

# 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  
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 - Final - Revised 1**

Meeting with Board of Directors \*

**November 7, 2022**

**10:30 a.m.**

Live streaming is available for all board and committee meetings on [mwdh2o.com](https://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.

## **Monday, November 7, 2022 Meeting Schedule**

**09:30 a.m. F&I  
10:30 a.m. E&O  
12:30 p.m. C&L  
01:30 p.m. IW**

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

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

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

### **\*\* CONSENT CALENDAR ITEMS -- ACTION \*\***

## **2. CONSENT CALENDAR OTHER ITEMS - ACTION**

- A. Approval of the Minutes of Engineering and Operations Committee [21-1649](#)  
Meeting held October 10, 2022

**Attachments:** [11072022 EO 2A Minutes.pdf](#)

## **3. CONSENT CALENDAR ITEMS - ACTION**

- 7-2** Ratify an emergency contract with PCL Construction, Inc., in the amount of \$855,623.78, for replacement of the expansion joint on the Upper Feeder pipeline at the Santa Ana River bridge crossing; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [Requires four-fifths vote of the Board] **[21-1629](#)**

**Attachments:** [11082022 EO 7-2 B-L](#)  
[11072022 EO 7-2 Presentation](#)

- 7-3** Award a \$1,228,607.10 contract to Howard Ridley Company, Inc. for the rehabilitation of the concrete liner at ten locations within the Rainbow Tunnel segment of San Diego Pipeline No. 1; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **[21-1630](#)**

**Attachments:** [11082022 EO 7-3 B-L](#)  
[11072022 EO 7-3 Presentation](#)

- 7-4** Authorize on-call agreements with GEI Consultants, Inc., HDR, Inc., and Stantec Consulting Services Inc. in amounts not to exceed \$2.5 million each, for a maximum of five years, to support Metropolitan's Dam Safety Initiatives Program; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. [WITHDRAWN 11/4/22] **[21-1632](#)**

- 7-6** Award an \$820,852.53 procurement contract to Whipps, Inc. for three slide gates to rehabilitate the San Jacinto Diversion Structure; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA **[21-1693](#)**

**Attachments:** [11082022 EO 7-6 B-L](#)  
[11072022 EO 7-6 Presentation](#)

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

**4. OTHER BOARD ITEMS - ACTION**

NONE

**5. BOARD INFORMATION ITEMS**

NONE

**6. COMMITTEE ITEMS**

- a. State Water Project Dependent Areas – Drought Mitigation Update [21-1648](#)

**Attachments:** [11072022 EO 6a Presentation](#)

## **7. MANAGEMENT REPORTS**

- a. Water System Operations Manager's Report [21-1650](#)

**Attachments:** [11072022 EO 7a Presentation](#)

- b. Engineering Services Manager's Report [21-1651](#)

**Attachments:** [11072022 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**

### **ENGINEERING AND OPERATIONS COMMITTEE**

**October 10, 2022**

Chair Smith called the teleconference meeting to order at 10:30 a.m.

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

Members absent: Director Dick

Other Board members present: Directors Abdo, Ackerman, Cordero, Dennstedt, Erdman, Fellow, Gray, Jung, Kurtz, Miller, Ortega, Pressman, Ramos, Record, Sutley and Tamaribuchi

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

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

1. Ernesto Medrano, OC/LA County Building and Construction Trades Council – In support of Item 7-2
2. James Elmendorf, Associated Builders & Contractors, Southern California Chapter – In support of Item 7-2
3. Haley Potiker, Resident of Los Angeles – In support of Item 7-2
4. Kristen Schwarz, Resident of Los Angeles – In support of Item 7-2
5. Alexandra Torres, W.I.N.T.E.R – In support of Item 7-2
6. Vishan Pashto, OC/LA County Building and Construction Trades Council – In support of Item 7-2
7. Amardeep Gill, Resident of Los Angeles – In support of Item 7-2
8. Luis Aleman, OC Labor Federation – In support of Item 7-2
9. Caty Wagner, Sierra Club California – In support of Item 7-2
10. Chris Hannan, OC/LA County Building and Construction Trades Council – In support of Item 7-2
11. Lauren Ahkiam, Water Projects L.A. Alliance for New Economy – In support of Item 7-2

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

#### **2. CONSENT CALENDAR OTHER ITEMS - ACTION**

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

Chair Smith recused himself from item 7-3 due to the fact that he currently owns Black & Veatch stock.

Chair Smith delegated meeting over to Vice Chair Blois

Director Faessel entered the meeting

### **3. CONSENT CALENDAR ITEMS - ACTION**

- 7-2 Subject:** Authorize the General Manager to sign a Project Labor Agreement with the Los Angeles and Orange Counties Building and Construction Trade Council, the Riverside and San Bernardino Counties Building and Construction Trades Council, the San Diego County Building and Construction Trades Council, the Tri-Counties Building and Construction Trades Council, and the signatory Unions and approve its use as a bid condition for select construction contracts within the Capital Investment Plan for a term of five years; and authorize an agreement with Parsons Constructors, Inc. in an amount not to exceed \$5,750,000 to administer the Project Labor Agreement; the General Manager has determined that this proposed action is exempt or otherwise not subject to CEQA
- Presented by:** John Vrsalovich, Team Manager, Engineering Services Group
- Motion:**
- a. Authorize the General Manager to sign a PLA with the trade councils of Los Angeles, Orange, Riverside, San Bernardino, San Diego Counties and the Tri-Counties and the signatory unions, and approve its use as a bid condition for select construction contracts within the Capital Investment Plan for a term of five years.
  - b. Authorize an agreement with Parsons Constructors, Inc. in an amount not to exceed \$5,750,000 to administer the PLA.

The following Directors provided comments or asked questions

1. Faessel
2. Miller
3. Blois
4. Repenning

Staff responded to the Directors' questions and comments.

Director Apodaca entered the meeting.

- 7-3**    Subject:        Authorize an agreement with MWA Architects in an amount not to exceed \$990,000 for preliminary design of new warehouse facilities at Metropolitan's La Verne site; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA
- Presented by:    Denise Allen, Senior Engineer, Engineering Services Group
- Motion:         Authorize an agreement with MWA Architects, in an amount not to exceed \$990,000, for preliminary design of La Verne warehouse facilities.
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- 7-4**    Subject:        Authorize on-call agreements with Brown and Caldwell, CDM Smith, Inc., Carollo Engineers, Inc., Jacobs Engineering Group, Inc., and Parsons Transportation Group, in amounts not to exceed \$10 million each, for a maximum of five years for engineering services; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA
- Presented by:    James Spicer, Unit Manager, Engineering Services Group
- Motion:         Authorize on-call agreements with Brown and Caldwell, CDM Smith, Inc., Carollo Engineers, Inc., Jacobs Engineering Group, Inc., and Parsons Transportation Group, in amounts not to exceed \$10 million each, for a maximum period of five years for engineering services.

The following Director provided comments or asked questions

1. Erdman

Staff responded to the Directors' questions and comments.

- 7-5**    Subject:        Authorize on-call agreements with MARRS Services, Inc., Butier Engineering, Inc., and Berg & Associates, Inc., in amounts not to exceed \$6.7 million, \$4.4 million, and \$3.5 million, respectively, for a maximum of three years for construction management and inspection services to support board-authorized Capital Investment Plan projects; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA
- Presented by:    David Yanez, Unit Manager, Engineering Services Group
- Motion:         Authorize on-call agreements with: (1) MARRS Services, Inc. in an amount not to exceed \$6.7 million; (2) Butier Engineering, Inc. in an amount not to exceed \$4.4 million; and (3) Berg & Associates, Inc. in an amount not to exceed \$3.5 million for construction management and inspection services, each with a duration of three years.

Director Camacho made a motion, seconded by Director Repenning, to approve the consent calendar consisting of items 2A, 7-2, 7-3, 7-4, and 7-5.

The vote was:

- Ayes: Directors Apodaca, Blois, Camacho, De Jesus, Faessel, Fong-Sakai, LeFevre, Morris, Peterson, Repenning, Smith, and Williams
- Noes: Blois (7-2)
- Abstentions: None
- Recusal: Smith (7-3)
- Absent: Director Dick

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

The motion for item 7-2 passed by a vote of 11 ayes, 1 no, 0 abstentions, and 1 absent.

The motion for item 7-3 passed by a vote of 11 ayes, 0 no, 0 abstentions, 1 recusal, and 1 absent.

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

Vice Chair Blois returned meeting to Chair Smith.

**4. OTHER BOARD ITEMS - ACTION**

NONE

**5. BOARD INFORMATION ITEMS**

NONE

**6. COMMITTEE ITEMS**

NONE

**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
- Successful public and member agency efforts in reducing water use during shutdown. Preserved 12,000 acre-feet of SWP supplies for future use
- Upper Feeder Shutdown; an “all hands-on deck” effort
- Jensen plant’s exceptional response to Castaic Lake turbidity event
- Managing cyanobacterial blooms in reservoirs – responses to Committee member questions
- Drinking water regulatory updates provided at the September Member Agency Water Quality Managers meeting

The following Directors provided comments or asked questions

1. De Jesus
2. LeFevre

Staff responded to the Director’s questions and comments.

- b.           Subject:               Engineering Services Manager’s Report
- Presented by:       John Bednarski, Engineering Services, Chief Engineer and Group Manager

Mr. Bednarski reported on the following:

- Construction & Procurement Contracts through August 2022
- Garvey Reservoir Site Drainage Project
- Upper Feeder bellows joint forensic assessment
- Status of study phase activities for State Water Project Dependent Areas
- Signing acceptance of CRA Reversionary Quitclaim Deeds for Desert properties
- Engineering’s Mentorship Program - 2022 Graduation Event
- E&O Inspection Trip on October 26, 2022

## 8. FOLLOW-UP ITEMS

NONE

## 9. FUTURE AGENDA ITEMS

NONE

The next meeting will be held on November 7, 2022.

Meeting adjourned at 12:13 pm

Tim Smith  
Chair



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

11/8/2022 Board Meeting

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**7-2**

**Subject**

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Ratify an emergency contract with PCL Construction, Inc., in the amount of \$855,623.78, for replacement of the expansion joint on the Upper Feeder pipeline at the Santa Ana River bridge crossing; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA [Requires four-fifths vote of the Board]

**Executive Summary**

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This action ratifies an emergency contract with PCL Construction, Inc., which was executed by the General Manager to replace the damaged expansion joint on the Upper Feeder, in the amount of \$855,623.78. A shutdown of the Upper Feeder was completed in September 2022, and the bellows expansion joint was replaced with a new slip-type expansion joint at the Upper Feeder's Santa Ana River crossing. This ratification should be the final board action with respect to this emergency work.

**Details**

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**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 up to 750 cubic feet per second (cfs) of untreated Colorado River water 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. Before the recent shutdown, the feeder had a bellows-type expansion joint at the bridge's mid-span that allowed for the pipeline's thermal expansion and contraction.

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 monitored the crack length and effectiveness of the short-term repair.

Due to the critical nature of the feeder, the risk of an unplanned outage, the location of the expansion joint above environmentally sensitive areas, and the historically low State Water Project (SWP) allocation, the General Manager executed an emergency contract with PCL Construction in June 2022 for installation of a 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 September shutdown on the Upper Feeder.

PCL Construction successfully replaced the bellows joint with a Metropolitan-fabricated slip-type joint during the September shutdown. Prior to the shutdown, the Upper Feeder was operating at a reduced flow to reduce the risk of pipe failure. Now that the joint has been replaced, the flow on the feeder has been increased in support of operational actions being implemented due to the current drought.

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 continuation of the emergency action to execute a no-bid contract for the expansion joint replacement. In accordance with the Administrative Code, Metropolitan's Board also voted to continue the emergency contract actions July, August, and September 2022. A four-fifths vote of the Board is required to ratify the emergency construction contract.

### **Upper Feeder Expansion Joint Replacement - Construction**

The emergency construction contract with PCL Construction included: 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 performed this construction work under a time-and-materials emergency contract. The contractor has completed all contractual obligations, including replacement of the Upper Feeder expansion joint, during the September shutdown.

Additional construction activities completed by Metropolitan forces included: fabrication of the new slip-type expansion joint; installation of a new 36-inch accessway; installation of a new 6-inch drain valve for improved dewatering of this pipe segment; installation of a new 4-inch tap near the expansion joint for use during construction; grading, clearing, and grubbing an area adjacent to the bridge for the contractor's crane pad and other construction activities; and shutdown, dewatering, quagga filtration, and startup activities. Metropolitan staff also provided design support for construction activities, construction inspection services, contract administration, environmental monitoring, and regular survey monitoring of the bridge and expansion joint.

A total of \$2,500,000 is allocated for this work. In addition to the amount of the contract described below, other funds allocated include \$677,000 for Metropolitan force activities as described above; \$292,000 for materials, supplies, and incidental expenses; \$274,000 for construction inspection; \$127,000 for submittals review, technical support during construction, responding to requests for information, and preparation of record drawings; \$196,000 for contract administration, environmental monitoring, field survey support, and project management; and \$78,376.22 for remaining budget.

**Attachment 1** provides the allocation of funds. The total amount expended for the Upper Feeder expansion joint replacement is approximately \$3.40 million.

### ***Ratification of Emergency Construction Contract (PCL Construction, Inc.)***

Specifications No. 2045 for the replacement of the expansion joint on the Upper Feeder at the Santa Ana River crossing was executed by the General Manager as a time and materials contract. The contract includes markups of 25 percent for labor and 15 percent for equipment and other expenses. The markups included the contractor's compensation for overhead costs (including home office support, superintendence, bond and insurance premiums, and taxes) and profit. Due to the relatively short timeframe to negotiate this emergency contract, no Small Business Enterprise requirement was established. At the completion of the emergency contract work, PCL Construction's cost approved by Metropolitan for the time and material work is \$855,623.78.

