting action will continue until the joint installation is completed and the contractor has restored the site and demobilized. The current shutdown on the Upper Feeder began on September 6, 2022, and is scheduled to end on September 20, 2022, at which time the Upper Feeder will return to service with full flow capacity. It is currently anticipated that staff will return to the Board again in October to request the board's ratification of the contract with PCL Construction, Inc. This action will require a four-fifths vote of the Board.

Alternatives Considered

Metropolitan's staff could terminate the current contract and direct Metropolitan forces to complete the installation of the new slip joint. Staff determined that this is not an acceptable alternative due to the work being completed by PCL Construction, Inc. during the current Upper Feeder shutdown; any change in scope for the contractor and Metropolitan forces would lengthen the duration of the current shutdown. Continuation of an emergency contract with PCL Construction, Inc. allows for timely completion of rehabilitation of a major pipeline that delivers Colorado River water into the central portion of Metropolitan's distribution system, with no delays to the current shutdown. Delaying completion of the shutdown would increase the use of limited SPW supplies.

Summary

This action authorizes the continuation of an emergency contract executed by the General Manager to replace the damaged expansion joint. See **Attachment 1** for the Location Map.

Project Milestone

September 2022 – Completion of the replacement of the compromised expansion joint

Policy

Metropolitan Water District Administrative Code Section 8122: Emergency Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is statutorily exempt under the provisions of CEQA and the State CEQA Guidelines because it involves the immediate emergency repair of an existing pipeline with the same purpose and capacity to maintain service essential to the public health, safety, or welfare. (Section 15269(b) of the State CEQA Guidelines). In addition, the proposed action is statutorily exempt under the provisions of CEQA and the State CEQA Guidelines because it involves the installation of a new pipeline or maintenance, repair, restoration, removal, or demolition of an existing pipeline that does not exceed one mile in length. (Section 15262(k) of the State CEQA Guidelines).

CEQA determination for Options #2:

None required

Board Options

Option #1

Determine that there is a need to continue the emergency action of executing a no-bid contract for construction of pipe joint repairs on the Upper Feeder. **(Requires four-fifths vote of the Board.)**

Fiscal Impact: Total cost for construction is currently unknown, as the emergency contract executed by the General Manager is based on time and materials. All funds will be incurred in the current biennium and have been previously authorized. It is not anticipated that the addition of the project listed above to the CIP will increase CIP expenditures in the current biennium beyond those which have been previously approved by the Board.

Business Analysis: This project enhances delivery reliability to member agencies and reduces the risk of unplanned shutdowns of the Upper Feeder.

Option #2

Do not determine that there is a need to continue the emergency action.
Fiscal Impact: Unknown costs for work performed by the contractor to date.
Business Analysis: This option would extend the duration of the current shutdown, increase the use of limited SPW supplies, and delay replacement of the expansion joint. The delay would limit flow on the Upper Feeder and expose Metropolitan to a greater risk of pipe rupture, which would severely disrupt water deliveries to member agencies.

Staff Recommendation

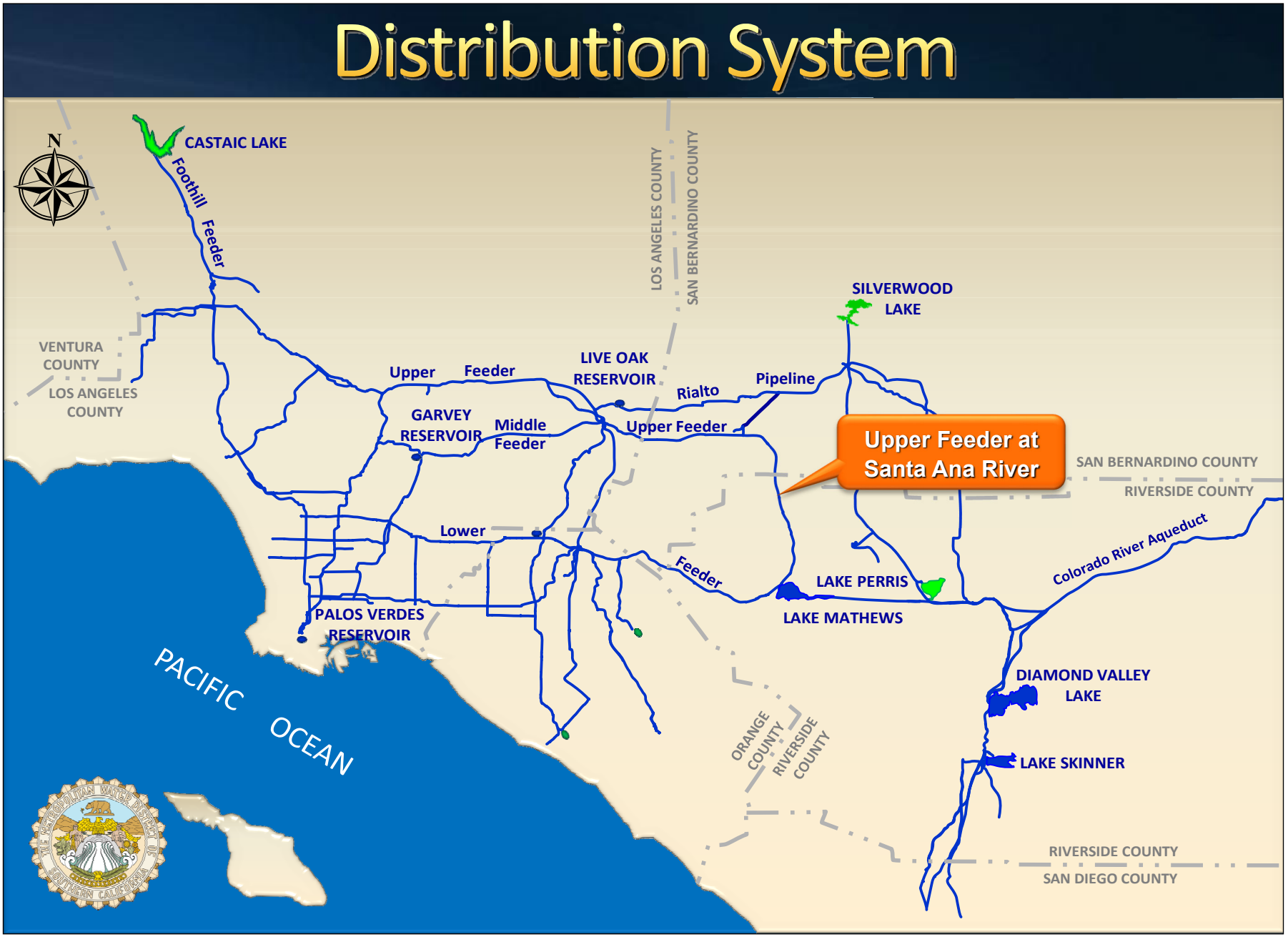
Option #1

8/18/2022
John V. Bednarski *Date*
Manager/Chief Engineer
Engineering Services

8/24/2022
Adel Hagekhalil *Date*
General Manager

Attachment 1 – Location Map

Ref# es12691306


Distribution System
N
CASTAIC LAKE
Foothill Feeder
VENTURA COUNTY
LOS ANGELES COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
Upper Feeder at Santa Ana River
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 Committee

Upper Feeder Expansion Joint Replacement

Item 7-1

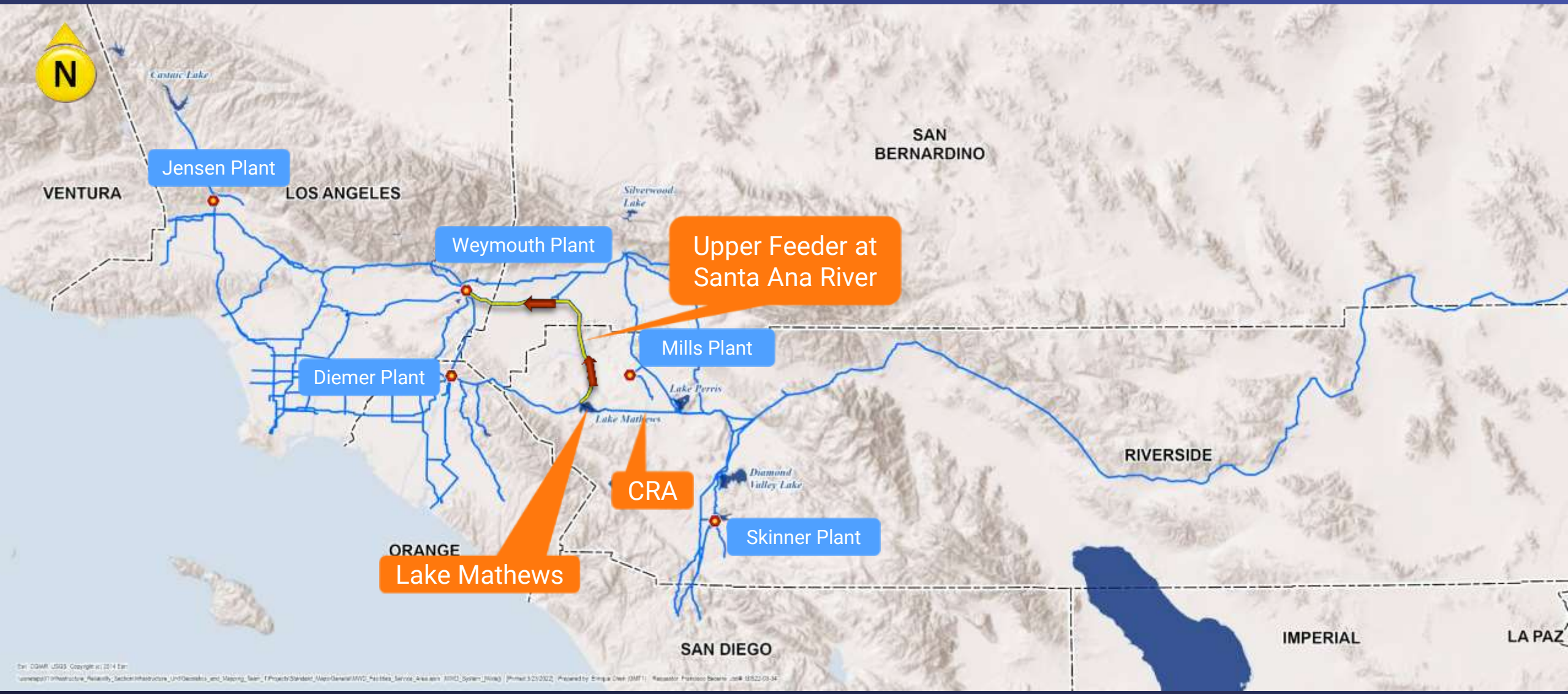
September 12, 2022

Upper Feeder Expansion Joint Replacement

Current Action

- Authorize the continuation of an emergency contract executed by the General Manager **(Requires four-fifths vote of the Board)**

Distribution System



Upper Feeder – Santa Ana River Crossing

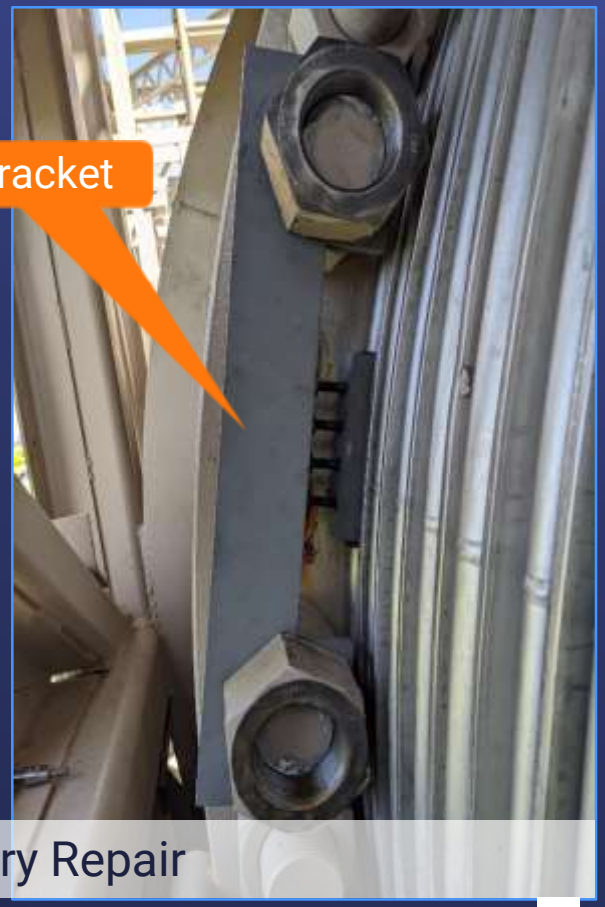
- Multi-span bridge with steel trusses & concrete piers
- 9’-8” ID steel pipe
- Pipeline design flow: 750 cfs
- Pipeline internal pressure: 200 psi
- Bellows expansion joint installed in 2018

Upper Feeder Expansion Joint Replacement

Bellows Expansion Joint Leak

- Discovered April 13, 2022
- Flow reduced
- Leak temporarily repaired April 21, 2022

Initial Leak



Temporary Repair

Upper Feeder Expansion Joint Replacement

Bellows Expansion Joint Inspection

- Bellows joint compromised; to be replaced with slip-type expansion joint
- Monitored crack growth weekly since mid-May

Expansion Joint Replacement Urgency

- Flow limited to 525 cfs prior to shutdown
- Upper Feeder supports drought actions & operational shifts to save SPW
- Bellows joint is being replaced by Metropolitan-fabricated slip joint

Upper Feeder Expansion Joint Replacement

Emergency Contract

- PCL Construction is currently under an emergency time and materials contract to perform the work
  - Board authorized continuation of the emergency action to execute a no-bid contract for the expansion joint replacement on July 12, 2022, & August 15, 2022
- Executed per Admin Code section 8122(b)
  - Monthly reporting to the Board required & continuation of contract activities determined by four-fifths vote
  - Board to ratify construction contract upon completion of construction activities

Upper Feeder Expansion Joint Replacement

Contractor Scope of Work

- Removal of bridge structural members & restraining cage for pipe access
- Removal of bellows joint
- Installation of new slip-type joint
- Reinstallation of bridge structural members & restraining cage

Upper Feeder Expansion Joint Replacement

Metropolitan Completed Activities

- ✓ Completed slip joint fabrication & installation design packages
- ✓ Installed 4-inch tap near expansion joint to facilitate construction
- ✓ Installed 6-inch dewatering valve
- ✓ Graded and cleared for crane pad
- ✓ Fabrication, coating, & assembly of new slip-type expansion joint
- ✓ Installed new 36-inch accessway

New Slip Joint Completed @ La Verne Shops

Clearing & Grading for Crane Pad

6-inch Valve Installation

Upper Feeder Expansion Joint Replacement

Quagga Filters for Dewatering

Upper Feeder Shutdown

- Started: 9/6/22; Planned duration: 15 days
- Preparation
  - Call to action to eliminate all outdoor watering in the affected areas during shutdown
  - Got the message out to conserve through numerous media outlets
  - Builds upon local conservation actions taken by Member Agencies
- Status
  - Dewatering completed
  - PCL has removed bellows joint & is installing slip joint
  - Weymouth using 100% SPW during the shutdown
    - Approximately 1,000 AF/day (varies by demand)

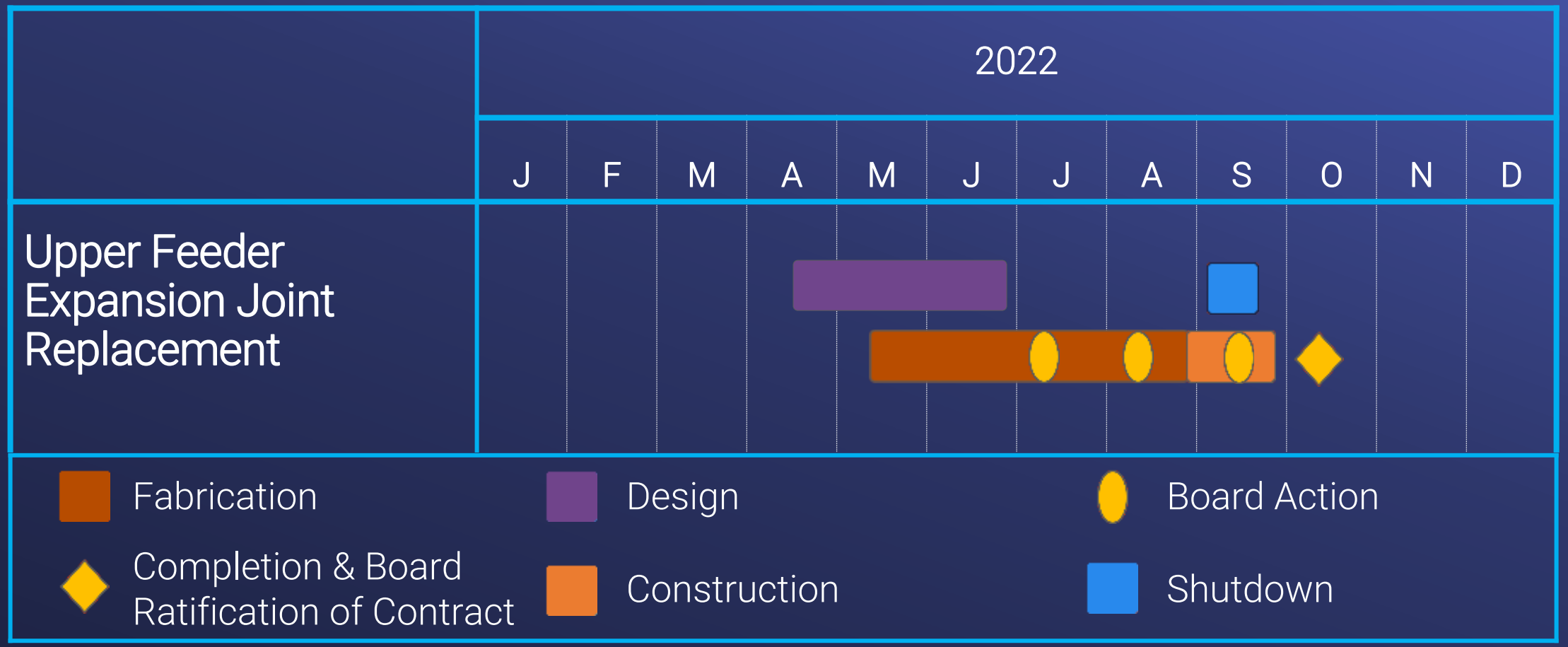
https://www.mwdh2o.com/projects-in-your-community/

Upper Feeder Expansion Joint Replacement

Alternatives Considered

- Board terminates emergency contract & Metropolitan forces complete installation of new slip joint
  - Delays end of shutdown
  - Costs already incurred
- Selected option
  - Continue emergency contract with PCL Construction

Project Schedule



Board Options

- Option #1

  Determine that there is a need to continue the emergency action of executing a no-bid contract for construction of pipe joint repairs on the Upper Feeder. **(Requires four-fifths vote of the Board.)**

- Option #2

  Do not determine that there is a need to continue the emergency action.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

9/13/2022 Board Meeting

7-2

Subject

Authorize an increase of $1,200,000 to an existing agreement with IBI Group, for a new not-to-exceed total of $1,830,000 for design services, and an agreement with Fugro, in an amount not-to-exceed $450,000 for geotechnical engineering services for the Weymouth Administration Building seismic upgrade project; the General Manager has determined that this proposed action is exempt or otherwise not subject to CEQA

Executive Summary

A key component of Metropolitan's seismic resiliency strategy includes seismic evaluation and upgrade of its facilities. Seismic analyses of the Administration Building at the F. E. Weymouth Water Treatment Plant (Weymouth plant) have concluded that the building needs to be strengthened in order to withstand a major earthquake. The planned upgrades include structural strengthening consistent with current seismic standards for essential facilities, as well as accessibility and fire/life safety improvements. This action authorizes an amendment to an existing agreement for design to upgrade the Weymouth plant's Administration Building and authorizes a new agreement to perform geotechnical engineering services in support of the project.

Details

Background

The Weymouth plant was placed into service in 1941 with an initial capacity of 100 million gallons per day (mgd) and was expanded twice to its current capacity of 520 mgd. The plant delivers a blend of waters from the Colorado River Aqueduct and the State Water Project to Metropolitan's Central Pool portion of the distribution system, and to an exclusive service area. The Weymouth plant is located in the city of La Verne, approximately 1.5 miles from the Sierra Madre-Cucamonga Fault, which can generate a 7.0 magnitude earthquake.

The Weymouth Administration Building has been in service since 1941. The building is comprised of two separate reinforced concrete structures: a two-story, 112-foot-wide by 92-foot-long structure of approximately 15,200 square feet that houses offices, support spaces, restrooms, a demonstration room, and a water quality laboratory; and an adjacent, four-story, 94-foot-wide by 74-foot-long structure (typically referred to as the Control Building) of approximately 20,000 square feet that houses the plant control room, chemical piping systems, lockers, conference rooms, and an equipment storage area. The plant's outlet conduit passes underneath the building.

When the Administration Building was constructed in 1940, it was designed to meet then-current building codes. Over the last several decades, industry knowledge of earthquakes and seismic design has greatly improved, which has led to the development of today's more stringent building codes. Structural evaluations conducted by staff under Metropolitan's seismic assessment program concluded that the building requires structural upgrades to withstand a major earthquake and retain its functionality as an essential facility. In January 2018, Metropolitan's Board authorized final design of seismic upgrades and building improvements to the Weymouth Administration Building.

The initial detailed structural analyses commenced shortly after the Board's authorization of this project. These analyses were based on then-current La Verne site-specific seismic criteria developed prior to 2009 and current provisions for seismic evaluation and retrofit of existing buildings (ASCE 41-13). However, new building code requirements released in 2019 prompted the update of the site-specific criteria, which increased the design ground

acceleration by approximately 50 percent, resulting in the development of a completely new seismic retrofit solution which significantly increased the complexity of the project's overall design efforts.

Due to these changes in the code, some of the early design work was reevaluated in order to meet the code's seismic requirements. The recommended approach now includes the use of micro-piles and larger shear walls to increase building strengthening. The addition of larger shear walls in critical areas of the facility resulted in the relocation of utilities and water treatment piping from the basement to an exterior trench, which also enhances accessibility and personnel safety; the reconfiguration of restrooms and other rooms; architectural modifications near the areas of structural upgrades; and related improvements associated with the preservation of historic architectural features. A new fire protection system consistent with California Fire Code Standards is also needed. Final design of this work is planned to be completed by a consultant under the existing professional services agreement, which is the subject of this action.

The planned seismic upgrades to the Weymouth Administration Building include: (1) addition of micro-piles to supplement existing caisson footings; (2) reinforcement of the walls for the plant's filter outlet channel; (3) filling of below-ground openings with structural concrete; (4) reinforcement of column base plates and roof-to-wall, beam, and shear wall connections; and (5) addition of new shear walls and drag beams. Staff also recommends instituting a micro-pile verification test program to refine the preliminary concepts for the foundation uplift resistance and load-deformation response data as part of the retrofit's overall design process.

Also included with this project are upgrades to the Weymouth plant's natural gas system, which consists of four gas meters and associated piping, serving all buildings and service shops throughout Metropolitan's La Verne site. The natural gas system components have exceeded the recommended 50-year service life. Upgrades to the natural gas system were previously included as part of the utility improvements for the La Verne Shops project. Since the existing main gas line is adjacent to and passes through the basement of the Administration Building, the system would require a shutdown during building construction. As a result, it is more efficient to upgrade the plant's gas system in conjunction with the building seismic upgrades work. This approach will reduce operations impact associated with natural gas outages and simplify construction.

As the Weymouth Administration Building is an essential facility that supports treatment plant operations, staff recommends moving forward with final design for building upgrades to enhance seismic resiliency and personnel safety. A number of staff and facilities in the building will be relocated prior to the start of construction activities to ensure that critical operational activities continue on an uninterrupted basis during the retrofit work. Planning activities for temporary offices and other facilities will be undertaken by staff and consultants during the design phase to support this objective.

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 actions 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 Capital Investment Plan Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Treatment Plant Reliability Program.

Weymouth Administration Building Upgrades– Final Design

Final design phase activities include: (1) detailed structural analyses; (2) preparation of drawings and specifications; (3) development of a construction cost estimate; (4) development of a staff relocation plan, (5) micro-pile verification and testing; (6) value engineering; and (7) advertisement and receipt of competitive bids. These activities will be conducted with a hybrid effort of consultants and Metropolitan staff. The civil, structural, and instrumentation design will be performed by Metropolitan staff. The architectural, mechanical, and electrical design will be performed by IBI Group, while the micro-pile verification and testing will be performed by Fugro, as discussed below. Metropolitan staff and the IBI Group will collectively develop a staff relocation plan that will be implemented while the construction is underway. Metropolitan staff will also perform overall project management and technical review.

A total of $4.8 million is required for this work. Allocated funds include $1.2 million for final design by the IBI Group and $450,000 for field investigation by Fugro, as described below. Allocated funds for Metropolitan

staff activities include $1.5 million for civil, structural, and instrumentation design and technical oversight and review of consultant's work; $920,000 for environmental support, project management, and project controls; and $730,000 for remaining budget. **Attachment 1** provides the allocation of the required funds.

As described below, final design will be performed by the IBI Group and Metropolitan staff. 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 12 percent of the total construction cost. The estimated cost of construction for this project is anticipated to range from $22.5 million to $24.5 million.

Engineering Services (IBI Group) – Amendment to Agreement

In January 2019, Metropolitan's Board awarded a $630,000 agreement to IBI Group to perform final design of building improvements related to seismic upgrades for the Weymouth Administration Building. As noted above, new building code requirements increased the design ground acceleration and resulted in a new seismic retrofit solution and additional preliminary design efforts. IBI Group is recommended to complete the remaining final design scope of work under the agreement amendment. The scope of work will include: (1) development of construction drawings and specifications for mechanical, electrical, plumbing, fire sprinkler, and gas service improvements; (2) analysis of the building's compliance with the current codes, including egress, occupancies, fire/life safety, and accessibility; (3) preparation of a plan for the preservation of historic features; (4) preparation of an engineer's cost estimate; and (5) technical assistance during the bid period.

This action authorizes an increase of $1,200,000 to an existing agreement with IBI Group for a new not-to-exceed amount of $1,830,000 to provide engineering design services for upgrades to the Weymouth Administration Building. For this agreement, Metropolitan has established a Small Business Enterprise (SBE) participation level of 18 percent. IBI Group has agreed to meet this level of participation. The planned subconsultants for this work are listed in **Attachment 2**.

Geotechnical Engineering Services (Fugro) – New Agreement

Fugro is recommended to provide geotechnical engineering services for micro-pile verification and testing. Fugro was prequalified through Request for Qualifications No. 1220 and was selected based on the firm's expertise in the structural and geotechnical aspects of this project, and its past work developing the geotechnical engineering report for the preliminary design phase of this project.

The planned geotechnical services include: (1) development of prototype micro-piles and a work plan; (2) drilling, installation, and testing of the proposed prototype micro-piles; (3) performing verification testing; and (4) preparation of a data report summarizing the procedure and results of the testing program. The experience gained from this testing program will validate the constructability of the proposed design concept and will be incorporated into the final designs and specifications of the construction contract.

This action authorizes an agreement with Fugro for a not-to-exceed amount of $450,000 to provide geotechnical services in support of the project to structurally strengthen the Weymouth Administration Building. For this agreement, Metropolitan has established an SBE participation level of 25 percent. The planned subcontractor for the drilling work is Condon-Johnson & Associates, Inc.

Alternatives Considered

Alternatives considered for completing final design activities of seismic upgrades and building improvements included assessing the availability and capability of in-house Metropolitan staff to conduct this work. Metropolitan's staffing strategy for utilizing consultants and in-house Metropolitan staff has been: (1) to assess current work assignments for in-house staff to determine the potential availability of staff to conduct this work; and (2) for long-term rehabilitation projects, when resource needs exceed available in-house staffing or require specialized technical expertise.

In the case of this project, Metropolitan staff maintains the core competencies and technical capabilities to perform civil, structural, and instrumentation design. The consultants will be relied upon to design the architectural and related mechanical, electrical, plumbing, and fire safety components; and to provide specialized services to address historical features and micro-pile verification and testing. In this manner, in-house staff will continue to address a baseload of work on capital projects, while the professional services agreements will be

relied upon to perform work that falls outside of the core competencies of in-house staff. This approach will allow for the efficient and timely completion of this project.

Summary

This action amends an agreement with IBI Group for a new not-to-exceed amount of $1,830,000 for design services to upgrade the Weymouth Administration Building; and authorizes an agreement with Fugro for a not-to-exceed amount of $450,000 to provide geotechnical services for structural strengthening of the Weymouth Administration Building. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the List of Subconsultants, and **Attachment 3** for the Location Map.

Project Milestone

November 2024 – Complete final design of upgrades to the Weymouth Administration Building

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 51073, dated January 9, 2018, the Board authorized final design of seismic upgrades to several La Verne buildings, including the Administration Building, Water Quality Laboratory and the Field Engineering Building.

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

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists of basic data collection, research, 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).

CEQA determination for Option #2:

None required

Board Options

Option #1

a. Authorize an increase of $1,200,000 to an existing agreement with IBI Group, for a new not-to-exceed amount of $1,830,000 for design services to upgrade the Weymouth Administration Building.
b. Authorize an agreement with Fugro for a not-to-exceed amount of $450,000 to provide geotechnical engineering services for structural strengthening of the Weymouth Administration Building.

Fiscal Impact: $4.8 million in capital funds. Approximately $4.0 million in capital funds will be incurred in the current biennium and has been previously authorized. The remaining capital expenditures will be funded from future CIP budgets following board approval of those budgets.
Business Analysis: This option will enhance Metropolitan's ability to maintain reliable water deliveries and enhance worker safety in the event of a major earthquake.

Option #2

Do not proceed with agreements at this time.

Fiscal Impact: None

Business Analysis: This option would forego an opportunity to reduce the risk of damage to the Weymouth Administration Building in the event of a major earthquake. Staff would continue to assess potential initiatives to minimize the risk of disruption to plant operations and provide life safety protection for critical infrastructure and personnel.

Staff Recommendation

Option #1

8/18/2022

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

8/23/2022

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – List of Subconsultants

Attachment 3 – Location Map

Ref# es12682558

Allocation of Funds for Weymouth Administration Building Upgrades

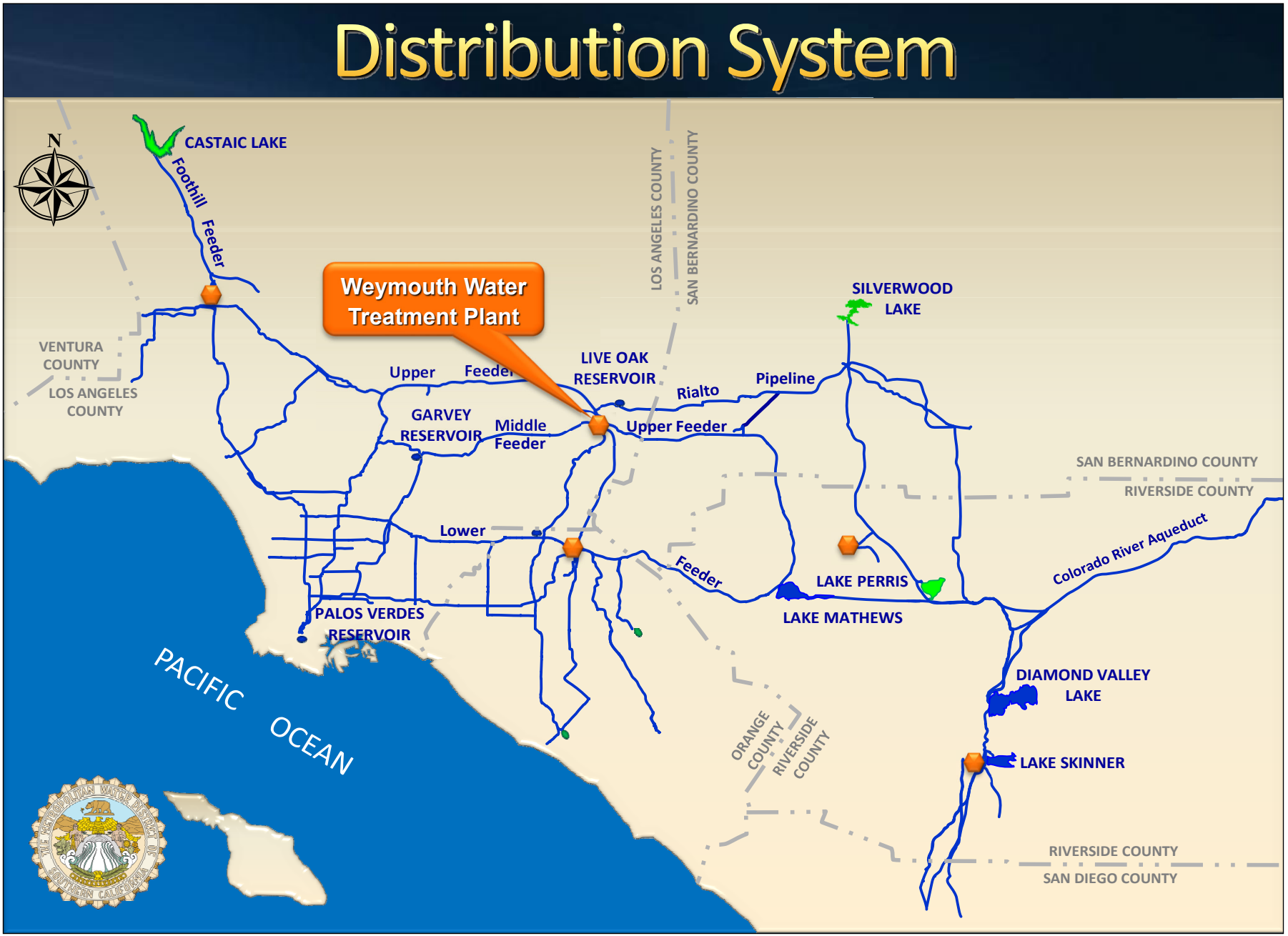
	Current Board Action (Sept. 2022)
Labor	
Studies & Investigations	$ -
Final Design	1,500,000
Owner Costs (Program mgmt., envir. monitoring)	920,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
IBI Group	1,200,000
Fugro, Inc.	450,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	730,000
Total	**$ 4,800,000**

The total amount expended to date on the seismic upgrades and building improvements at the Weymouth Administration Buildings is approximately $2.6 million. The total estimated cost to complete the project, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $29.9 million to $31.9 million.

The Metropolitan Water District of Southern California

Subconsultants for Agreement with IBI Group

Subconsultant and Location
Blackman & Forsyth Santa Monica, CA
Construction Cost Consultants, Inc. Los Angeles, CA
Historic Resources Group, LLC Pasadena, CA
Lerch Bates Englewood, CO
P2S, Inc. Long Beach, CA
Silverlake Conservation, LLC Los Angeles, CA


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

Engineering & Operations Committee

Weymouth Administration Building Upgrades

Item 7-2

September 12, 2022

Weymouth Administration Building Upgrades

Current Action

- Authorize an increase of $1,200,000 to an existing agreement with IBI Group for design services
- Authorize an agreement with Fugro, in an amount not-to-exceed $450,000 for geotechnical engineering services

Distribution System

Weymouth Plant

Essential Facility

Weymouth Administration Building Upgrades

Background

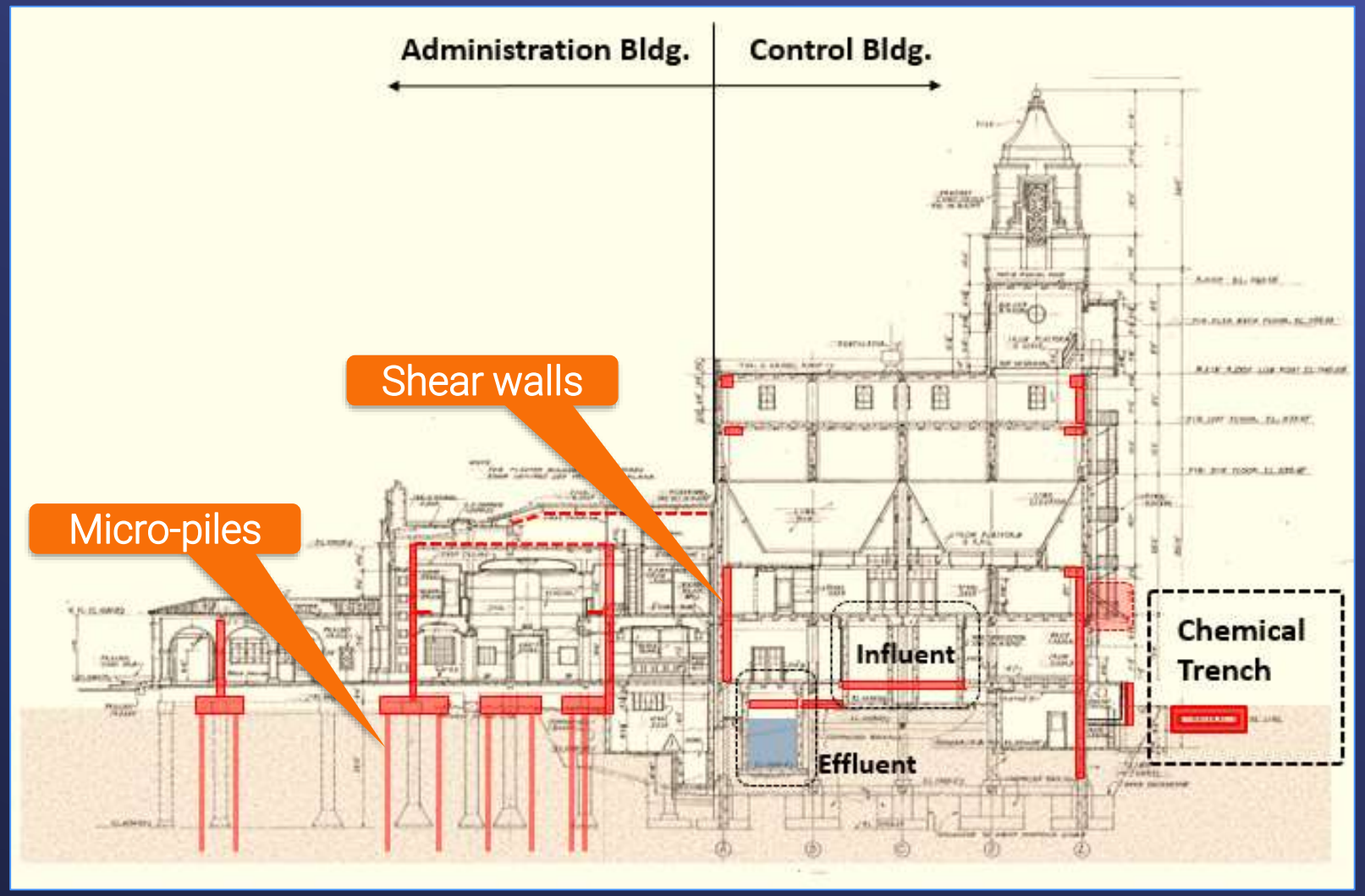
Weymouth Administration Building Upgrades

Water Quality Lab in Admin. Bldg.

Weymouth Administration Building Upgrades

Sierra Madre-Cucamonga fault is 1.5 miles away. Based on regional seismicity research, design ground acceleration increased 50%.

Seismic Retrofit Solution for Site-specific Seismic Criteria



Weymouth Administration Building Upgrades

Metropolitan Scope

- Structural design for all building improvements
- Site plans for chemical & gas line trench
- Design of instrumentation & control upgrades
- Environmental support for CEQA
- Staff, laboratory, & control room relocation planning
- Project management & design oversight

Weymouth Administration Building Upgrades

Agreement Amendment - IBI Group

- Complete final design - architectural mechanical, electrical, plumbing, & fire sprinkler
- Prepare plans for preservation of historic features
- Prepare engineer's cost estimate
- Provide technical assistance during bid period
- SBE participation level: 18%
- NTE Amount: $1,830,000

Weymouth Administration Building Upgrades

New Agreement – Fugro

- Prequalified under RFQ No. 1220
- Scope of Work
  - Provide geotechnical engineering services
  - Conduct micro-pile drilling & verification testing
- NTE amount: $450,000
- SBE participation level: 25%

Weymouth Administration Building Upgrades

Alternatives Considered

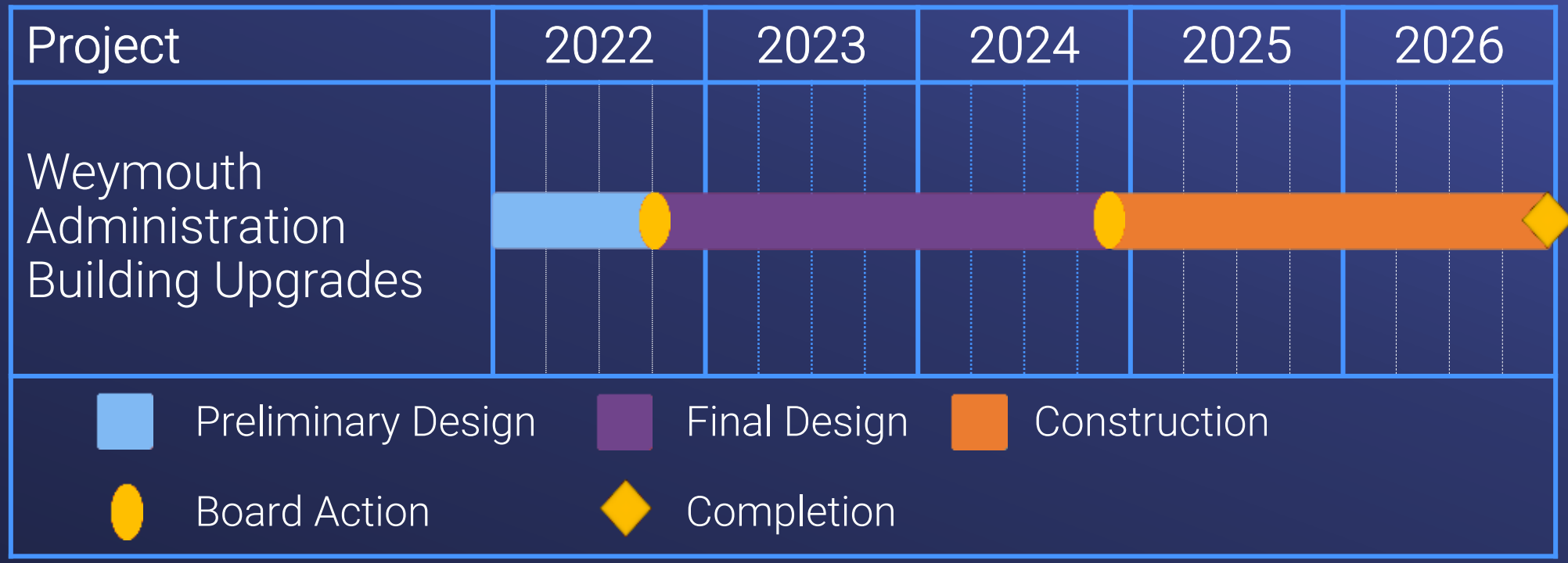
- Metropolitan staff to complete all final design activities
  - Specialized expertise required for micro-pile testing program
- Selected Option
  - Staff & consultant work as a hybrid team
    - Metropolitan staff to lead civil, structural, & instrumentation design
    - Consultants to develop architectural, micro-pile verification testing & perform geotechnical services

Allocation of Funds

Weymouth Administration Building Upgrades

Metropolitan Labor	
Final Design	$1,500,000
Program mgmt. & envir. support	920,000
Professional & Technical	
IBI Group	1,200,000
Fugro	450,000
Remaining Budget	730,000
Total	$4,800,000

Project Schedule



Board Options

- Option #1
  - Authorize an increase of $1,200,000 to an existing agreement with IBI Group, for a new not-to-exceed amount of $1,830,000 for design services to upgrade the Weymouth Administration Building.
  - Authorize an agreement with Fugro for a not-to-exceed amount of $450,000 to provide geotechnical engineering services for structural strengthening of the Weymouth Administration Building.
- Option #2

  Do not proceed with agreements at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

9/13/2022 Board Meeting

7-3

Subject

Award a $287,824 contract to Bishop, Inc. for replacement of the maintenance building roof at the Henry J. Mills Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

Executive Summary

Metropolitan has an ongoing program to provide timely roof maintenance and repairs at its facilities. The maintenance building at the Henry J. Mills Water Treatment Plant (Mills plant) was placed into operation in 1993. The building's roofing system has deteriorated and needs to be replaced to ensure that the building's interior workspace remains safe during inclement weather conditions and is suitable for its intended functions. This action awards a construction contract to replace the existing roof of the maintenance building at the Mills plant.

Details

Background

The Mills plant commenced service in 1978 and is currently rated to treat 220 million gallons per day. The plant treats water from the East Branch of the State Water Project (SWP) and delivers treated water to two member agencies in Riverside County. The facility is located in the city of Riverside.

The maintenance building at the Mills plant has been in operation since 1993. The building provides essential offices, a breakroom, restrooms, and shop space to operations and maintenance (O&M) technicians, facilities maintenance staff, and inventory coordinators. The building's original tar and gravel roofing system has exceeded its 25-year life expectancy. Over the last several years, the building's roof has shown significant signs of deterioration and leakage, requiring localized repairs following weather events.

Final design is now complete, and staff recommends moving forward with award of a construction contract to replace the Mills maintenance building roof at this time.

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 Maintenance Building roof replacement at the Mills plant, pending board award of the contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15519). This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the System Reliability Program.

Mills Maintenance Building Roof Replacement – Construction

The scope of the construction contract work consists of the replacement of approximately 10,000 square feet of roofing material on the maintenance building at the Mills plant, which includes removing the existing tar and gravel roofing system and installing a new single-ply roofing system. Metropolitan forces will relocate roof-mounted equipment, relocate ductwork and supports, and replace deteriorating equipment platforms and penetration covers.

A total of $720,000 has been budgeted for this work. In addition to the amount of the contract described below, other funds to be allocated include $56,600 for construction inspection; $177,000 for Metropolitan force activities as described above; $55,000 for submittals review, technical support during construction, responding to requests for information, and preparation of record drawings; $52,000 for contract administration, environmental monitoring, and project management; and $91,576 for the remaining budget.

Attachment 1 provides the allocation of the required funds. The total estimated cost of the Mills Maintenance Building Roof Replacement project, including the amount allocated to date and funds allocated for the work described in this action, is approximately $720,000.

Award of Construction Contract (Bishop, Inc.)

Specification No. M-3055 to replace the maintenance building roofing system at the Mills plant was advertised for bids on June 22, 2022. As shown in **Attachment 2**, six bids were received and opened on August 4, 2022. The low bid from Bishop, Inc. in the amount of $287,824 complies with the requirements of the specifications. The other bids ranged from approximately $349,000 to $451,000, while the engineer's estimate for this project was $334,000. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount. Bishop, Inc. is an SBE firm, and thus achieves 100 percent participation. This action awards a $287,824 contract to Bishop, Inc. for the Mills maintenance building roof replacement project.

As described above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for construction management and inspection of projects with construction less than $3 million is 12 to 15 percent. For this project, the performance metric goal for inspection is 12.2 percent of the total construction cost ($464,824), which includes the construction contract ($287,824) and Metropolitan force construction ($177,000).

Alternatives Considered

Staff considered continuing with temporary localized repairs for portions of the roof where leakage has been observed. However, past repairs have not prevented the development of new leaks in subsequent rainy seasons. Continued deterioration of the roof may lead to damage of electronic equipment within the building as well as presenting a safety hazard for staff. The recurrence of leaks is an indication that the nearly 30-year-old roof has exceeded its service life and needs to be replaced. The current approach replaces the entire roof in order to maintain long-term operational reliability and provide the best value to Metropolitan.

Summary

This action awards a $287,824 contract to Bishop, Inc. for the Mills Maintenance Building Roof Replacement project. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

Project Milestone

July 2023 – Completion of construction

Policy

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

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action involves repair, maintenance, permitting, leasing, or minor alterations of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use, or replacement or reconstruction of existing structures and facilities that will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structures replaced. Accordingly, the proposed action qualifies for Class 1 and Class 2 (Sections 15301 and 15302 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Award a $287,824 contract to Bishop, Inc. for replacement of the maintenance building roof at the Mills plant.

Fiscal Impact: Expenditure of $720,000 in capital funds. All expenditures will be incurred in the current biennium and have been previously authorized.

Business Analysis: This option will protect Metropolitan's assets and sustain the operation of the Mills plant.

Option #2

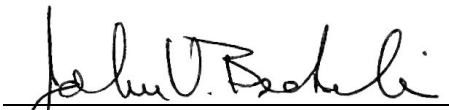
Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would continue with temporary localized repairs to the existing roof and interior damage as needed prior and subsequent to inclement weather events, which may lead to increased annual repair costs.

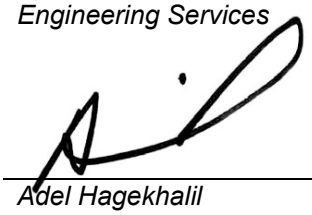
Staff Recommendation

Option #1



8/18/2022

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



8/25/2022

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Allocation of Funds

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# es12683051

Allocation of Funds for Mills Maintenance Building Roof Replacement

	Current Board Action (Sept. 2022)
Labor	
Studies & Investigations	$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	52,000
Submittals Review & Record Drwgs.	55,000
Construction Inspection & Support	56,600
Metropolitan Force Construction	147,000
Materials & Supplies	20,000
Incidental Expenses	10,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Bishop, Inc.	287,824
Remaining Budget	91,576
Total	**$ 720,000**

The total amount expended to date replace the replacement of the roof at the Mills plant maintenance building is approximately $108,000. The total estimated cost to complete the project including the amount appropriated to date, and funds allocated for the work described in this action is $828,000.

The Metropolitan Water District of Southern California

Abstract of Bids Received on August 4, 2022, at 2:00 P.M.

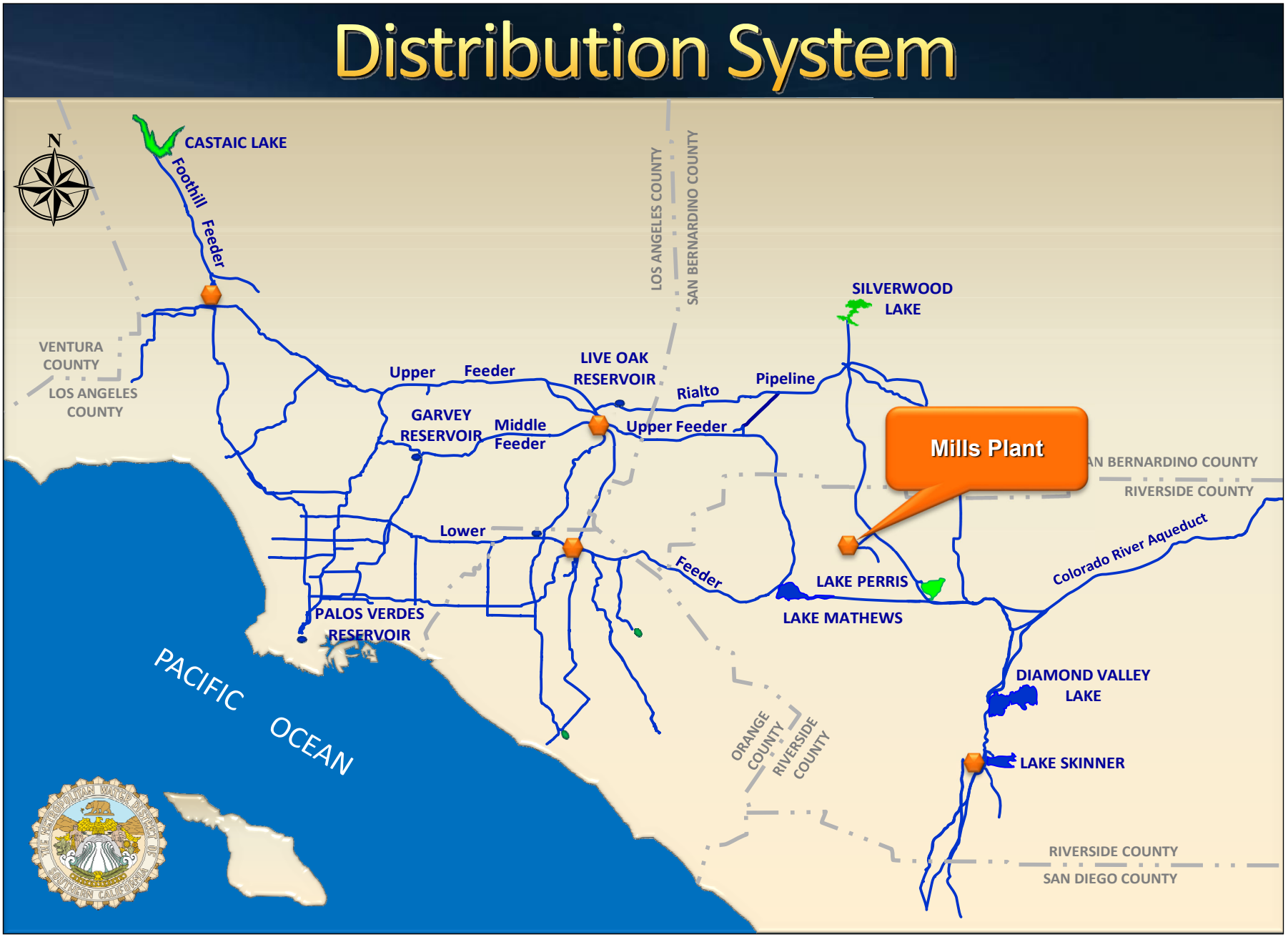
Specifications No. M-3055
Mills Maintenance Building Roof Replacement

The work consists of removal of existing roofing materials and placement of a new single-ply membrane roofing system.

Engineer's estimate: $334,000

Bidder and Location	Total	SBE $	SBE %	Met SBE[1]
Bishop, Inc Orange, CA	**$287,824**	**$287,824**	**100%**	**Yes**
Danny Letner Orange, CA	$349,000	-	-	-
Rite-Way Roof Corporation Fontana, CA	$365,855	-	-	-
Commercial Roofing Systems, Inc. Arcadia, CA	$369,920	-	-	-
Best Contracting Services, Inc. Gardena, CA	$397,666	-	-	-
AME Builders, Inc. Pomona, CA	$451,000	-	-	-

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


Distribution System
N
CASTAIC LAKE
Foothill Feeder
VENTURA COUNTY
LOS ANGELES COUNTY
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
Mills Plant
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 Committee

Mills Maintenance Building Roof Replacement

Item 7-3

September 12, 2022

Mills Maintenance Building Roof Replacement

Current Action

- Award a $287,824 contract to Bishop, Inc. for replacement of the maintenance building roof at the Henry J. Mills Water Treatment Plant

Distribution System

Location Map – Mills Plant

Background

- Houses O&M technicians, maintenance staff & inventory coordinators

Damage to Drywall & Ceiling Tiles Due to Leakage

- Tar & gravel roof nearly 30 years old
- Roof deterioration & leakage observed
- Damage to interior of building following rain events

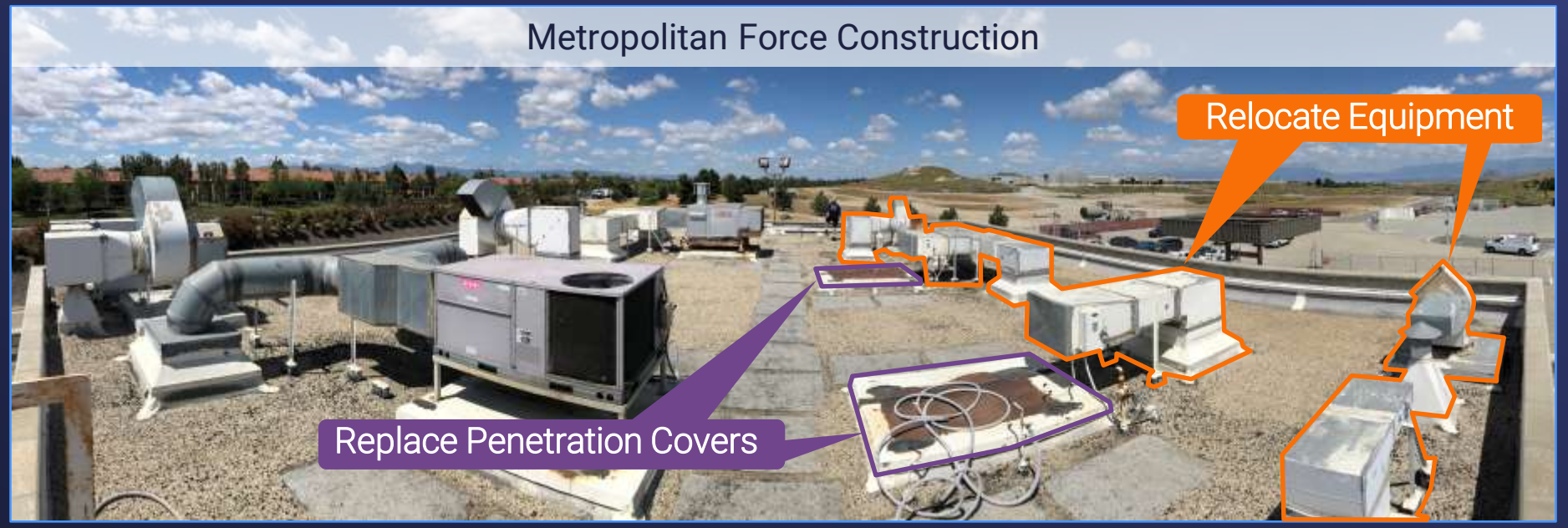
Mills
Maintenance Building
Roof Replacement

Alternatives Considered

- Perform localized roof repairs when leakage occurs
  - Past repairs have not prevented new leaks in subsequent inclement weather events
- Selected alternative
  - Replace the entire roof to maintain long-term operational reliability

Scope of Work

- Contractor
  - Remove approximately 10,000 sq. ft. of existing tar & gravel roofing system
  - Install new single-ply roofing system
  - Remove & replace skylight
- Metropolitan
  - Relocate roof-mounted equipment
  - Relocate duct work & supports
  - Replace deteriorating equipment platforms & penetration covers



Bid Results
Specifications No. M-3055

Bids Received	August 4, 2022
No. of Bidders	6
Lowest Responsible Bidder	Bishop, Inc.
Low Bid	$287,824
Range of Other Bids	$349,000 to $451,000
Engineer's Estimate	$334,000
SBE Participation*	100%

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

Allocation of Funds

Mills Maintenance Building Roof Replacement

Metropolitan Labor	
Program mgmt., contract admin. & envir. support	$ 52,000
Construction Inspection	56,600
Submittal review, technical support & record drwgs.	55,000
Force construction	147,000
Materials & Incidentals	30,000
Contract	
Bishop, Inc.	287,824
Remaining Budget	91,576
Total	$720,000

Project Schedule

Board Options

- Option #1

  Award a $287,824 contract to Bishop, Inc. for replacement of the maintenance building roof at the Mills plant.

- Option #2

  Do not proceed with the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

9/13/2022 Board Meeting

7-4

Subject

Authorize an increase of $690,000 to an existing agreement with Carollo Engineers, Inc., for a new not-to-exceed amount of $990,000, to serve as the owner's advisor for development of the Sepulveda Feeder Pump Stations project with the alternative delivery approach referred to as progressive design-build; 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 current statewide drought and historically low allocation of State Water Project (SWP) supplies by the California Department of Water Resources directly impact Metropolitan's ability to deliver water to certain SWP-dependent areas within its system. The addition of pump stations at the Sepulveda Canyon and Venice Pressure Control Facilities would allow Metropolitan to reverse the normal flow in the Sepulveda Feeder and augment treated water deliveries to the west service area portion of Metropolitan's distribution system. This action authorizes an amendment to a professional services agreement with Carollo Engineers Inc. for a new not to-exceed amount of $990,000, to serve as the owner's advisor for development of the new pump stations project under the project delivery approach referred to as progressive design-build.

Details

Background

Metropolitan's distribution system was originally constructed in the 1940s to deliver treated Colorado River Aqueduct (CRA) supplies throughout the service area. The system was expanded in the 1970s to connect to the SWP. The distribution system was designed to take advantage of the region's topography and primarily utilizes gravity to move water through the system. Much of the service area benefits from access to both CRA and SWP sources of supply; however, certain portions of the system can only receive limited CRA water due to inherent hydraulic limitations. These SWP-dependent areas rely on stored SWP supplies, transfers, and exchange deliveries during multi-year droughts as California is currently experiencing.

The west service area portion of Metropolitan's distribution system normally receives SWP water via the Jensen plant, Sepulveda Feeder, and connecting pipelines. The Sepulveda Feeder is a 96-inch-diameter Prestressed Concrete Cylinder Pipe (PCCP) line that extends south approximately 42 miles from the Jensen plant in Granada Hills to an interconnection with the Second Lower Feeder in Torrance, near Palos Verdes Reservoir.

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 Greg Avenue Pump Station and the East Valley Feeder. This backup system is limited to a maximum capacity of approximately 50 cubic feet per second (cfs). Due to the statewide drought, the Greg Avenue Pump Station is operating full time at its maximum capacity.

In February 2022, Metropolitan's Board approved the planning and implementation of infrastructure projects to improve water reliability for the west service area. As a result of that planning effort, staff recommends proceeding with the Sepulveda Feeder Pump Stations project as a fast-track, phased project for SWP-dependent areas in the west service area. This project would reverse flows within the Sepulveda Feeder and convey treated water to the west service area, supplementing deliveries from the Greg Avenue Pump Station.

Two new pump stations along the Sepulveda Feeder, located adjacent to the existing Venice and Sepulveda Canyon Control Facilities, would supply treated water from the Weymouth and Diemer plants via the central portion of the distribution system to the west service area. The initial stage of the larger project would include the construction of two pump stations capable of moving up to 30 cfs from the central pool to the San Fernando Valley and westward. 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 PCCP. The pump station sites will be planned so that additional pumping capacity could be added in future stages after the Sepulveda Feeder is lined with a welded steel liner pipe. This lining project will increase the internal pressure rating of the pipeline and is currently planned to be implemented as part of Metropolitan's PCCP Rehabilitation Program. A consulting agreement to perform preliminary design for this lining project was authorized by the Board in August 2022.

The pump stations will also enhance Metropolitan's overall system flexibility by enabling facilities in the west service 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. Staff recommends proceeding with the Sepulveda Feeder Pump Stations expeditiously to help improve water supply reliability in the western service area.

In order to expedite project completion, staff recommends developing this project under the alternative project delivery method referred to as progressive design-build. Metropolitan is currently pursuing legislation to authorize the use of alternative project delivery methods. If enacted, Assembly Bill 1845 (Calderon) would authorize Metropolitan to utilize progressive design-build delivery for drought-related projects such as the Sepulveda Feeder Pump Stations starting January 1, 2023. The progressive design-build model utilizes a two-phase process. Under the first phase, a design-build entity would be selected based on qualifications in response to a Request for Qualifications (RFQ). The selected design-build entity would then progress the design to the point at which a guaranteed maximum price could be estimated. Under the second phase, Metropolitan would negotiate the guaranteed maximum price with the selected design-build entity. If unable to reach an agreement, Metropolitan would discontinue negotiations, and select a different design-build entity for negotiations. This action authorizes amending an existing agreement for a consultant to provide staff with advisement and support for the preparation of contract documents and an RFQ in support of a solicitation for a competitively advertised progressive design-build contract for design and construction of the Sepulveda Feeder Pump Stations. Staff will return to the Board at a future date for award of the first phase design-build contract.

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). 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

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 will include investigation of the two sites; site planning to accommodate current and future pumping capacities; preliminary design; preparation of a technical requirements document; development of design-build procurement documents; and procurement of the progressive design-build team. Preliminary design and owner's advisor services will be performed by Carollo Engineers, Inc., as described below, in preparation for a potential progressive design-build contract for the Sepulveda Feeder Pump Stations at Sepulveda Canyon and Venice Control Facilities.

A total of $1,600,000 is required for this work. Allocated funds include $690,000 for preliminary design and owner's advisor services by Carollo Engineers, Inc. Allocated funds for Metropolitan staff activities include $400,000 for technical oversight, review of consultant's work, and identification of technical requirements; $350,000 for project management, preparation of environmental documentation, and other owner's costs; and $160,000 for remaining budget. **Attachment 1** provides the allocation of the required funds. The estimated cost of construction for this project is anticipated to range from $40 million to $60 million.

Owner's Advisor Services – Carollo Engineers, Inc.

Staff recommends utilizing the services of an owner's advisor to assist with development of the project's design-build procurement documents. Metropolitan's current contract documents are tailored to the traditional design-bid-build delivery method. Substantial revisions are needed to convert them into a more performance-based format suitable for progressive design-build. The performance-based format will ensure the project meets Metropolitan's requirements, but at the same time allow for more collaboration, innovation, and cost-saving opportunities with the design-build entity. To allow for the earliest possible completion, work on the design-build procurement documents is recommended to start now so that they will be ready for advertisement of the RFQ when the pending legislation takes effect. However, Metropolitan will not solicit proposals from design-build entities until the legislation has passed and will not enter into a design-build agreement prior to the legislation taking effect.

Owner's advisor services are recommended to be performed by Carollo Engineers, Inc. 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 under an existing board-authorized agreement. The planned owner's advisor services activities will include: (1) development of owner's engineering documents for two-phase RFQ/RFP selection of design-build contractor, (2) development of the project schedule, (3) preparation of engineering and construction estimates for the design-build contract, and (4) reviewing proposed plans, procedures, schedules, guidelines, and training material associated with the implementation and deployment of new work processes at Metropolitan for use of the progressive design-build project delivery method. This work will be coordinated with Metropolitan's Legal department.

This action authorizes an increase of $690,000 to an existing agreement with Carollo Engineers, Inc. for a new not-to-exceed amount of $990,000 for owner's advisor services during the first phase of progressive design-build for the Sepulveda Feeder Pump Stations. For this agreement, Metropolitan has established a Small Business Enterprise participation level of 25 percent. Carollo Engineers, Inc. has agreed to meet this level of participation. The planned subconsultants for this work are Stantec Inc. and Paul Hansen Engineering.

Alternatives Considered

Alternatives considered for the Sepulveda Feeder Pump Stations included using a traditional design-bid-build design process where drawings and specifications would be developed for advertisement for competitive bidding. Due to the timing and urgency of this project, it was determined that this traditional project delivery approach would delay completion of the project by two years when compared to alternative delivery approaches. A key complexity identified by the project team was how to ensure that Metropolitan can augment water deliveries to the west service area in an expedited manner. To mitigate these risks, it was determined that Metropolitan should utilize progressive design-build delivery to expedite construction of the pump stations. Initial work will include conducting preliminary design for the pump stations and preparing the needed design-build procurement documents. With this approach, Metropolitan will rely on the consultant as the owner's advisor to furnish the needed documents. This alternative is expected to provide the earliest possible completion for the project.