As described above, Metropolitan staff completed various construction activities and construction support activities as part of this project. The total cost of construction for this project is \$2,334,623.78 which includes \$855,623.78 for the contract; \$292,000 for materials and supplies; and \$1,187,000 for Metropolitan force activities described above. (The construction amount includes \$510,000 which was allocated in July 2022 for fabrication of the slip-type expansion joint). Engineering Services' performance metric target range for inspection of projects with construction less than \$3 million is 9 to 15 percent. For this project, the performance metric goal for inspection is 11.7 percent of the total construction cost.

## Alternatives Considered

Metropolitan's staff initially considered using an expedited schedule for board award of a construction contract rather than utilizing the emergency contracting provisions in the Administrative Code. However, even with an accelerated advertisement and award approach, construction work would not have begun until late this year. Staff determined that this was not an acceptable schedule considering the flow restrictions that had been placed on the feeder and the risk of an unplanned outage. The emergency contract with PCL Construction allowed for the timely repair of a major pipeline that delivers Colorado River water into the central portion of Metropolitan's distribution system and is a critical facility helping to reduce the impacts of the extreme drought conditions on the SWP. The selected option reduced the risk of an unplanned shutdown to perform costly emergency repairs and restored reliable deliveries to Metropolitan's member agencies.

## Summary

This action ratifies an emergency contract with PCL Construction, Inc., in the amount of \$855,623.78, executed by the General Manager to replace the damaged expansion joint. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the listing of Subcontractors, and **Attachment 3** for the Location Map.

## Project Milestone

Construction was completed in September 2022.

## Policy

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Metropolitan Water District Administrative Code Section 8122: Emergency Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52778, dated April 12th, 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)

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### 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 Option #2:

None required

## Board Options

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### Option #1

Ratify an emergency contract with PCL Construction, Inc. in the amount of \$855,623.78 for replacement of the expansion joint on the Upper Feeder pipeline at the Santa Ana River bridge crossing. **[Requires four-fifths vote of the Board.]**

**Fiscal Impact:** Expenditure of \$2,500,000 in capital funds. All funds were incurred in the current biennium and have been previously authorized. It is not anticipated that the expenditures on this project 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 ratify the emergency contract.

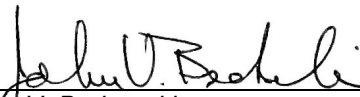
**Fiscal Impact:** Unknown

**Business Analysis:** The construction work has already been completed. This option could expose Metropolitan to claims for work performed by the contractor under the emergency contract.

## Staff Recommendation


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### Option #1

  
\_\_\_\_\_  
John V. Bednarski  
Chief Engineer/Manager  
Engineering Services

10/20/2022

Date

  
\_\_\_\_\_  
Adel Hagekhalil  
General Manager

10/20/2022

Date

**Attachment 1 – Allocation of Funds**

**Attachment 2 – Listing of Subcontractors**

**Attachment 3 – Location Map**

Ref# es12688250

### Allocation of Funds for the Upper Feeder Expansion Joint Replacement

	<b>Current Board Action (Nov. 2022)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	196,000
Submittals Review, Eng Support, & Record Drwgs.	127,000
Construction Inspection & Support	274,000
Metropolitan Force Construction	677,000
Materials & Supplies	183,000
Incidental Expenses	109,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	
PCL Construction, Inc.	855,623.78
Remaining Budget	78,376.22
<b>Total</b>	<b>\$ 2,500,000</b>

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 \$3.4 million.

**The Metropolitan Water District of Southern California****Subcontractors for PCL Construction, Inc.****Specifications No. 2045  
Upper Feeder Expansion Joint Replacement**

Subcontractor and Location
Mr. Crane Orange, CA
Dean's Certified Welding Temecula, CA





Engineering & Operations Committee

# Upper Feeder Expansion Joint Replacement

Item 7-2

November 7, 2022

## Upper Feeder Expansion Joint Replacement

### Current Action

- Ratify an emergency contract with PCL Construction, Inc., in the amount of \$855,623.78, for replacement of the expansion joint on the Upper Feeder pipeline at the Santa Ana River bridge crossing  
**[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 was located at bridge mid-span



# Upper Feeder Expansion Joint Replacement

## Bellows Joint

- Crack discovered and leak temporarily repaired April 2022
  - Flow limited to 525 cfs
- Risk of unplanned shutdown on Upper Feeder; supports drought actions & operational shifts to save SPW
- Initial findings from forensic analysis of bellows showed multiple locations where additional leaks could have formed



Initial Leak



Steel  
Bracket

Temporary Repair



## Upper Feeder Expansion Joint Replacement

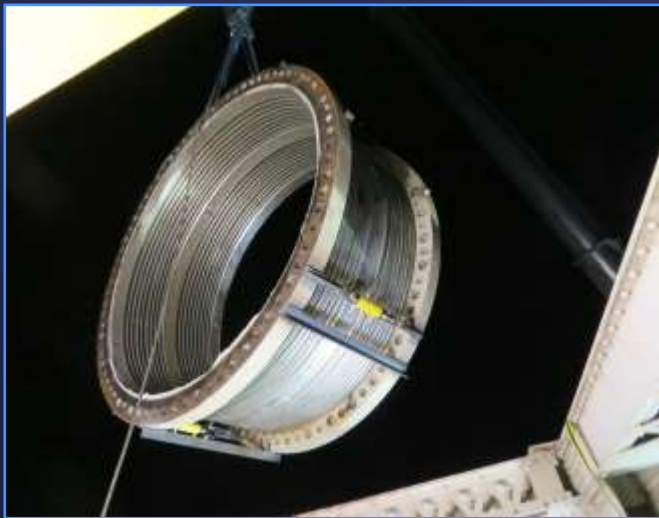


## Emergency Contract

- PCL Construction performed work under a time & materials contract
  - Board authorized continuation of the emergency action to execute a no-bid contract for the expansion joint replacement in July, August, & September 2022
- Executed per Admin Code section 8122(b)
  - Board to ratify construction contract [requires four-fifths vote]

# Contractor Completed Activities

- ✓ Removed bridge structural members & restraining cage for pipe access
- ✓ Removed bellows joint
- ✓ Installed new slip-type joint
- ✓ Reinstalled bridge structural members & restraining cage



# Upper Feeder Expansion Joint Replacement

## Metropolitan Completed Activities

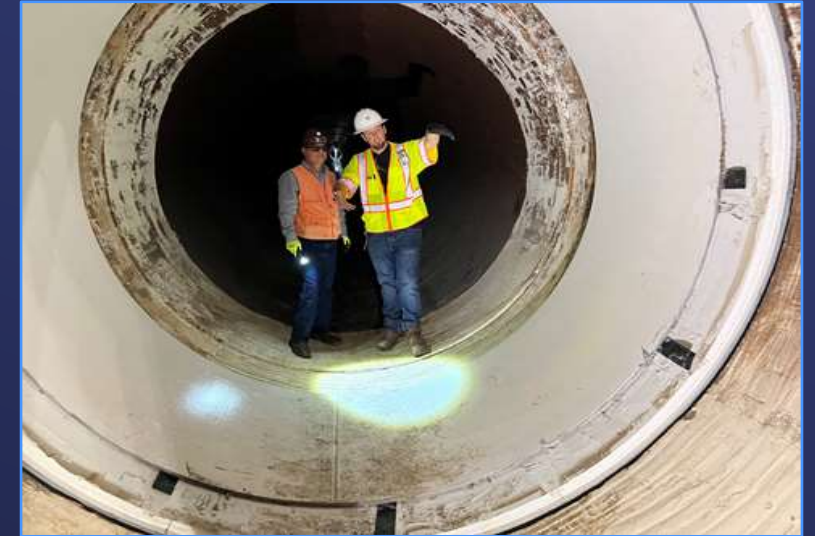
- ✓ Completed slip joint fabrication & installation design packages
- ✓ Installed 4-inch tap near expansion joint to facilitate construction
- ✓ Procured slip joint flanges, hardware & accessories
- ✓ Installed 6-inch dewatering valve
- ✓ Graded and cleared for crane pad
- ✓ Fabrication, coating, & assembly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



## Upper Feeder Expansion Joint Replacement

### Upper Feeder Shutdown

- ✓ Completed ahead of schedule
- ✓ Member Agencies reduced demands during shutdown
- ✓ Saved 12 TAF compared with original SPW usage forecast
- ✓ Successful collaboration between organizations within & outside Metropolitan



# Allocation of Funds

## Upper Feeder Expansion Joint Replacement

Construction Contract – PCL Construction	\$ 855,623.78
Metropolitan Labor	
Program mgmt. environmental support, & contract admin.	196,000
Construction inspection and support	274,000
Submittal review, engineering support, & record drawings	127,000
Force construction & fabrication	677,000
Materials	183,000
Incidentals	109,000
Remaining Budget	78,376.22
Total	<u>\$2,500,000</u>

\*Including \$900,000 allocated in July 2022, total project cost is \$3.4M

# Board Options

- Option #1

Ratify an emergency contract with PCL Construction, Inc. in the amount of \$855,623.78 for replacement of the expansion joint on the Upper Feeder pipeline at the Santa Ana River bridge crossing.  
**[Requires four-fifths vote of the Board.]**

- Option #2

Do not ratify the emergency contract.

# Staff Recommendation

- Option #1





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

11/8/2022 Board Meeting

7-3

**Subject**

Award a \$1,228,607.10 contract to Howard Ridley Company, Inc. for the rehabilitation of the concrete liner at ten locations within the Rainbow Tunnel segment of San Diego Pipeline No. 1; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

**Executive Summary**

The Rainbow Tunnel is a horseshoe-shaped tunnel segment of San Diego Pipeline No. 1 that conveys treated water from the Robert A. Skinner Water Treatment plant (Skinner plant) south to member agencies in Riverside and San Diego Counties. Staff has identified ten locations along the tunnel where the concrete liner is showing signs of degradation and needs replacement. This action awards a contract to replace the degraded concrete at ten locations within the Rainbow Tunnel.

**Details**

The San Diego Pipelines Nos. 1 and 2 carry treated water from the Skinner plant to member agencies in Riverside and San Diego Counties. The parallel pipelines were constructed in 1945, range in diameter from 48-inches to 72-inches, and are comprised of multiple materials, including steel, precast concrete, and tunnel segments. The pipelines merge twice, once in a horseshoe-shaped tunnel segment known as Rainbow Tunnel. This tunnel segment is approximately 4,700 feet long with a height of six feet.

Recent inspections of the Rainbow Tunnel have identified areas of cracking and spalling of the existing concrete liner, which leads to the potential for water intrusion. A structural integrity investigation of the tunnel using ground penetrating radar was performed to further study areas of concern. The test revealed that the tunnel was in good condition from a structural standpoint; however, voids in the soil behind the seven-inch-thick liner were observed in ten locations. The method of repair for these locations includes the injection of grout behind the tunnel liner to stabilize the soil and prevent water intrusion, followed by the removal and replacement of the distressed concrete liner. Rehabilitation of the tunnel segment at these ten locations within the Rainbow Tunnel will rehabilitate the degraded concrete liner and reduce the risk of water quality impacts or an unplanned shutdown in the future.

Final design for the concrete liner rehabilitation at the ten locations within Rainbow Tunnel has been completed, and staff recommends proceeding with awarding a contract for this work.

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 actions described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to this action during the current biennium are available within the Capital Investment Plan Appropriation for Fiscal Years 2022/23 and 2023/24. This project has been reviewed in accordance with Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Distribution System Reliability Program.

**Rainbow Tunnel Concrete Liner Rehabilitation – Construction**

The scope of the construction contract consists of rehabilitating the concrete tunnel liner at ten locations within the San Diego Pipeline No. 1 Rainbow Tunnel. The planned work will include grout wall injection, surface preparation, temporary ventilation, and concrete removal and replacement. Metropolitan forces will dewater the

tunnel, establish clearances, and return the system to service. This work will be conducted during two upcoming ten-day shutdowns of San Diego Pipeline Nos. 1 and 2 that are scheduled for January/February 2023 and February/March 2023.

A total of \$2,300,000 is allocated for this work. In addition to the contract amount, allocated funds for work by Metropolitan staff include: \$202,000 for construction management and inspection; \$335,000 for Metropolitan force shutdown activities; \$155,000 for submittals review, responding to requests for information, and preparation of record drawings; \$125,000 for contract administration, environmental monitoring support, and project management; and \$254,392.90 for remaining budget. **Attachment 1** provides the allocation of the required funds. The total estimated cost to complete the work, including the amount appropriated to date and funds allocated for the work described in this action, is \$2.9 million.

***Award of Construction Contract (Howard Ridley Company, Inc.)***

Specifications No. 2038 for the construction of the Rainbow Tunnel Concrete Liner Rehabilitation was advertised on August 31, 2022. As shown in **Attachment 2**, two bids were received and opened on October 4, 2022. The bid from Harrison Western was deemed to be non-responsive as they did not have a California contractor's license. The bid from Howard Ridley Company, Inc. in the amount of \$1,228,607.10 complies with the requirements of the specifications. The engineer's estimate for this project was \$1,340,000. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount. Howard Ridley Company, Inc. is an SBE firm, and thus achieves 100 percent participation. The subcontractors for this contract are listed in **Attachment 3**.

As described above, Metropolitan staff will perform construction management and inspection. The total cost of construction for this project is \$1,563,607.10 which includes the amount of the contract and Metropolitan force activities. Engineering Services' performance metric goal for inspection of projects with construction less than \$3 million is 12.9 percent. For this project, the performance metric for inspection is 15 percent of the total construction cost.

**Alternatives Considered**

Staff considered several alternatives for the rehabilitation of the Rainbow Tunnel, including a complete relining of the tunnel using a steel liner system and concrete liner. However, this alternative would require a four-to-six-month shutdown and range in cost from \$10 million to \$15 million. The selected alternative will complete the rehabilitation of the tunnel within two ten-day shutdowns and extends the service life of the current concrete liner in the tunnel. Due to member agency service connection demands downstream of the Rainbow Tunnel, staff limits the duration of the tunnel shutdown to ten days.

**Summary**

This action awards a \$1,228,607.10 contract to Howard Ridley Company, Inc. to rehabilitate the concrete liner of the Rainbow Tunnel at ten locations. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Listing of Subcontractors for the Low Bidder, and **Attachment 4** for the Location Map.

***Project Milestone***

March 2023 – Completion of construction

**Policy**

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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

## California Environmental Quality Act (CEQA)

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### CEQA determination for Option #1:

The proposed action involves operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. In addition, the proposed action includes the replacement and reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have the same purpose and capacity as the structure replaced. Accordingly, the proposed action qualifies under Class 1 and Class 2 Categorical Exemptions (Sections 15301 and 15302 of the State CEQA Guidelines).

### CEQA determination for Option #2:

None required

## Board Options

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### Option #1

Award a \$1,228,607.10 contract to Howard Ridley Company, Inc. to rehabilitate the concrete liner of the Rainbow Tunnel at ten locations.

**Fiscal Impact:** Expenditure of \$2.3 million in capital funds. All funds will be incurred in the current biennium and have been previously authorized.

**Business Analysis:** This option will complete the needed rehabilitation of the damaged lining of the Rainbow Tunnel, which will protect Metropolitan's assets and reduce the risk of costly emergency repairs.

### Option #2

Do not proceed with the project at this time.

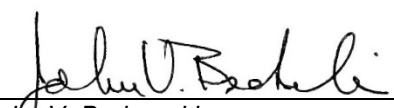

**Fiscal Impact:** None

**Business Analysis:** This option would forgo an opportunity to enhance reliability and extend the service life of the Rainbow Tunnel, and could lead to higher costs, more extensive repairs, and unplanned shutdowns.

## Staff Recommendation

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### Option #1

 _____ John V. Bednarski Chief Engineer/Manager Engineering Services	10/17/2022 _____ Date
 _____ Adel Hagekhalil General Manager	10/19/2022 _____ Date

**Attachment 1 – Allocation of Funds**

**Attachment 2 – Abstract of Bids**

**Attachment 3 – Subcontractors for Low Bidder**

**Attachment 4 – Location Map**

### **Allocation of Funds for Rainbow Tunnel Concrete Liner Rehabilitation**

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	<b>Current Board Action (Nov. 2022)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	125,000
Submittals Review & Record Drwgs.	155,000
Construction Inspection & Support	202,000
Metropolitan Force Construction	320,000
Materials & Supplies	-
Incidental Expenses	15,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
Howard Ridley Company, Inc.	1,228,607.10
Remaining Budget	254,392.90
<b>Total</b>	<b>\$ 2,300,000</b>

The total amount expended to date for rehabilitation of the Rainbow Tunnel concrete liner is approximately \$615,000. The total estimated cost to complete the work, including the amount appropriated to date, and funds allocated for the work described in this action is \$2.9 million.

**The Metropolitan Water District of Southern California****Abstract of Bids Received on October 4, 2022, at 2:00 P.M.****Specifications No. 2038  
Rainbow Tunnel Concrete Liner Rehabilitation**

The work consists of localized concrete tunnel liner rehabilitation at ten locations within the San Diego Pipeline No. 1 Rainbow Tunnel including grout injection behind the tunnel liner, surface preparation, temporary ventilation, and concrete removal and replacement.

Engineer's estimate: \$1,340,000

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE \$</b>	<b>SBE %</b>	<b>Met SBE<sup>1</sup></b>
Harrison Western Lakewood, CO	\$799,490 <sup>2</sup>	-	-	-
<b>Howard Ridley Company, Inc. Chino, CA</b>	<b>\$1,228,607.10</b>	<b>\$1,228,607.10</b>	<b>100%</b>	<b>Yes</b>

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

2 Non-responsive bid

**The Metropolitan Water District of Southern California****Subcontractors for Low Bidder****Specifications No. 2038****Rainbow Tunnel Concrete Liner Rehabilitation**

Low bidder: Howard Ridley Company, Inc.

Subcontractor and Location
Slater Waterproofing Montclair, CA





Engineering & Operations Committee

# Rainbow Tunnel Concrete Liner Rehabilitation

Item 7-3

November 7, 2022

## Rainbow Tunnel Concrete Liner Rehabilitation

### Current Action

- Award a \$1,228,607.10 contract to Howard Ridley Company, Inc. for the rehabilitation of the concrete liner at ten locations within the Rainbow Tunnel segment of San Diego Pipeline No. 1

# Distribution System



# Rainbow Tunnel Concrete Liner Rehabilitation

## Background

- Rainbow Tunnel
  - Tunnel section of San Diego Pipeline #1
  - Concrete-lined horseshoe tunnel
  - 77 years old
  - 4,700 feet long
  - 6-foot inside height



Rainbow Tunnel Survey Imagery

# Rainbow Tunnel Concrete Liner Rehabilitation

## Background

- Inspections in 2020 & 2021 identified locations of concrete degradation in the tunnel liner
  - Structural analysis of tunnel showed tunnel structurally sound
  - Several locations identified as potential leak locations
    - Sealed from the surface of the tunnel liner – Met Forces
  - 10 locations of significant concrete degradation identified
    - Require complete localized liner replacement



## Rainbow Tunnel Concrete Liner Rehabilitation

### Alternatives Considered

- Complete tunnel relining
  - Require 4 to 6-month shutdown
  - Current limit – 10 days
- Selected Alternative
  - Completed localized concrete liner rehabilitation
  - Utilizes two upcoming 10-day shutdowns
    - Jan/Feb 2023 & Feb/March 2023
  - Extends service life of current liner

## Rainbow Tunnel Concrete Liner Rehabilitation

### Scope of Work

- Contractor
  - Complete replacement of concrete liner at ten locations
  - Grout curtain injection
  - Temporary ventilation
  - Surface preparation at tunnel access
- Metropolitan
  - Shutdown support & continuing inspections
  - Grading & preparation of staging area
  - Submittal review, construction inspection, & project management

# Bid Results

## Specifications No. 2038

Bids Received	October 4, 2022
No. of Bidders	2
Lowest Responsible Bidder	Howard Ridley Company, Inc.
Low Bid	\$1,228,607.10
Other Bid	\$799,490*
Engineer's Estimate	\$1,340,000
SBE Participation**	100%

\*Bid deemed non-responsive

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

# Allocation of Funds

## Rainbow Tunnel Concrete Liner Rehabilitation

### Metropolitan Labor

Owners Costs (Proj. Mgmt., Contract Admin., Envir. Support)	\$ 125,000
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Construction Inspection & Support	202,000
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Force Construction	320,000
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Submittals Review, Tech. Support, Record Dwgs.	155,000
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Materials & Incidentals	15,000
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### Contracts

Howard Ridley Company, Inc.	1,228,607.10
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Remaining Budget	254,392.90
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Total	\$ 2,300,000
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# Project Schedule



# Board Options

- Option #1
  - Award a \$1,228,607.10 contract to Howard Ridley Company, Inc. to rehabilitate the concrete liner of the Rainbow Tunnel at ten locations.
- Option #2
  - Do not proceed with the project at this time.

# Staff Recommendation

- Option #1





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

11/8/2022 Board Meeting

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**7-6**

**Subject**

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Award an \$820,852.53 procurement contract to Whipps, Inc. for three slide gates to rehabilitate the San Jacinto Diversion Structure; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

**Executive Summary**

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The San Jacinto Diversion Structure controls flows from the Colorado River Aqueduct (CRA) into the Casa Loma Siphon First and Second Barrels and the San Jacinto Pipeline. The structure uses three slide gates to control these flows. Since their initial installation over 80 years ago, the gates have deteriorated and need to be replaced. This action awards a procurement contract for three new slide gate assemblies. This procurement contract award will ensure the timely fabrication and delivery of the slide gates for an upcoming installation contract.

**Details**

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**Background**

The San Jacinto Diversion Structure was constructed in 1939 as part of the CRA conveyance system. The diversion structure is located at the west portal of the San Jacinto Tunnel and controls flows into the Casa Loma Siphon First and Second Barrels and the San Jacinto Pipeline. Two slide gates (V-01 and V-02) control flows into the first barrel of the Casa Loma Siphon, which ultimately supplies CRA water to Lake Mathews. A third slide gate (V-03) controls flows into the San Jacinto Pipeline. Each of these cast iron gates is approximately 6 feet wide by 8 feet high.

A recent inspection revealed failing gate shafts and motor operators, as well as significant corrosion damage on the three slide gates, including corrosion of the gate leafs and guide rails. During the March 2019 CRA shutdown, the slide gate assembly for V-03 was removed from service because it could not be reliably operated. A temporary drop gate was installed further downstream to regulate flows into the San Jacinto Pipeline.

To allow for an improved ability to control flow, the new gates will have a robust design, including upgraded materials. Staff recommends moving forward with the procurement of three new slide gates and actuator assemblies to ensure their timely delivery for a subsequent installation contract. Staff will seek board authorization to award a construction contract in mid-2023 for installation of the three gates during a planned 2024 shutdown of the CRA.

In accordance with the April 2022 action on the biennial budget for fiscal years 2022/23 and 2023/24, the General Manager will authorize staff to proceed with the procurement of three slide gates and appurtenances to rehabilitate the San Jacinto Diversion Structure, pending board award of the procurement contract described below. Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the work to be performed pursuant to the subject contracts 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 Distribution System Reliability Program.

**San Jacinto Diversion Structure Slide Gate Rehabilitation – Procurement of Three Gates**

The scope of the procurement contract includes furnishing three stainless steel side gates, actuator arms, motors, associated fittings, and accessories.

A total of \$1,100,000 is required to perform this work. In addition to the amount of the contract, the allocated funds include \$79,000 for factory fabrication inspection and functional testing; \$5,000 for Metropolitan forces to receive, offload, and store the slide gates at Diamond Valley Lake; \$64,000 for submittals review, technical support, and responding to manufacturer requests for information; \$62,000 for contract administration and project management; and \$69,147.47 for remaining budget.

**Attachment 1** provides the allocation of required funds. The total estimated cost to complete rehabilitation of the slide gates at the San Jacinto Diversion Structure, including the amount appropriated to date, funds allocated for the work described in this action, and all future actions, is expected to range between \$2.5 million and \$3.0 million.

***Award of Procurement Contract (Whipps, Inc.)***

Specifications No. 2028 for furnishing three stainless steel slide gates and fittings to rehabilitate the San Jacinto Diversion Structure was advertised for bids on August 17, 2022. As shown in **Attachment 2**, three bids were received and opened on October 6, 2022. Two of the bids were deemed to be non-responsive due to exceptions taken by the bidder. The bid from Whipps, Inc. in the amount of \$820,852.53 complies with the requirements of the specifications. This amount includes all sales and use taxes imposed by the State of California. The budgetary estimate for this material, based on a survey of vendors, ranged from \$500,000 to \$750,000. Staff attributes the higher-than-expected bid amount to increased costs for materials, labor, and transportation. Proceeding with a contract at this time will enable completion of the rehabilitation of the San Jacinto Diversion Structure with minimal operational impacts and will enable a future contractor to have the gates available for installation in the planned 2024 CRA shutdown. As a procurement contract, there are no subcontracting opportunities and no SBE participation level was established for this contract.

This action awards an \$820,852.53 procurement contract to Whipps, Inc. to furnish three stainless steel slide gates and appurtenances to rehabilitate the San Jacinto Diversion Structure.

**Alternatives Considered**

During the planning and design of this project, staff considered rehabilitating the existing three gates instead of replacement with new gates. This approach would replace components experiencing excessive wear, while refurbishing the gate leaf and frame. All three gates were previously refurbished in 2011, and a similar life span would be expected for a new refurbishment effort. The selected alternative to completely replace and upgrade the slide gate systems will provide significantly longer longevity for the overall control structure on the CRA when compared to the refurbishment approach. The recommended approach will provide new gates with a life span of approximately 80 years.

**Summary**

This action awards an \$820,852.53 procurement contract to Whipps, Inc. to furnish three slide gates and appurtenances to rehabilitate the San Jacinto Diversion Structure. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

***Project Milestones***

December 2023 – Complete fabrication of slide gate assemblies

March 2024 – Complete installation of slide gates under a separate contract

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## Policy

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

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

By Minute Item 52778, dated April 14, 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.

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## California Environmental Quality Act (CEQA)

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### 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 operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. In addition, the proposed action includes the replacement and reconstruction of existing structures and facilities where the new structure will be located on the same site and as the structure replaced and will have the same purpose and capacity as the structure replaced. Accordingly, the proposed action qualifies under Class 1 and Class 2 Categorical Exemptions (Sections 15301 and 15302 of the State CEQA Guidelines).

### CEQA determination for Option #2:

None required

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## Board Options

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### Option #1

Award an \$820,852.53 procurement contract to Whipps, Inc. to furnish three slide gates and appurtenances to rehabilitate the San Jacinto Diversion Structure.

**Fiscal Impact:** Expenditure of \$1,100,000 in capital funds. All costs will be incurred in the current biennium and have been previously authorized.