Summary

This action authorizes amending an existing agreement with Carollo Engineers, Inc. for a new not-to-exceed amount of $990,000 to serve as owner's representative for development of a progressive design-build contract for pump stations at Sepulveda Canyon and Venice Control Facilities. See **Attachment 1** for the Allocation of Funds and **Attachment** 2 for the Location Map.

Project Milestone

March 2023 – Issue an RFQ/RFP for a progressive design-build contract to construct two pump stations on the Sepulveda Feeder

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 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.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities (Section 15378(b)(2) of the State CEQA Guidelines) and will not result in direct or indirect physical changes in the environment (Section 15378(b)(5) of the State CEQA Guidelines). Additionally, the proposed action is categorically exempt under the State CEQA Guidelines because it consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded (Section 15306 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize a $690,0000 increase to an existing agreement with Carollo Engineers, Inc. for a new not-to-exceed amount of $990,000 to perform owner's advisor services for the Sepulveda Feeder Pump Stations.

Fiscal Impact: $1,600,000 in capital funds which will be incurred in the current biennium and have been previously authorized

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 current drought.

Staff Recommendation

Option # 1

8/18/2022

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

8/24/2022

Adel Hagekhalil *Date*
General Manager

Attachment 1 – Financial Statement

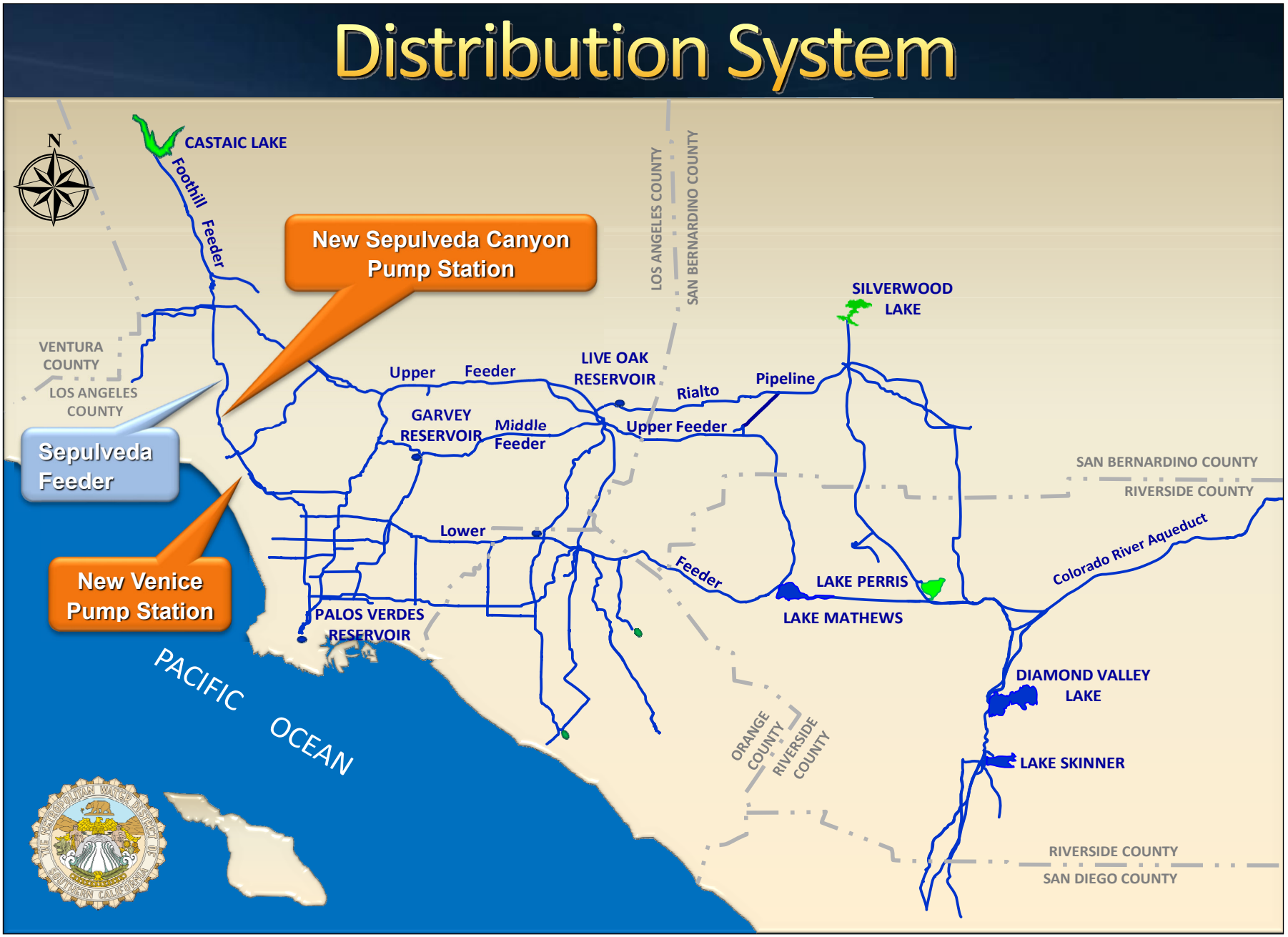
Attachment 2 – Location Map

Ref# es12685892

Allocation of Funds for Sepulveda Feeder Pump Stations

	Current Board Action (Sept. 2022)
Labor	
Studies & Investigations	$ -
Preliminary Design	400,000
Owner Costs (Program mgmt., envir. review)	350,000
Submittals Review & Record Drwgs.	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Carollo Engineers, Inc.	690,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Remaining Budget	160,000
Total	**$ 1,600,000**

The total amount expended to date is $300,000. The total estimated cost to complete the Sepulveda Feeder Pump Stations, including the amount appropriated to date, funds allocated for the work described in this action, and future construction costs, is anticipated to range from $40 million to $60 million.


Distribution System
N
CASTAIC LAKE
Foothill Feeder
New Sepulveda Canyon Pump Station
LOS ANGELES COUNTY
SAN BERNARDINO COUNTY
SILVERWOOD LAKE
VENTURA COUNTY
LOS ANGELES COUNTY
Sepulveda Feeder
Upper Feeder
LIVE OAK RESERVOIR
Rialto Pipeline
GARVEY RESERVOIR
Middle Feeder
Upper Feeder
SAN BERNARDINO COUNTY
RIVERSIDE COUNTY
Lower Feeder
Colorado River Aqueduct
New Venice Pump Station
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 Committee

Sepulveda Feeder Pump Stations

Item 7-4

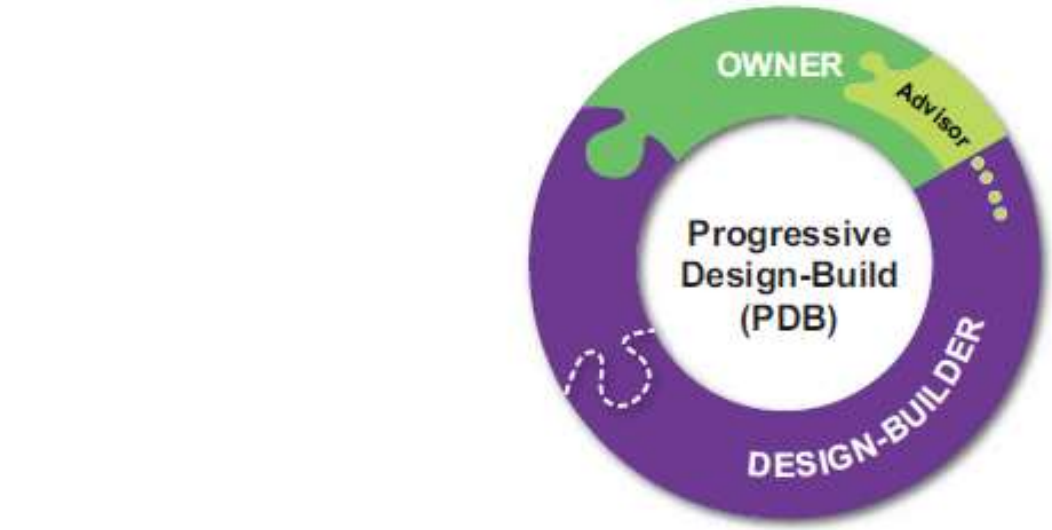
September 12, 2022

Sepulveda Feeder Pump Stations

Background

- February 2022 – Board approves planning of projects to improve water reliability for the West Branch of SWP
- August 2022 – Board adopts resolution affirming Metropolitan's commitment to regional reliability
- August 2022 – California legislature passed Assembly Bill 1845 (Calderon)
  - Legislation allows Metropolitan to utilize Alternative Delivery for drought and Pure Water Projects
  - Alternative delivery options: Design Build, Progressive Design Build, and CM/GC
- September 2022 – Gov. Newsom signs Senate Bill 991
  - Allows local agencies to utilize progressive design build for projects over $5 M

Progressive Design Build Process



Sepulveda Feeder Pump Stations

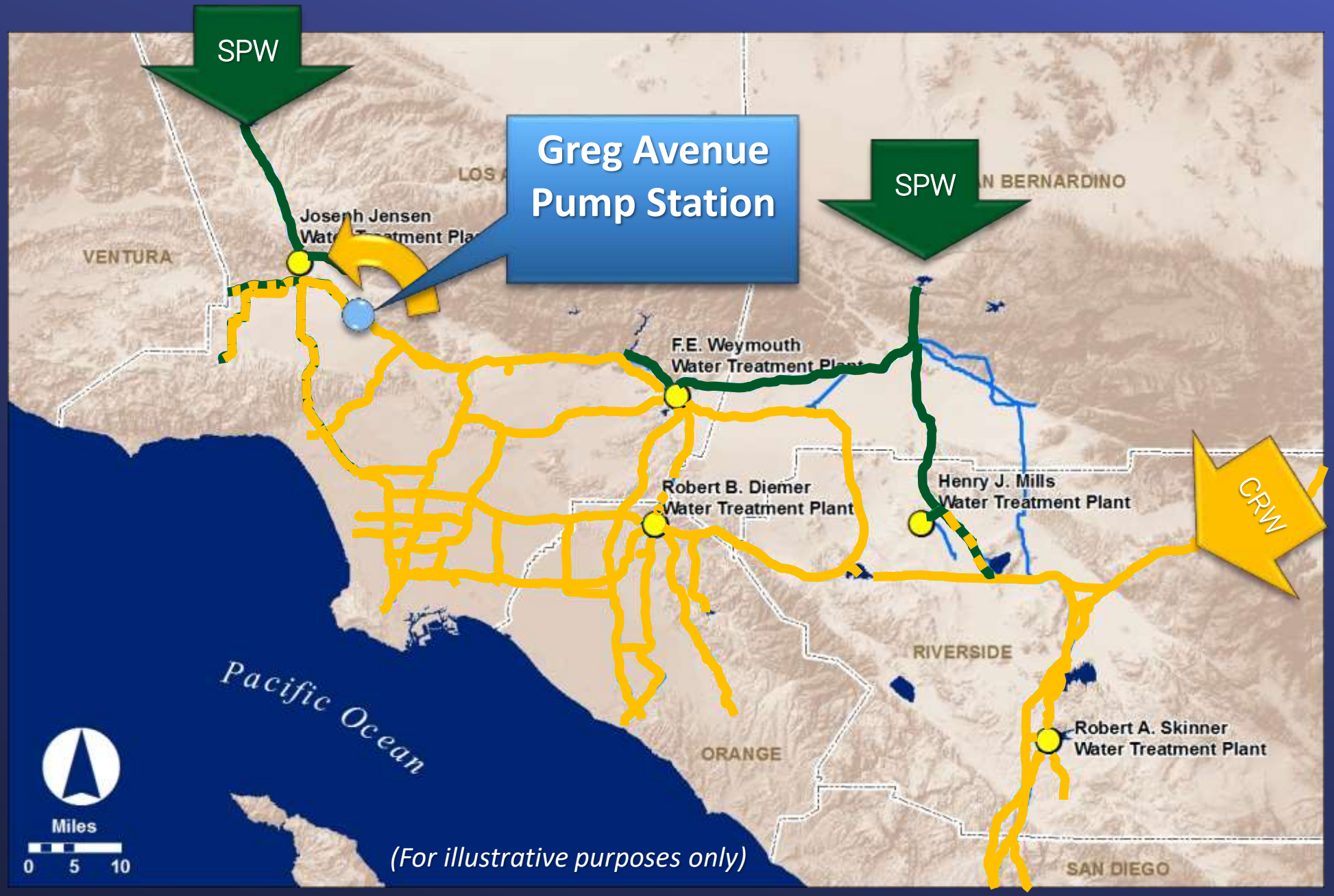
Current Action

- Authorize an increase of $690,000 to an existing agreement with Carollo Engineers, Inc., to serve as the owner's advisor for development of the Sepulveda Feeder Pump Stations project
- 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

Distribution System

Delivering State Project Water

Managing through Droughts



Improving Infrastructure

Sepulveda Feeder Pump Stations

Constructed in Stages

- Stage 1- Constructs two pump stations
  - Initial capacity based on pressure limitations of Sepulveda Feeder
  - Provides 30 cfs
- Stage 2 - Upgrades both pump stations
  - Provides up to 300 cfs
- Relining of Sepulveda Feeder will be required before Stage 2 operates
  - Implemented as part of PCCP Rehabilitation Program

Sepulveda Feeder Pump Stations

Alternatives Considered

- Design-bid-build
  - Considered using this traditional project delivery process
  - This approach would extend completion of the project by up to two years
- Alternative selected
  - Use progressive design-build delivery
  - Allows for expedited completion

Sepulveda Feeder Pump Stations

Carollo Agreement

- Selected based on familiarity with project, and expertise in Progressive Design Build process
- Scope of Work
  - Preliminary design for the pump stations
  - Prepare design-build procurement documents
  - Review proposed plans, procedures, schedules, guidelines, & training material
- Increase of $690,000; new NTE amount: $990,000
- SBE participation level: 25%

Sepulveda Feeder Pump Stations

Metropolitan Scope

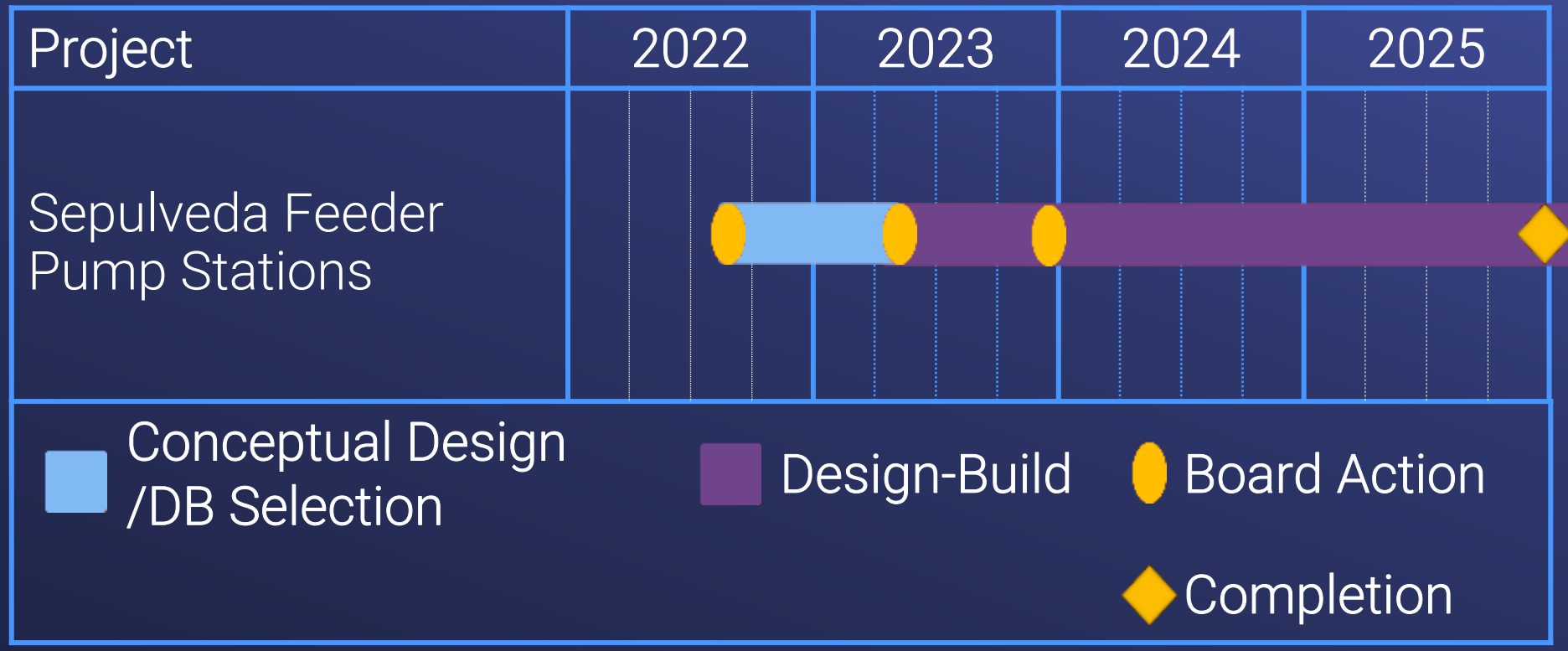
- Provide consultant oversight, environmental support & project management
- Identify technical requirements
- Conduct preliminary design review
- Develop DB processes, procedures & documents
- Advertise & select DB entity

Allocation of Funds

Sepulveda Feeder Pump Stations

Metropolitan Labor	
Program mgmt. & envir. support	$ 350,000
Preliminary design	400,000
Agreement	
Carollo Engineers, Inc.	690,000
Remaining Budget	160,000
Total	$1,600,000

Project Schedule



Board Options

- Option #1

  Authorize a $690,000 increase to an existing agreement with Carollo Engineers, Inc. for a new not-to-exceed amount of $990,000 to perform owner's advisor services for the Sepulveda Feeder Pump Stations.

- Option #2

  Do not authorize the project at this time.

Staff Recommendation

- Option #1


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

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

9/13/2022 Board Meeting

7-5

Subject

Authorize an agreement with Calpine Energy Solutions, LLC for the sale of renewable energy from the Phase I-II hydroelectric power plants; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA.

Executive Summary

This action authorizes the General Manager's execution of an agreement with Calpine Energy Solutions, LLC (Calpine) for the sale of renewable energy and renewable energy credits (RECs) from nine Phase I-II hydroelectric power plants.

Details

Background

In the 1970s, Metropolitan initiated a program to develop conduit hydroelectric power plants on its water distribution system. Nine of these plants were developed in phases and have a total nameplate capacity of 80.4 megawatts. The Phase I plants include the Foothill Feeder, Lake Mathews, Yorba Linda, and San Dimas plants that were built between 1979-1981. The Phase II plants include the Red Mountain, Venice, Corona, and Temescal plants that were built between 1982-1986, as well as the Diamond Valley Lake plant that was converted to hydroelectric generation in 2002. These Phase I and II hydroelectric power plants: (1) meet the definition of eligible renewable energy projects under state law; (2) are located near electrical load centers; and (3) generate electricity as water moves through Metropolitan's distribution system to meet member agency water demands. Power generation from Phase I plants was sold to the California Department of Water Resources (CDWR) under a previous agreement that terminates on September 30, 2022. Phase II generation was sold to CDWR under a separate agreement that terminated on December 31, 2020, and has been sold at market prices since the Phase II agreement expired.

The energy from these plants qualifies as renewable, and as such, offers the buyer the ability to count the output toward its State of California Renewable Portfolio Standard (RPS) obligation. Although RPS requirements will increase to 50 percent by 2026, 60 percent by 2030, and 100 percent by 2045, RPS contract prices have been decreasing due to: (1) falling prices for wind and solar technologies, which together are expected to make up a majority of the total renewable generating capacity in California; (2) a surplus in RPS energy with investor-owned utilities' RPS requirements being met through 2025; and (3) the requirement that began in 2021 that 65 percent of RPS resources be contracted for ten or more years. RPS contract prices for short or intermediate terms are forecasted to remain relatively flat for the next several years.

On May 25, 2022, Metropolitan issued a Request for Offers (RFO) requesting proposals from approximately 50 entities for traditional and flexible term purchase of bundled and stand-alone products of Energy, RECs, and Resource Adequacy (RA) capacity output from the nine plants. In response to the solicitation, Metropolitan received offers from six bidders for the plants' outputs. Based on an evaluation of the proposals completed by Metropolitan staff, the 10-year term proposal submitted by Calpine was identified as providing the best economic value and portfolio fit for bundled renewable energy and RECs to Metropolitan over a long-term period, starting October 1, 2022, through September 30, 2032.

Key Terms and Conditions

The key terms and conditions of the agreement with Calpine are:

1. An electric industry standard contracting document, Western Systems Power Pool (WSPP), will be utilized. Both Metropolitan and Calpine are parties to the WSPP, and Metropolitan has used it on numerous Colorado River Aqueduct energy transactions.
2. The term of the ten-year agreement would be from October 1, 2022, through September 30, 2032.
3. The buyer would take possession of and can claim all environmental and renewable attributes for the energy sold.
4. Metropolitan's contractor would act as the Scheduling Coordinator to interface with the California Independent System Operator (CAISO) for the sale of the generation into the CAISO energy market on behalf of Calpine, for which Metropolitan would receive a payment from CAISO settlements directly for the value of the renewable energy. Metropolitan would receive a separate payment from Calpine for the value of the RECs.
5. The energy pricing under the new contract is based on the daily market energy price plus a fixed adder. The fixed adder represents the premium for the environmental and renewable attributes.
6. Estimated total annual revenue varies depending on the generation achieved at each of the nine plants which have a combined total nameplate capacity of 80.4 megawatts. Annual generation from these nine plants has varied based on water deliveries in the past ten years (2012-2021) between 86 to 197 gigawatt hours (GWh), with an average generation of 148 GWh hours per year.
7. Based on recent generation amounts and projected market energy prices, annual revenues from this agreement are estimated to range from $1.1 million to $2.5 million, averaging around $1.85 million per year.
8. There are no minimum generation requirements, and this agreement does not create any restrictions on Metropolitan's water system operations.

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

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. In particular, the proposed action involves the operation of existing equipment and facilities with negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, it will not have a significant effect on the environment. Accordingly, this proposed action qualifies as a Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines)

CEQA determination for Option #2:

None required

Board Options

Option #1

Authorize an agreement with Calpine Energy Solutions, LLC for the sale of renewable energy from the Phase I-II hydroelectric power plants.

Fiscal Impact: Estimated total annual revenues would be approximately $1.85 million, depending on water delivery requirements and resulting generation.
Business Analysis: Provides Metropolitan with a stream of revenues tied to the renewable power value that is greater than selling energy into the CAISO energy market. The sale also assists other power entities in their renewable goals.

Option #2

Direct staff to continue negotiations or initiate new negotiations with the same or new parties.
Fiscal Impact: The fiscal impact of this option is unknown. If new agreements are not in place by the time the existing agreement expires on September 30, 2022, Metropolitan would sell the energy for the Phase I and II plants into the CAISO energy market. It is expected that the environmental attributes of the energy would have to be sold separately, and revenues would be substantially less than with the proposed agreement.
Business Analysis: Completing negotiations for the renewable power under an alternative agreement will take more time and may not be completed before the existing agreement expires. Without an agreement, the energy could be sold into the CAISO energy market, but the value of the environmental attributes would be significantly discounted.

Staff Recommendation

Option #1

8/23/2022
Brent M. Yamasaki *Date*
Water System Operations Group Manager

8/24/2022
Adel Hagekhalil *Date*
General Manager

Ref# wso12691361

Engineering & Operations Committee

Authorize Agreement for Sale of Renewable Energy from Hydroelectric Plants

Item 7-5

September 12, 2022

HEP Phase I & II Agreement Authorization

Current Action

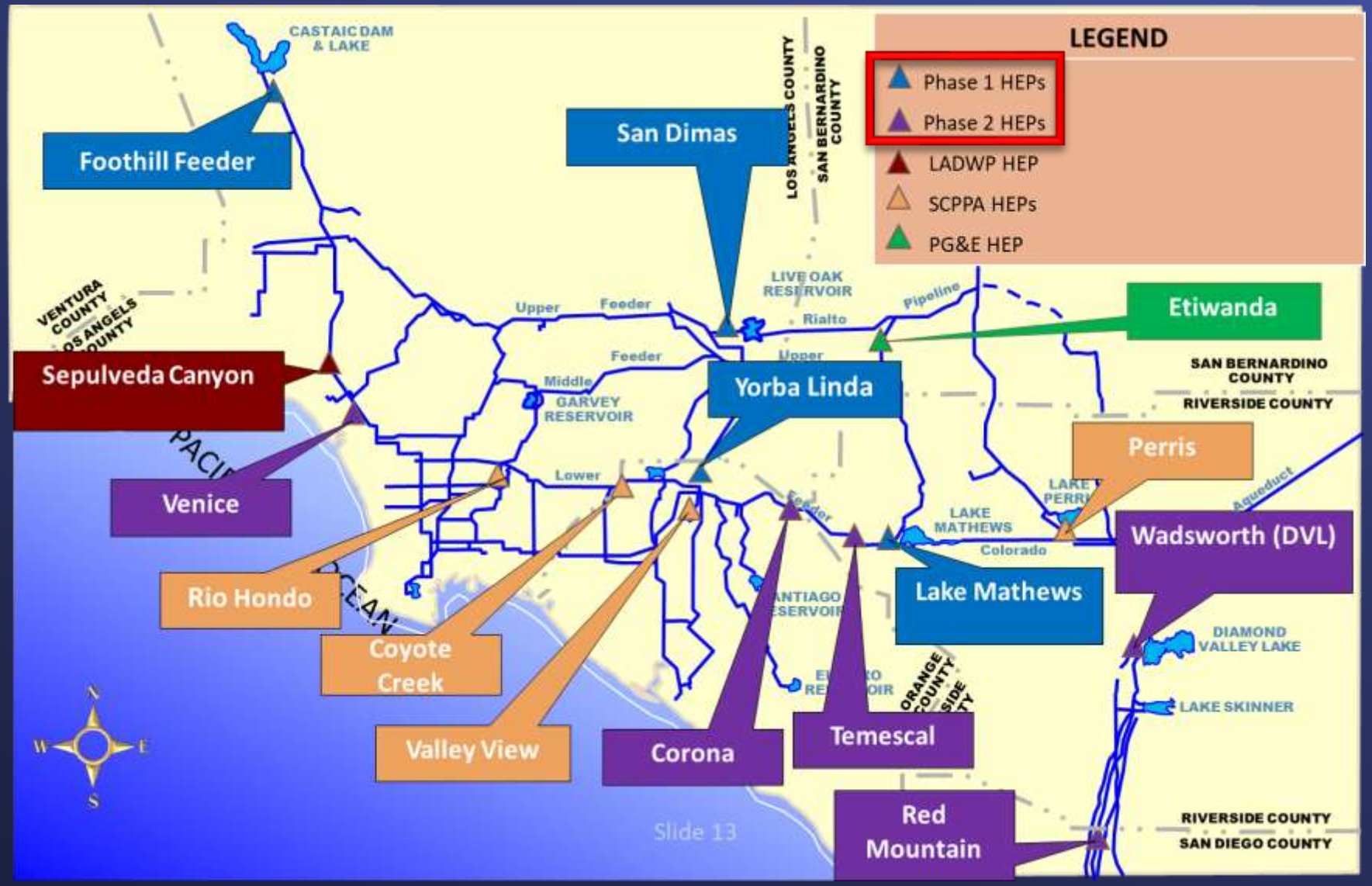
- Authorize an agreement with Calpine Energy Solutions, LLC for the sale of renewable energy from the Phase I-II hydroelectric power plants

Background

Turbine assembly at Red Mountain HEP

- 15 active small-conduit hydroelectric generating units
- Installed primarily in the 1970s-1980s
- 130 megawatts (MW) installed capacity
- “Run of River” operation
- Units produce Energy (kW-hrs), Renewable Energy Credits (RECs), and Resource Adequacy (RA) capacity (kW-months)

Metropolitan's Fleet of Small Hydroelectric Power Plants (HEPs)



Hydroelectric Plant Energy Contracts

Buyer	# Plants	Capacity (MW)	Termination Date
DWR #1 (Lake Mathews, Foothill, Yorba Linda, San Dimas)	4	29	Sept. 2022
Phase #2 (Venice, Temescal, Corona, Red Mtn, DVL)	5	51.4	Dec. 2020* (Currently Unprocured)
SCPPA (Perris, Coyote Creek, Rio Hondo, Valley View)	4	17.4	Dec. 2023
LADWP (Sepulveda)	1	8.4	Dec. 2023
PG&E (Etiwanda)	1	23.9	June 2034

* The output of the Phase 2 generation has been sold at market prices since the agreement expired in 2020

HEP Phase I&II Agreement Authorization

Selection Process

- Request for Offers (RFO) issued June 2022
  - Three Products
    - Energy (kW-hrs)
    - Renewable Energy Credits (RECs)
    - Resource Adequacy (RA) Capacity (kW-months)
  - 8 offers/6 bidders
- Offers ranked using objective criteria

HEP Phase I&II Agreement Authorization

Recommended Offer

- Calpine Energy Services, LLC
  - 10-year contract for Energy & RECs
    - October 1, 2022 – September 30, 2032
  - CAISO SP15 Index Price for Energy + REC Premium
    - Total 10-year revenue estimated to range from $90 -100 million
    - Annual incremental revenues estimated to range from $1.1 - $2.5 million

Board Options

- Option #1

  Authorize an agreement with Calpine Energy Solutions, LLC for the sale of renewable energy from the Phase I-II hydroelectric power plants

- Option #2

  Direct staff to continue negotiations or initiate new negotiations with the same or new parties

Staff Recommendation

- Option #1


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 30, 2022**

Summary

The attached report provides a summary of actions and accomplishments on the Capital Investment Plan (CIP) during fiscal years 2020/21 and 2021/22. 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 2022, the fourth quarter of fiscal year 2021/22, and the final quarter of the fiscal years 2020/21 and 2021/22 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 2022

Date of Report: 9/13/2022

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

CAPITAL INVESTMENT PLAN
Quarterly Report

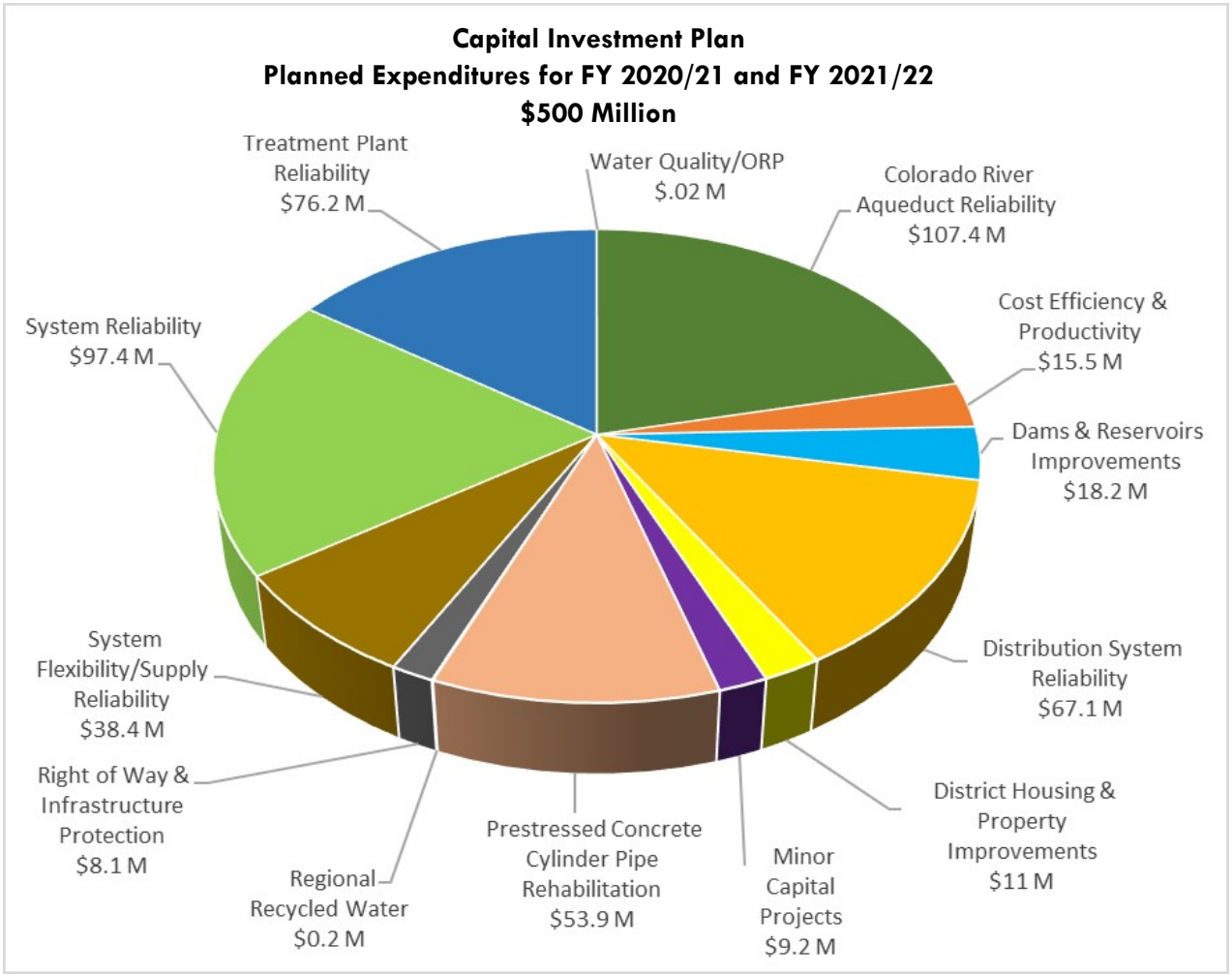
April – June 2022

Table of Contents

CAPITAL INVESTMENT PLAN FOR FISCAL YEARS 2020/21 & 2021/22

Metropolitan's total planned capital expenditures for Fiscal Years (FYs) 2020/21 and 2021/22 was $500 million. Figure 1 below in relation to their associated programs. In April 2020, the Board appropriated $500 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 2020/21 and 2021/22.