**Business Analysis:** This option will improve the operational reliability of the CRA delivery system.

### Option #2

Do not proceed with this project at this time.



**Fiscal Impact:** None

**Business Analysis:** This option will forego an opportunity to improve the operational reliability of CRA, which may lead to costly urgent repairs.

**Staff Recommendation**

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Option #1

 _____ John V. Bednarski Manager/Chief Engineer Engineering Services	10/24/2022 _____ <i>Date</i>
 _____ Adel Hagekhalil General Manager	10/26/2022 _____ <i>Date</i>

**Attachment 1 – Allocation of Funds****Attachment 2 – Abstract of Bids****Attachment 3 – Location Map**

Ref# es12687407

### Allocation of Funds for San Jacinto Diversion Structure Slide Gate Rehabilitation

	<b>Current Board Action (Nov. 2022)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt.)	62,000
Support during construction & testing	-
Submittals Review & Record Drwgs.	64,000
Construction Inspection & Support	79,000
Force Construction	5,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	
Whipps, Inc,	820,852.53
Remaining Budget	69,147.47
<b>Total</b>	<b><u>1,100,000</u></b>

The total amount expended to date on the San Jacinto Diversion Structure Slide Gate Rehabilitation project is approximately \$325,000. The total estimated cost to complete this project, including the amount appropriated to date, funds allocated for the work described in this action, and all future actions, is expected to range between \$2.5 million and \$3.0 million.

**The Metropolitan Water District of Southern California**  
**Abstract of Bids Received on October 6, 2022 at 2:00 P.M.**  
**Specifications No. 2028**  
**San Jacinto Diversion Structure Slide Gate Rehabilitation**

The work consists of providing three slide gates and appurtenances to be installed as part of rehabilitation of the San Jacinto Diversion Structure project.

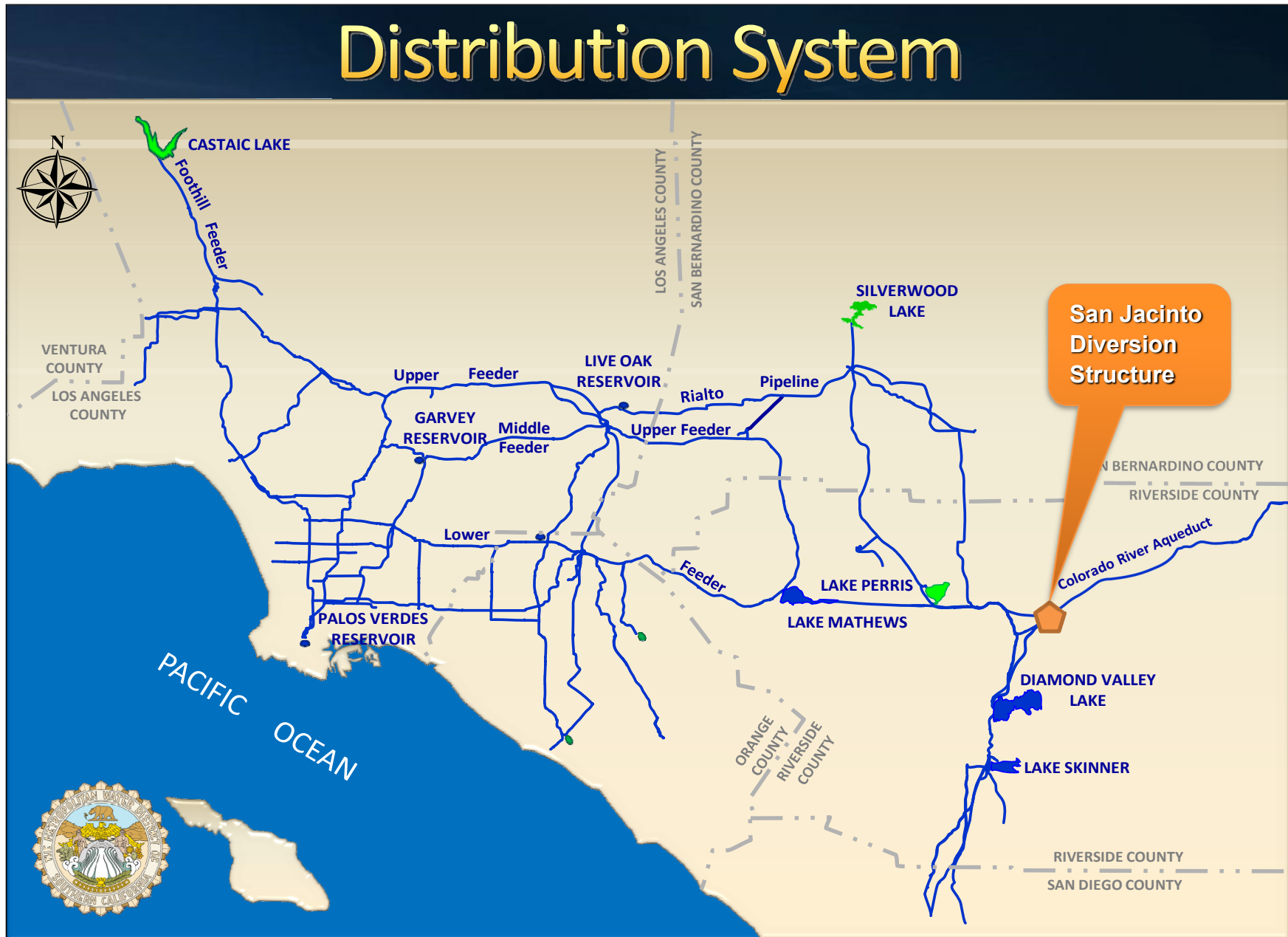
Estimated range of costs: \$500,000 – \$750,000

<b>Bidder and Location</b>	<b>Base Bid Price Total <sup>1</sup></b>
Hydro Gate Denver, CO	\$525,033 <sup>3</sup>
ISE Metal, Inc. Sherbrooke/Quebec, Canada	\$720,456 <sup>3</sup>
<b>Whipps, Inc.</b> <b>Athol, MA</b>	<b>\$820,852.53</b>

<sup>1</sup> As a procurement contract, there are no subcontracting opportunities.

<sup>2</sup> Includes sales and use taxes of 7.75 percent imposed by the state of California

<sup>3</sup> Non-responsive bid





Engineering & Operations Committee

# San Jacinto Diversion Structure Rehabilitation Slide Gate Procurement

Item 7-6

November 7, 2022

## San Jacinto Diversion Structure

### Slide Gate Procurement

#### Current Action

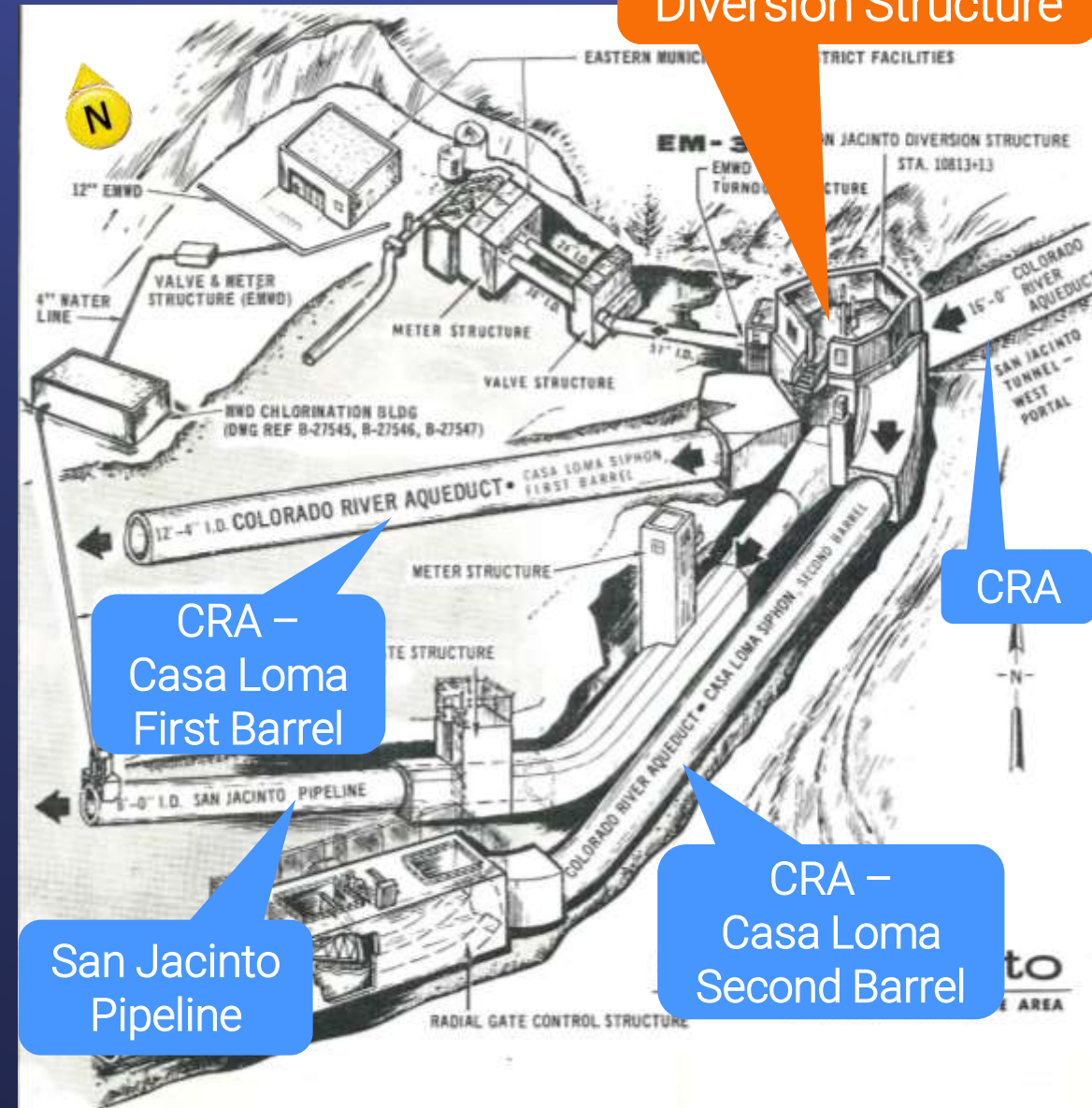
- Award a \$820,852.53 procurement contract to Whipps, Inc. for three slide gates to rehabilitate the San Jacinto Diversion Structure

# Distribution System



# San Jacinto Diversion Structure

- Constructed in 1939
- Slide Gates V-01 & V-02
  - Controls flows into Casa Loma Siphon First Barrel
  - Supplies CRA water to Lake Mathews
- Slide Gate V-03
  - Controls flows into the San Jacinto Pipeline



# Background

- Slide Gate V-03 failed in 2019 & was removed
  - Temporary drop gate installed to provide isolation on San Jacinto Pipeline
- Significant corrosion identified on Slide Gates V-01 & V-02
  - Failure of Slide Gates V-01 or V-02 would impact operational control and flexibility

Slide Gate V-03



## San Jacinto Diversion Structure

### Slide Gate Procurement

## Slide Gate Procurement & Installation

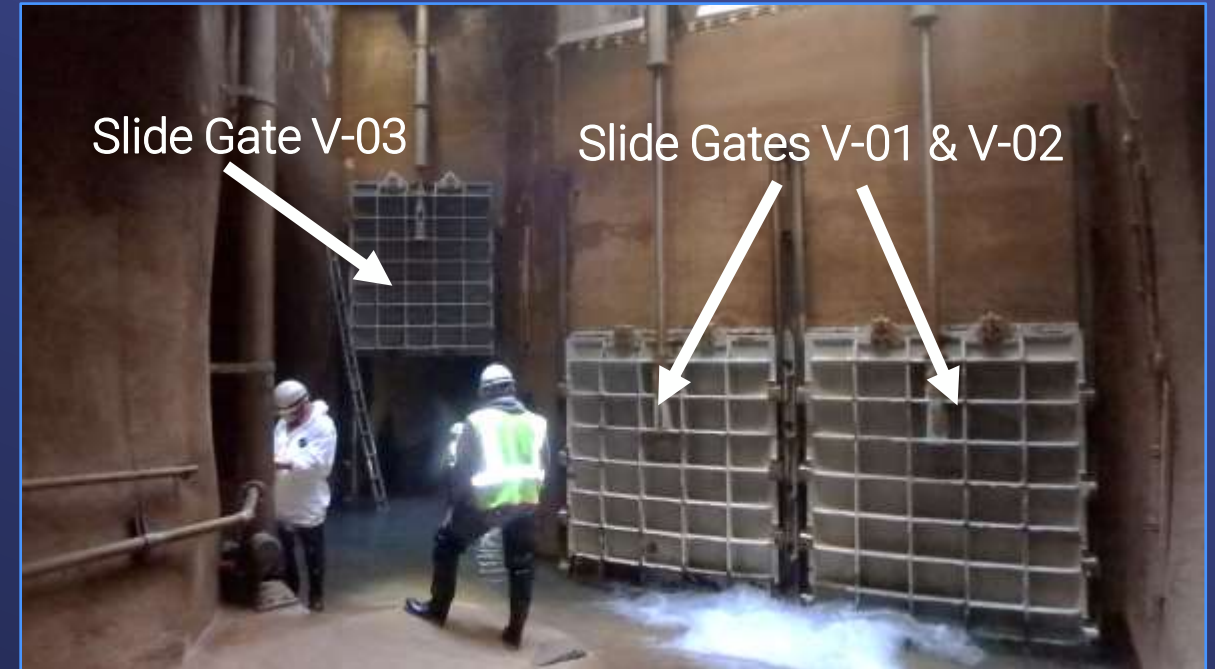
- Slide gate fabrication & delivery expected to take up to 12 months
- Delivery scheduled for late-2023
- Slide gates to be installed during February/March 2024 CRA shutdown
- Operational by March 2024
- Installed under separate contract



Leakage Past Closed  
Slide Gates

# Alternatives Considered

- Rehabilitation
  - Replace components showing excessive wear
  - 10-year life span anticipated
  - Previously rehabilitated in 2011
- Selected alternative
  - Replace all three slide gates to avoid failure resulting in unplanned shutdown & operational impacts



Interior of San Jacinto Diversion Structure

## San Jacinto Diversion Structure

## Slide Gate Procurement

### Scope of Work

- Contractor
  - Furnish three slide gates
  - Deliver gates to Wadsworth Pumping Plant
- Metropolitan
  - Submittal review
  - Factory fabrication inspection
  - Off-load slide gates
  - Contract administration & project management

# Bid Results

## Specifications No. 2028

Bids Received	October 6, 2022
No. of Bidders	3
Lowest Responsible Bidder	Whipps, Inc.
Lowest Responsible Bid	\$820,852.53
Range of other Bids*	\$525,000 to \$720,000
Estimated Range of Costs	\$500,000 to \$750,000

\* Two Non-Responsive Bids

# Allocation of Funds

## San Jacinto Slide Gates

### Metropolitan Labor

Program mgmt., contract admin. & envir. support	\$ 62,000
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Fabrication Inspection	79,000
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Submittal review, technical support & record drwgs.	64,000
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Force construction	5,000
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### Contract

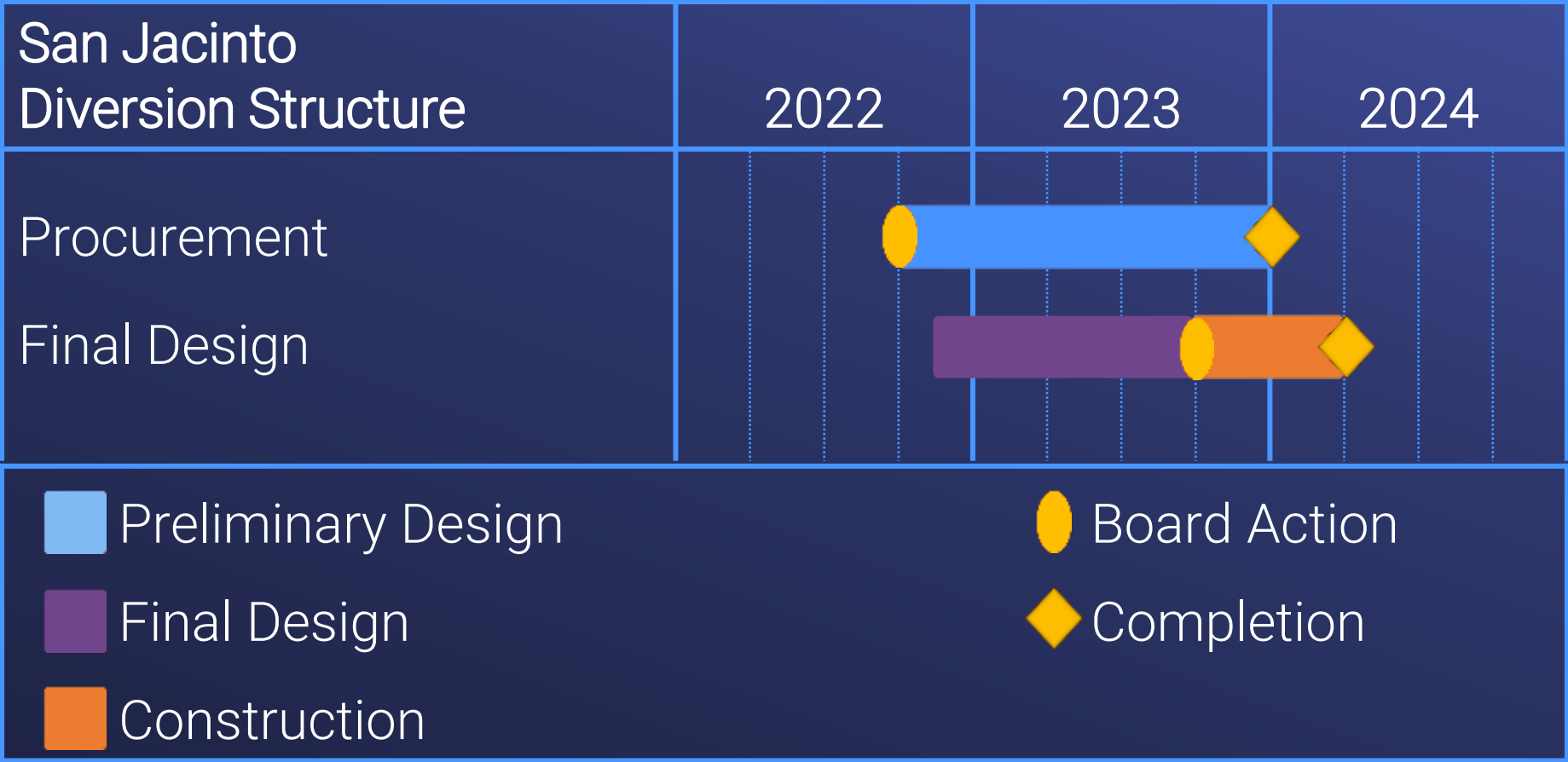
Whipps, Inc.	820,852.53
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Remaining Budget	69,147.47
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Total	\$1,100,000
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# Project Schedule



# Board Options

- Option #1

Award an \$820,852.53 procurement contract to Whipps, Inc. to furnish three slide gates and appurtenances to rehabilitate the San Jacinto Diversion Structure.

- Option #2

Do not proceed with this project at this time.

# Staff Recommendation

- Option #1





Engineering & Operations Committee

# State Water Project Dependent Areas Drought Mitigation Update

Item 6a

November 7, 2022

# Drought Action Development - A Two Prong Approach

Planning  
long-term  
actions for  
extreme  
droughts

- Long Term Solutions Approach
  - Planning Process
  - Portfolios of Actions



Implementing  
near-term  
actions

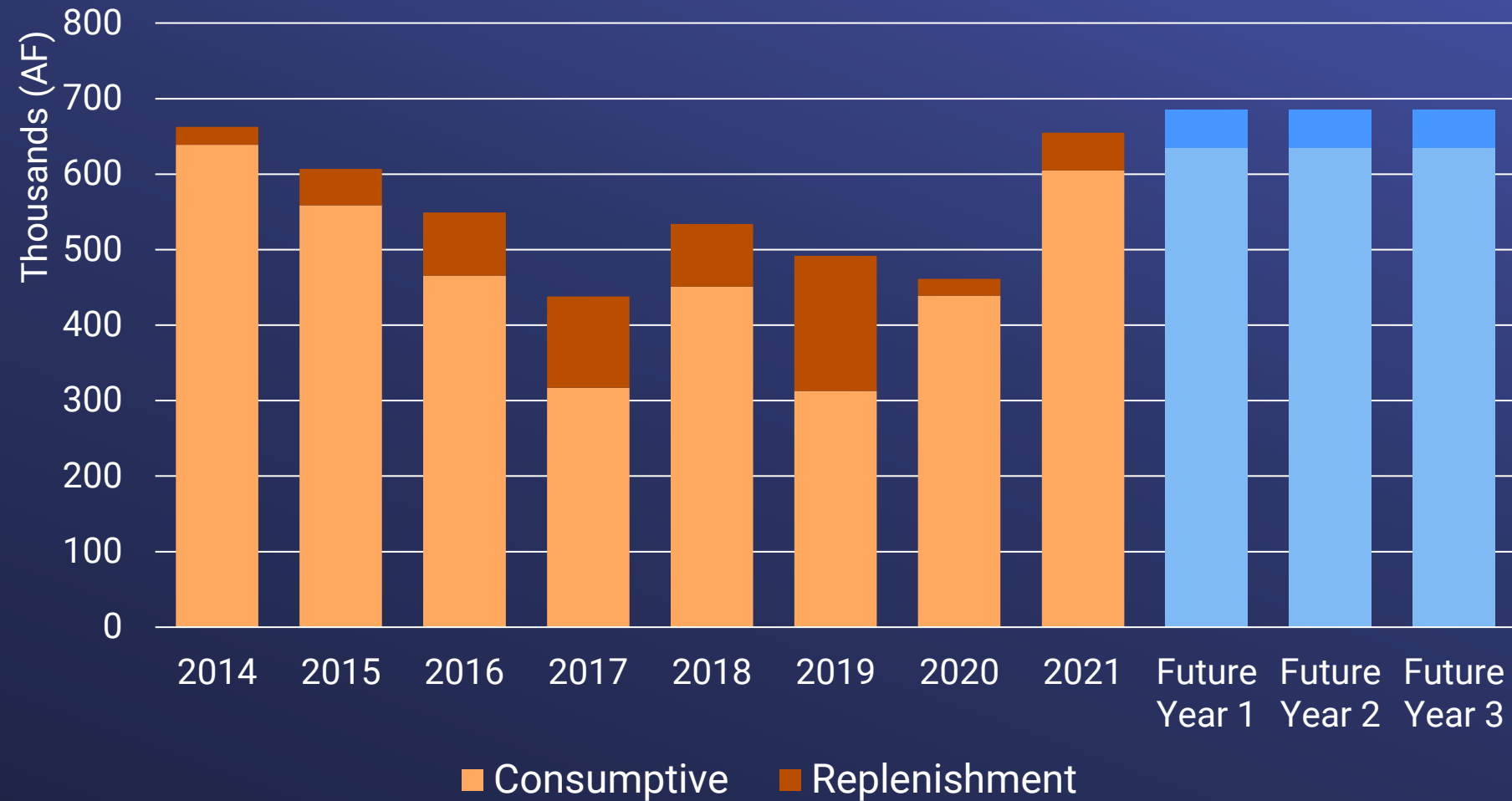
- Near Term Solutions Approach
  - High-Potential
  - Low Risk

SWP Dependent Area Solutions

# Drought Action /Project Portfolios Update

Demand Level Criteria

## SWP Dependent Area Agency Demand

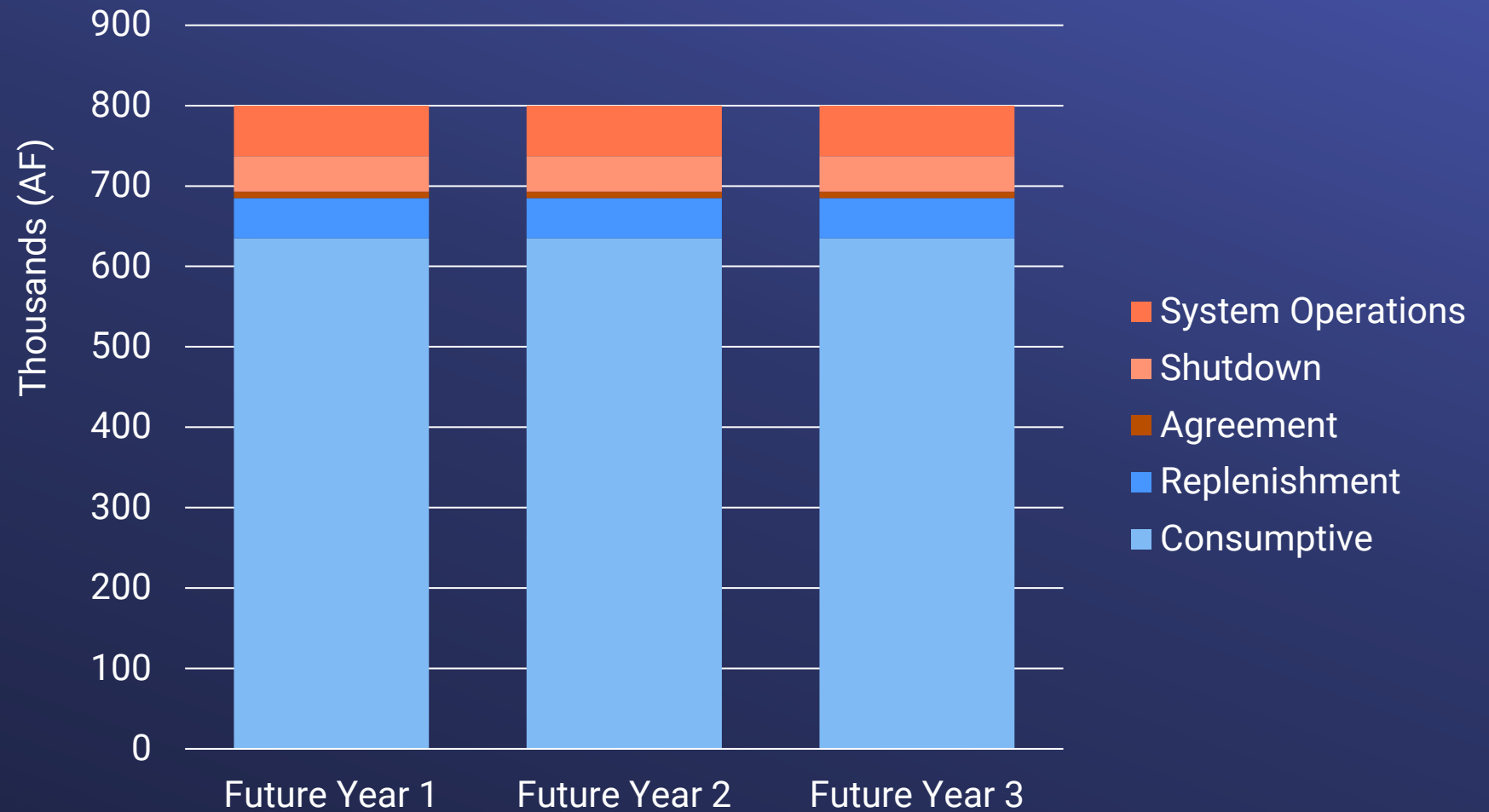


SWP Dependent Area Solutions

## Drought Action /Project Portfolios Update

Demand Level Criteria

## Drought Level Demand – Repeats for 3 Years



Total SWP Dependent Area Demand = 800 TAF (based on 2021 level of demand with loss of local supply, no drought actions, and 2015 LAA condition)