Figure 1: CIP for FY 2020/21 and FY 2021/22 by Program



[Cover Photos: (left to right; top to bottom): *Skinner Cathodic Protection* - drilling of anode well at Site 6; *Skinner Facility Area Paving* - roller compaction of asphalt paving in Area 9; *Casa Loma Siphon Barrel No. 1 Seismic Upgrade* - placement of 151-inch welded steel pipe]

FOURTH QUARTER SUMMARY

Biennial expenditures through June 2022 totaled $458.8 million (details shown in Table 15), and expenditures for the 4th Quarter of Fiscal Year 2021/22, April through June 2022, totaled $81.9 million for all capital programs.

During the 4th Quarter, board actions heard in open session included ten project-specific actions and one action on the upcoming biennial CIP budget summarized in Table 1 below. These actions awarded eight contracts totaling approximately $156.1 million, authorized seven new professional/technical services agreements totaling a not-to-exceed amount of approximately $18.6 million, authorized one construction staging and storage site lease agreement in an amount not-to-exceed approximately $0.4 million, authorized an increase to two existing agreements totaling a not-to-exceed amount of approximately $2.3 million, and appropriated $600 million for projects identified in the CIP Appendix for FYs 2022/23 and 2023/24. 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	7-4	Mills Plant Control System Upgrade	Authorized an agreement not-to-exceed $8,500,000 and authorized an increase of $1,950,000 to an existing agreement
April	7-5	Capital Investment Plan for Fiscal Years 2022/23 and 2023/24	Appropriated $600 million for projects identified in the CIP for FYs 2022/23 and 2023/24
April	7-6	Orange County Feeder Lining Replacement, Stage 3	Awarded $17,226,250 construction contract and authorized a construction staging and storage site lease agreement not-to-exceed $360,000
May	7-3	La Verne Shops Building Completion - Stage 5	Awarded $18,930,000 construction contract and authorized an agreement not-to-exceed $650,000
May	7-4	Upgrades at Three Sepulveda Feeder Structures	Awarded $3,143,592 construction contract
May	7-5	Weymouth Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation	Awarded $93,840,000 construction contract and authorized an agreement not-to-exceed $495,000

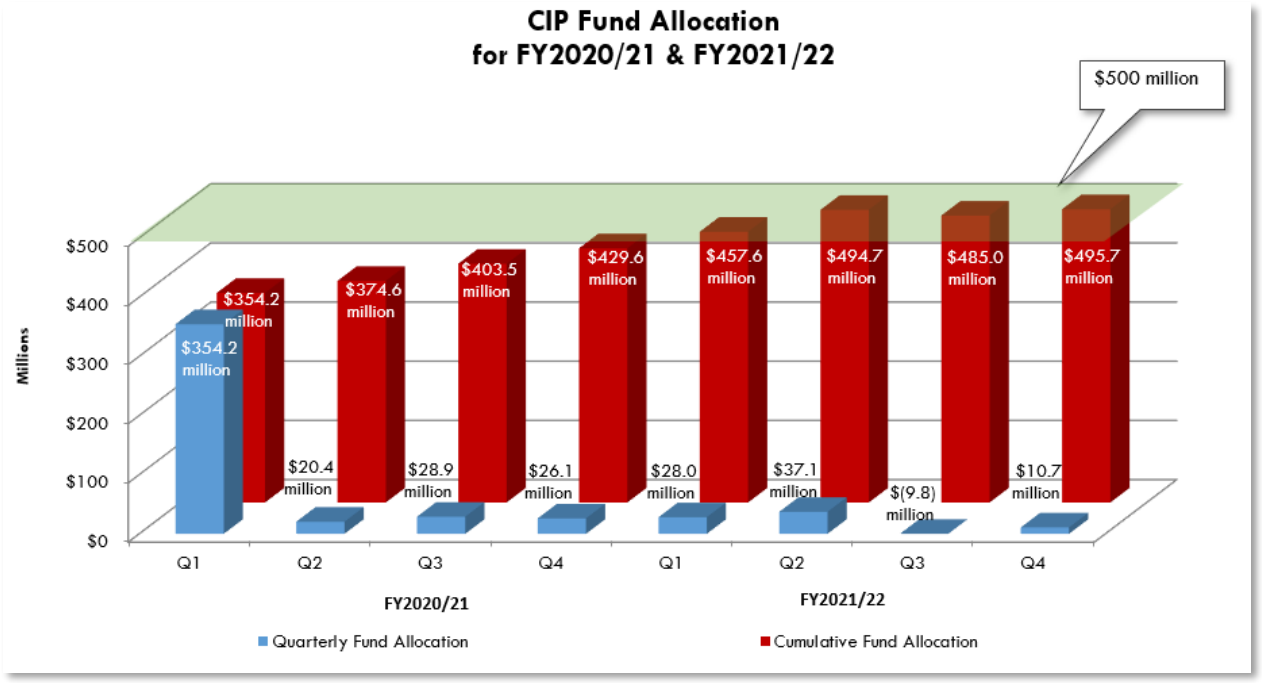
Month	Board Letter Item No.	Project	Action taken
May	7-6	OC-88 Pump Station Chiller Replacement	Awarded $2,654,000 construction contract
May	7-7	Second Lower Feeder PCCP Rehabilitation - Reach 3A	Awarded $11,844,700 construction contract
June	7-5	Arc Flash Assessment and Mitigation	Authorized four agreements not-to-exceed $2,250,000 each
June	7-6	Weymouth Battery Energy Storage System	Awarded $6,176,521 construction contract and authorized an increase of $300,000 to an existing agreement
June	7-7	Jensen Ozone PSUs Replacement	Awarded a $2,257,897 construction contract

The previously referenced April 2020 board action appropriated $500 million to perform work on planned capital projects through the current biennium. In order 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 capital 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, no unplanned capital projects were authorized by the Board.

During the 4th Quarter, the total amount of Appropriation No. 15517 funds authorized by the General Manager for the current biennium (FYs 2020/21 and 2021/22) through management actions including the funds for the projects shown in Table 1 is approximately $10.7 million. Details of these management actions which occurred during the 4th Quarter can be found in the **Project Actions** section of this report.

Figure 2 shows the allocation of the funds from Appropriation 15517 for this quarter and total for the current biennium through the quarter, which is approximately $495.7 million, leaving approximately $4.3 million unallocated and unused.

Figure 2: CIP Fund Allocation from Appropriation No. 15517 – FY 2020/21 and FY 2021/22



*Numbers may not sum due to rounding

Information on construction and procurement contracts activities for the 4th Quarter of FY 2021/22 is summarized in Table 2 below and presented in further detail in the **Construction and Procurement Contracts** section of this report. Progress payments for these contracts in the 4th Quarter totaled approximately $41.7 million and primarily reflect construction progress on Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement , Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1, Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems, Lake Mathews Reservoir Wastewater System Replacement, MWD HQ Building Fire Alarm & Smoke Control Improvements, Skinner Water Treatment Plant Facility Area Paving, and Weymouth Plant Basins 5-8 & Filter Bldg. No. 2 Rehabilitation.

Table 2: 4th Quarter Contract Action

Contract Actions during Q4 for FY 2021/2022, April 2022 through June 2022	
Contracts Awarded by Board	8 construction contracts totaling $156.11 million (Table 10)
Total Payments Authorized	$41.70 million
Construction Contracts Completed	Notice of Completion was filed for 3 construction contracts (Table 9)
Active Contracts at end of Q4[1]	27 construction contracts, totaling $351.73 million (Table 11) 15 procurement contracts, totaling $67.10 million (Table 12) $418.83 million total value*

* Numbers may not sum due to rounding.

IMPACTS OF COVID-19

In response to the Governor's and General Manager's emergency declarations resulting from the COVID-19 pandemic, all active construction contracts were suspended in late March 2020. Since then, all contracts except on-site work for CRA Pumping Plant Sump Rehabilitation, resumed construction activities. Staff and the contractor have negotiated a resolution to the aforementioned CRA Pumping Plant Sump Rehabilitation contract. Metropolitan will take possession of key equipment and will receive a credit for the deleted equipment installation work and equipment not provided. Currently, it is anticipated that the existing contract will be completed by fall of 2022 and the CRA Pumping Plant Sump Rehabilitation project will be re-advertised to install the equipment and materials procured under the existing contract. Supply chain issues, especially delivery delays for electrical, control, and computer equipment in addition to construction components such as roofing materials, specialty doors, power door assist hardware, heat pumps, and valves, have been reported on several construction contracts and IT projects.

[1] Active contracts at the end of the 4th Quarter are those that are ongoing at the end of June 2022. In other words, contracts completed during the reporting quarter are excluded.

PLANNED EXPENDITURE AND BUDGET

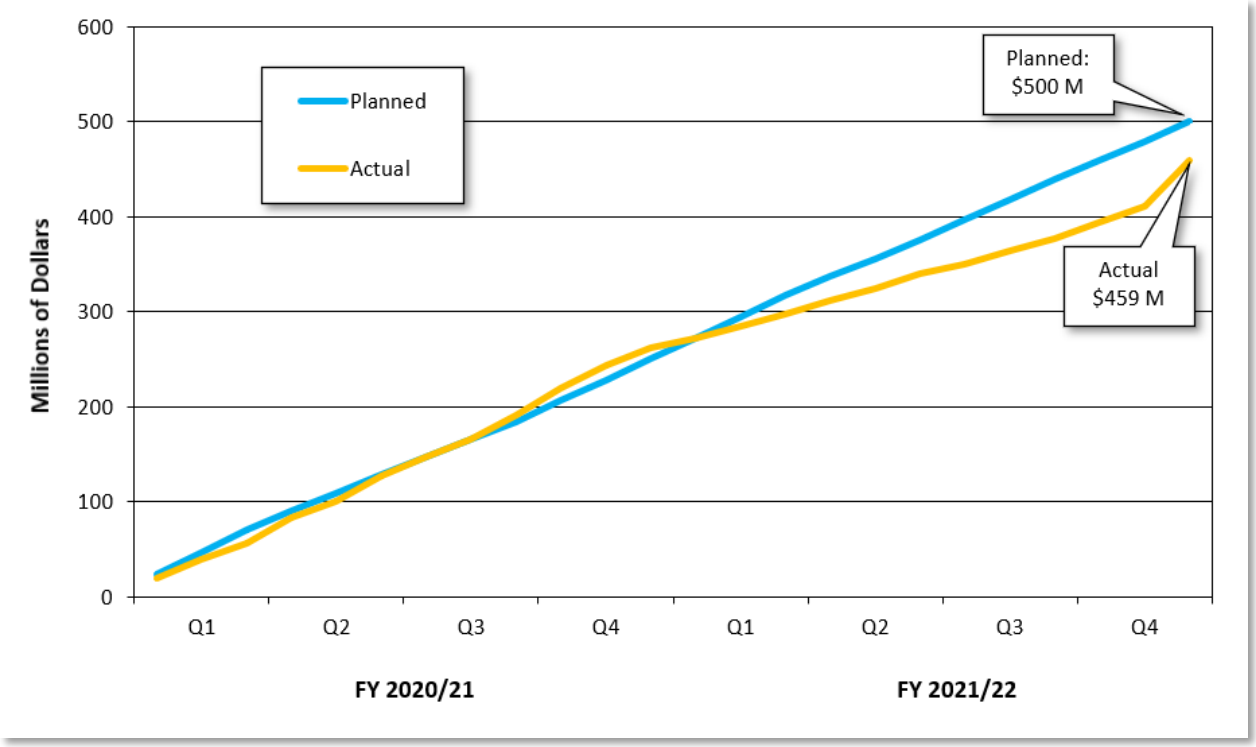
Table 3 and Figure 3 below show planned and actual expenditures for the biennium through the end of the 4th Quarter of FY 2021/22, and the forecast of expenditures through the end of the current biennium, against planned expenditures for the same time interval. Actual expenditures through the 4th Quarter of FY 2021/22 were approximately 92% of planned expenditures.

Table 3: Current Biennium: Planned & Actual Expenditures for FYs 2020/21 & 2021/22

Quarter	Planned Expenditures (millions)	Actual Expenditures (millions)
FY 2020/21 Q1	$70.4	$55.6
Q2	$58.5	$72.2
Q3	$55.0	$63.6
Q4	$66.1	$70.3
FY 2021/22 Q1	$67.0	$36.2
Q2	$58.3	$42.3
Q3	$63.3	$36.8
Q4	$61.4	$81.9
Totals*	**$500.0**	**$458.8**

* 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 $500 million and the actual expenditures at the end of the current biennium are $459 million. This negative variance below the planned expenditures is due to several factors including delays in awarding and completing some construction and procurement contracts due to the difficulties in obtaining permits within the planned timeline, the cancellation of construction portion of one construction contract due to the COVID-19 pandemic leaving only materials and equipment procurement portion, and equipment/materials delivery delays due to manufacturing and supply chain issues attributed to the COVID-19 pandemic.

MAJOR CAPITAL PROGRAMS OVERVIEW

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

- Program
- Project Group/Appropriation
- Project

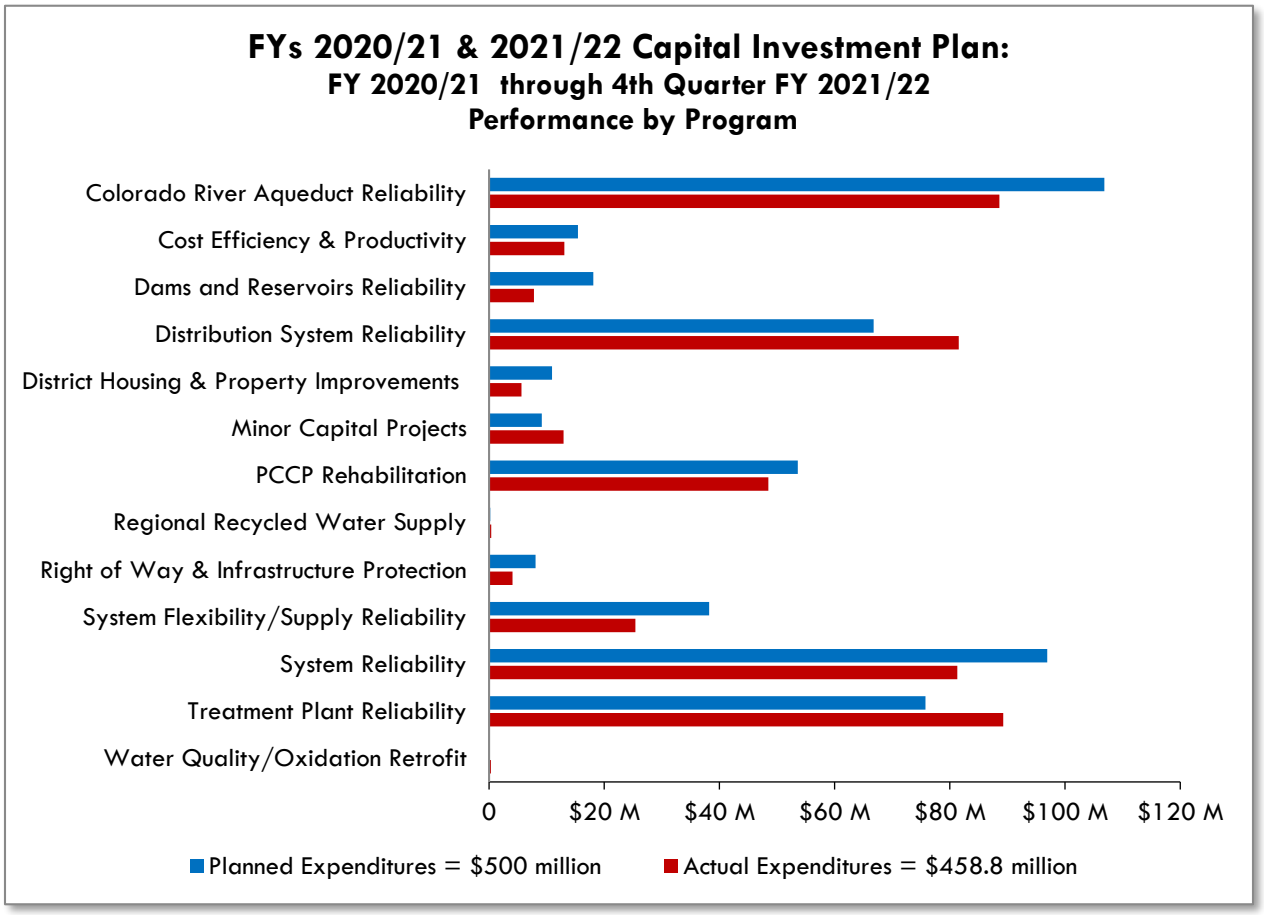
Metropolitan's CIP is comprised of 13 programs, which capture all projects within the CIP. The 13 capital programs are listed below in alphabetical order. Programs are comprised of one or more project groups/appropriations, and project group/appropriations are comprised of one or more projects. The status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

For the current biennium, there are over 37 project groups, 72 planned appropriations, and 435 planned projects (excluding Minor Capital Projects) within the CIP. The list of appropriations that make up each of the programs, along with planned expenditures and actual costs to date for those appropriations, are provided in Table 15 at the end of this report.

Figure 4 below shows actual versus planned expenditures for the 13 capital programs for 4th Quarter of FY 2021/22.

Figure 4: Biennium-to-date Expenditures (Actuals vs. Planned) through 4th Quarter FY 2021/22



Variances between planned and actual expenditures for each program are primarily due to shifts in spending on current and planned construction work. The following information on the top ten capital projects provides examples of activities that contributed to such variances.

The list of projects in Table 4 below reflects the ten projects in the CIP with the highest level of planned expenditures in the current biennium. The planned versus actual expenditures through the end of the 4th Quarter of FY 2021/22 are also shown in this table.

Table 4: Top Ten Planned Capital Projects
Planned and Actual Expenditures

Project	Planned July 2020 to June 2022 (millions)	Actuals July 2020 to June 2022 (millions)
Headquarters Building Improvements	$31.3	$36.2
Casa Loma Siphon Barrel No. 1 Seismic Upgrade	$30.0	$22.4
CRA Pump Plant Sump System Rehabilitation	$28.0	$12.2
Perris Valley Pipeline - Tunnels	$27.8	$2.9
CRA Discharge Line Isolation Coupling Assemblies	$23.0	$18.3
Second Lower Feeder PCCP Rehabilitation - Reach 8	$22.0	$6.9
Jensen Electrical Upgrades - Stage 2	$15.2	$18.0
Diemer West Basin & Filter Building Rehabilitation	$14.2	$17.8
Second Lower Feeder PCCP Rehabilitation – Reach 2	$13.0	$5.8
Orange County Feeder Relining - Reach 3	$12.5	$2.6
Total*	**$217.1**	**$143.3**

* Numbers may not sum due to rounding.

The cumulative expenditure variance for the top ten projects through the 4th Quarter of FY 2021/22 reflects a mix of over- and under-spending on projects relative to their planned expenditures. Positive or negative variances do not mean that the projects are over or under budget, it simply reflects variances in timing of expenditures when compared to original budget plans. The following are the variance explanations for the top ten projects where actual expenditures exceeded planned expenditures through the current reporting quarter for the biennium.

- **Headquarters Building Improvements:** The actual expenditures were more than planned because of the following: (1) the approval of additional change orders to complete needed work while the building was lightly occupied due to the COVID-19 pandemic; and (2) the contractor was able to accelerate completion of some work elements as the building was been lightly occupied.
- **Jensen Electrical Upgrades - Stage 2:** Project expenditures for the biennium are higher than originally planned through the 4th Quarter because the contractor's work activities were expedited after the COVID-19 work suspension was lifted in order to meet the scheduled 2022 shutdown dates.

- **Diemer West Basin & Filter Building Rehabilitation:** Project expenditures for the biennium are higher than originally planned through the 4th Quarter because the contractor's work activities were expedited to meet the scheduled completion date.

The following are the variance explanations for the top ten projects with actual expenditures less than planned expenditures through the current reporting quarter for the biennium).

- **Casa Loma Siphon Barrel No. 1 Seismic Upgrade:** The actual vs. planned variance is due to a shift in timing of the award of the pipe installation contract from earlier in the biennium to December 2021 to ensure sufficient capacity in the current CIP budget to accommodate expenditures from this project in the biennium.
- **CRA Pump Plant Sump System Rehabilitation:** The actual vs. planned variance is due to the suspension of the on-site work due to the COVID-19 pandemic starting in March 2020, which led to cancellation of the construction portion of the contract. Resolution of outstanding submittal comments and supply chain issues have also caused a delay in the delivery of equipment and materials to the site.
- **Perris Valley Pipeline – Tunnels:** The actual vs. planned expenditure variance is due to postponing the start of construction from November 2020 to late 2022 due to the need to conduct additional subsurface investigations to determine groundwater treatment requirements and potential soil contamination levels. Additionally, complex right-of-way issues needed to be resolved prior to the advertisement of this project for construction bids.
- **CRA Discharge Line Isolation Coupling Assemblies:** The actual expenditures were less than planned due to the contractor completing more work than planned during the 2020 shutdown.
- **Second Lower Feeder PCCP Rehabilitation – Reach 8:** This project involved relining approximately 2,900 feet of PCCP pipeline in the City of Placentia, which is a portion of the original length of the Reach 8 project. Construction work was completed in September 2020. The planned expenditures for this biennium were based on relining 17,000 feet of PCCP but during design the scope was reduced to prioritize the most at-risk, 2,900-foot portion of the feeder. The remaining 14,100 feet of PCCP will be included in a future PCCP rehabilitation contract.
- **Second Lower Feeder PCCP Rehabilitation – Reach 2:** The actual vs. planned variance is due to shifts in the timing of construction completion, which was completed approximately five months earlier than planned and under budget leaving less work for the current biennium. Early completion of this work can be attributed to extensive preconstruction planning and permitting, successful community outreach efforts, and better than expected relining production by the contractor.
- **Orange County Feeder Relining - Reach 3:** The actual vs. planned expenditure variance is due to postponing the start of construction from September 2020 to May 2022 in order to reduce expenditures in this biennium. The final contract, for Reach 3, was awarded for construction in April 2022 to ensure that there is sufficient capacity in the current CIP budget to accommodate expenditures from this project in the biennium.

MAJOR CAPITAL PROGRAMS – HIGHLIGHTS

The section that follows provides 4th Quarter highlights for the 12 Major Capital Programs; the Minor Capital Program is highlighted in its own section of this report. Status is provided for selected projects within each Major Capital Program. The selected projects typically achieved major milestones during the 4th Quarter of FY 2021/22 or are scheduled to achieve major milestones in the next quarter.

Program	Project
Colorado River Aqueduct (CRA) Reliability	CRA Pumping Plants Water Treatment Systems Replacement
Cost Efficiency & Productivity	Battery Energy Storage System
Dams and Reservoirs Improvements	Garvey Reservoir Rehabilitation
Distribution System Reliability	Etiwanda Pipeline Lining - Stage 3
District Housing & Property Improvements	Program highlights only
Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation	Second Lower Feeder PCCP Rehabilitation - Reach 3A
Regional Recycled Water Supply	Program highlights only
Right-of-Way & Infrastructure Protection	Program highlights only
System Flexibility/Supply Reliability	Perris Valley Pipeline - Tunnels
System Reliability	Fuel Management System Upgrade
Treatment Plant Reliability	Jensen Electrical Upgrades – Stage 2
Water Quality/Oxidation Retrofit	Program highlights only

Colorado River Aqueduct (CRA) Reliability Program

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

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$106.83 million	$88.61 million

PROGRAM HIGHLIGHTS (4th Quarter)

Status

Expenditures for this program are less than planned due to schedule adjustments in order to optimize the construction activities of multiple contracts within the same CRA shutdown and to accommodate extended 8-pump operation, on-going supply chain disruptions, and suspension of construction contracts under Metropolitan's response to COVID-19.

Accomplishments

- Continued construction activities for the following contracts:
  - CRA Domestic Water Treatment System Upgrades at all five pumping plants:
    - i. Contractor mobilized and initiated site preparation at Intake Pumping Plant.
    - ii. Contractor continued submittals for review
  - CRA Mile 12 Flow Meter Upgrades
    - i. Completed excavation and installation of electrical grounding grid and duct banks
    - ii. Continued installation of above ground electrical conduits and junction boxes
    - iii. Began installation of security system, solar panel array equipment and control panels
  - CRA Pumping Plants Overhead Cranes Rehabilitation
    - i. Continued submittals for review
    - ii. Continued fabrication of the crane assembly for Gene Pumping Plant
  - Gene Wash Reservoir Discharge Valve Structure Rehabilitation
    - i. Filed a Notice of Completion after completing startup and commissioning activities
- Continued submittals for the water treatment equipment procurement for domestic water treatment systems at all CRA pumping plants with expected deliveries in two shipments, in late 2022 and early 2024, to coincide with the Domestic Water Treatment System Upgrades construction schedule
- Under Metropolitan's response to COVID-19, suspended on-site construction for the CRA Pumping Plant Sump System Rehabilitation and continued submittals and fabrication activities
  - Received pump deliveries for Intake, Iron and Eagle Mountain Pumping Plants
  - Continued fabrication of remaining pumps, piping, and other materials to be furnished
- Continued final design of the CRA Sump System Rehabilitation installation contract
- Continued to evaluate and establish the course of action and construction repackaging options of the remaining outstanding contract work items for CRA 6.9 kV Power Cable Replacement
- Rejected bids for CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain due to high bids
- Continued final design of:
  - CRA Conduits Structural Protection upgrades
  - Gene Communication Reliability Upgrades
- Continued preliminary design of:

  - Black Metal Mountain 2.4 kV Electrical Power Upgrades
  - CRA Desert Region Security Improvements
  - Hinds Pumping Plant Discharge Valve Platform Replacement
- Continued preliminary design and preparation of procurement package for the CRA Main Transformer Replacement
- Continued the CRA main pump rehabilitation efforts at all five pumping plants and performed the study to install variable frequency drive pumps at Gene and Intake Pumping Plants. Completed removal of two of the three headgates at Hinds Pumping Plant. Began preparation of procurement package for the pilot exciter system installation at Gene Pumping Plant.
- Initiated final design for utility improvement projects at Hinds, Eagle Mountain, Iron Mountain and Gene Pumping Plants

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue construction activities planned for the following contracts:
  - CRA Domestic Water Treatment System Upgrades at all five CRA pumping plants
  - CRA Mile 12 Flow Meter Upgrades
  - CRA Pumping Plants Overhead Crane Replacement
- Continue fabrication activities for CRA Pumping Plant Sump System Rehabilitation and receive final equipment deliveries for Gene and Hinds Pumping Plants.
- Continue final design of:
  - CRA Conduits Structural Protection Upgrades
  - Gene Communication Reliability Upgrades
- Continue preliminary design of:
  - Black Metal Mountain 2.4 kV Electrical Power Upgrades
  - CRA Desert Region Security Improvements
  - Hinds Pumping Plant Discharge Valve Platform Replacement
- Continue preliminary design and preparation of a procurement package for the CRA Main Transformer Replacement
- Continue the CRA main pump rehabilitation efforts at all five pumping plants, and complete conceptual study to install variable frequency drive pumps at Gene and Intake Pumping Plants. Continue design of recirculation line up to the connection point at Eagle Mountain Pumping Plant and continue preparation of a procurement package for the pilot exciter system installation at Gene Pumping Plant.
- Continue study of CRA 2.3 kV Switchrack Rehabilitation at four CRA pumping plants and continue preliminary design of a pilot Switchrack Rehabilitation project at Iron Mountain Pumping Plant
- Initiate Value Engineering workshop to optimize cost savings for the CRA Storage Building Replacement at Hinds, Eagle Mountain, and Iron Mountain

Estimated Construction Completion Date:
March 2025

Total Project Estimate:
$47.8 million

Current Phase Estimate:
$41.5 million

Cost to Date for Current Phase:
$2.3 million

CRA Reliability Program: CRA Pumping Plants Water Treatment Systems Replacement

This project will upgrade the domestic water treatment systems at all five Colorado River Aqueduct pumping plants.

Phase	Construction
% Complete for Construction	6%
Construction Contract Awarded	December 2021
Appropriation Number	15483
Contract Number	1949

The contractor mobilized, performed site survey, began excavation for underground electrical ductbanks and concrete support pedestals and footings, and began installation of above ground conduits for the domestic water tank and lighting at the Intake Pumping Plant. In the upcoming quarter, the contractor plans to continue installation of above ground conduits at the Intake Pumping Plant and procure the temporary treatment skids.

Contractor chip excavated subgrade for above ground conduit support pedestals at Intake Pumping Plant

Cost Efficiency and Productivity Program

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.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$15.43 million	$13.07 million

PROGRAM HIGHLIGHTS (4th Quarter)	
Status	Biennium expenditures for this program are less than planned due to shifts in timing of the work, with expenditures offset by schedule delays of several projects in the remaining appropriations within this program.
Accomplishments	• Awarded construction contract for battery energy storage system at the Weymouth plant • Prepared a request for proposal (RFP) associated with Enterprise Content Management Phase II
Upcoming Activities	Upcoming work for the next quarter will include: • Continue construction of battery energy storage systems at the Jensen and Skinner plants • Begin construction of battery energy storage system at the Weymouth plant • Continue WINS Water Billing System Upgrade • Continue Real Property Group Business System Replacement • Advertise a request for proposal (RFP) associated with Enterprise Content Management Phase II • Advertise RFP for Payroll-Timekeeping Reimplementation

Estimated Jensen and Skinner Construction Completion Date:
October 2022

Estimated Weymouth Construction Completion Date:
July 2023

Total Project Estimate:
$27.0 million*

Current Phase Estimate:
$24.9 million

Cost to Date for Current Phase:
$3.6 million

*** In June 2022, the total project estimate was revised from $25.6 million to $27.0 million***

Cost Efficiency & Productivity Program: Battery Energy Storage System

This project will install battery energy storage systems (BESS) at three locations: (1) one-megawatt (MW) BESS at the Jensen plant, (2) one-MW BESS at the Skinner plant, and (3) one-MW BESS at the Weymouth plant. The project is eligible for participation in the Self-Generation Incentive Program (SGIP).

Phase	Construction
% Complete for Construction of Jensen and Skinner	15%
% Complete for Construction of Weymouth	0%
Contract Awarded for Jensen and Skinner	September 2021
Contract Awarded for Weymouth	June 2022
Contract Number for Jensen and Skinner	1998
Contract Number for Weymouth	2014
Appropriation Number	15521

Final design for the Weymouth plant was completed and a construction contract was awarded. Design submittals were reviewed and the contractor continued construction of the fire access road at the Skinner plant. In the upcoming quarter, the contractor will mobilize and begin construction at the Weymouth plant. Submittals will continue to be reviewed and the contractor will begin construction of the equipment pads at the Jensen and Skinner plants.

Contractor installing crushed aggregate base for fire access road at Skinner WTP

Dams and Reservoirs Improvements Program

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

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$18.11 million	$7.80 million

PROGRAM HIGHLIGHTS (4th Quarter)

Status

Biennium expenditures for this program are less than planned due to schedule variances associated with the Dam Monitoring System Upgrades projects and time needed for the dam safety services and dam instrumentation request for qualifications (RFQ)s.

Accomplishments

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Completed scoping document and issued an RFQ to identify and select a qualified consultant to support implementation of the dam monitoring system upgrade
- Garvey Reservoir Rehabilitation
  - Issued an RFQ to identify qualified consultants for the dam monitoring system upgrade
- Lake Mathews and Lake Skinner Dam Monitoring System Upgrades
  - Issued an RFQ for dam safety services to identify and select a qualified consultant to complete preliminary and final design
- Lake Skinner Outlet Tower Seismic Upgrade
  - Identified qualified consultants to perform detailed structural analysis of the outlet tower

Upcoming Activities

Upcoming work for the next quarter will include:

- Diamond Valley Lake Dam Monitoring System Upgrades
  - Evaluate RFQ submittals and identify a consultant to support implementation of the system upgrade
- Garvey Reservoir Rehabilitation
  - Continue preliminary design
  - Evaluate RFQ submittals and identify a consultant to support implementation of the dam monitoring system upgrade
- Lake Mathews and Lake Skinner Dam Monitoring System Upgrades
  - Evaluate RFQ submittals and identify a consultant to complete preliminary and final design
- Lake Skinner Outlet Tower Seismic Upgrade
  - Evaluate structural analysis approach and methodologies proposed by consultants, select a consultant to perform detailed structural analysis of the outlet tower

Dams and Reservoirs Improvements Program: Garvey Reservoir Rehabilitation

This project will refurbish aging facilities at the Garvey Reservoir site and restore them to reliable operating condition.

Estimated Preliminary Design Completion Date:
December 2022

Total Project Estimate:
$68.5 million

Current Phase Estimate:
$3.9 million

Cost to Date for Current Phase:
$1.8 million

Phase	Preliminary Design
% Complete for Current Phase	50%
Current Phase Authorized	March 2021
Appropriation Number	15377

Metropolitan staff and the design consultant worked on developing the preliminary design report and a request for qualifications (RFQ), which was issued to prequalify consultants for the dam monitoring system upgrade. A workshop on nitrification was also completed. In the upcoming quarter, a value engineering workshop is scheduled to be completed and a consultant will be selected for the dam monitoring work.

Existing dam monitoring station at Garvey Reservoir

Distribution System Reliability Program

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, in order to reliably meet water demands.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$66.76 million	$81.54 million

PROGRAM HIGHLIGHTS (4th Quarter)	
Status	Biennium expenditures for this program are more than planned due to differences in timing between planned and actual payments for projects such as the Lakeview Pipeline Improvements and Middle Feeder Relocation for SCE Mesa Substation.

Accomplishments	• Started construction of the Casa Loma Siphon Barrel No. 1 Seismic Upgrade
	• Awarded construction contracts for:
	  o OC-88 Pump Station Chiller Replacement
	  o Orange County Feeder Relining - Stage 3
	  o West Valley, East Valley, and Sepulveda Feeders Intertie Structures Electrical Upgrades
	  o Upper Feeder Expansion Joint Replacement at the Santa Ana River Crossing

Upcoming Activities	Upcoming work for the next quarter will include: • Complete construction of Garvey Reservoir Drainage and Erosion Improvements - Areas 6 to 8, 10, and 11 • Begin construction of the Upper Feeder Expansion Joint Replacement at the Santa Ana River Crossing • Continue testing of the Garvey Reservoir Sodium Hypochlorite Feed System Upgrades

Distribution System Reliability Program: Etiwanda Pipeline Lining - Stage 3

Estimated Procurement Delivery Date:
August 2022

Total Project Estimate:
$37.5 million*

Current Phase Estimate:
$6.6 million

Cost to Date for Current Phase:
$6.2 million

**In June 2022, the Total Project Estimate changed from $30.0 million to $37.5 million*

This project will replace approximately 2.5 miles of the deteriorated internal mortar lining with a flexible polyurethane lining that could better withstand the significant changes in pressures experienced by the pipeline when operating the Etiwanda Hydroelectric Plant. This project will also reline approximately 1,300 feet of pipe with steel liner.

Phase	Procurement
% Complete for Procurement	83%
Procurement Phase Authorized	December 2021
Appropriation Number	15441
Procurement Contract Number	2011

The construction package was advertised and opened for bids. In the upcoming quarter, a construction contract will be awarded and procured steel liner material will be delivered to the project site.

Stage 3 project location in the cities of Fontana and Rancho Cucamonga

District Housing & Property Improvements Program

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*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$10.94 million	$5.62 million

PROGRAM HIGHLIGHTS (4th Quarter)	
Status	Biennium expenditures for this program are less than planned due to unanticipated additional geotechnical analysis that was necessary prior to completion of the preliminary design for all of the villages.
Accomplishments	• Completed preliminary design of the housing, village enhancements, and the kitchen and lodging improvements at Gene and Iron Mountain Pumping Plants • Completed value engineering workshop for the housing, village enhancements, and the kitchen and lodging improvements at the Hinds and Eagle Mountain Pumping Plants
Upcoming Activities	Upcoming work for the next quarter will include: • Authorize a consulting agreement for final design of the housing and property improvements program. • Continue preparation of the environmental documentation in support of the housing and property improvements program

Prestressed Concrete Cylinder Pipe (PCCP) Rehabilitation Program

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.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$53.59 million	$48.50 million

PROGRAM HIGHLIGHTS (4th Quarter)

Status

Biennium expenditures for this program are less than planned due to a delay in permitting and subsequent rescheduling of construction contract award for Second Lower Feeder Reach 3.

Accomplishments

- Second Lower Feeder Reach 3:
  - Awarded a construction contract for Reach 3A, which will reline approximately 1.2 miles of pipeline from Oak Street Pressure Control Structure south through City of Rolling Hills Estates to the Palos Verdes Reservoir
  - Continued design and permits acquisition of Reach 3B, which will reline approximately 3.6 miles of pipeline from the intertie with Sepulveda Feeder south to Oak Street PCS, through the cities of Torrance, Los Angeles, and Lomita, and will replace three 48-inch diameter sectionalizing valves at the intertie with Sepulveda Feeder
- Allen-McColloch Pipeline:
  - Continued preliminary design for rehabilitation, including identification of proposed pipe access excavation pits for approximately 9 miles of PCCP
  - Began evaluating a member agency partnership proposal that may facilitate rehabilitation work.
- Sepulveda Feeder Reach 1 - Continued final design to rehabilitate approximately three miles of Sepulveda Feeder 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. Work includes preparation of final design drawings, traffic control plans, and permitting.
- Sepulveda Feeder Reach 2 - Continued final design to rehabilitate approximately 3.8 miles of Sepulveda Feeder from the Dominguez Gap Channel crossing south to the intertie with Second Lower Feeder, through the cities of Torrance and Los Angeles. Work includes preparation of final design drawings, traffic control plans, and permitting.
- Second Lower Feeder Isolation Valve Procurement - Continued fabrication of the sixth through tenth of the thirteen large-diameter conical plug valves and actuators. Worked with the manufacturer to schedule the shipment of completed valves until PCCP Rehabilitation Valve and Equipment Storage Building is completed.

- PCCP Rehabilitation Valve and Equipment Storage Building - Completed mobilization and grading for construction of a new valve storage building at Lake Mathews. This building will safely store large-diameter valves and actuators to support the PCCP Rehabilitation Program.
- Calabasas Feeder – Solicited proposals for engineering services to complete preliminary design work the relining of the entire approximately nine miles long Calabasas Feeder PCCP line

Upcoming Activities

Upcoming work for the next quarter will include:

- Second Lower Feeder Reach 3A - Review contractor submittals
- Second Lower Feeder Reach 3B - Continue final design and seek construction permit approvals
- Sepulveda Feeder South Reaches 1 and 2 - Continue developing final designs and initiate permitting process for long-lead permits from Caltrans, City of Los Angeles, and City of Torrance
- Sepulveda Feeder North – Authorize a new agreement for preliminary design
- Second Lower Feeder Isolation Valve Procurement - Complete fabrication of the sixth and continue fabrication on the seventh through tenth of thirteen large-diameter conical plug valves
- PCCP Rehabilitation Valve and Equipment Storage Building - Continue contractor submittal reviews and site work including drainage improvements and utilities
- Allen-McColloch Pipeline - Continue preliminary design and prepare a response to member agency's input to shutdown planning
- Calabasas Feeder Preliminary Design - Authorize a new professional services agreement to complete preliminary design

Estimated Construction Completion Date:
June 2023

Reach 3A Total Project Estimate:
$21.6 million

Current Phase Estimate:
$18.3 million

Cost to Date for Current Phase:
$0.5 million

PCCP Rehabilitation Program: Second Lower Feeder PCCP Rehabilitation – Reach 3A

This project will rehabilitate approximately 1.2 miles of PCCP segments of the Second Lower Feeder within the city of Rolling Hills Estates with steel liner. The project will also enlarge four existing pipe access shafts for improved egress and relocate one air release and vacuum valve.

Phase	Construction & Closeout
% Complete for Construction	2%
Construction Contract Awarded	May 2022
Appropriation Number	15497
Contract Number	1903

The Reach 3A construction contract was awarded and a notice to proceed (NTP) was issued. In the upcoming quarter, submittal review, coordination with the City of Rolling Hills Estates and contractor, and community outreach will begin.

Second Lower Feeder Reach 3A pipe new access sites in the City of Rolling Hills Estates

Regional Recycled Water Supply Program

Program Information: *The Regional Recycled Water Supply (Pure Water Southern California) 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.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$0.21 million	$0.37 million

PROGRAM HIGHLIGHTS (4th Quarter)	
Status	Biennium expenditures for this program are consistent with planned expenditures.

Accomplishments	• Advanced Water Treatment Demonstration Facility:
	  o Coordinated with the independent scientific advisory panel to review Phase 1 draft testing report
	• Direct Potable Reuse Demonstration Facility
	  o Initiated study and conducted technical workshops to identify potential studies for testing future direct potable reuse (DPR) processes

Upcoming Activities	Upcoming work for the next quarter will include:
	• Continue warranty repairs on equipment and post-contract system improvements to enhance safety and operational reliability of the AWT
	• Advanced Water Treatment Demonstration Facility:
	  o Continue coordination with the State Water Resources Control Board to submit final reimbursement invoice as part of the grant funding agreement
	  o Continue to finalize Phase 1 testing report
	  o Continue post-construction contract improvements to enhance safety and operational reliability
	• Direct Potable Reuse Demonstration Facility:
	  o Continue study to modify the AWT Demonstration Facility to allow testing of future direct potable reuse processes

Right-Of-Way and Infrastructure Protection Program

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 in order to address access limitations, erosion-related issues, and security needs.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$8.07 million	$4.08 million

PROGRAM HIGHLIGHTS (4th Quarter)	
Status	Biennium expenditures for this program are less than planned due to design resources being diverted to work on urgent drought related projects.
Accomplishments	• Began construction of Western San Bernardino County - Stage 1
Upcoming Activities	Upcoming work for the next quarter will include: • Continue final design for Western San Bernardino County Region - Stage 2 • Continue final design for two urgent repair sites along San Diego Pipelines 4 & 5 as part of Riverside and San Diego County Region - Stage 2

System Flexibility/Supply Reliability Program

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.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$38.21 million	$25.41 million

PROGRAM HIGHLIGHTS (4th Quarter)	
Status	Biennium expenditures for this program are less than planned due to differences between the planned and actual start of the Perris Valley Pipeline Tunnels and other projects.
Accomplishments	• Advertised a contract to procure large diameter isolation valves for the Rialto Pipeline Water Supply Reliability Improvements projects • Completed design of the Perris Valley Pipeline Tunnels
Upcoming Activities	Upcoming work for the next quarter will include: • Advertise a contract for construction of the Perris Valley Pipeline Tunnels • Continue design of the Rialto Pipeline Water Supply Reliability Improvements. This effort consists of the following individual projects. o Wadsworth Pumping Plant Bypass Pipeline o Wadsworth Pumping Plant Stage 2 - Badlands Tunnel Surge Tank Facility o Inland Feeder/Rialto Pipeline Intertie o Inland Feeder/San Bernardino Valley Municipal Water District (SBVMWD) Pump Station Intertie • Award a contract to procure large diameter isolation valves for the Rialto Pipeline Water Supply Reliability Improvements • Complete evaluation of the West Service Area Water Supply Reliability Improvements consisting of the following individual projects: o West Area Supply and Delivery Alternatives o Drought Response West Side Pump Station

System Flexibility/Supply Reliability Program: Perris Valley Pipeline - Tunnels

Final Design Completion Date:
June 2022

Total Project Estimate:
*$78.2 million**

Current Phase Estimate:
*$4.8 million***

Cost to Date for Current Phase:
$4.8 million

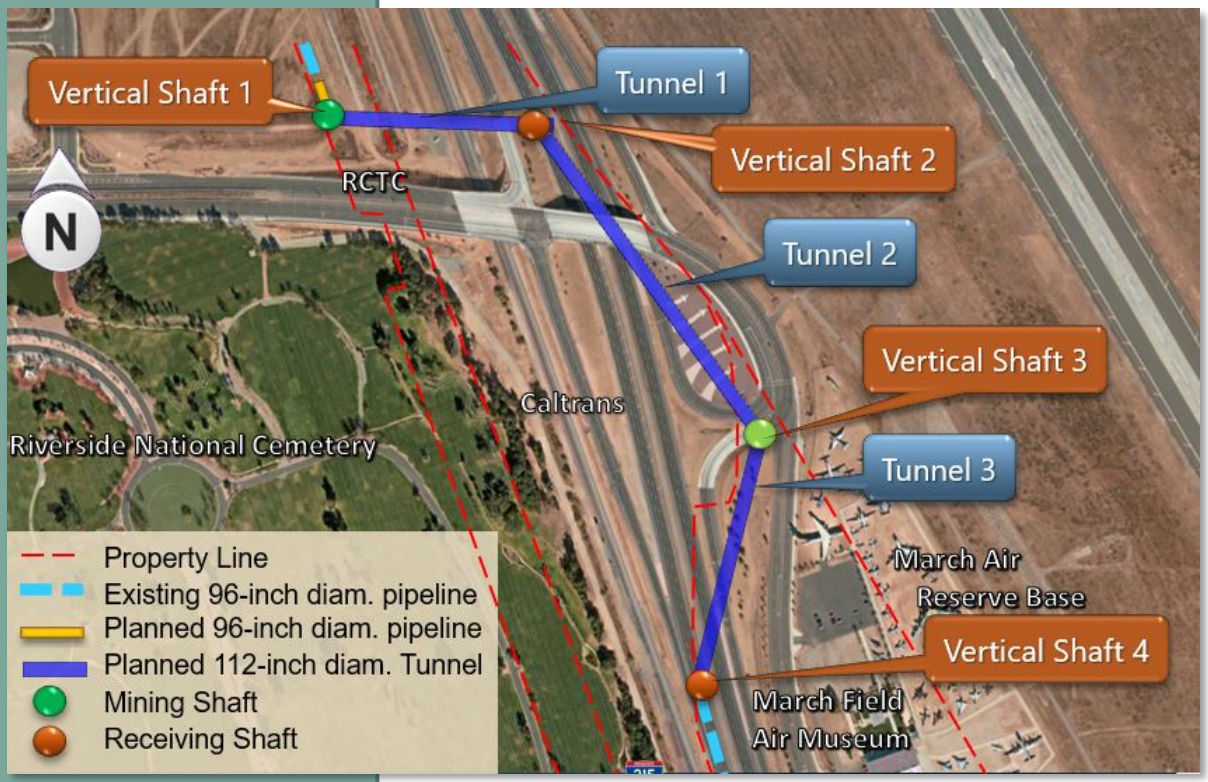
**In May 2022 the total project estimate changed from $66.0 million to $78.2 million*

***$5.4 million reported in Q1 of FY 2021/22 included preliminary design*

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

Phase	Final Design
% Complete for Current Phase	100%
Current Phase Authorized	January 2010
Appropriation Number	15425

Final design was completed, and negotiations continued with March Joint Powers Authority and CalTrans to obtain the necessary easements and permits prior to the start of construction. In the upcoming quarter, the construction bid package will be advertised.



Interstate 215 crossing project area

System Reliability Program

Program Information: *The System Reliability Program is comprised of projects to improve or modify facilities located throughout Metropolitan's service area in order 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.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$96.91 million	$81.30 million

PROGRAM HIGHLIGHTS (4th Quarter)

Status

Biennium expenditures for this program are less than planned due to shift in timing of the work and supply chain disruption.

Accomplishments

- Desert Microwave Site Tower Upgrades - performed detailed planning using data gathered from site visits
- Fuel Management System Upgrade - monitored pilot installation of first fuel management unit at Sunset Garage site
- Headquarters Fire Alarm Upgrade - Fire alarm system upgrades are completed on floors P1 through the 3rd floor
- Completed construction for Lake Mathews Disaster Recovery Facility Upgrades
- Skinner Facility Area Paving - continued construction

Upcoming Activities

Upcoming work for the next quarter will include:

- Applications-Servers Upgrade - continue to migrate and upgrade applications in batches
- Datacenter Backup Infrastructure Upgrade - advertise a request for proposal (RFP)
- Headquarters Fire Alarm Upgrade - continue upgrade of building fire and life safety systems
- Headquarters Security Upgrade Stage 2 - continue installation of new interior building security features
- MWD Cyber Security Upgrade:
  - Continue deployment of secure web gateway software to MWD-owned workstations and laptops
  - Continue deployment of privileged access management software to MWD-owned workstations, laptops, and servers
- Skinner Facility Area Paving - complete construction
- WiFi Upgrade:
  - Headquarters building access point - continue installation

Estimated Deployment Completion Date:
June 2023

Total Project Estimate:
$1.5 million

Current Phase Estimate:
$1.0 million

Cost to Date for Current Phase:
$93,000

System Reliability Program: Fuel Management System Upgrade

This project will replace the existing fuel management system with a newer, more capable, and reliable system.

Phase	Deployment
% Complete for Current Phase	9%
Current Phase Authorized	September 2021
Appropriation Number	15501

The pilot site at Sunset Garage was monitored. Jensen, Soto, Diemer, and La Verne sites were prepared for installation. In the upcoming quarter, installations will begin at Jensen, Soto, Diemer, and La Verne. Pool vehicles at Union Station will be fitted with transponder devices.

Pilot fuel management kiosk at Sunset Garage

Treatment Plant Reliability Program

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 in order to continue to reliably meet treated water demands.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$75.78 million	$89.26 million

PROGRAM HIGHLIGHTS (4th Quarter)

Status

Biennial expenditures for this program are more than planned due to shifts in timing of the work.

Accomplishments

- Completed construction of Jensen Electrical Upgrades – Stage 2
- Completed preliminary design of Weymouth Administration and Control Buildings seismic upgrades
- Began preliminary design of:
  - Diemer Filter Rehabilitation
  - Jensen Reservoir Bypass Gate Replacement
  - Water Quality Laboratory Upgrades
- Awarded construction contract and began construction of:
  - Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation
  - Jensen Ozone PSU Replacement – Stage 1
- Continued construction of:
  - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades
- Continued procurement of power supply units (PSU) and dielectrics for Jensen ozone generators
- Began equipment procurement for Diemer Power and Distribution Panel Upgrade

Upcoming Activities

Upcoming work for the next quarter will include:

- Continue procurement of:
  - Jensen ozone PSUs and dielectrics. Delivery of the equipment is expected in the summer of 2022.
  - Equipment for Diemer Power and Distribution Panel Upgrade
- Obtain authorization of an agreement for final design to upgrade Weymouth Administration and Control Buildings
- Continue preliminary design of:
  - Diemer Filter Rehabilitation
  - Jensen Reservoir Bypass Gate Replacement
  - Water Quality Laboratory Upgrades
- Continue construction of:
  - Jensen Ozone PSU Replacement – Stage 1
  - Mills Electrical Upgrades - Stage 2
  - Mills Module Nos. 3 and 4 Flash Mix Chemical Containment Upgrades
  - Weymouth Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation

Treatment Plant Reliability Program: Jensen Electrical Upgrades – Stage 2

Construction Completion Date:
June 2022

Total Project Estimate:
$52.5 million

Current Phase Estimate:
$23.5 million

Cost to Date for Current Phase:
$22.0 million

The Stage 2 improvements will upgrade two unit power centers and their associated motor control centers and provide needed redundancy for critical components of the plant's electrical system.

Phase	Construction & Closeout
% Complete for Construction	100%
Construction Contract Awarded	July 2019
Appropriation Number	15442
Contract Number	1914

Construction was completed and a Notice of Completion (NOC) was filed. In the upcoming quarter, record drawings will be prepared and the project will be closed out.

Completed unit substations 7A&B and 9A&B at the Jensen plant

Water Quality/Oxidation Retrofit Program

Program Information: *The Water Quality/Oxidation Retrofit Program (ORP) 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.*

Planned Biennium Expenditures (July 2020 through June 2022)	Actual Biennium Expenditures (July 2020 through June 2022)
$0.02 million	$0.33 million

PROGRAM HIGHLIGHTS (4th Quarter)	
Status	Biennial expenditures and progress are consistent with the plan for this program
Accomplishments	• Mills Enhanced Bromate Control Facilities o Continued final design
Upcoming Activities	Upcoming work for the next quarter will include: • Continue final design of Mills Enhanced Bromate Control Facilities

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

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

For the past two bienniums, the two-year budgets for the Minor Cap Program have been $10 million, and $15.5 million respectively. In April 2020, the Board appropriated funds for the projects identified in the CIP appendix for the current biennium, FYs 2020/21–2021/22, including the Minor Cap Program. $20 million has been allocated for the current biennium.

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 2020/21–2021/22.

	Fiscal Year			Totals
	2016/17–2017/18	2018/19–2019/20	2020/21–2021/22	
Amount Appropriated	$10M	$15.5M	$20M	$45.5M
Expenditures (through June 2022)	$7.2M	$11.4M	$6.7M	$25.3M
Number of Projects Approved	41	48	54	143
Number of Projects Completed (through June 2022)	40	29	4	73
Percent of Work Complete	99%	88%	39%	N/A
Number of Projects with Durations of Over 3 Years	1	7	0	0

Through June 2022, 72 of the 142 projects have been completed, and seven active projects have exceeded three years in duration, as described below.

- Garvey Reservoir Sodium Hypochlorite Tank Replacement has experienced delays due to the Texas deep freeze event, which caused power and resin supply chain disruptions in 2021. As a result, delivery of the new tank has been rescheduled and is now expected by July 2022. Metropolitan force construction will complete tank installation by December 2022.
- Gene Inlet Surge Chamber Access Improvement has experienced delays due to re-scheduling of the installation of recently fabricated hatch cover, which can only occur when Gene Wash Reservoir water level is lowered. Metropolitan force construction plans to complete the hatch cover installation during the 2023 CRA shutdown and complete the project by April 2023.
- Gene Pool Refurbishment has experienced delays due to 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 December 2022.
- Irvine Regulating Structure Sump Drain Line Modification is substantially complete. The project is scheduled to be closed upon contractor's completion of punch-list items, in August 2022.
- OC-88 Fire Protection System Upgrades started construction in late 2021, however, the contract was terminated as a result of the contractor's debarment by the State of California's Department of Industrial Relations. A new contract has been awarded, and the project is scheduled to be completed in September 2022.
- San Diego Pipeline No. 2 Access Road Relocation was originally advertised for bids in November 2020 to be constructed by a contractor, but construction did not start in Spring 2021 as planned due to COVID-19 pandemic restrictions and the contract was terminated. Now the work is being performed by Metropolitan force construction, and the project is scheduled to be completed in August 2022
- Water Quality HVAC Energy Management Upgrade construction was completed in June 2022. The project was closed in July 2022.

Planned biennium expenditures to date (July 2020 through June 2022) for the Minor Capital Projects Program were $9.15 million, while actual biennium expenditures for the same period were $12.94 million.

Minor Cap Projects, 4th Quarter

Authorized Projects

Seven projects were authorized under the Minor Cap Program during the 4th Quarter of fiscal year 2021/22 (April through June 2022):

- CRA Canal Sidewall Replacement at Mile Marker 33 – This project will replace three areas of deteriorated canal sidewall panels, covering an area of approximately 1,500 square feet, on the CRA canal located near mile marker 33.4. The project budget is $180,000.
- CRA Fall Prevention Swing Gates - This project will procure and install self-closing swing gates to replace existing fall prevention chains located on fixed-ladder ways and elevated

platforms at the CRA conveyance and distribution facilities, to comply with updated Cal-OSHA requirements. The project budget is $308,000.

- Foothill Feeder Pipe Protection – This project will replace the eroded soil cover to protect the exposed Foothill Feeder pipeline along the Newhall Creek. The project budget is $390,000.
- Skinner Plant Chemical Flowmeter Replacement - This project will replace 16 chemical flow meters at the Skinner plant, which are obsolete and no longer supported by the manufacturer. The project budget is $355,000.
- Skinner Plant No. 1 Filter Access Improvements – This project will design and install ladder access gates at 54 filters in Skinner Plant No. 1 to enhance personnel safety. The project budget is $360,000.
- Skinner Washwater Reclamation Plant No. 2 Basin 6 Launder and Weir Replacement – This project will remove and replace the aging fiberglass launders, weirs, and associated stainless steel hardware in Basin 6 of the Washwater Reclamation Plant No. 2 to improve effectiveness of suspended solids collection. The project budget is $350,000.
- Vibration Data Collection System Upgrade – This project will upgrade and modernize the vibration collection system located at Gene Pumping Plant and DVL, which are no longer supported by the manufacturer and does not transmit data to the central server that collects vibration data from other locations. The project budget is $110,000.

Completed Projects

Four projects were completed under the Minor Cap Program during the 4th Quarter of fiscal year 2021/22 (April through June 2022):

- CRA Lakeview Siphon Leak Repair
- CRA Pumping Plant Station Battery Replacement
- San Diego Canal Dewatering Sump Upgrade
- West Coast Feeder/Palos Verdes Feeder Interconnection Valve Automation

Cancelled Projects

- None

PROJECT ACTIONS

Table 5 lists capital project actions authorized by the Board and the General Manager along with funding allocation amounts during the 4th Quarter of FY 2021/22, through the authority delegated by the Board in April 2020. The total funding amount authorized by the General Manager during the 4th Quarter is $17,676,200, through thirty-six management actions. In some cases 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.

Table 5: Capital Projects Funded by General Manager Authorization

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Arc Flash Software Model Development	Assessment, Development, Analyses, & Mitigation	$0	$12,000,000
Battery Energy Storage System at Weymouth Water Treatment Plant	Construction	$50,000	$9,030,000
CRA Pumping Plants 6.9 kV Power Cable Replacement[2]	Expert Witness and Legal Services	$300,000	$900,000
Diemer Chemical Feed System Improvements[3]	Additional Preliminary Design	$500,000	$3,768,000
Diemer Filter Rehabilitation	Preliminary Design	$341,000	$1,573,000
Diemer Power and Distribution Panel Upgrades	Procurement and Construction	$285,000	$1,350,000
Direct Potable Reuse Demonstration Facility	Preliminary Design Oversight	$400,000	$400,000
Greg Avenue Pump Station Rehabilitation[4]	Additional Design, Procurement, Installation, Testing, and Start up	$250,000	$1,580,910

2 Additional funds were required for legal and consulting services authorized per April 2022 Board letter Item 7-17 heard in closed session.

3 Additional funds were required to update preliminary design to address changed chemical feed design criteria after the implementation of ozonation at the Diemer plant.

4 Additional funds were required for staff time, design, procurement, installation, start-up support, and record drawings of new check valves and mechanical seals for system enhancements to facilitate around the clock, unstaffed operation.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Jensen Electrical Upgrades - Stage 3	Study	$740,000	$3,400,000
Jensen Solids Mechanical Dewatering Facility	Study	$45,000	$50,000
Jensen Ozone PSUs Replacement – Stage 2	System Evaluation	$510,000	$510,000
Jensen Ozone PSUs Replacement – Stage 1[5]	Additional Construction	$0	$780,897
Jensen Reservoir Bypass Gate Refurbishment	Preliminary Design	$148,000	$522,000
Jensen Site Security Improvements[6]	Additional Preliminary Design	$205,000	$205,000
La Verne Shops Building Completion – Stage 5	Construction	$467,200	$24,700,000
Mills Plant Control System Upgrade	Design, Procurement, & Implementation	$240,000	$19,945,000
OC-88 Pump Station Chillers Replacement	Construction	$100,000	$4,200,000
Orange County Feeder Relining - Reach 3[7]	Additional Final Design, Re-permitting, & Lease Extension	$800,000	$800,000
Orange County Feeder Relining - Reach 3	Construction	$1,000,000	$22,400,000
Payroll and Timekeeping System Upgrade	Design, Development, & Deployment	$250,000	$1,670,000

[5] Additional authorization was required for the increased amount of the construction contract resulting from the difference between the November 2021 and June 2022 board awards after finding out that the original contractor was debarred from bidding or being awarded a public works contract in California.

[6] Additional preliminary design funds were required to perform comprehensive subsurface utility survey to validate alignment for approximately 4,600 linear feet of new duct banks.

[7] Additional funds were required for final design to comply with updated pipeline access hole safety criteria, re-permitting with different agencies, and land lease extension of pipe storage site location.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Perris Valley Pipeline - Tunnels[8]	Additional Geotechnical Investigation, CEQA Documentation, Preliminary Design, & Final Design	$2,700,000	$2,700,000
San Diego Canal Radial Gate Replacement[9]	Additional investigation, Final Design, Fabrication, & Installation	$310,000	$320,000
Second Lower Feeder PCCP Rehabilitation – Reach 3A	Construction	$0	$19,100,000
Seven Minor Capital Projects	Design & Construction	$2,053,000	$2,053,000
Skinner Facility Area Paving[10]	Additional Construction	$250,000	$250,000
Upgrades at Three Sepulveda Feeder Structures	Construction	$50,000	$4,700,000
Weymouth Chlorination System Upgrades[11]	Additional Construction	$250,000	$250,000
Weymouth Domestic and Fire Water System Improvements[12]	Additional Construction	$150,000	$150,000
Weymouth Treatment Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation	Construction	$5,000,000	$114,000,000

8 Additional design funds were required to realign pipeline to avoid sources of groundwater, avoid crossing under bridge abutments, and reduce potential ground settlement impacts to I-215 Freeway. The funds were also required to perform additional site environmental surveys and prepare an addendum to the original Environmental Impact Report.

9 Additional funds were required for investigation, design, fabrication, and installation of steel structural members to stiffen the V-06 radial gate after cracks were discovered during 2021 CRA shutdown inspection of the gate.

10 Additional construction funds were required to improve additional areas of deteriorating pavement identified during construction.

11 Additional funds were required for shutdown coordination, revisions during commissioning and testing, staff labor to complete start-up, record drawings, and integration of chlorination equipment.

12 Additional funds were required for coordination and field inspection due to the realignment of the potable water line and to update record drawings.

Project Authorized	Activity Authorized	Amount Authorized for Current Biennium	Total Amount Authorized
Weymouth Water Quality Instrumentation Improvements[13]	Additional Construction	$150,000	$150,000
Whitewater Tunnel No. 2 Seismic Upgrade[14]	Additional Preliminary Design	$440,000	$440,000
	Total	**$17,984,200**	**$253,897,807[15]**

Due to a reduction or increase in anticipated expenditures through June 2022 on the following projects, $9.5 million was returned to and $2.2 million was reallocated from the CIP Appropriation (Appropriation No. 15517). Reallocations from Appropriation No. 15517 were distributed to the previously authorized projects listed in Table 6 below. While these reallocations changed the biennial funded amount, the total authorized funding for each project remained the same.

Table 6: General Manager Actions to Reallocate Capital Project Funds

Project	Amount Authorized for Reallocation To/From CIP Appn.	Total Amount from CIP Appn. for Current Biennium
Headquarters Fire Alarm and Smoke Control Upgrades	$(9,000,000)	$10,553,000
Casa Loma Siphon #1 Seismic Upgrades	$2,100,000	$20,387,019
Greg Avenue Pump Station Rehabilitation	$60,000	$13,976,800
La Verne Shops Building Completion – Stage 5	$60,000	$525,000
Jensen Ozone PSUs Replacement - Stage 1	$(510,000)	$6,182,000
Total:	**$(7,290,000)**	

[13] Additional funds were required for testing and calibration of additional water quality instruments, completion of start-up, commissioning, and record drawings.

[14] Additional funds were required for preliminary design activities including additional geotechnical investigation to improve the road access to the west portal area, additional structural analysis to better define the length of the tunnel at the portal sections, and value engineering.

[15] Excludes $900,000 reduction in total amount authorized for Direct Potable Reuse Demonstration Facility which was previously reported as $2,700,000 in Q2 of FY 2021-22. The corrected amount authorized by October 2021 Board letter Item 7-3 is $1,800,000.

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 2020. 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 heard in closed session.

Table 7: CEQA Exemption Determinations

Projects
Live Oak Reservoir Bypass Pipeline Cathodic Protection
Badlands Tunnel Surge Tank Facility
Headquarters Building Physical Security Improvements – Stage 3

CONSTRUCTION AND PROCUREMENT CONTRACTS

The table below summarizes the status of all construction and procurement contracts that were 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 $41,702,349.

Table 8: Summary of Construction and Procurement Contracts during 4th Quarter (April through June 2022)

Summary	Construction	Procurement
Number of Contracts Active during this Quarter[16]	30	15
Total Contract Amount of Active Contracts	$372,988,390	$67,101,522
Number of Contracts Completed this Quarter[17]	3	0
Number of Contracts Awarded this Quarter[18]	9	0
Total Contract Amount of Contracts Awarded this Quarter	$157,312,960	$0
Contract Earnings[19, 20, 21] this Quarter	$22,746,929	$18,955,420

The figures on the next two pages show the locations of the thirty active construction contracts during the 4th Quarter.

16 Number of Contracts Active during this Quarter includes those that were underway as well as those that were completed during the 4th Quarter.