SWP Dependent Area Solutions

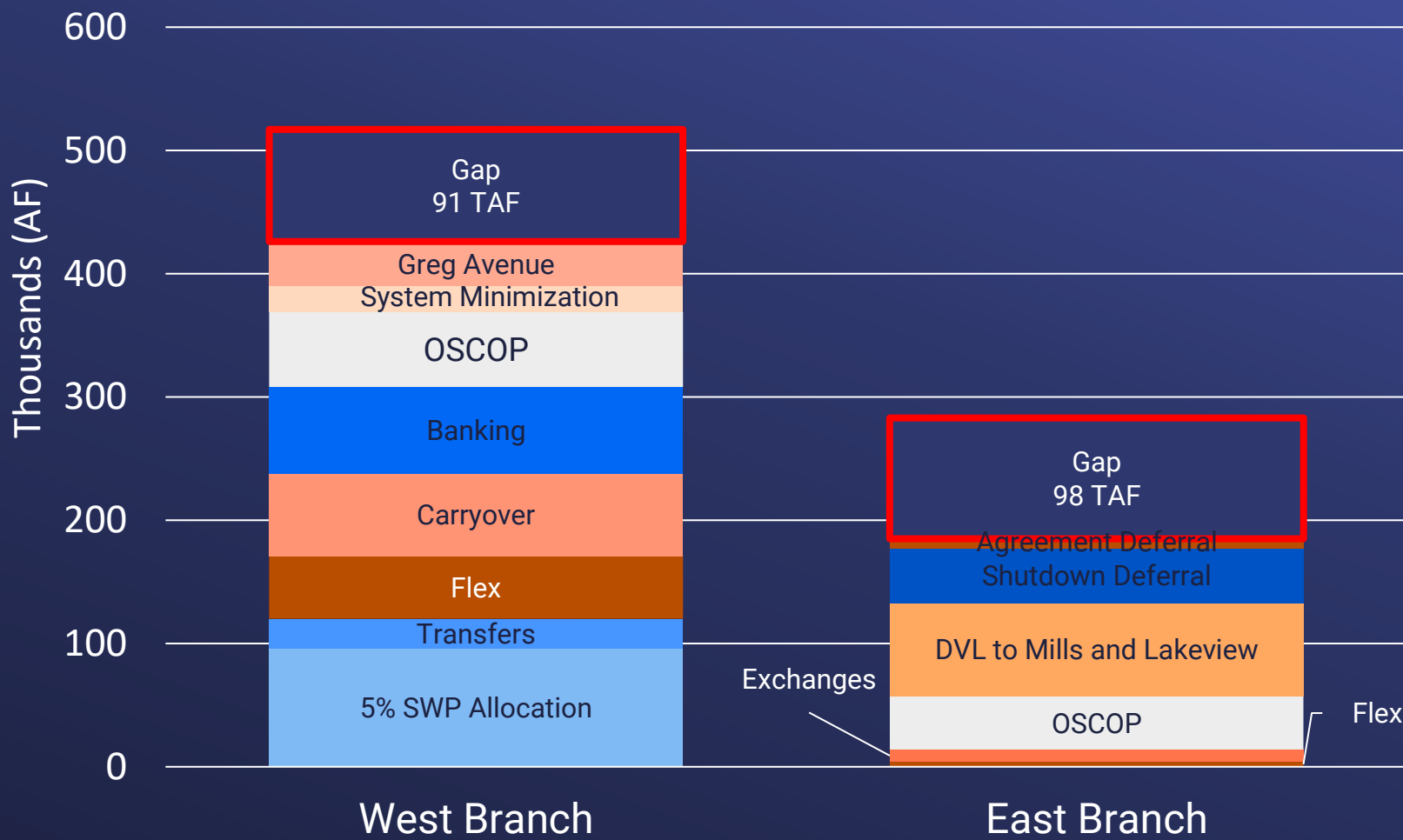
Drought Action /Project  
Portfolios Update

Typical Initial  
Storage Case

Existing Resource and  
Drought Action  
Performance and  
Resource Take  
Strategy Criteria

# Future Supply Gap with Existing Resources

## New Operation Assuming New Drought Actions



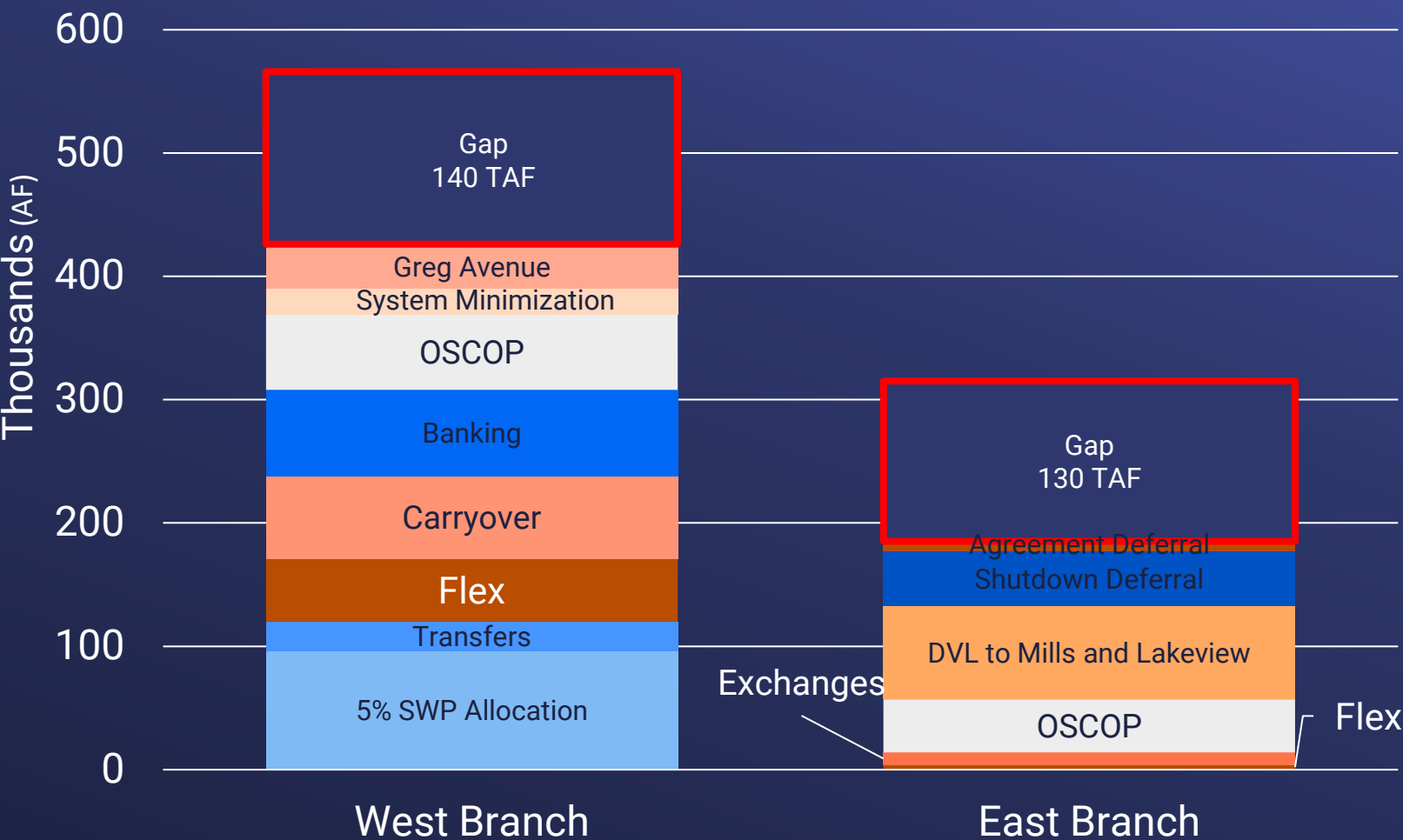
# Future Supply Gap with Existing Resources