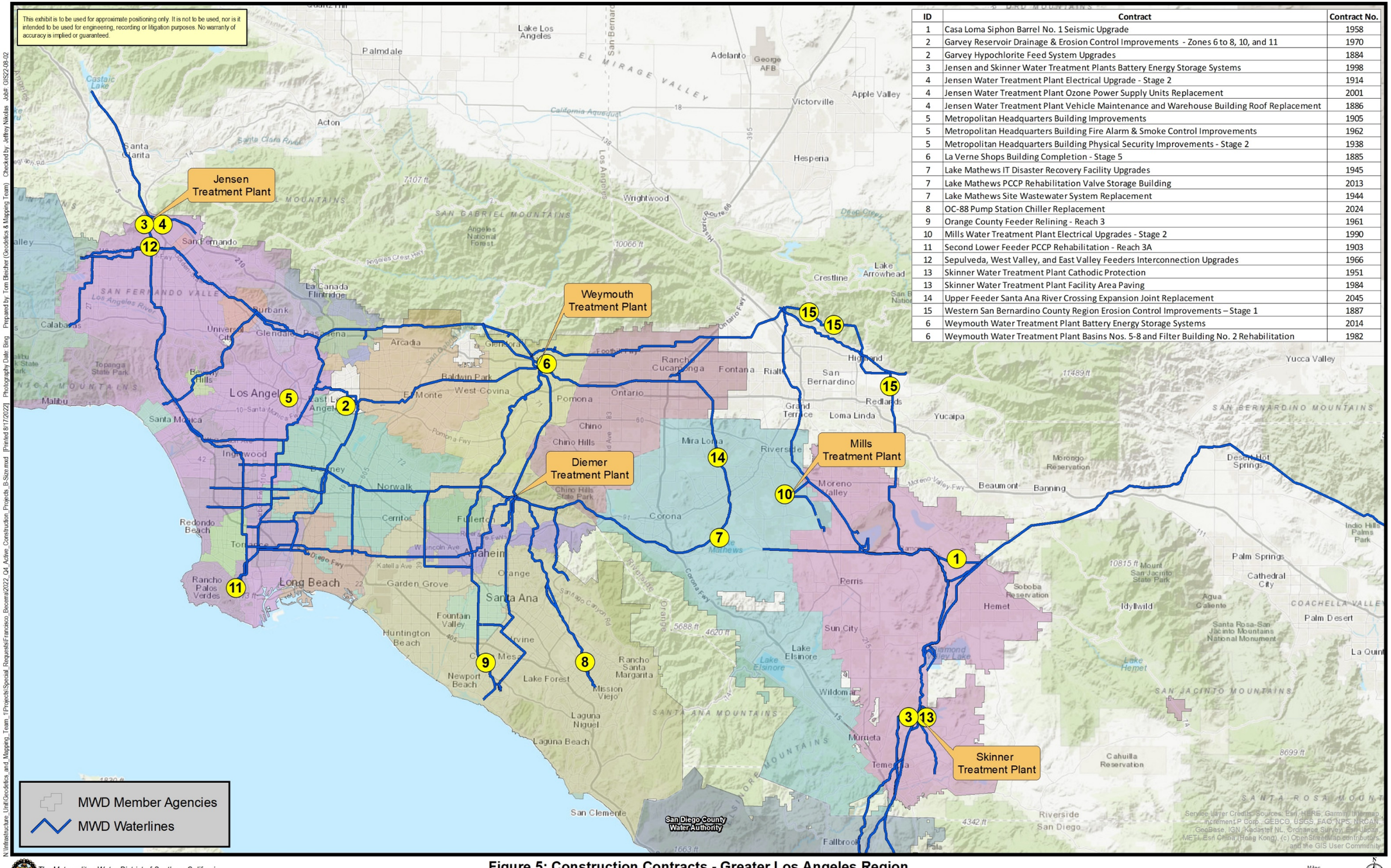
17 Completed construction contracts are those which Metropolitan has accepted as physically complete and has filed Notice of Completion during the 4th Quarter. Completed procurement contracts are those which Metropolitan has received complete delivery and use of field services during the 4th Quarter.

18 On June 28, 2022, Metropolitan awarded Contract No. 2045 under the General Manager's contracting authority in specified circumstances to PCL Construction, Inc. to respond to an emergency on the Upper Feeder at the Santa Ana River Bridge.

19 Contract earnings reflected in this report represent the value of the work performed by the contractor by the 25th day of the month. Contract earnings include contract retention and other similar deductions for the amounts earned by the contractor, but otherwise required to be withheld by Metropolitan by law or by contract.

20 Contract payments are typically made by Metropolitan in the month following performance of the work.

21 For the reasons listed above in the preceding two footnotes, contract payments in Metropolitan's financial system may be less than the earnings until the final payment has been made to the contractor.

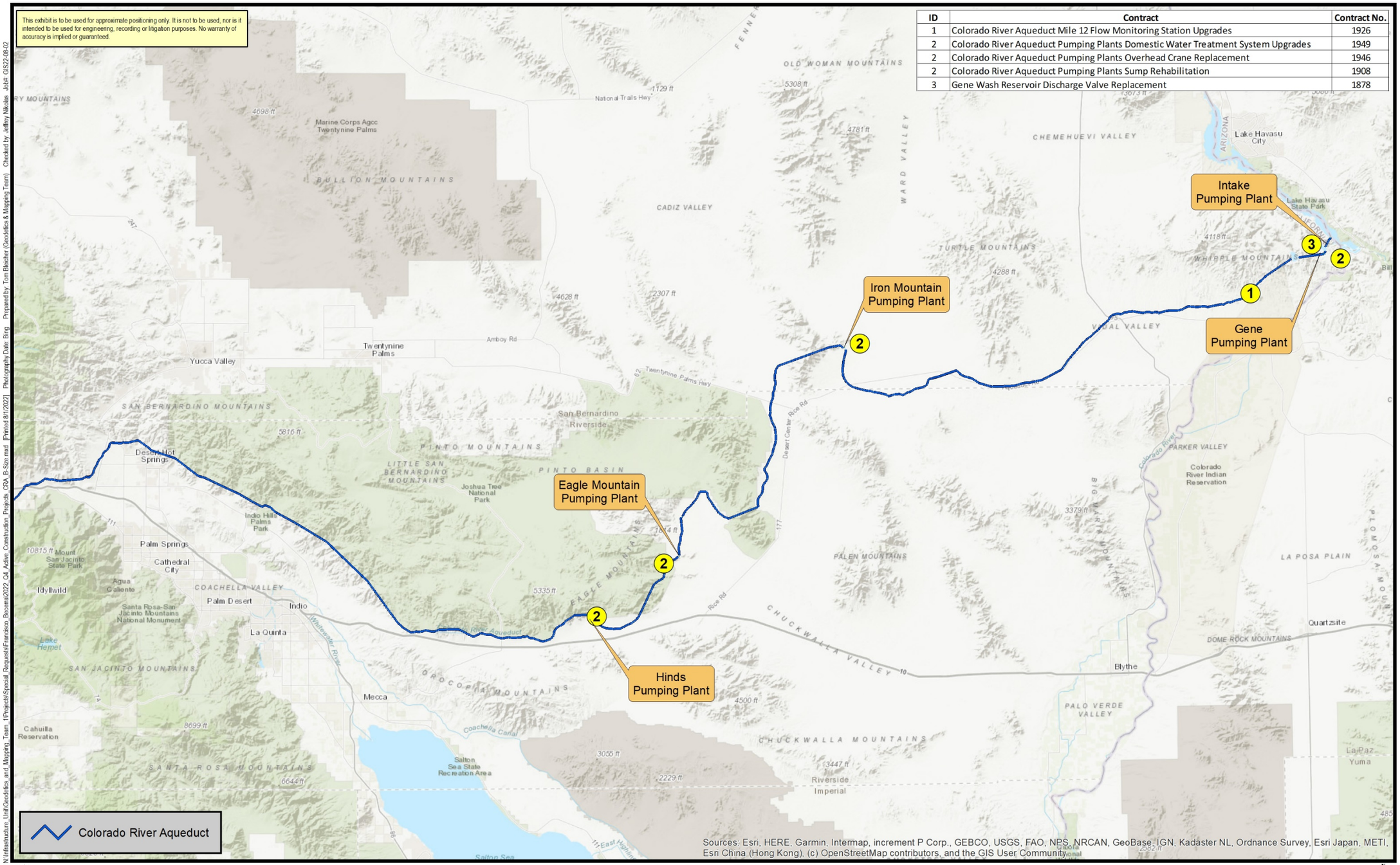


ID	Contract	Contract No.
1	Casa Loma Siphon Barrel No. 1 Seismic Upgrade	1958
2	Garvey Reservoir Drainage & Erosion Control Improvements - Zones 6 to 8, 10, and 11	1970
2	Garvey Hypochlorite Feed System Upgrades	1884
3	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	1998
4	Jensen Water Treatment Plant Electrical Upgrade - Stage 2	1914
4	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	2001
4	Jensen Water Treatment Plant Vehicle Maintenance and Warehouse Building Roof Replacement	1886
5	Metropolitan Headquarters Building Improvements	1905
5	Metropolitan Headquarters Building Fire Alarm & Smoke Control Improvements	1962
5	Metropolitan Headquarters Building Physical Security Improvements - Stage 2	1938
6	La Verne Shops Building Completion - Stage 5	1885
7	Lake Mathews IT Disaster Recovery Facility Upgrades	1945
7	Lake Mathews PCCP Rehabilitation Valve Storage Building	2013
7	Lake Mathews Site Wastewater System Replacement	1944
8	OC-88 Pump Station Chiller Replacement	2024
9	Orange County Feeder Relining - Reach 3	1961
10	Mills Water Treatment Plant Electrical Upgrades - Stage 2	1990
11	Second Lower Feeder PCCP Rehabilitation - Reach 3A	1903
12	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	1966
13	Skinner Water Treatment Plant Cathodic Protection	1951
13	Skinner Water Treatment Plant Facility Area Paving	1984
14	Upper Feeder Santa Ana River Crossing Expansion Joint Replacement	2045
15	Western San Bernardino County Region Erosion Control Improvements – Stage 1	1887
6	Weymouth Water Treatment Plant Battery Energy Storage Systems	2014
6	Weymouth Water Treatment Plant Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation	1982

N:\Infrastructure_Unit\Geodetics_and_Mapping_Team_1\Projects\Special_Requests\Francisco_Becerra\2022_Q4_Active_Construction_Projects_B-Size.mxd [Printed 8/17/2022] Photography Date: Bing Prepared by: Tom Bleicher (Geodetics & Mapping Team) Checked by: Jeffrey Nikolas Job#: GIS22-08-02

The Metropolitan Water District of Southern California
Engineering Services Group

Figure 5: Construction Contracts - Greater Los Angeles Region



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 three contracts for which Metropolitan accepted the contract as completed during the 4th Quarter of FY 2021/22 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.	Contract	Notice of Completion	Original Bid Amount	Final Contract Costs	Change Order	Change Order %
1878	Gene Wash Reservoir Discharge Valve Replacement	May 2022	$5,316,900	$5,375,921	$59,021	1.1%
1914	Joseph Jensen Water Treatment Plant Electrical Upgrade - Stage 2	June 2022	$14,784,000	$15,436,467	$652,467	4.4%
1945	Lake Mathews IT Disaster Recovery Facility Upgrades	May 2022	$448,900	$448,900	$0	0%
		Totals:	**$20,549,800**			

For the 4th Quarter, the total bid amount of the completed contract was approximately $20.6 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 contracts during the preceding 12-month period (July 2021 through June 2022) is 3.28 percent[22].

[22] Original amount of contracts completed (Jul. 2021 through Jun. 2022) = $84,240,440
Change orders for completed contracts (Jul. 2021 through Jun. 2022) = $2,767,041
Change order percentage for (Jul. 2021 through Jun. 2022) = 3.28%

Contracts Awarded by the Board during 4th Quarter:

During the period of April through June 2022, eight construction contracts totaling $156,112,960 were awarded by the Board.

Table 10: Construction and Procurement Contracts Awarded This Quarter

Construction Contracts	
La Verne Shops Building Completion - Stage 5	
Contract Number	1885
Contractor	Woodcliff Corporation
Amount	$18,930,000
Second Lower Feeder PCCP Rehabilitation - Reach 3A	
Contract Number	1903
Contractor	J.F. Shea Construction, Inc.
Amount	$11,884,700
Orange County Feeder Relining - Reach 3	
Contract Number	1961
Contractor	Spiniello Infrastructure West, Inc.
Amount	$17,226,250
Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	
Contract Number	1966
Contractor	Blois Construction, Inc.
Amount	$3,143,592
Weymouth Water Treatment Plant Basins Nos. 5-8 and Filter Building No. 2 Rehabilitation	
Contract Number	1982
Contractor	J.F. Shea Construction, Inc.
Amount	$93,840,000
Jensen Water Treatment Plant Ozone Power Supply Units Replacement	
Contract Number	2001
Contractor	Leed Electric, Inc.
Amount	$2,257,897
Weymouth Water Treatment Plant Battery Energy Storage System	
Contract Number	2014
Contractor	Siemens Industry, Inc.
Amount	$6,176,521

OC-88 Pump Station Chiller Replacement	
Contract Number	2024
Contractor	Mehta Mechanical Co., Inc. dba MMC Inc.
Amount	$2,654,000

The table on this page lists the 27 ongoing construction contracts through the end of the 4th Quarter. Also, Metropolitan is negotiating a settlement with the contractor on Construction Contract No. 1908 to remove the remaining construction portion of the contract, which was suspended due to Metropolitan's response to COVID-19. As part of the settlement, Metropolitan is procuring materials and equipment from the contractor for a future construction contract.

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

	Cont. No.	Contract Title	Contractor	Contract Amount[23]	Earnings Through June 2022	Start Date	Est. Com-pletion Date	Est. Percent Complete
1	1884	Garvey Reservoir Sodium Hypochlorite Feed System Upgrades	Metro Builders & Engineers Group, Ltd.	$2,430,457	$2,379,557	4/9/21	7/22	98%
2	1885	La Verne Shops Building Completion - Stage 5	Woodcliff Corporation, Inc.	$18,930,000	$400,000	6/10/22	5/24	2%
3	1886	Joseph Jensen Water Treatment Plant Vehicle Maintenance Building Roof Replacement[24]	AME Builders, Inc. dba AME Roofing	$282,390	$47,640	11/1/21	7/22	17%
4	1887	Western San Bernardino County Region Erosion Control Improvements - Stage 1	Jeremy Harris Construction, Inc.	$677,898	$355,000	4/1/22	11/22	52%
5	1903	Second Lower Feeder PCCP Rehabilitation - Reach 3A	J. F. Shea Construction, Inc.	$11,884,700	$240,000	6/6/22	6/23	2%
6	1905	Metropolitan Headquarters Building Improvements[24]	Bernards Bros. Inc.	$50,736,371	$50,523,668	1/14/19	7/22	99%
7	1908	CRA Pumping Plants – Sump Rehabilitation[25]	Michels Corp dba Michels Pipeline Construction	$27,242,360	$11,450,270	1/24/19	7/22	42%

23 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.

24 Granting of additional working days to complete construction are being considered.

25 Contract 1908 has exceeded the contract working days and the contractor will be assessed liquidated damages.

	Cont. No.	Contract Title	Contractor	Contract Amount[23]	Earnings Through June 2022	Start Date	Est. Com-pletion Date	Est. Percent Complete
8	1926	CRA Mile 12 Flow Monitoring Station Upgrades	R2 Engineering dba R2Build	$2,049,058	$1,594,518	6/16/21	8/22	78%
9	1938	MWD HQ Bldg. Physical Security Improvements[24]	Bernards Bros. Inc.	$5,998,980	$5,917,636	9/22/20	7/22	99%
10	1944	Lake Mathews Reservoir Wastewater System Replacement	Creative Home dba CHI Construction	$3,815,000	$1,403,375	12/13/21	3/23	37%
11	1946	Colorado River Aqueduct Pumping Plants - Overhead Crane Replacement	J.F. Shea Construction, Inc.	$13,518,670	$1,058,339	10/14/20	9/23	8%
12	1949	Colorado River Aqueduct Pumping Plants Domestic Water Treatment System Replacement	J.F. Shea Construction, Inc.	$32,824,000	$1,886,981	1/20/22	2/25	6%
13	1951	Skinner WTP Cathodic Protection	National Corrosion	$240,933	$234,733	12/13/21	7/22	97%
14	1958	Colorado River Aqueduct Replacement of Casa Loma Siphon Barrel No. 1	J.F. Shea Construction, Inc.	$11,499,000	$5,055,160	1/20/22	6/23	44%
15	1961	Orange County Feeder Relining - Reach 3	Spiniello Infrastructure West, Inc.	$17,226,250	$428,000	5/11/22	9/23	2%
16	1962	MWD HQ Building Fire Alarm & Smoke Control Improvements	Bernards Bros. Inc.	$14,165,888	$7,619,485	9/24/20	1/23	54%
17	1966	Sepulveda, West Valley, and East Valley Feeders Interconnection Upgrades	Blois Construction, Inc.	$3,143,592	$0	7/7/22	8/23	0%
18	1970	Garvey Reservoir Drainage and Erosion Improvements - Areas 6, 7, 8, 10, and 11	Kaveh Engineering & Construction, Inc.	$1,475,719	$1,421,749	11/20/20	9/22	96%
19	1982	Weymouth Water Treatment Plant Basins Nos. 5-8 & Filter Building No. 2 Rehabilitation	J. F. Shea Construction, Inc.	$93,840,000	$3,815,000	6/10/22	5/25	4%
20	1984	Skinner Water Treatment Plant Facility Area Paving	All American Asphalt	$2,048,200	$2,046,950	2/11/22	7/22	99%
21	1990	Henry J. Mills Water Treatment Plant Electrical Upgrades, Stage 2	CSI Electrical Contractors, Inc.	$9,200,000	$1,258,727	12/13/21	1/25	14%

	Cont. No.	Contract Title	Contractor	Contract Amount[23]	Earnings Through June 2022	Start Date	Est. Com-pletion Date	Est. Percent Complete
22	1998	Jensen and Skinner Water Treatment Plants Battery Energy Storage Systems	Ameresco, Inc.	$11,604,521	$2,511,652	10/7/21	10/22	22%
23	2001	Jensen Water Treatment Plant Ozone Power Supply Units Replacement	Leed Electric, Inc.	$2,257,897	$0	7/20/22	12/23	0%
24	2013	Lake Mathews PCCP Rehabilitation Valve Storage Building	Facility Builders & Erectors, Inc.	$4,759,000	$605,279	3/10/22	8/23	13%
25	2014	Weymouth Plant Battery Energy Storage System	Siemens Industry, Inc.	$6,176,521	$0	7/18/22	12/23	0%
26	2024	OC-88 Pump Station Chiller Replacement	Mehta Mechanical Co., Inc. dba MMC Inc.	$2,654,000	$70,000	6/6/22	6/23	3%
27	2045	Upper Feeder Santa Ana River Crossing Expansion Joint Replacement	PCL Construction, Inc.	$1,200,000	$0	6/28/22	12/22	0%
Total contract value for active construction contracts:				**$351,727,102**				

The following table lists the 15 ongoing procurement contracts through the end of the 4th Quarter.

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

	Cont. No.	Contract	Contractor	Contract Amount[26]	Earnings Through June 2022	Start Date	Est. Delivery Com-pletion Date	Est. Percent Complete [27]
1	1851	Furnishing Horizontal Axially Split Centrifugal Pumps for the Greg Avenue Pump Station	Xylem Water Solutions U.S.A., Inc.	$1,734,103	$1,651,760	5/16/17	D[28]	95%
2	1861	Furnishing Lubricated Plug Valves for Second Lower Feeder	Southwest Valve & Equipment, Inc.	$2,380,909	$2,362,968	9/11/17	D[28]	99%
3	1867 [29]	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 1	Crispin Valve, LLC	$5,066,975	$2,602,171	12/18/17	12/22	51%
4	1868	Furnishing Butterfly Valves for the Weymouth Water Treatment Plant – Schedule 2	DeZurick, Inc.	$771,984	$760,384	12/18/17	D[28]	98%
5	1873	Furnishing One Hydraulic Shear System for the La Verne Maintenance Shops	Landmark Solutions, LLC	$151,870	$146,970	3/21/18	D[28]	97%
6	1912	Furnishing Large-Diameter Conical Plug Valves	Ebara Corporation	$23,750,060	$17,157,856	12/24/18	6/23	72%
7	1922	Furnishing One Double Column Vertical Machining Center for the La Verne Maintenance Shops	Gosiger Machine Tools, LLC (Gosiger West)	$2,193,356	$2,156,295	9/17/18	D[28]	98%
8	1948	Refurbishing Valve Actuators for the Diemer Water Treatment Plant	Flowserve Limitorque	$3,532,700	$2,359,406	2/16/19	8/22	67%
9	1955	Furnishing Membrane Filtration Systems for the CRA Domestic Water Treatment Systems	Wigen Water Technologies	$1,244,535	$529,166	5/28/20	7/25	43%
10	1965	Furnishing Equipment for the Jensen Ozone Power Supply Units Upgrades	Suez Treatment Solutions, Inc.	$4,141,194	$2,025,325	3/30/20	8/22	49%

[26] 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.

[27] 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.

[28] All items were delivered but contract remains open pending use of manufacturer field services.

[29] 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[26]	Earnings Through June 2022	Start Date	Est. Delivery Com-pletion Date	Est. Percent Complete [27]
11	1968	Furnishing Earthquake-Resistant Ductile Iron Pipe for the Casa Loma Siphon Barrel No. 1	Kubota Corporation	$9,237,782	$9,021,862	2/12/20	D[28]	98%
12	1969	Furnishing Inlet Valve Gearboxes for Skinner Module No. 7	R&B Automation, Inc.	$224,510	$207,035	4/29/20	2/24	92%
13	1978	Furnishing Steel Pipe for the Casa Loma Siphon Barrel No. 1	Northwest Pipe Company	$6,134,208	$5,860,701	1/16/20	12/23	95%
14	2011	Furnishing Steel Pipe for Etiwanda Pipeline North Relining, Stage 3	Northwest Pipe Company	$6,044,897	$5,024,397	12/20/21	8/22	83%
15	PO 206 047	Furnish Equipment to Upgrade the Ozone Control System at the Mills Water Treatment Plant	Royal Industrial Solutions	$492,440	$0	12/6/21	9/22	0%
		Total contract value for active procurement contracts:		**$67,101,522**				

PERFORMANCE METRICS

In order 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 almost all cases lie within or below the metric target ranges. In rare cases, the calculated values may exceed the metric target ranges.

Once a project phase is complete, either final design or construction, staff's performance against these metrics is then calculated and compared to the target metrics. Table 13 and Table 14 on the following page summarize the comparison between the target metrics and the actual performance metrics for each project category for the current reporting period. In cases where the actual performance exceeded the target metric, explanations for the variance are provided. Actual performance for in-house construction projects and minor capital projects are not reported in this section, since the efforts required for final design and inspection are different.

Table 13: Performance Metric Actuals, Projects > $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Battery Energy Storage System at Weymouth Water Treatment Plant	Final Design	$400,446	$6,422,521	9-12%	6.2%
Gene Wash Reservoir Discharge Valve Rehabilitation	Inspection	$704,130	$6,118,459	9-12%	11.5%
Jensen Ozone PSU & Critical Components Upgrade Stage 1	Final Design	$598,224	$7,093,897	9-12%	8.4%
Jensen Water Treatment Electrical Upgrades - Stage 2	Inspection	$2,703,385	$18,643,223	9-12%	14.5%[30]
La Verne Shops Buildings Completion - Stage 5	Final Design	$3,538,036	$22,025,000	9-12%	16.1%[31]
Orange County Feeder Relining - Reach 3	Final Design	$2,040,000	$18,706,250	9-12%	10.9%
Second Lower Feeder PCCP Rehabilitation Reach 3A	Final Design	$1,980,000	$17,980,700	9-12%	11%
Upgrades at Three Sepulveda Feeder Structures	Final Design	$422,774	3,368,592	9-12%	12.6%[32]
Weymouth Basins 5-8 & Filter Building No. 2 Rehabilitation	Final Design	$3,135,000	100,543,000	9-12%	3.1%

[30] Inspection costs for Jensen Water Treatment Electrical Upgrades Stage 2 were higher than the target range because shutdowns were re-sequenced to complete construction work on schedule after an earlier work suspension to mitigate COVID-19.

[31] Final Design costs for La Verne Shops Building Completion – Stage 5 were higher than the target range due to additional design efforts as a result of differing site conditions discovered during the project bidding period, and re-advertisement and bidding. The site inspection identified corroded concrete aggregate spots on the exterior of the concrete tilt-up walls requiring concrete core samples for laboratory testing, and the development of specifications and drawings for the wall repairs.

[32] Final Design costs for Upgrades at Three Sepulveda Feeder Structures were higher than the target range because Metropolitan elected to execute the electrical upgrades and the piping modifications under one construction contract to avoid multiple construction activities at the same general location in successive years. Additional design efforts were needed to combine the separate contract documents, which were already underway, into one design package.

Table 14: Performance Metric Actuals, Projects < $3 Million

Project	Metric	Actual Cost of Metric	Construction Cost	Target Range	Actual %
Lake Mathews IT Disaster Recovery Facility Upgrades	Inspection	$137,578	$448,900	9-15%	30.6%[33]
OC – 88 Pump Station Chiller Replacement	Final Design	$255,930	$2,782,000	9-15%	9.2%

[33] Inspection costs for Lake Mathews IT Disaster Recovery Facility Upgrades were higher than the target range due to longer than anticipated time to complete construction, which required additional inspection. The construction delays were mainly due to the discovery of unforeseen site conditions including encountering unrippable rock during excavation and longer than anticipated time to receive key equipment such as fire suppression and fire alarm systems due to supply chain issues caused by the COVID-19 pandemic.

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 2022).

Relocations

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

PROJECTS EXPENSED TO OVERHEAD

There are no expensed projects to report during the fourth quarter of fiscal year 2021/22 (April through June 2022).

PROGRAM/APPROPRIATION STATUS

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

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

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2022 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Colorado River Aqueduct Reliability Program	**Total**	**$473,498**	**$428,385**	**$107,370**	**$88,606**
Cabazon Radial Gate Facility Improvements	15320	$1,016	$705	$0	$79
White Water Siphon Protection[34],[35]	15341	$15,585	$17,331	$0	$2,841
CRA - Conveyance Reliability	15373	$117,828	$116,377	$17,205	$8,879
CRA Pumping Plant Reliability Program	15374	$24,467	$24,003	$0	$14
CRA - Electrical/Power Systems Reliability	15384	$56,515	$48,490	$7,477	$7,651
CRA – Discharge Containment	15385	$8,129	$7,975	$0	$396
CRA - Reliability for FY2006/07 through FY2011/12	15438	$134,194	$119,472	$39,102	$24,689
CRA Main Pump Reliability	15481	$65,730	$53,058	$28,296	$25,435
CRA - Reliability for FY2012/13 through FY2017/18	15483	$42,127	$35,881	$15,279	$14,753
CRA - Reliability for FY2018/19 through FY2023/24	15507	$7,907	$5,094	$10	$3,869

34 Approximately $2.85 million reimbursement from Federal Emergency Management Agency (FEMA) for construction of Whitewater Erosion Protection Structure Rehabilitation was credited in Q4 of FY 2020/21. The credited work was completed prior to the current biennium and has been reversed in this table to account all capital work performed in the current biennium.

35 White Water Siphon Protection (Appropriation No. 15341) has exceeded its authorized budget during the 4th Quarter of FY 2021/22. This variance was rectified in August 2022.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2022 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Cost Efficiency & Productivity Program	**Total**	**$217,535**	**$183,536**	**$15,505**	**$13,070**
DVL Recreation Facilities[36]	15334	$87,104	$63,953	$2,725	$32
Power Reliability and Energy Conservation	15391	$54,795	$52,842	$0	$0
Information Technology System - Business, Finance, and HR	15411	$22,468	$22,458	$1,320	$118
Yorba Linda Power Plant Modifications	15446	$17,125	$17,092	$30	$79
Business Operations Improvement	15484	$15,646	$10,238	$8,087	$3,552
Project Controls and Reporting System	15490	$6,440	$6,302	$0	$348
Enterprise Content Management	15500	$3,600	$3,595	$93	$1,994
DVL Recreation Rehabilitation & Refurbishment	15515	$1,030	$913	$3,250	$803
Energy Sustainability Improvements	15521	$9,326	$6,145	$0	$6,145
Dams and Reservoirs Reliability Program	**Total**	**$76,454**	**$68,988**	**$18,200**	**$7,800**
Reservoir Cover and Replacement	15417	$65,214	$59,368	$11,720	$6,853
Dam Rehabilitation & Safety Improvements	15419	$11,240	$9,619	$6,480	$947
Distribution System Reliability Program	**Total**	**$385,784**	**$368,128**	**$67,100**	**$81,538**
Conveyance and Distribution System - Rehabilitation	15377	$104,486	$101,744	$16,003	$8,302
Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12[37]	15441	$112,137	$115,488	$5,567	$11,972
Hydroelectric Power Plant Improvements	15458	$20,403	$17,276	$72	$2,572

[36] Approximately $107K was credited in Q4 of FY 2020/21 and $4.5 million was credited in Q2 of FY 2021/22 from the sales of surplus DVL properties per the November 2005 Board Letter, Item 7-3 and the March 2020 Board Letters, Item 8-2. These credits were reversed in this table to account for all capital work performed in the current biennium.

[37] Conveyance and Distribution System - Rehabilitation for FY2006/07 through FY2011/12 (Appropriation No. 15441) has exceeded its authorized budget during the 4th Quarter of FY 2021/22. This variance was rectified in August 2022.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2022 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Conveyance and Distribution System - Rehabilitation for FY2012/13 through FY2017/18	15480	$124,638	$113,653	$31,776	$42,772
Pipeline Rehabilitation and Replacement	15482	$1,143	$1,033	$0	$829
Conveyance and Distribution System - Rehabilitation for FY2018/19 through FY2023/24	15503	$22,927	$16,351	$12,862	$12,507
District Housing & Property Improvements Program	**Total**	**$10,607**	**$6,550**	**$11,000**	**$5,621**
Employee Village Enhancement	15513	$10,607	$6,550	$11,000	$5,621
Minor Capital Projects Program	**Total**	**$53,500**	**$32,009**	**$9,200**	**$12,940**
Capital Program for Projects Costing Less Than $250,000 for FY2014/15 through FY2015/16	15489	$8,000	$6,709	$0	$16
Capital Program for Projects Costing Less Than $250,000 for FY2016/17 through FY2017/18	15498	$10,000	$7,172	$2,166	$413
Capital Program for Projects Costing Less Than $400,000 for FY2018/19 through FY2019/20	15504	$15,500	$11,424	$2,004	$5,809
Capital Program for Projects Costing Less Than $400,000 for FY2020/21 through FY2021/22	15518	$20,000	$6,703	$5,030	$6,703
Prestressed Concrete Cylinder Pipe Rehabilitation Program	**Total**	**$304,327**	**$268,750**	**$53,860**	**$48,500**
PCCP Rehabilitation and Replacement	15471	$24,243	$22,673	$2,400	$2,216
Sepulveda Feeder PCCP Rehabilitation	15496	$30,525	$27,923	$875	$4,897
Second Lower Feeder PCCP Rehabilitation[38]	15497	$234,427	$207,448	$48,200	$33,818
Allen-McColloch Pipeline, Calabasas Feeder, and Rialto Pipeline PCCP Rehabilitation	15502	$15,132	$10,706	$2,385	$7,569

[38] Approximately $220K tariff refund from Northwest Pipe Company was credited in Q3 of FY 2021/22 for Contract No. 1940 - Second Lower Feeder PCCP Rehabilitation – Reach 4. Approximately $738K tariff refund from Northwest Pipe Company and $124K permit deposit refund from the City of Carson were credited in Q4 of FY 2021/22 for Contract No. 1902 - Second Lower Feeder PCCP Rehabilitation – Reach 2. These credits were reversed in this table as the tariff payments and permit deposit were made prior to the current biennium.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2022 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Regional Recycled Water Supply Program	**Total**	**$22,850**	**$21,300**	**$210**	**$372**
Demonstration-Scale Recycled Water Treatment Plant[39]	15493	$22,850	$21,300	$210	$372
Right of Way & Infrastructure Protection Program	**Total**	**$30,385**	**$27,060**	**$8,115**	**$4,081**
Right of Way & Infrastructure Protection	15474	$30,385	$27,060	$8,115	$4,081
System Flexibility/Supply Reliability Program	**Total**	**$667,513**	**$641,548**	**$38,400**	**$25,406**
Hayfield and Lake Perris Groundwater Recovery	15402	$1,500	$1,113	$0	$256
Perris Valley Pipeline	15425	$133,500	$131,117	$27,752	$2,931
Water Delivery System Improvements	15488	$71,224	$69,605	$10,648	$20,116
Verbena Property Acquisition	15492	$264,000	$261,947	$0	$1,469
Delta Wetlands Properties (Delta Islands)	15494	$197,289	$177,765	$0	$633
System Reliability Program	**Total**	**$366,338**	**$306,931**	**$97,400**	**$81,302**
Information Technology System - Infrastructure	15376	$51,306	$47,718	$481	$2,004
Information Technology System - Security	15378	$12,351	$10,815	$3,930	$2,583
La Verne Shop Facilities Upgrade[40]	15395	$47,087	$47,319	$10,619	$1,829
Water Operation Control	15467	$51,654	$42,082	$3,888	$2,762
Union Station Headquarters Improvements	15473	$98,845	$86,226	$31,301	$37,246
IT Infrastructure Reliability	15487	$49,271	$36,793	$25,006	$20,100
Operations Support Facilities Improvement	15495	$25,161	$19,542	$8,884	$2,754

[39] $1 million grant from the California State Water Resources Control Board for the construction of Advanced Water Treatment Demonstration Facility was credited in Q3 of FY 2020/21. The credited work was completed prior to the current biennium and has been reversed in this table to account all capital work performed in the current biennium.

[40] La Verne Shop Facilities Upgrade (Appropriation No. 15395) has exceeded its authorized budget during the 4th Quarter of FY 2021/22. This variance was rectified in August 2022.

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2022 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Metropolitan Security System Enhancements	15499	$15,910	$11,052	$6,692	$8,294
Infrastructure Reliability Information System	15501	$5,770	$2,866	$3,533	$1,361
System-Wide Paving & Roof Replacements for FY 2020/21 through FY 2021/22	15516	$3,791	$1,594	$1,498	$1,447
System-Wide Paving & Roof Replacements for FY2020/21 through FY2023/24	15519	$1,501	$918	$0	$918
Enterprise Data Analytics	18910	$3,690	$5	$1,567	$5
Treatment Plant Reliability Program	**Total**	**$953,426**	**$912,490**	**$76,160**	**$89,261**
Chlorine Containment and Handling Facilities	15346	$162,370	$160,536	$0	$89
Weymouth Water Treatment Plant Improvements	15369	$190,910	$188,141	$6,662	$6,438
Jensen Water Treatment Plant Improvements	15371	$47,062	$46,638	$43	$54
Diemer Water Treatment Plant Improvements	15380	$213,657	$208,330	$18,301	$19,179
Mills Water Treatment Plant Improvements	15381	$5,525	$5,277	$0	$0
Skinner Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15435	$3,860	$2,142	$0	$33
Diemer Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15436	$71,439	$65,671	$3,112	$3,376
Weymouth Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15440	$29,079	$27,516	$5,502	$8,755
Jensen Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15442	$91,376	$84,696	$23,687	$25,630
Mills Water Treatment Plant Improvements for FY2006/07 through FY2011/12	15452	$29,152	$24,592	$480	$5,198
Weymouth Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15477	$77,539	$76,958	$6,068	$11,440

Capital Programs/Appropriations	Appn. No.	Total to Date		Biennium to Date	
		Appn. Amount ($1,000's)	Costs thru June 2022 ($1,000's)	Biennium to Date Planned Expenditures ($1,000's)	Biennium Actual Expenditures ($1,000's)
Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18[41]	15478	$1,425	$1,436	$0	$429
Mills Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15479	$1,094	$847	$0	$394
Skinner Water Treatment Plant Improvements for FY 2012/13 Through FY 2017/18	15485	$1,990	$1,729	$0	$6
Jensen Water Treatment Plant Improvements for FY2012/13 through FY2017/18	15486	$8,339	$7,484	$0	$723
Weymouth Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15505	$685	$302	$468	$79
Jensen Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15508	$9,872	$5,206	$8,971	$4,884
Diemer Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15510	$1,461	$755	$1,487	$373
Skinner Water Treatment Plant, Improvements for FY 2020/21 Through FY 2023/24	15512	$3,961	$3,637	$520	$1,584
Mills Water Treatment Plant Improvements for FY2020/21 through FY2023/24	15520	$2,631	$597	$860	$597
Water Quality/Oxidation Retrofit Program	**Total**	**$631,914**	**$628,233**	**$19**	**$329**
Diemer Water Treatment Plant Oxidation Retrofit	15389	$370,192	$370,024	$0	$0
Weymouth Water Treatment Plant Oxidation Retrofit	15392	$251,482	$248,594	$19	$18
Enhanced Bromate Control	15472	$10,240	$9,615	$0	$312
Total CIP		**$4,194,130**	**$3,893,907**	**$502,539**	**$458,827**

[41] Diemer Water Treatment Plant Improvements for FY2012/13 through FY2017/18 (Appropriation No. 15478) has exceeded its authorized budget during the 4th Quarter of FY 2021/22. This variance was rectified in August 2022.

Notes on above table:

- Numbers may not sum due to rounding.
- Numbers are based on the general ledger information downloaded on 07/26/2022.
- $0 under ***Planned Expenditures*** indicate 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
- Total appropriation amount to date and total cost through June 2022 include land acquisitions for Verbena Property and Delta Wetlands Properties.

LIST OF TABLES

LIST OF FIGURES

Engineering & Operations Committee

Capital Investment Plan Quarterly Report for Period Ending June 2022

Item 6a

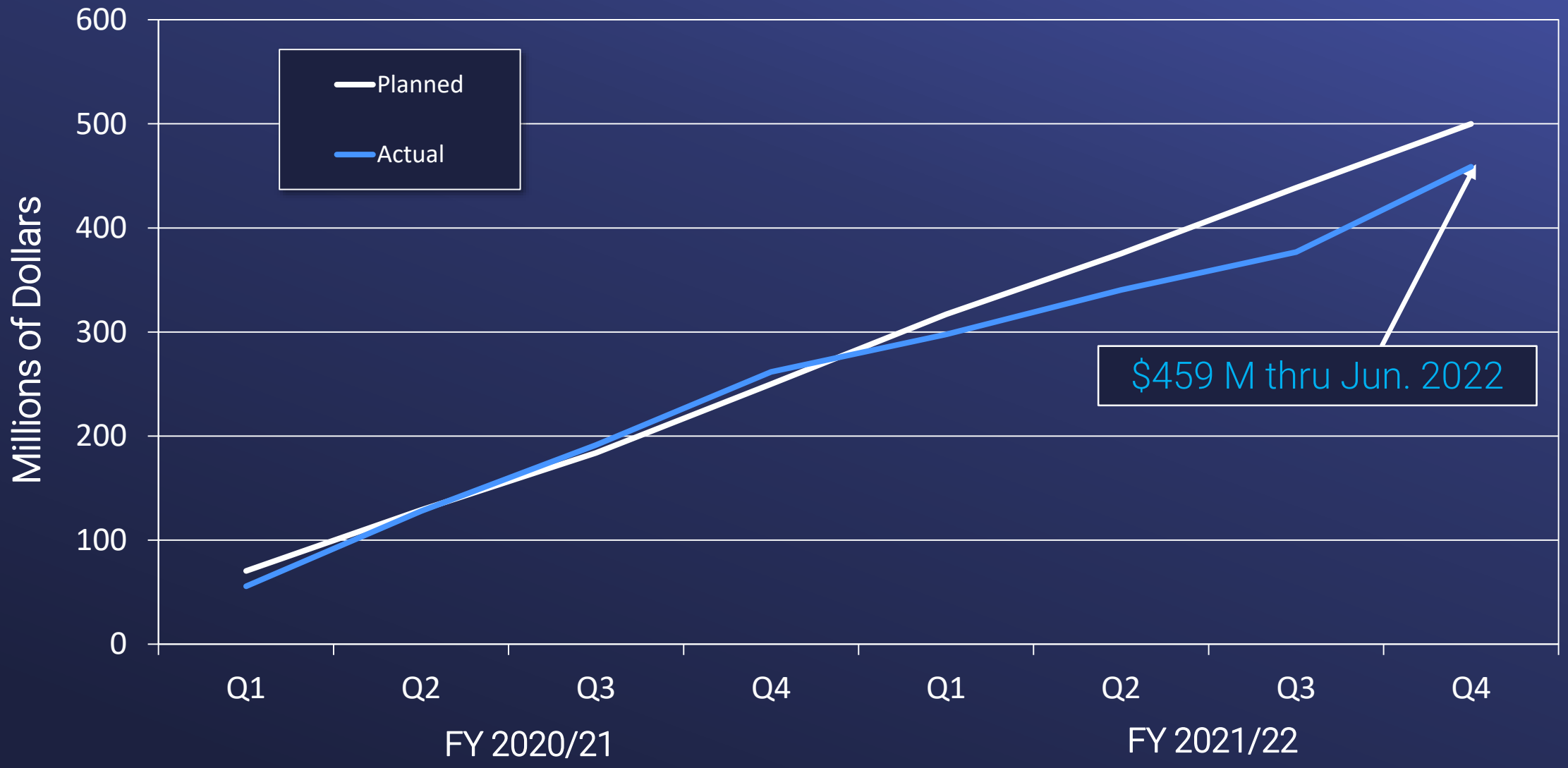
September 12, 2022

Capital Investment Plan Quarterly Report for Period Ending June 2022

4th Quarter Summary for FY 2021/22

- 8 Construction contracts awarded - $156.1 M
- 7 Professional service agreements authorized - $18.6 M
- Contracts currently underway - $418.8 M
  - 27 construction - $351.7 M
  - 15 procurement - $67.1 M

CIP Performance – FYs 2020/21 & 2021/22



CRA Domestic Water Treatment Systems Replacement

- Contract awarded in December 2021
  - Expected completion in March 2025
- Construction Phase Estimate: $41.5 M
- Actual for Construction Phase: $2.3 M

Contractor prepared subgrade to install above-ground conduit support pedestals at Intake Pumping Plant

Battery Energy Storage Systems

Contractor installing crushed aggregate base for fire access road at Skinner WTP

- Contract for Jensen and Skinner plants awarded in September 2021
  - Estimated to complete in October 2022
- Contract for Weymouth plant awarded in June 2022
  - Estimated to complete in July 2023
- Current Construction Phase Estimate: $24.9 M
- Actual for Current Phase: $3.6 M

Contract Completion and Change Orders

Contract	Original Contract Amount	Contract Change Orders	Change Order %
Gene Wash Reservoir Discharge Valve Replacement	$5,316,900	$59,021	1.1%
Joseph Jensen Water Treatment Plant Electrical Upgrade – Stage 2	$14,784,000	$652,467	4.4%
Lake Mathews IT Disaster Recovery Facility Upgrades	$448,900	$0	0%
Total	$20,549,800		

Performance Metrics – 4th Quarter of FY 2021/22

Projects w/ Construction Costs < $3 Million

	Final Design % of Construction	Inspection % of Construction
Target Performance Range	9% to 15%	9% to 15%
Actual Performance	9.2%	30.6%

Projects w/ Construction Costs > $3 Million

	Final Design % of Construction	Inspection % of Construction
Target Performance Range	9% to 12%	9% to 12%
Actual Performance	6.9%	13.8%

Minor Capital Projects

Fiscal Year Appropriation	2016/17 2017/18	2018/19 2019/20	2020/21 2021/22
Amount Appropriated	$10 M	$15.5 M	$20.0 M
Amount Allocated	$8.3 M	$15.5 M	$17.1 M
Expenditures Through June 2022	$7.2 M	$11.4 M	$6.7 M
# of Projects Approved	41	48	54
# of Projects Completed Through June 2022	40	29	4
% of Work Complete	99%	88%	39%

7 projects exceeded 3 years in duration


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering & Operations Committee

State Water Project (SWP) Dependent Area Solutions: Drought Action/Project Portfolios Update

Item # 6b

September 12, 2022

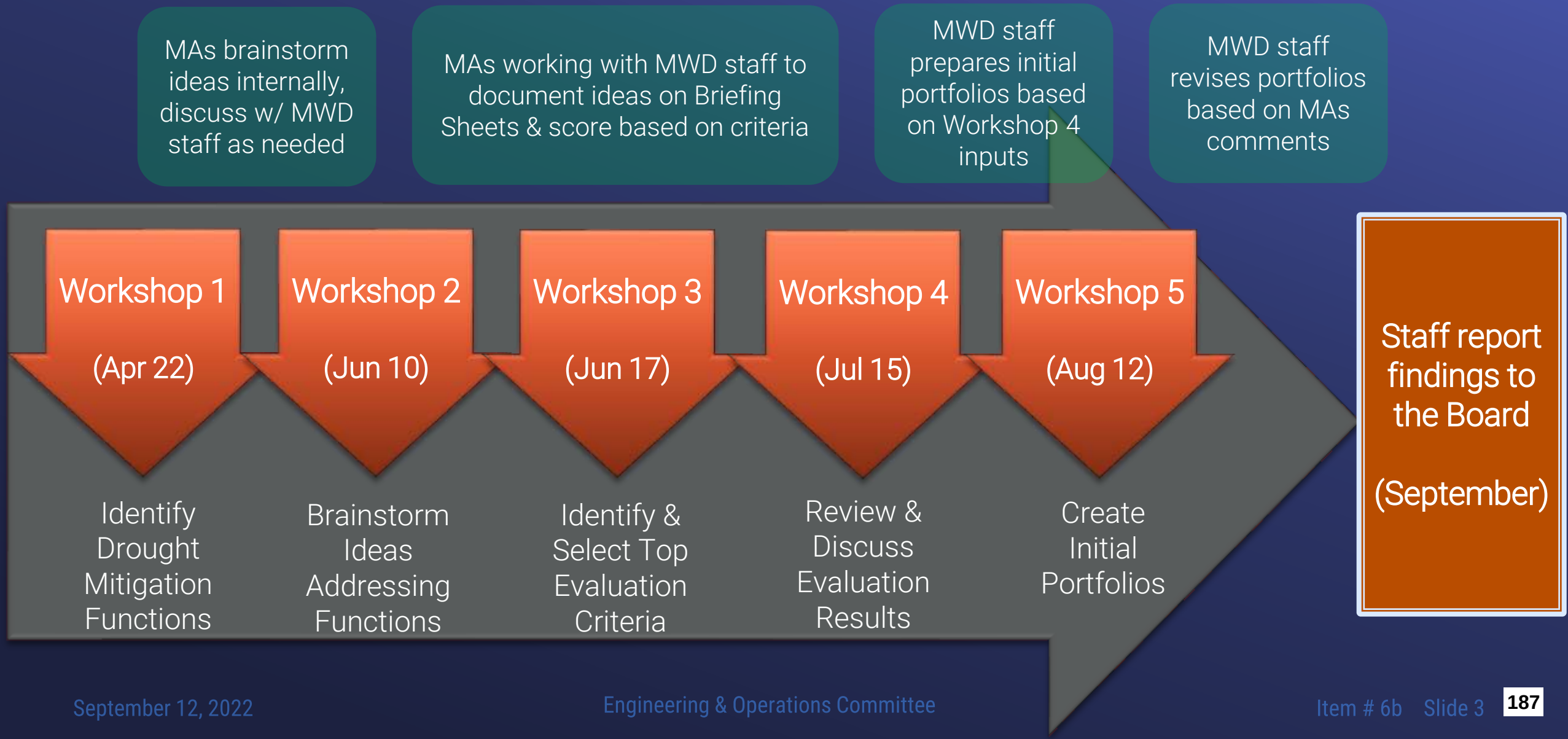
SWP Dependent Area Solutions

Drought Action /Project Portfolios Update

Call to Action

- Identify elements of solutions to Southern California's water reliability crisis
  - Collaboration with member agencies
    - Individual meetings
    - Workshop series
  - Development of action/project portfolios
    - Reconfiguration of infrastructure to enhance access to existing supply portfolio
    - Development of new supplies
    - Development of surface & groundwater storage

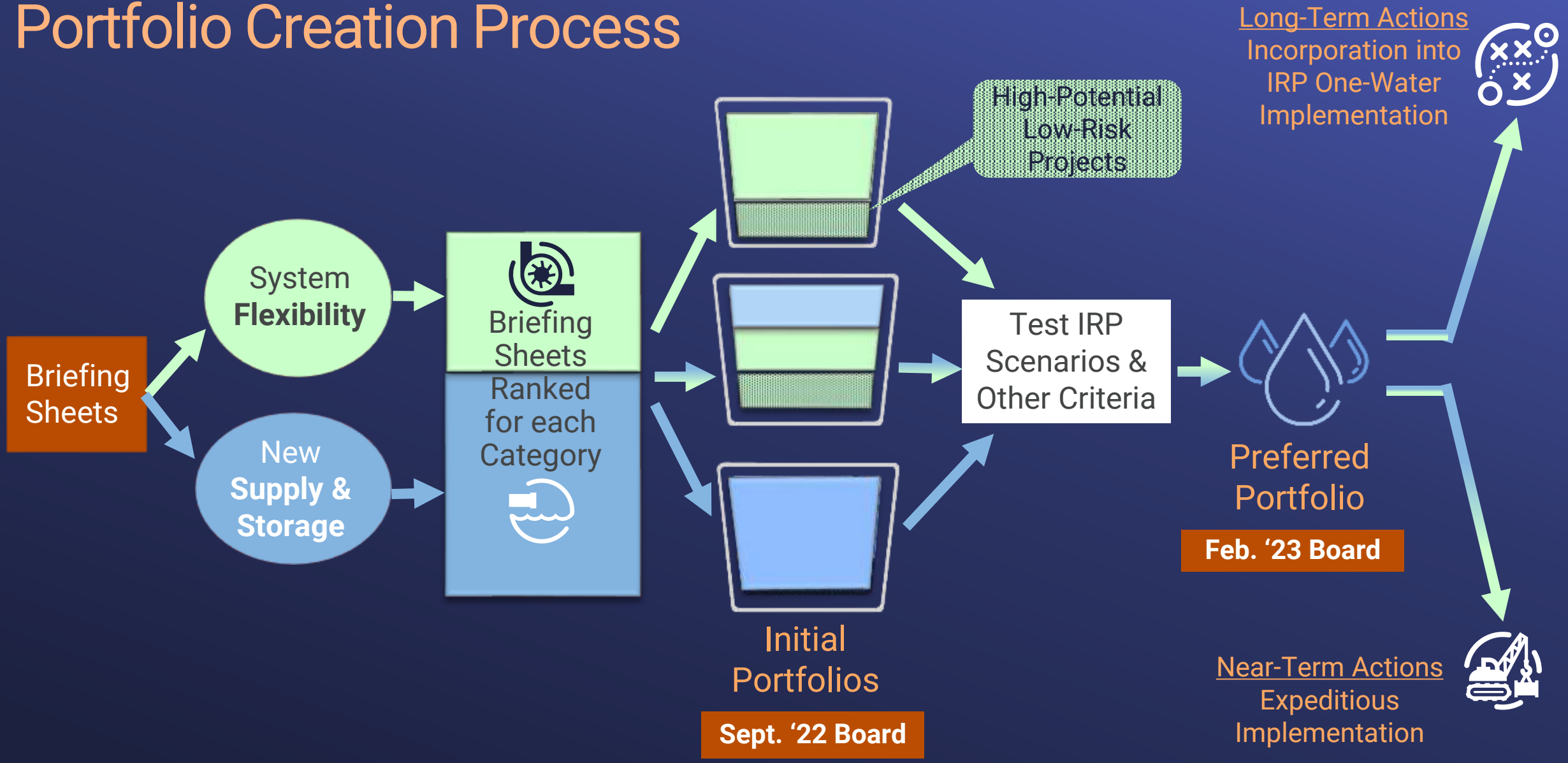
Member Agency Workshop Series



Definitions

- Near-term portfolios are to address a potential future drought within 7 to 10 years
- Long-term portfolios are to address a potential future drought beyond 10 years and consider the overall supply reliability
- System flexibility category includes projects that reconfigure the existing conveyance & distribution system to improve access to the existing supply & storage portfolio
- Supply/Storage category includes projects that add core supply, flexible supply, or storage

Portfolio Creation Process



SWP Dependent Area Solutions

Drought Action /Project Portfolios Update

Initial Criteria

Preliminary – will be evaluated with member agencies

Planning for the Next Drought (Near-Term)

- Action/project portfolio creation criteria
  - Number of low-SWP-supply years - 3
  - Supply level - 5% allocation each year
  - Demand level - 2021 level + 30 TAF
  - Initial storage level - 2021 plus 100 TAF in DVL
  - Existing resource and drought action performance - 2021 level for entire year
  - Resource take strategy - take surface storage evenly
  - Buffer - 10%

SWP Dependent Area Solutions

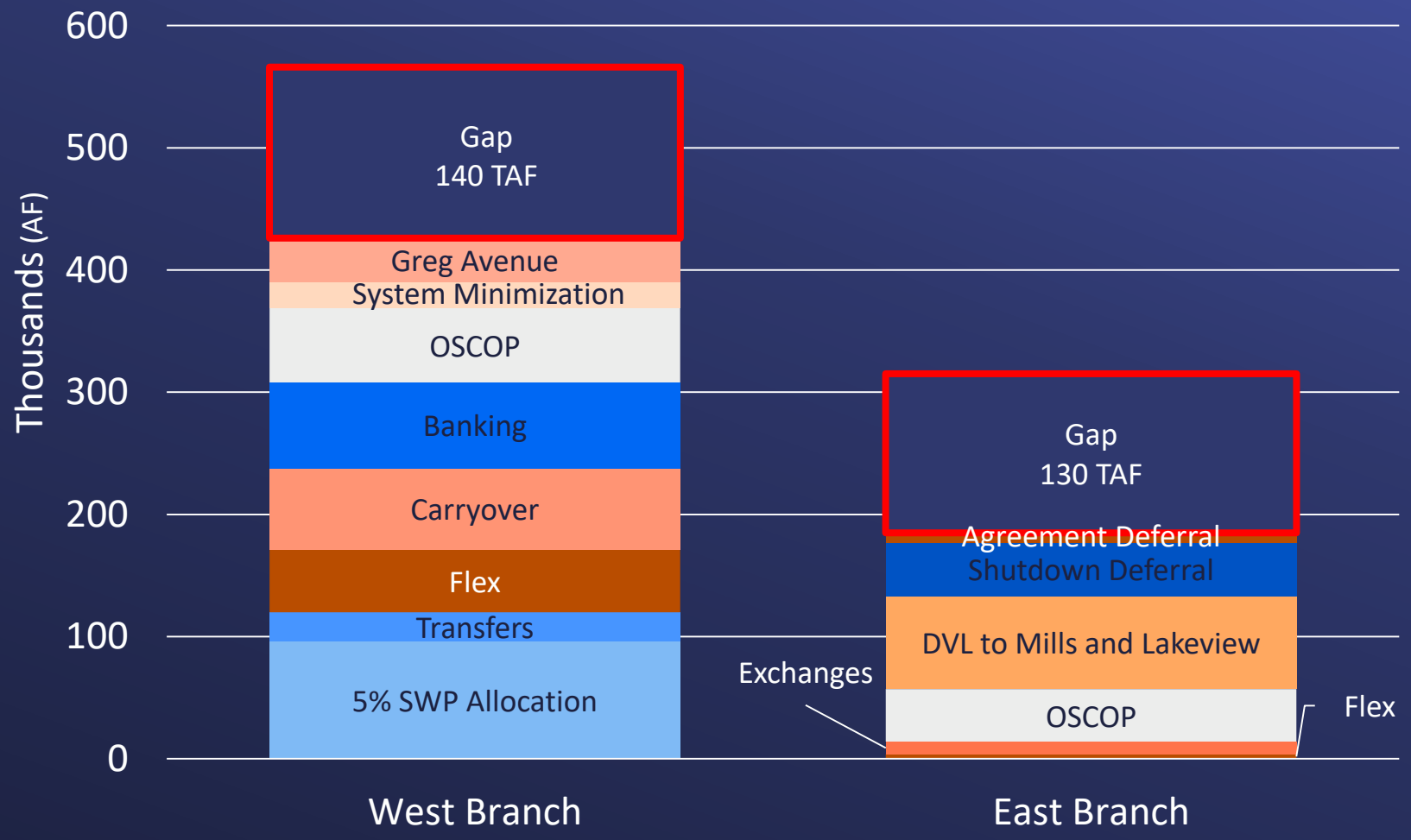
Drought Action /Project Portfolios Update

Initial Gap

Preliminary – will be evaluated with member agencies

Future Supply Gap with Existing Resources

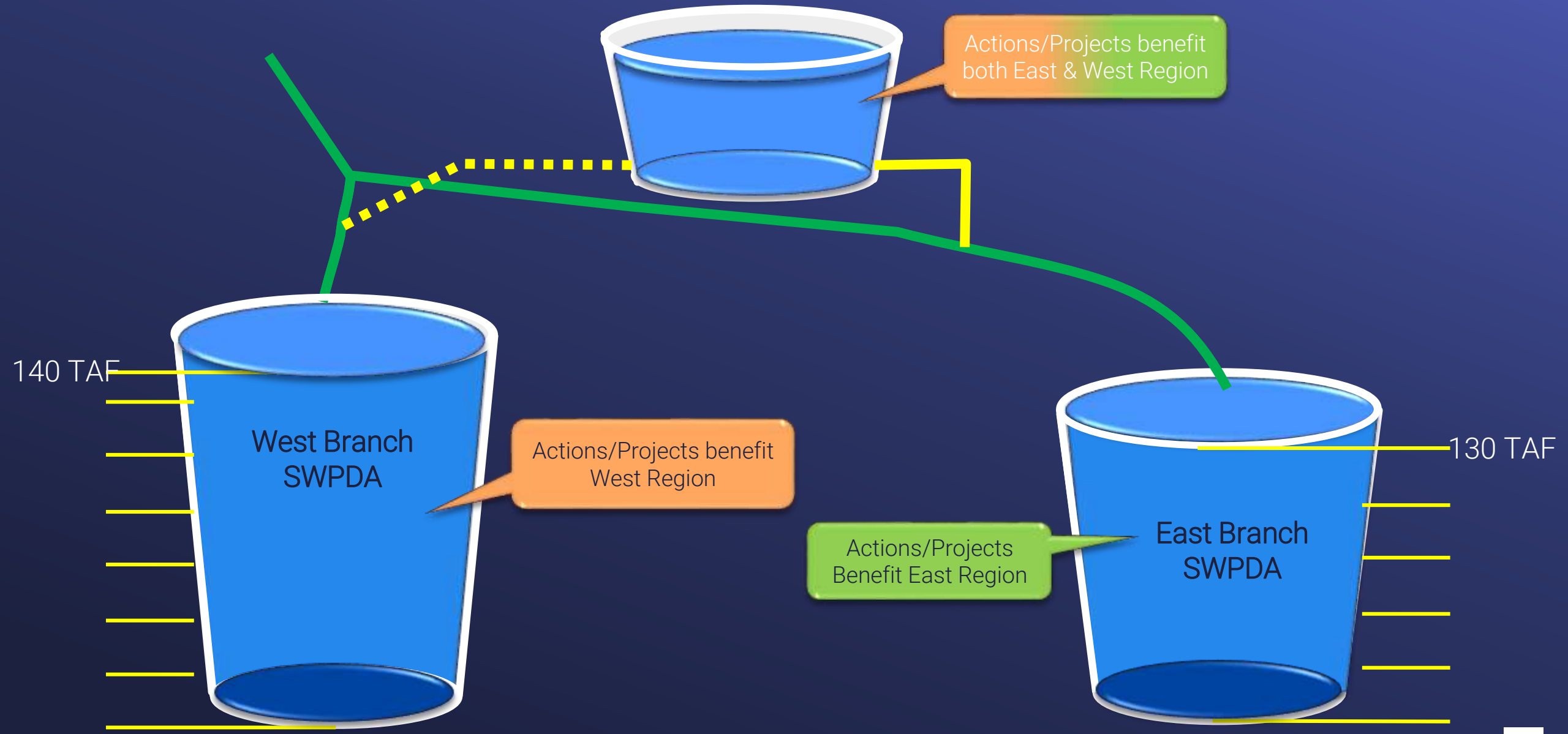
New Operation Assuming New Drought Actions



Planning for Future Droughts & Supply Reliability (Long-Term)

- Analyze and size through incorporation with the IRP
- Could consider additional criteria
  - Extended drought resilience
  - Sustainability
  - Climate change
  - Seismic resilience

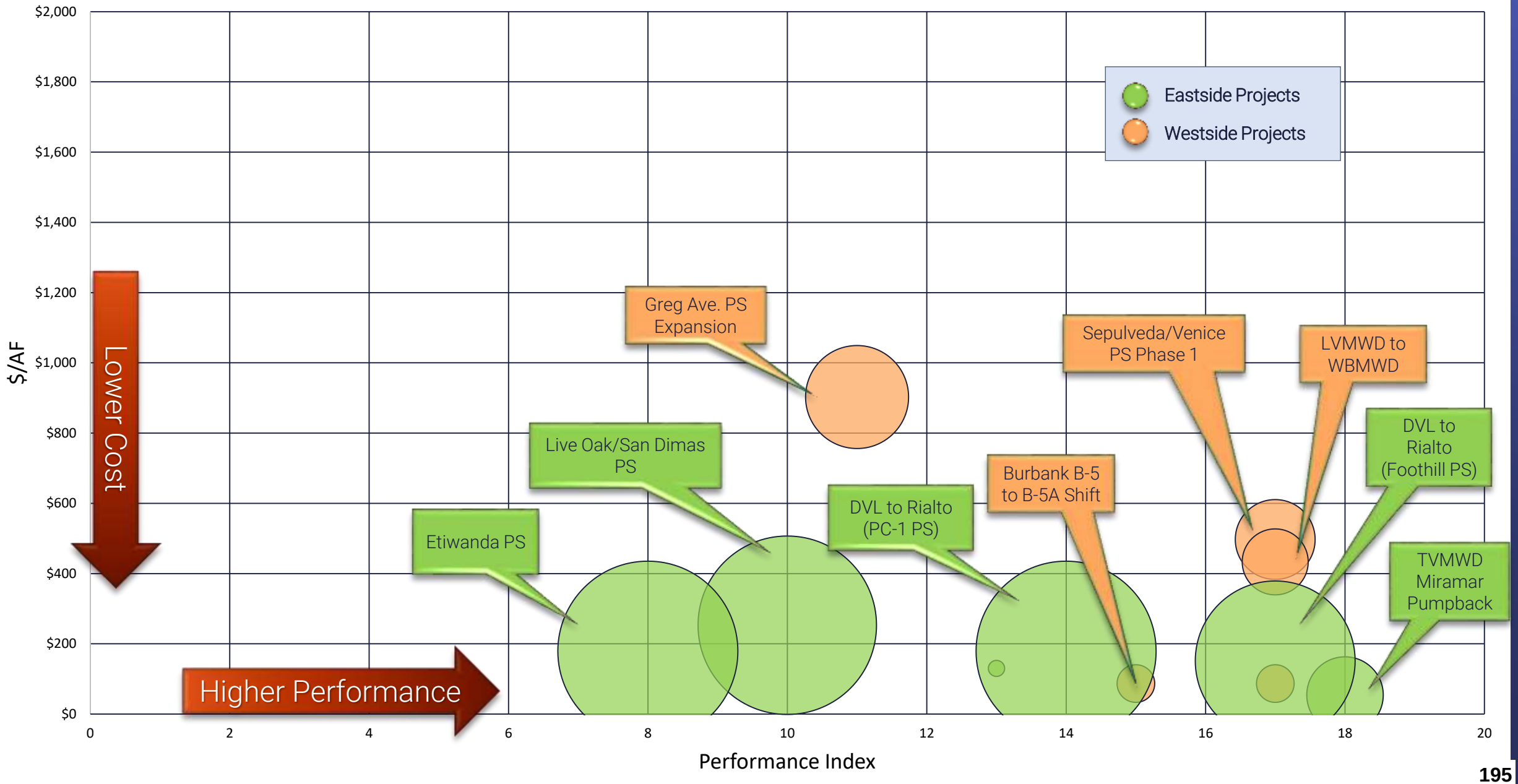
Near-Term Demand/Supply Gap - East & West Branches



Proposed Initial Portfolios

- Near-term
  - System-flexibility portfolio
  - Mixed portfolio
- Long-term
  - System-flexibility portfolio
  - Supply/storage portfolio
  - Mixed portfolio

Near-Term System Flexibility Projects



Initial East Branch Near-Term Mixed Portfolio

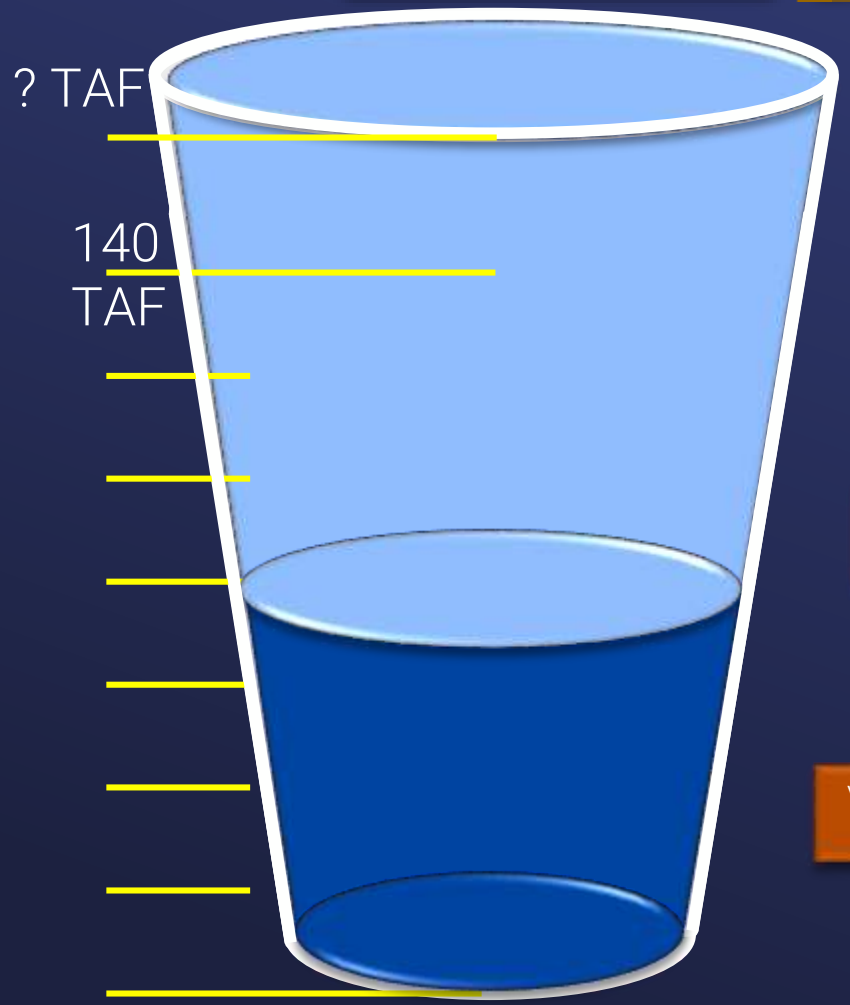
Other Potential Projects

- Local Basin Projects
- Chino Basin Program Expansion
- Quagga Control CRW to USG-3