New Operation Assuming New Drought Actions

SWP Dependent Area Solutions  
Drought Action /Project  
Portfolios Update

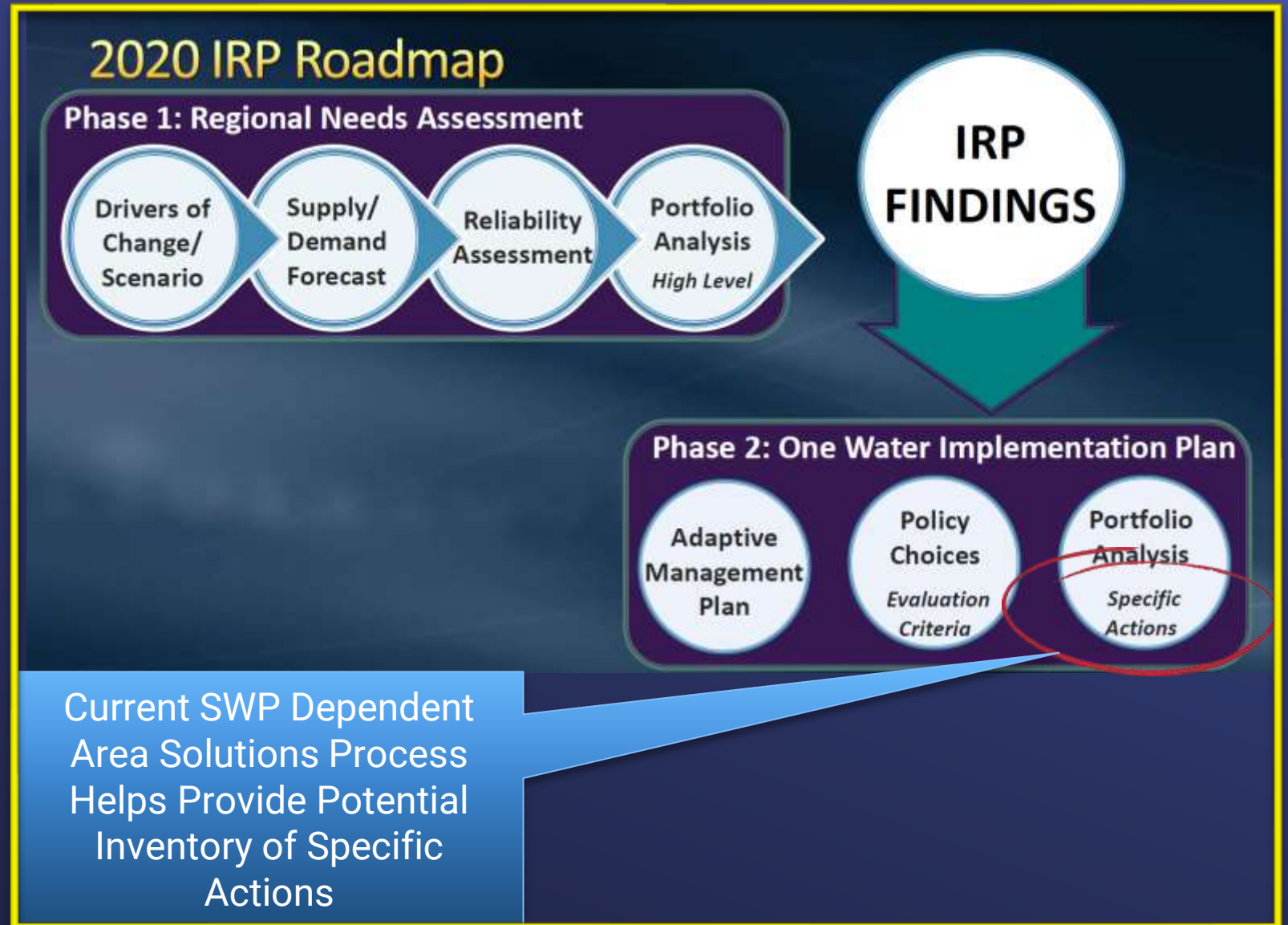
## Initial Gap

Preliminary – will be  
evaluated with  
member agencies



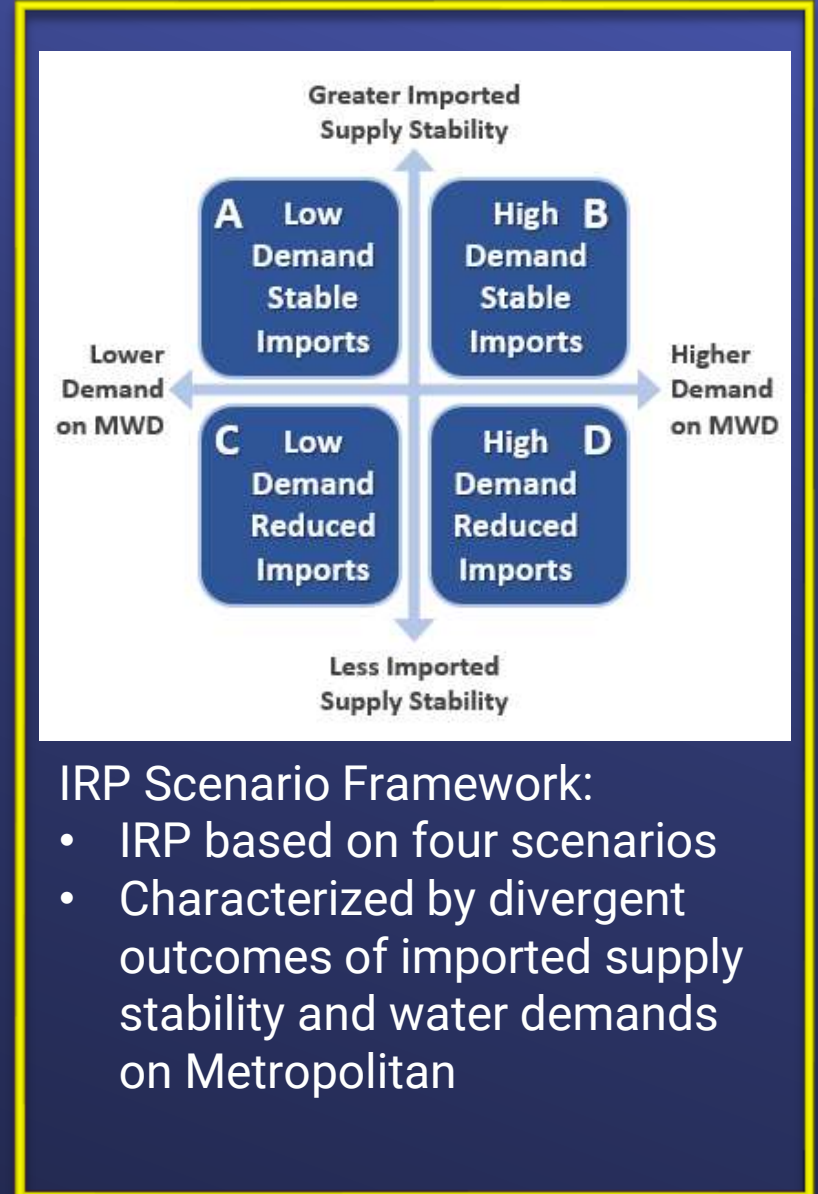
# IRP Road Map for Phase 1 and 2

- Strategy to Ensure Regional Water Reliability
- Identified SWP-Dependent Areas Reliability



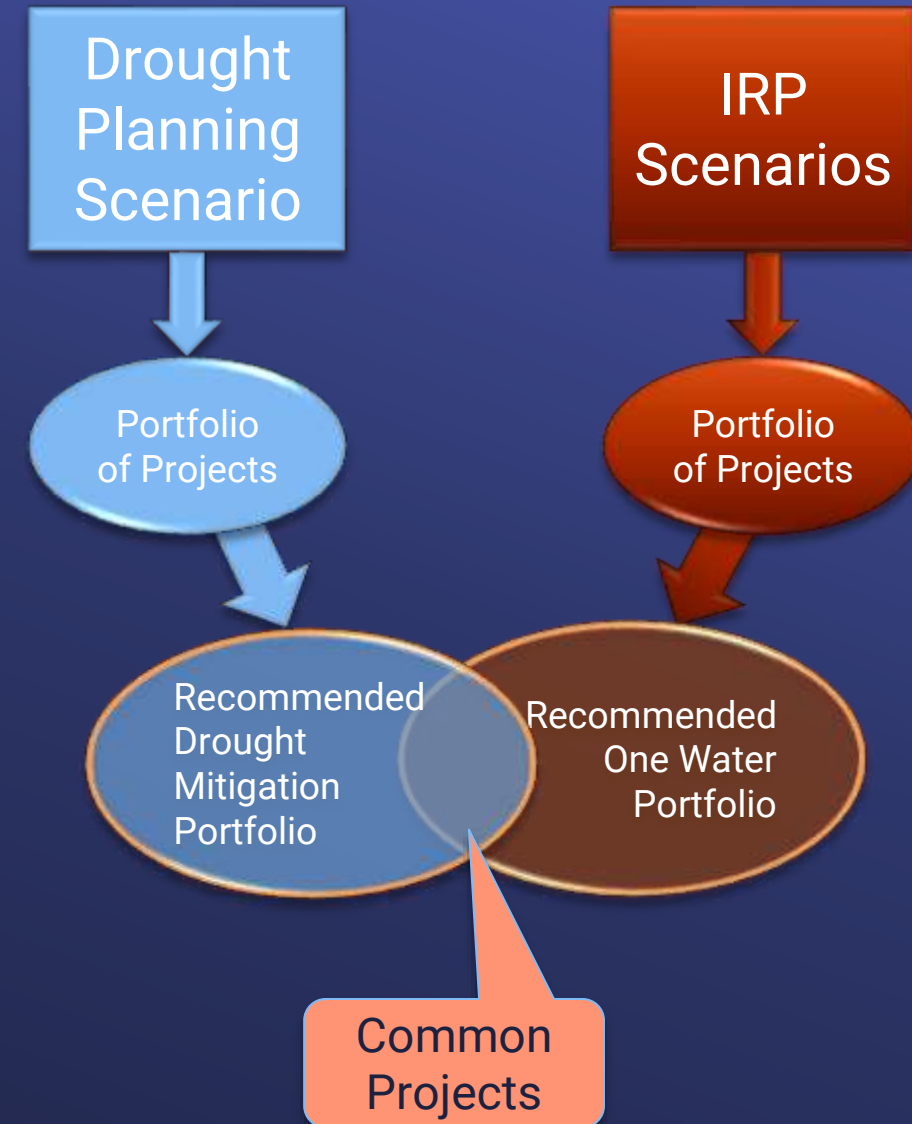
# Scenario Planning

- IRP scenario planning
- Testing the drought mitigation project portfolios
- Drought mitigation projects that do not help with improving deficiencies identified in the IRP may be
  - **Modified, Eliminated and/or Replaced**
- Process indicates if we are doing enough
- Later portfolios will be used in the One Water Implementation phase of the IRP

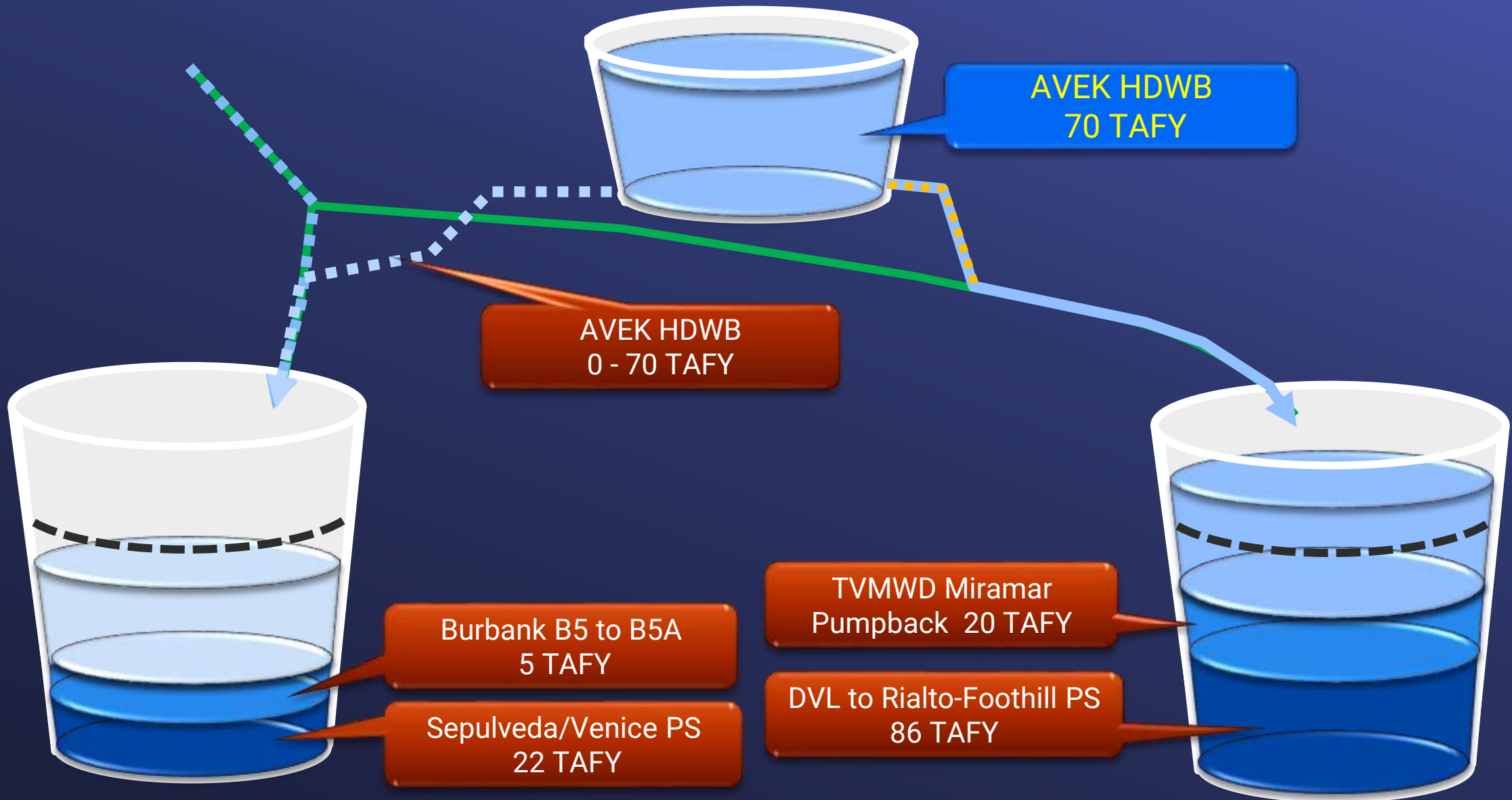


# IRP Scenarios vs Drought Mitigation Scenarios

- Drought Planning Scenarios vs IRP Scenarios
  - The Drought Planning Scenario is separate and distinct from the IRP Scenarios
  - Drought solutions can improve the conditions of uncertainty for the IRP scenarios
- Different Processes
  - Each designed to solve unique problems
  - Drought mitigation projects address the acute issue exposed by the drought in the SWP-dependent areas
  - IRP needs assessment establishes a strategy for ensuring regional water reliability



# SWPDA High Potential - Low Risk Flexibility (Near-Term) Projects



# Potential Long-Term Reliability Options

## Potential Long-Term Options to Boost System Reliability



# Status of Activities Potentially Benefiting the West Side Region

Project	Action	Scheduled Completion	Status
Interconnection between WBMWD & LVMWD	Study	Sep-22	Completed
Shift of Burbank B-5 Supply to B-5A	Study	Sep-22	Completed
Expansion of Greg Ave. Pumping Operation	Study	Dec-22	On schedule – in progress
AVEK HDWB to Supply Westside Agencies	Study	Feb-23	Consulting MAs – in progress
Surface Storage Options	Study – Phase 1	Oct-23	On schedule – in progress
East-West Conveyance System	Study	Dec-23	Consultant Agreement- in development
Desalination Research	Study	Dec-23	RFP – in advertisement
Sepulveda/Venice Pump Stations Phase 1	Alternative Project Delivery	Dec-25	On Schedule – RFQ in development

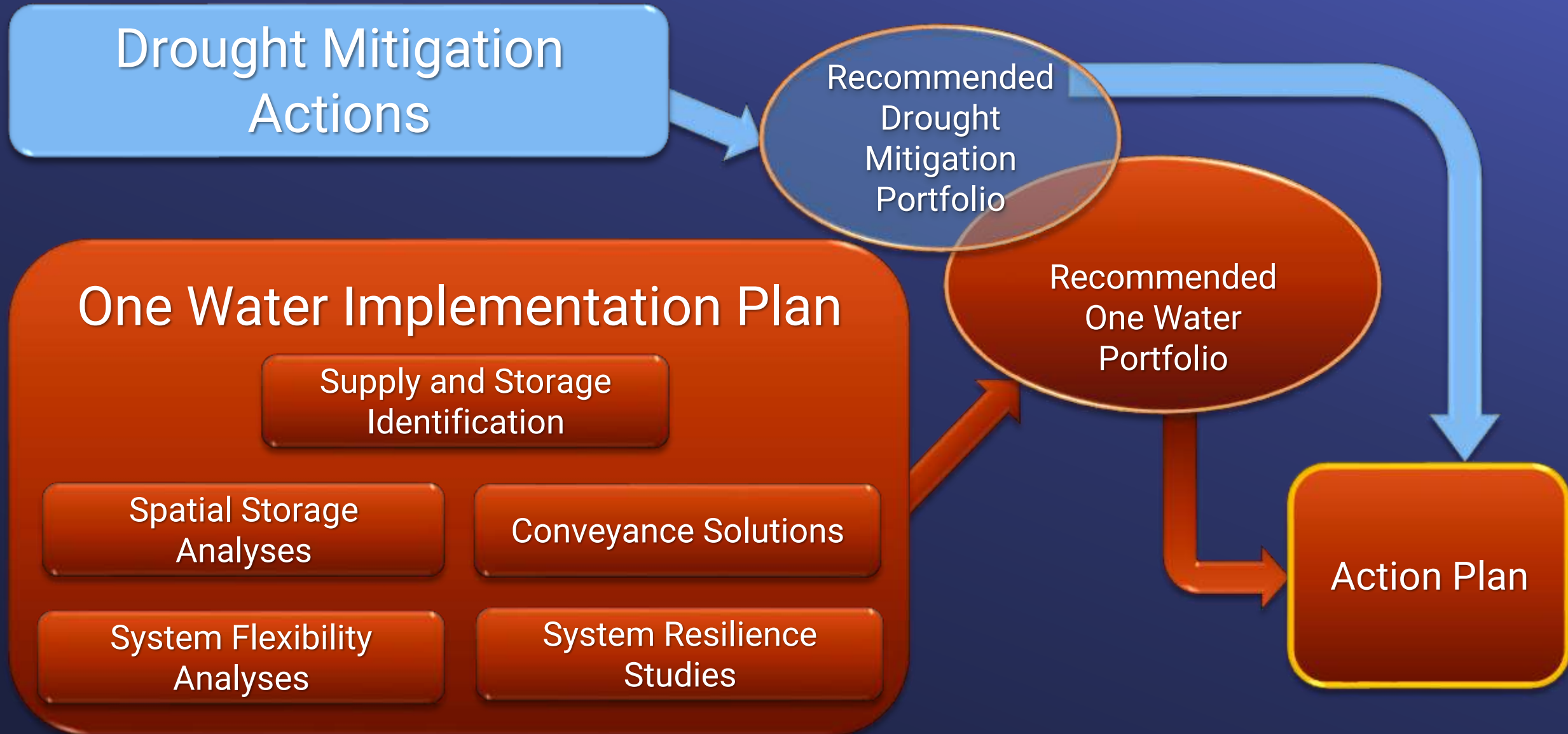
# Status of Activities Potentially Benefiting the Rialto Service Area

Project	Action	Schedule	Status
USG Cyclic Program	New Agreement	Feb-22	On schedule
TVMWD Miramar Pumpback	Study	Sep-22	Completed
Chino Basin Program Expansion	Study	TBD	Working with Member Agencies on the Study
Quagga Control CRW to USG-3	Agency Approvals	Feb-22	Draft plan complete
IEUA Local Resource Development	Benefit Assessment	TBD	Collaborating with Member Agencies on the Study
Surface Storage Options	Study	Oct-23	On schedule
PC-1 Pump Station	Study	Nov-23	Consultant selection
Desalination Research	Study	Dec-23	RFP Process

# Status of DVL to Rialto Projects

Project	Upcoming Action	Planned Board Action	Anticipated Completion Schedule	Current Status
Wadsworth Bypass	Award Construction Contract	Dec-22	May-24	On schedule – Advertising for construction bids
Inland Feeder-Rialto Pipeline Intertie	Award Construction Contract	April-23	May-24	On schedule – in design
Badlands Tunnel Surge Tank	Award Construction Contract	April-23	May-24	On schedule – in design
Foothill Pump Station	Award Construction Contract	Jun-23	Dec-24	On schedule – in design, resolving environmental challenges

# Process Moving Forward for Long-Term Supply Reliability







Engineering & Operations Committee

# Water System Operations Manager's Report

Item 7a

Monday, November 7, 2022  
10:30 a.m.

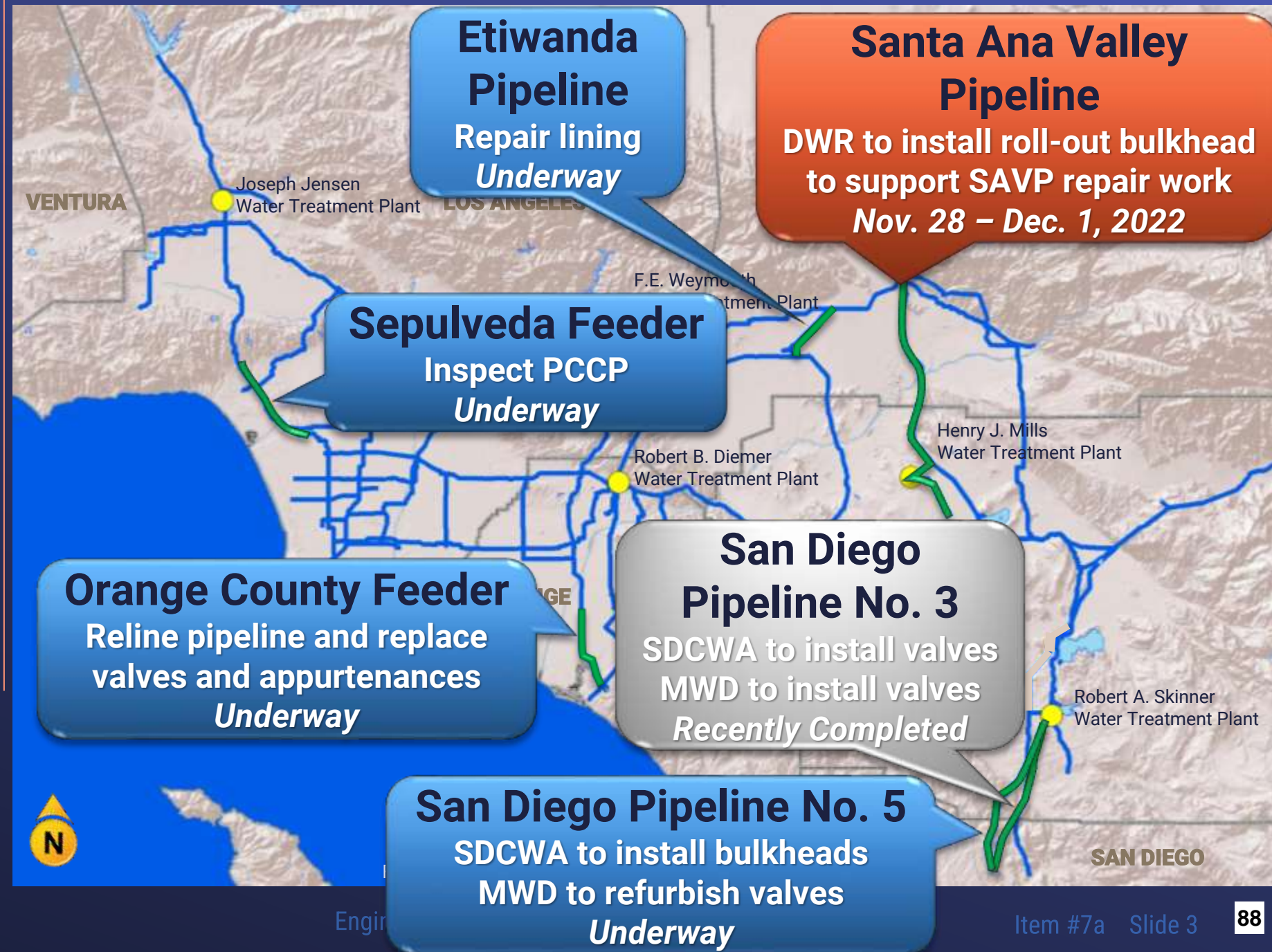
## Current Operational Conditions



## Continuing Drought Operations

- 2022 SWP Allocation is 5%
- SWP blend targets are 0% at Diemer, Weymouth, and Skinner plants
- DVL to Mills drought operation continues to perform well
- Managing storage based on WSDM principles
- Maintaining 8-pump CRA flow
- Upper Feeder flowed at 690 cfs with no leaks
- October 2022 deliveries of ~157 TAF were ~6 TAF higher than October 2021

# Ensuring Continued System Reliability



# Successful Functional Exercise: ShakeOut 2022

## Preparing for Emergencies



- Hybrid EOC format tested for earthquake response
- Metropolitan's EOC, Weymouth and Western Conveyance & Distribution ICPs, and five member agencies participated
- Met-Alert notification sent to all employees
- Included monthly MARS radio test
- California Utilities Emergency Association assisted



# Preparing for Emergencies

## Partnerships are Essential

- Metropolitan re-elected to the Board of Directors of the California Utilities Emergency Association
- CUEA membership provides access to other utilities and a link to the State's Emergency Operations Center
- Toured Southern California Edison's EOC and participated in a briefing on SCE's resilience efforts



California Air  
Resources Board

## Proposed Advanced Clean Fleets Regulation (ACF)

Public Fleet Requirements for  
Medium- and Heavy-Duty  
Vehicles (>8,500 lbs.)

# Metropolitan Comments on Proposed ACF

- Proposed ACF requires 50% of fleet purchases to be zero emission by 2024 and 100% by 2027
- Metropolitan submitted written comments on Oct. 17
  - Extend 100% purchase requirement for essential water providers from 2027 to 2030
  - Supported industry association comments on public sector concerns
  - Used Upper Feeder shutdown as case example for resilient fleet needs to meet critical water services
- Metropolitan provided oral comments at Oct. 27 CARB Public Hearing
- Tentative adoption of ACF planned for Spring 2023





Engineering & Operations Committee

# Engineering Services Manager's Report

Item 7b

November 7, 2022

# Construction & Procurement Contracts September 2022

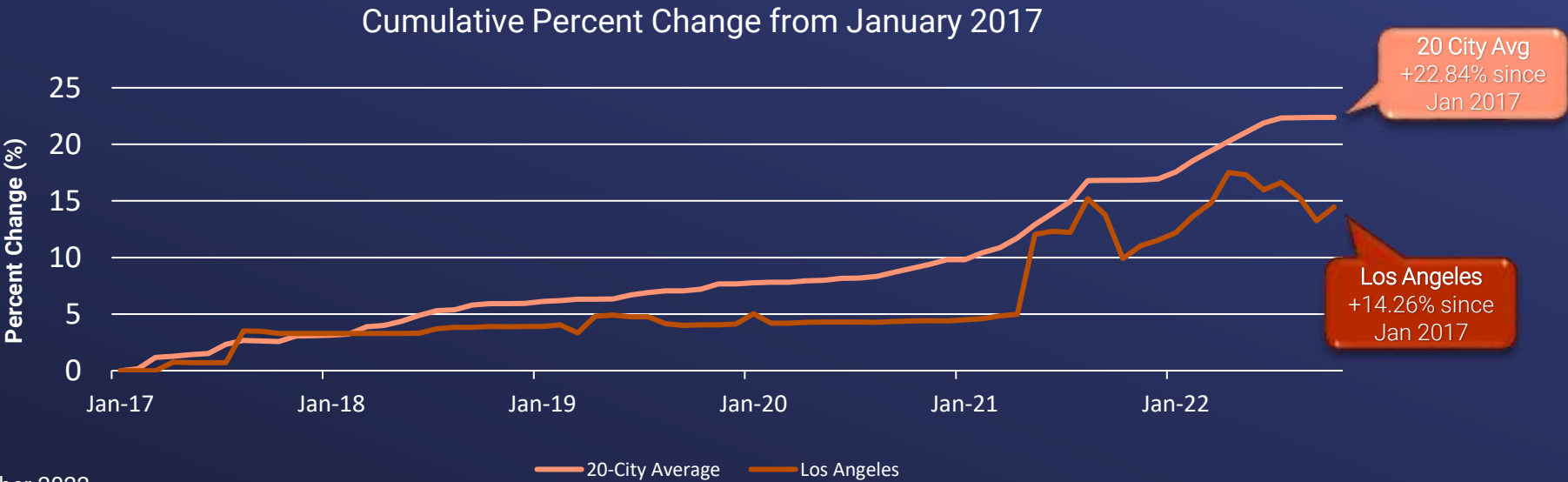
## Construction & Procurement Contracts Through September 2022

Number of Contracts at end of September 2022	43
Total Bid Amount of Contracts in Progress at end of September 2022	\$437M
Contracts Awarded in September 2022	2
Contracts With Notice To Proceed Issued in September 2022	1
Contracts Completed in September 2022	5
Contract Gross Earnings in September 2022	\$16M

# Inflationary Trends in Construction

**ENR**  
Engineering News-Record  
**Construction  
Cost Index  
2017 - Present**

	Year-Over-Year Percent Change in CCI	
Year	20-City Average	Los Angeles Region
Jan 2017 - Jan 2018	3.19%	3.30%
Jan 2018 - Jan 2019	3.02%	0.63%
Jan 2019 - Jan 2020	1.66%	1.11%
Jan 2020 - Jan 2021	2.06%	-0.54% *
Jan 2021 - Jan 2022	7.99%	7.59%
Jan 2022 - Oct 2022 (Present)	4.93%	2.17%



Source: Engineering News-Record. Data as of October 2022

# Inflationary Trends in Construction

## Recent Contract Awards

	<b>Contract No. 1982 Weymouth Basins 5-8 &amp; Filter Building No. 2 Rehabilitation</b>	<b>Contract No. 1891 Etiwanda Pipeline North Liner Repair – Phase 3</b>	<b>Contract No. 1885 La Verne Shops Building Completion – Stage 5</b>
Initial Estimate Range	\$65,000,000 to \$80,000,000	\$17,000,000 to \$21,000,000	\$11,000,000 to \$13,000,000
Revised Engineer's Estimate at Bid Opening	\$107,420,000	\$30,520,000	\$21,932,700
Range of Bids Received	\$79,897,020 to \$95,169,800 3 bidders	\$25,972,700 to \$29,930,000 4 bidders	\$18,930,000 to \$21,911,078 7 bidders

# Alternative Delivery Workshop

## Site Visit to LADWP Tujunga Wellfield Project



# E&O Inspection Trip

## October 26, 2022



State Water Project  
Aqueduct Bifurcation Structure



AVEK Water Storage Program

# E&O Inspection Trip

## October 26, 2022



Presentations at the Jensen Plant



Sepulveda Feeder Operations



Sepulveda Pressure Control Structure

# Etiwanda Pipeline Reach 3 Rehabilitation Preparatory Work



Beam and Plate Installation  
for Pit Shoring



Demolition of Cement Mortar Lining

# Orange County Feeder Reach 3 Rehabilitation Preparatory Work



Pipe Access Pit –  
Pipe Section Removed



Site Excavation