Initial West Branch Near-Term Mixed Portfolio

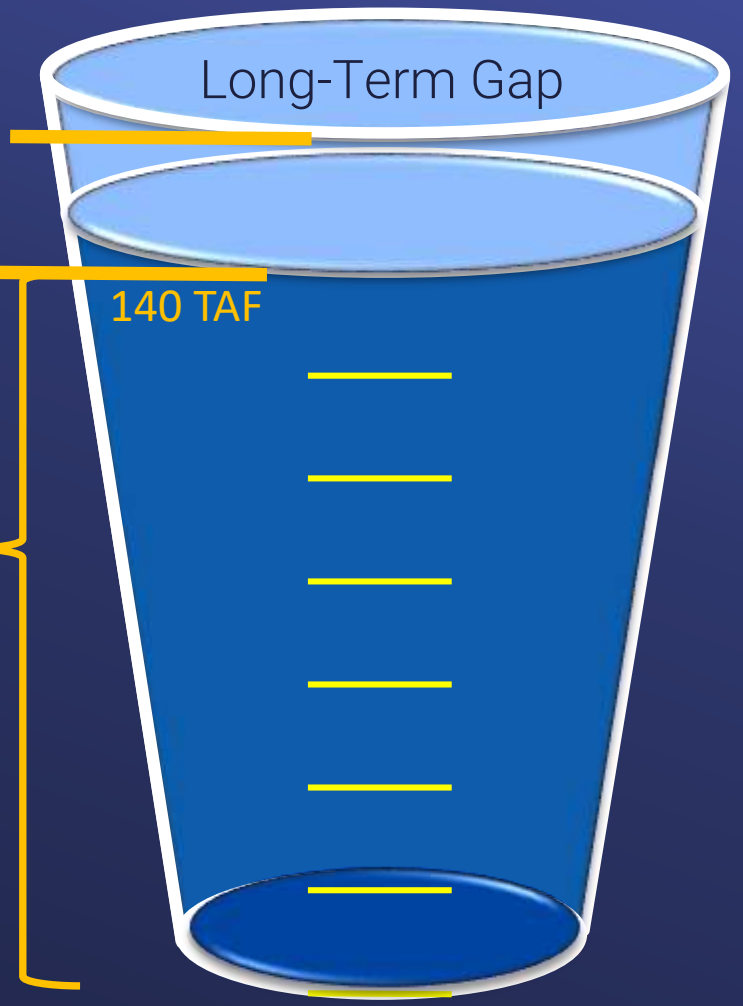
Initial West Branch Long-Term Mixed Portfolio

- In-region reservoirs
- Local desalters
- Seawater desalination



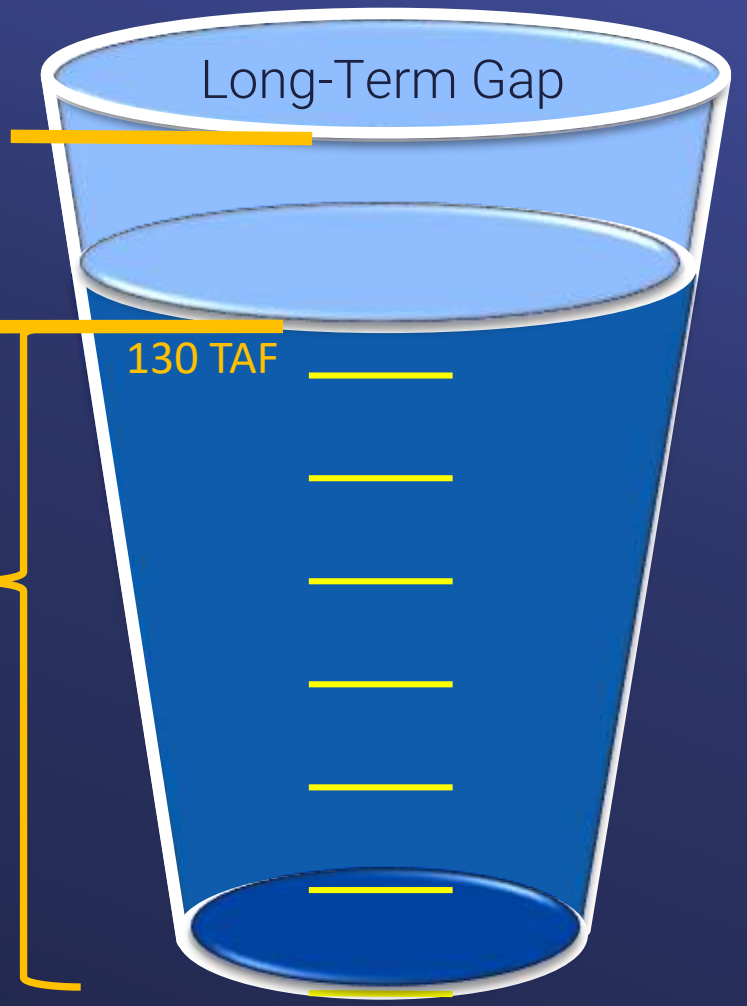
Summary of Initial Portfolios – West Branch

	Status	Project Description
Long-Term Projects	Likely Options - Initial Reconnaissance Study	•Pure Water SoCal •E-W Conveyance Line •Desalination •Local Supply •Regional Storage •Pumping Expansion
Near-Term Projects	High Potential Options – Expedited Study	•AVEK to West Branch w/ New Connection •Crescenta - LA Connection •LVMWD – WBMWD Interconnection •Burbank B5 to B5A Shift
	High Potential Options – Implementation	•Sepulveda/Venice PS Phase 1



Summary of Initial Portfolios – East Branch

	Status	Project Description
Long-Term Projects	Likely Options - Initial Reconnaissance Study	•Pure Water SoCal •Expanding GW Basin usage •Local Supply
Near-Term Projects	High Potential Options – Expedited Study	•USG Cyclic & other similar Programs •TVMWD Miramar Pumpback
	High Potential Options – Implementation	•DVL to Rialto Delivery •Wadsworth Intertie •Badlands Surge Tank •Foothill PS Intertie •IF/RF Intertie •AVEK



SWP Dependent Area Solutions

Drought Action /Project Portfolios Update

Significant Funding Dedicated to Advance Drought Projects

- Projects for the current biennium: $46M
  - East side: DVL to Rialto Delivery (four projects)
  - West side: Sepulveda/Venice Pump Stations
  - Additional high-potential/low-risk projects
- Ten-year CIP expenditure projection: $283M
  - Pumping capacity expansion
  - Interconnectivity improvements
  - Groundwater treatments
- $50M for Metropolitan's drought mitigation projects included in the State budget
- Continue to explore grant opportunities

Next Steps

- Continue to expedite high-potential low-risk near-term projects
- Conduct additional studies to define scope and costs of long-term projects
- Further analyze and refine initial portfolios
  - Incorporate into IRP process
  - Collaborate with member agencies
- Return to Board in February 2023 with preferred portfolios and recommended actions


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

Engineering & Operations Committee

Pure Water Southern California Quarterly Update

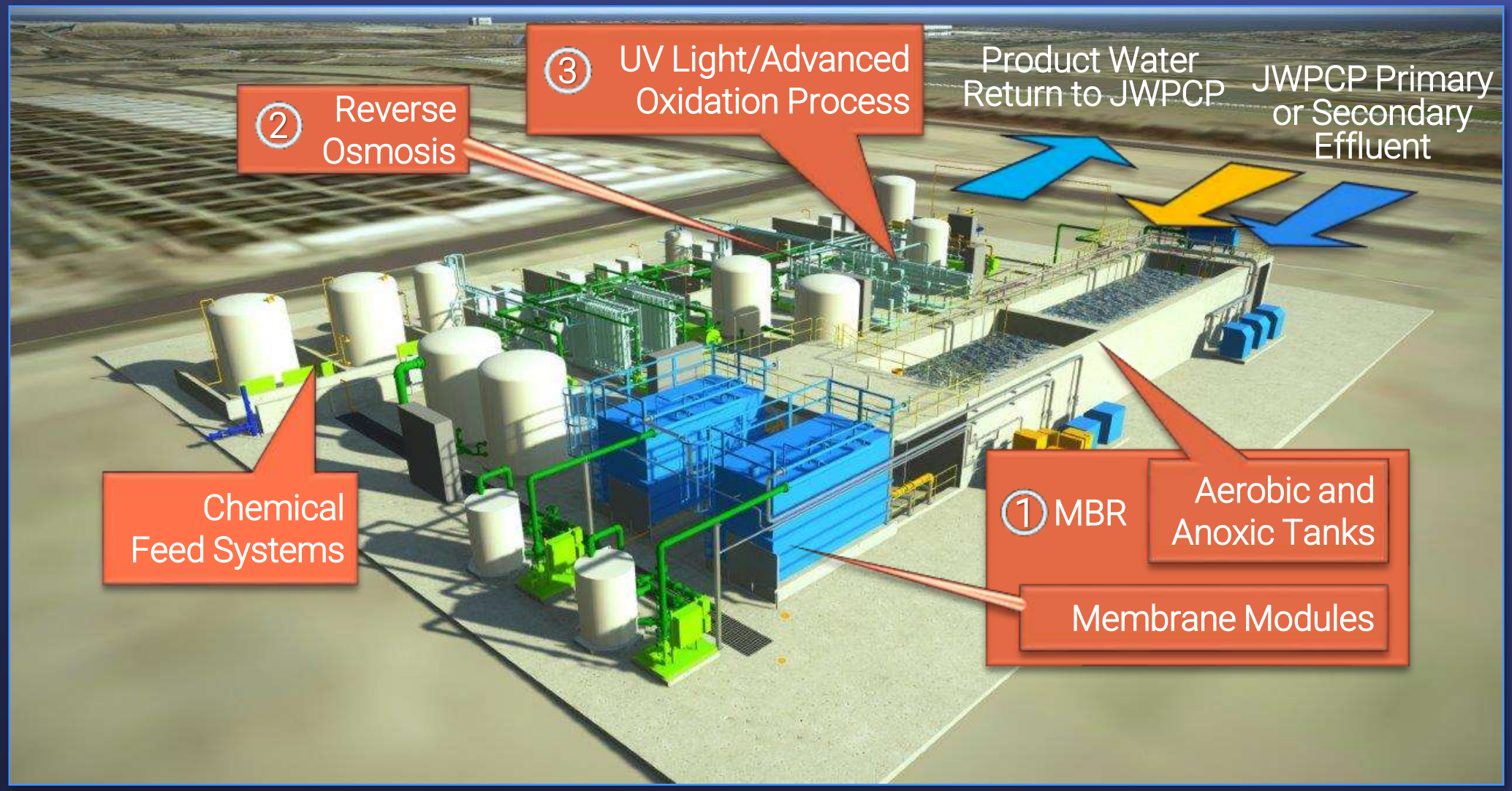
Item 6c
September 12, 2022

Pure Water Southern California Quarterly Update

Outline of Activities

- Demonstration Plant
- DPR Planning Efforts
- Program Elements
- Agency Coordination
- CEQA
- Funding
- Outreach
- Next Steps

Demonstration Facility



Pure Water
Demonstration Plant

Demonstration Plant Activities

- Acclimating bioreactor
- Conducting microbial sampling
- Replacing membrane units
- Calibrating instrumentation
- Transitioning new contract operator

Pure Water
Demonstration Plant

Demonstration Plant Activities

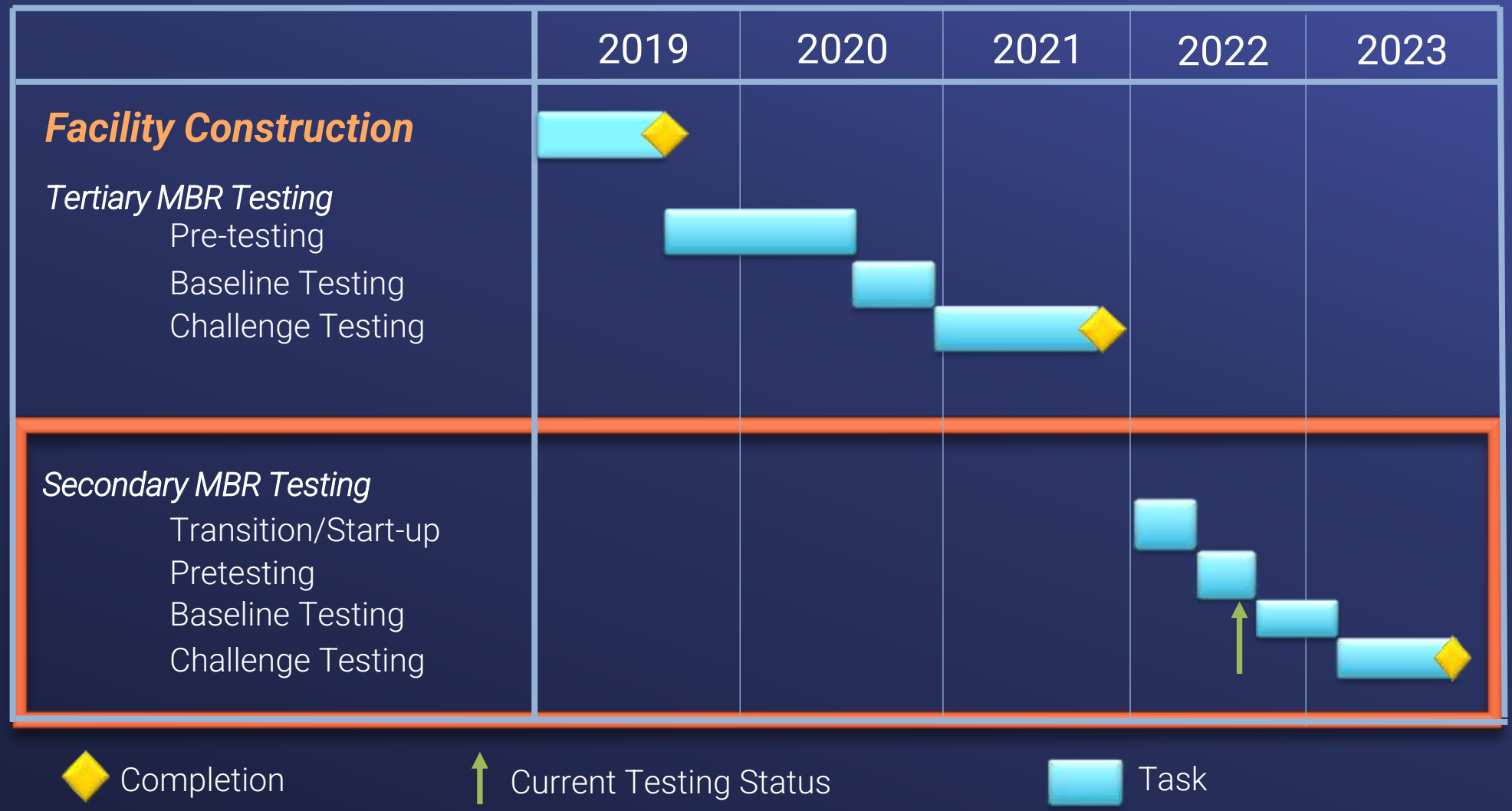
- Performing critical maintenance
- Programming control system
- Aligning facility improvements
- Collaborating with Contract Operator, Equipment Vendors, LACSD

Demonstration Plant Activities

Secondary MBR Testing

- Regulatory
  - Approval of Test Plan
  - Permit from SCAQMD
- Treating primary effluent from LACSD
- Potential for operational efficiencies and cost savings
- Secondary MBR demonstration testing results informs treatment process selection
  - Builds on tertiary MBR testing results
  - Supports LACSD's JWPCP technical evaluations

Demonstration Plant Testing Schedule

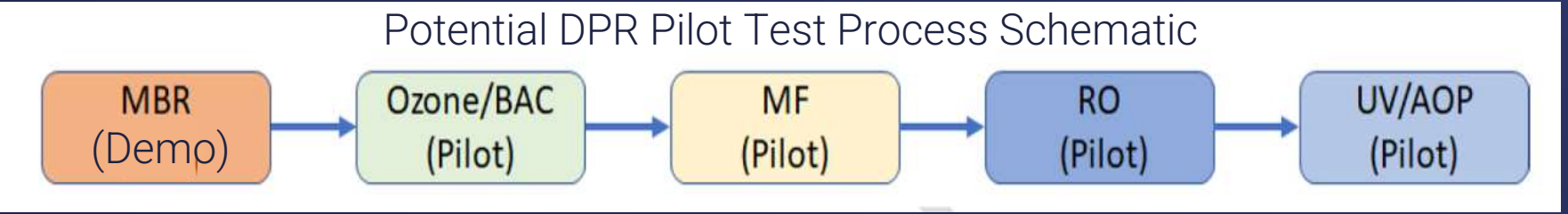


Direct Potable Reuse (DPR) Planning Efforts

Division of Drinking Water will finalize California's DPR regulations in 2023

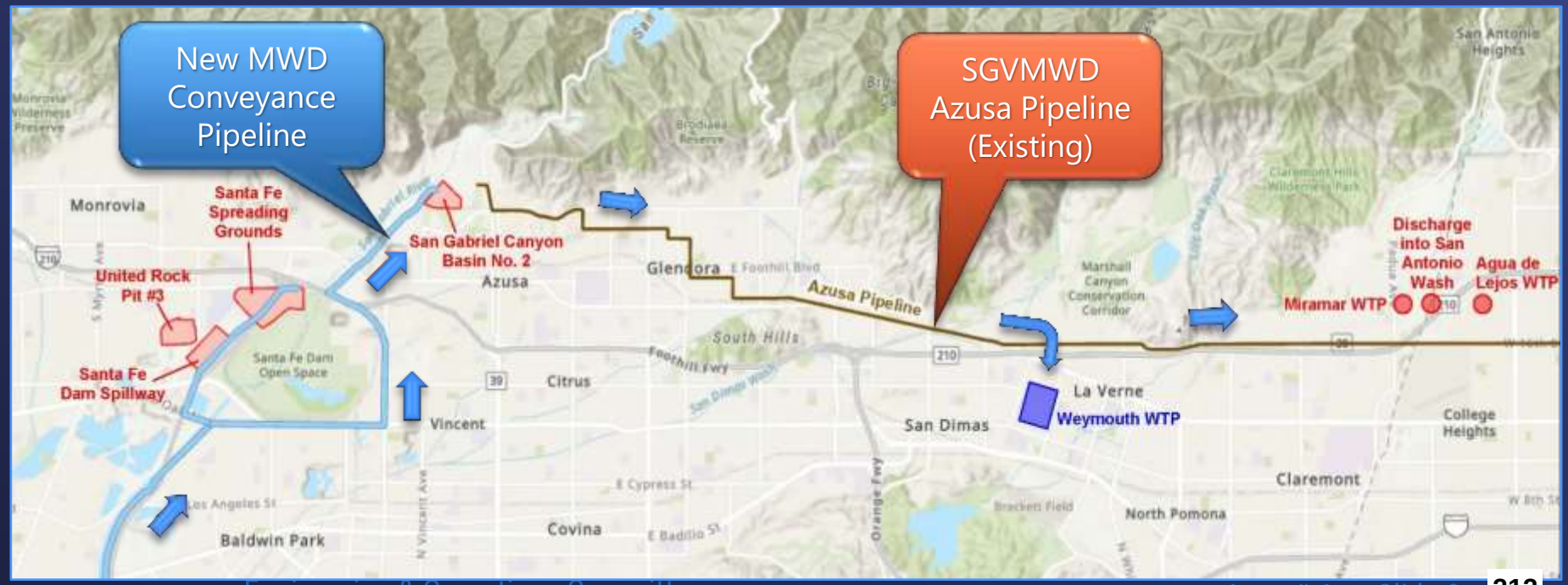
Metropolitan is evaluating DPR approaches for the Pure Water Southern California Program

- Participating with WateReuse California workgroup; engaging state regulators on DPR criteria development
- Preparing DPR research plan to guide Metropolitan implementation
- Evaluating DPR environmental impacts for CEQA
- Planning and developing process design approach for DPR pilot testing in 2023/24



Agency Coordination

- San Gabriel Valley MWD coordination
  - Finalized LOI (6/22)
  - Replenishment at San Gabriel Canyon Spreading Grounds
  - Evaluating use of USGMWD's Azusa Pipeline (reverse flow) for conveyance to Weymouth for DPR
- Potential for purified water deliveries to Three Valleys MWD and Inland Empire Utilities Agency



CEQA Activities

- Current Environmental Studies
  - Biology
  - Air Quality
  - Cultural and Tribal Resources
  - Geology, Soils and Paleontology
  - Hazards and Hazardous Materials
  - Jurisdictional Delineation, Traffic, Air Quality
  - Noise
  - GHG Emissions and Energy
  - Transportation
- Tentative Schedule
  - Notice of Preparation and Scoping: Fall 2022
  - Draft Program EIR Public Review: Early 2023
  - Final Program EIR Certification: Spring 2024

Potential-Early Start & Early-Delivery Opportunities

Early-Delivery Projects

- Designs for Early Delivery facilities
  - 1-2 mgd Title 22 recycled water supplies for local use
  - Up to 30 mgd AWT treatment and associated facilities
  - Up to 6.5 miles of pipeline through City of Carson
  - Early delivery connections to LACSD, LADWP, WBMWD

Early-Start Activities (Pre-CEQA completion)

- Program Management support
- Preliminary Designs:
  - Santa Fe Area conveyance
  - Portions of tunneling for conveyance alignment
  - Portions of conveyance alignment as cities approve alignment
  - AWT site preparation

Potential Early Delivery Demands

Pure Water Southern California
Potential Service Connection Locations for Early Delivery Opportunities

Legend
- Proposed 84-inch PWSC Pipeline
- WB Distribution System
- LADWP Harbor Loop System
- Lateral (by others)
- Injection Well Locations
- Demands Up to 4 MGD
- Demands Up to 10 MGD
- Demands Up to 16 MGD

1. Title 22 LACSD/Carson "Campus+"
2. Connection to LADWP Loop System/LB Harbor
3. WRD Inland Injection Wellfield
4. West Basin Refinery

Potential Early Start Projects

PRELIMINARY
FOR DISCUSSION PURPOSES ONLY

Portions of tunneling for conveyance alignment

Santa Fe Area Conveyance

AWT Site Preparation

Early Delivery Demands

Legend
- Proposed 84-inch PWSC Pipeline
- Tunnel Segments

6/7/22

Summary

PWSCA State and Federal Funding

State

- $665 M various water recycling funding for Fiscal Years 2021-22, 2022-23 and 2023-24
- $80 M direct earmark funding for Metropolitan's PWSCA in the budget; Governor needs to sign
- Funds for competitive grants for DPR-related work

Federal

- Potential funding to consider (new large-scale water recycling (LSWR), Title XVI grants, WIFIA or CWSRF (low-interest loans)
- New LSWR program guidelines ~Fall 2022

Outreach Highlights

Congresswoman Napolitano & USBR Commissioner Touton tour demonstration plant

Environmental Listening Session

Outreach Highlights

- AB 1845 passes through legislature
- New branding for Pure Water Southern California
- Outreach update scheduled for October's C& L Committee meeting

PURE WATER SOUTHERN CALIFORNIA

Program Schedule

Next Steps & Potential Milestones

- Commence Demo Plant sMBR baseline testing
- Issue NOP, conduct scoping meetings, continue outreach
- Complete Cost of Service analysis
- Conduct Board workshops/discussion on program/rates
- Prepare Board action to capitalize program
- Continue pursuit for State and Federal grants
- Incorporate Early Start/Delivery projects into Program

Key Actions	Timeframe
Board action to include Pure Water SC in the CIP	Dec. 2022/1st Quarter2023
PM support consultant on-board	1st Quarter 2023
Early-delivery water agreements framework	2nd Quarter 2023
Early Delivery/Start design consultants on-board	Mid 2023


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Engineering & Operations Committee

Water System Operations Manager's Report

Item 7a

Monday, September 12, 2022
9:30 a.m.

Current Operational Conditions

Continuing Drought Operations

- 2022 SWP Allocation is 5%
- SWP blend targets are 0% at Diemer and Skinner plants; 100% at Weymouth plant during Upper Feeder shutdown
- DVL to Mills drought operation continues to perform well
- Managing storage based on WSDM principles
- Maintaining 8 pump CRA flow
- August 2022 deliveries of 162 TAF were 4 TAF lower than August 2021

Upper Feeder Shutdown

September 6 – 20, 2022

- SWP blend for Weymouth at 100% began on September 5th
- Metropolitan is operating the system to minimize Weymouth SWP deliveries
  - Culver City Feeder shift to Diemer Plant
- Member Agencies taking operational actions
  - Topping off reservoirs before shutdown
  - Increasing shift to local or stored water during shutdown
  - Shifting to Diemer Plant from Weymouth Plant
  - Increasing conservation messaging

Upper Feeder Shutdown

September 6 – 20, 2022

- Slip joint delivered to field site after testing at La Verne Shops
- Upper Feeder dewatering complete
- Contractor starting repair activities
- Continued coordination with member agencies on operational and conservation actions

Upper Feeder Shutdown Press Conference

August 30, 2022

- Getting the message out through numerous media outlets on the critical need for the shutdown and increased conservation
- Call to action to eliminate all outdoor watering in the affected areas
- Press event hosted by Burbank Water & Power

2022 Extreme Heat Event

California ISO (CAISO) Severe Operating Conditions

Extreme Heat Event & Wildfires

- Extreme West-wide heat event began Wednesday 8/31 and continued through the Labor Day holiday until Friday 9/9
- CAISO peak load during the heat event of 52,061 MW on Tuesday 9/6 exceeded the previous record demand by 2,000 MW and the 2020 peak by over 5,000 MW
- CAISO issued an EEA-3 on Tuesday 9/6 and came within about 500 MW of curtailing firm load (rolling blackouts)
- Multiple wildfires occurred across the state, some threatening transmission or generation
- The Governor declared an emergency similar to the 2020 energy crisis, allowing emergency generators to run without penalty

Notes:

- *EEA = Energy Emergency Alert*
- *EEA-1 = All available generation is in use*
- *EEA-2 = Load mgmt. procedures in effect*
- *EEA-3 = Firm load shed imminent or in progress*

2022 Extreme Heat Event

Metropolitan's Response

Reduced Demand and Increased Generation

- In response to a direct CAISO request, Metropolitan voluntarily reduced pumping load at Gene and Intake during critical load hours (5 pm – 9 pm on 9/5 and 9/6 during heat event)
  - Reducing Gene and Intake by 4 pumps at both plants for four hours reduced CRA pumping demand by 50 MW, or ~20%
  - No impact to 8-pump flow operations on the rest of CRA
- Coordinated with SDCWA to increase Skinner plant deliveries, allowing the Carlsbad desalination plant to ramp down during peak load hours
- Adjusted flows on San Diego Pipeline 5 to allow Red Mountain hydroplant to operate, adding 4 MW of generation
- Increased peaking flows on Rialto Feeder by using Live Oak reservoir, allowing DWR to increase peak generation at Devil Canyon by about 4 MW

Partnering with Emergency Management Agencies

Emergency Response

Fairview Fire

- Wildfire in Hemet near DVL; no impact to Metropolitan operations
- Metropolitan's Eastern Conveyance & Distribution Incident Command Post activated
- DVL recreation area used as Riverside County Fire Command Post
- Firefighting aircraft used DVL as water source
- Alert sent to all MWD employees of local unhealthy air quality
- Internal and external communications throughout event

As of 9/8, burned ~20,000 acres and is ~5% contained

Helicopters pulling water from DVL to fight wildfire

USEPA Proposed Rule

PFOA/PFOS and CERCLA

Released September 6, 2022

- Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) proposed as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- CERCLA's strict liability standard
  - May apply to water treatment residuals
  - Enforcement is retroactive
  - Financial implications to utilities uncertain
- Staff reviewing USEPA proposal
  - Comments due November 7, 2022
  - Working with AMWA, AWWA, WUWC on comments
  - Metropolitan's previous comments sought exemption for water utilities


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

Engineering & Operations Committee

Engineering Services Manager's Report

Item 7b

September 12, 2022

Construction & Procurement Contracts July 2022

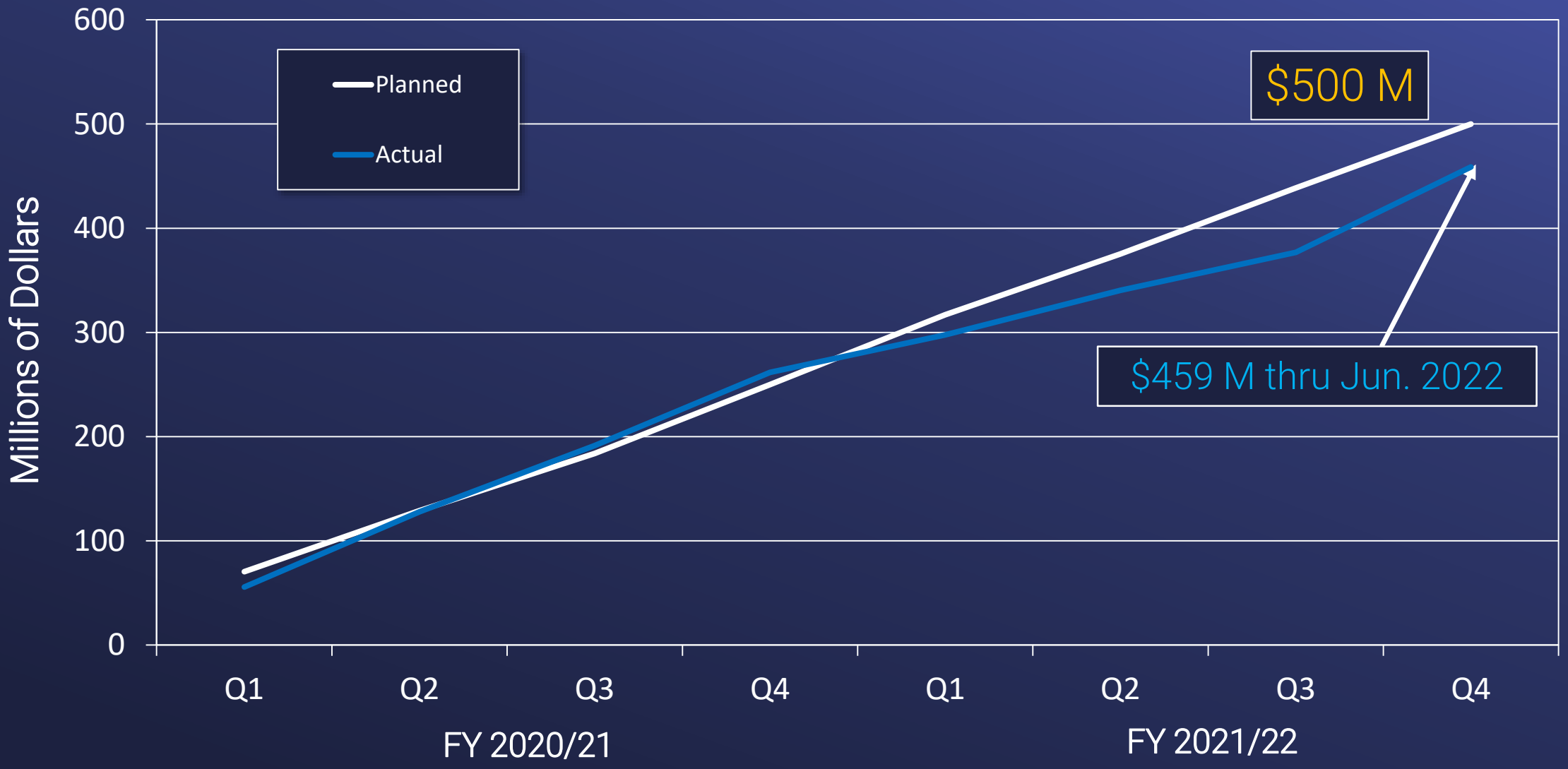
Construction & Procurement Contracts Through July 2022	
Number of Contracts at end of July 2022	45
Total Bid Amount of Contracts in Progress at end of July 2022	$451 M
Contracts Awarded in July 2022	2
Contracts With Notice To Proceed Issued in July 2022	3
Contracts Completed in July 2022	0
Contract Gross Earnings in July 2022	$2.6 M

Casa Loma Siphon Seismic Retrofit Project

Site Inspection Visit

- Contractor:
  JF Shea Construction, Inc.
- Contract Amount:
  $11,499,000
- Paid to Date:
  51%

CIP Performance – FYs 2020/21 & 2021/22



Battery Energy Storage Projects

- Weymouth Project
  - Received initial incentive commitment verification
  - Total incentive anticipated: $2.126 M
- Skinner and Jensen Projects
  - Contractor mobilization underway
  - Batteries and electrical systems in LA Ports
  - Total incentive anticipated: $6 M

Typical Battery System

Skinner Plant Battery Project Site Prep

Headquarters Construction Update

- Seismic Upgrade Contract
  - 99.8% complete
- Physical Security Stage 2 Contract
  - 99.1%
- Physical Security Stage 3 Contract
  - In advertisement
- Fire & Smoke Upgrade Contract
  - 56%
- P-1 Fire Water Piping Replacement
  - In final design

Project Labor Agreement Update

- Draft agreement transmitted to trades councils
  - July 2022
- First negotiation session
  - August 4, 2022
- Second negotiation session
  - August 24, 2022
- Third negotiation session
  - September 7, 2022
- Board Action
  - October 2022
  - Consider approval of PLA
  - Consider approval of PLA administrator agreement

Engineering and Operations Inspection Trip - 2022

- Planned date:
  October 26, 2022
- One-day trip
- Planned itinerary:
  - AVEK storage program
  - Key West Branch SWP facilities
  - Jensen plant: 50-year anniversary
  - Sepulveda pumping projects

SWP Oso Pump Plant

SWP East/West Branch Bifurcation


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA