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.

PWSCRC Committee
M. Camacho, Chair
J. Morris, Vice Chair
D. Alvarez
A. Fellow
L. Fong-Sakai
M. Gualtieri
R. Lefevre
M. Luna
J. McMillan
G. Peterson
K. Seckel
T. Smith

Subcommittee on Pure Water Southern California and Regional Conveyance

Meeting with Board of Directors *

March 26, 2024

2:30 p.m.

Tuesday, March 26, 2024 Meeting Schedule
08:30 a.m. BOD WKSP
12:00 p.m. Break
12:30 p.m. Sp BOD
01:30 p.m. Exec
02:30 p.m. PWSCRC

Agendas, live streaming, meeting schedules, and other board materials are available here: https://mwdh2o.legistar.com/Calendar.aspx. If you have technical difficulties with the live streaming page, a listen-only phone line is available at 1-877-853-5257; enter meeting ID: 891 1613 4145. Members of the public may present their comments to the Board on matters within their jurisdiction as listed on the agenda via in-person or teleconference. To participate via teleconference 1-833-548-0276 and enter meeting ID: 815 2066 4276 or click https://us06web.zoom.us/j/81520664276pwd=a1RTQWh6V3h3ckFhNmdsUWpKR1c2Zz09

MWD Headquarters Building • 700 N. Alameda Street • Los Angeles, CA 90012
Teleconference Locations:
Borgo Santi Apostoli, 20 • Florence, Italy
Douglas/Hicks Law • 5120 W. Goldleaf Circle, #140 • Los Angeles, CA 90056
525 Via La Selva • Redondo Beach, CA 90277
3008 W. 82nd Place • Inglewood, CA 90305

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

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

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

2. CONSENT CALENDAR OTHER ITEMS - ACTION

Boardroom

A. Approval of the Minutes of the Subcommittee on Pure Water Southern California and Regional Conveyance Meeting for January 23, 2024 (Copies have been submitted to each Director, Any additions, corrections, or omissions) **21-3164**

Attachments: 03262024 PWSCRC 2A (01232025) Minutes

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

3. SUBCOMMITTEE ITEMS

a. Pure Water Southern California Cost Recovery Alternatives Update **21-3239**

Attachments: 03262024 PWSCRC 3a1 Presentation
03262024 PWSCRC 3a2 Presenation

b. Pure Water Southern California Quarterly Update **21-3153**

Attachments: 03262024 PWSCRC 3b Presentation

c. Pure Water Southern California Demonstration Testing and Activities Update **21-3152**

Attachments: 03262024 PWSCRC 3c Presentation

d. Pure Water Southern California Demand Projections **21-3240**

Attachments: 03262024 PWSCRC 3d Presentation

e. State Water Project Dependent Areas Drought Mitigation Update **21-3241**

Attachments: 03262024 PWSCRC 3e Presentation

4. FOLLOW-UP ITEMS

NONE

5. FUTURE AGENDA ITEMS

6. ADJOURNMENT

NOTE: This committee reviews items and makes a recommendation for final action to the full Board of Directors. Final action will be taken by the Board of Directors. Committee agendas may be obtained on Metropolitan's Web site https://mwdh2o.legistar.com/Calendar.aspx. This committee will not take any final action that is binding on the Board, even when a quorum of the Board is present.

Writings relating to open session agenda items distributed to Directors less than 72 hours prior to a regular meeting are available for public inspection at Metropolitan's Headquarters Building and on Metropolitan's Web site https://mwdh2o.legistar.com/Calendar.aspx.

Requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Executive Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

Boardroom

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

MINUTES

SUBCOMMITTEE ON PURE WATER SOUTHERN CALIFORNIA AND REGIONAL CONVEYANCE

January 23, 2024

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

Members present: Directors Alvarez, Camacho (entered after roll call), Fellow, Fong-Sakai, Lefevre (teleconference location posted), McMillan, Morris, Peterson (entered after roll call), and Seckel.

Members absent: Directors Chacon, Luna, and Smith.

Other Board members present: Chair Ortega, Directors Armstrong, Bryant, Cordero, De Jesus, Dennstedt, Dick, Erdman, Goldberg, Gray (teleconference location posted), Kassakhian, Kurtz, and Miller.

Committee staff present: Bednarski, Chapman, Chaudhuri, Hagekhalil, Martinez, Quilizapa, and Upadhyay.

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

None

Director Peterson entered the meeting.

CONSENT CALENDAR ITEMS – ACTION

2. CONSENT CALENDAR OTHER ITEMS - ACTION

A. Approval of the Minutes of the Subcommittee on Pure Water Southern California and Regional Conveyance for November 28, 2023 (Copies have been submitted to each Director, any additions, corrections, or omissions)

Director Seckel made a motion, seconded by Director Fong-Sakai, to approve the consent calendar consisting of item 2A.

The vote was:

Ayes:	Directors Alvarez, Fellow, Fong-Sakai, Lefevre, McMillan, Morris, Peterson, Seckel.
Noes:	None
Abstentions:	None
Absent:	Directors Camacho, Chacon, Luna, and Smith.

The motion for Item 2a passed by a vote of 8 ayes, 0 noes, 0 abstentions, and 4 absent.

END OF CONSENT CALENDAR ITEMS

3. SUBCOMMITTEE ITEMS

a. Subject: Pure Water Southern California – Quarterly Update and 2023 Cost Estimate Details

Presented by: Bruce Chalmers, Program Manager- Pure Water Southern California, Engineering Services Group

Mr. John Bednarski introduced Mr. Chalmers. Mr. Chalmers reported on the following:

- Implementation of State Funds, preliminary design of pipeline reaches 1 & 2.
- Details of program cost estimate from November 2023.
- Current expenditures and budget status for O&M.
- Large Scale Water Recycling (LSWR) grant program updates, application status, feasibility study, cost eligibility, program authorization, and amount of funds requested.
- Sequencing plan and proposed scope of work for Pure Water Southern California with LSWR funds.

The following Directors provided comments or asked questions.

1. Peterson
2. Fellow
3. Fong-Sakai
4. Alvarez
5. DeJesus
6. Seckel
7. Ortega
8. Miller

Staff responded to Directors questions and comments.

Chair Camacho entered the meeting.

b. Subject: Assessment of Reuse Alternatives for Pure Water Southern California

Presented by: Heather Collins, Assistant Group Manager, Water System Operations

Mr. Mickey Chaudhuri introduced Ms. Collins. Ms. Collins reported on the following:

- Overview of recycled water regulatory development and Metropolitan's progressive approach to PWSC reuse alternatives.
- Program overview for Phase 1 (115 mgd: 90 mgd IPR, 25 mgd DPR to Weymouth using existing pipeline) and Phase 2 (adds additional 35 mgd of DPR with new pipeline).
- Benefits to PWSC pursing raw water augmentation form of DPR for regional accessibility and increased operational control.
- Consideration for treated water augmentation and next steps for DPR development.

The following Directors provided comments or asked questions.

1. Morris
2. Erdman
3. Alvarez

Staff responded to Directors questions and comments.

c. Subject: Drought Mitigation Portfolio Progress Update: An Operational Perspective

Presented by: Keith Nobriga, Assistant Group Manager, Water System Operations

Mr. Mickey Chaudhuri introduced Mr. Nobriga. Mr. Nobriga reported on the following:

- Metropolitan's continued history of portfolio development; current focus on drought and climate mitigation.
- Case study for a three-year drought sequence like 2020-22, and a fourth drought year.
- Applying operational lessons learned from the last drought for improved reliability.
- Review of existing and near-term drought actions and how they have helped our overall reliability.
- Benefits of additional new drought actions for further improved drought reliability.

The following Directors provided comments or asked questions.

1. Fong-Sakai

Staff responded to Directors questions and comments.

d. Subject: State Water Project Dependent Areas Drought Mitigation Update

Presented by: John Shamma, Section Manager, Engineering Services Group

Mr. John Bednarski introduced Mr. Shamma. Mr. Shamma reported on the following:

- Drought mitigation portfolio implementation plan consisting of cost-effective projects providing timely relief for SWP dependent areas and projects for further consideration in CAMP4W.
- Potential incorporation of expansion of the Sepulveda Feeder Pump Station into the CIP.
- A portfolio of cost-effective projects for immediate implementation, and a portfolio of projects for further consideration to enhance Metropolitan's ability to deal with future droughts.
- Adjustments to CIP program descriptions for improved tracking of drought mitigation efforts and progress.

The following Directors provided comments or asked questions.

1. Lefevre
2. Miller
3. Alvarez
4. Fong-Sakai
5. Peterson

Staff responded to Directors questions and comments.

4. FOLLOW-UP ITEMS

Director Alvarez requested information about where the water will go, how it will be delivered, and who will own it.

Director Alvarez requested an analysis of overall demand and water delivery to agencies during the 2020 drought.

Director Alvarez would like to see an analysis (of the same depth as the conveyance facilities analysis) that looks at how the issues raised on slide 11 of this presentation might be addressed to make the goal of 115 mgd possible.

Director Fellow requested that staff provide a chart comparing costs of State Water Project, desalination, and Pure Water Southern California.

Director Seckel requested that staff prepare for a "Plan B" and prepare alternate and more prudent financial and engineering plans in the event that Metropolitan's original plan for PWSC becomes more costly and unaffordable in order to be able to move forward with the program.

Director Fong-Sakai requested that the board discussions reconvene next month to allow for directors to fully digest the information received last week and for ongoing discussions regarding Pure Water Southern California cost details stemming from the recently posted Memorandum on Pure Water Southern California – Cost Methodology.

5. FUTURE AGENDA ITEMS

NONE

6. ADJOURNMENT

The next meeting will be held on March 26, 2024.

Meeting adjourned at 11:44 a.m.

John Morris
Vice Chair

Subcommittee on Pure Water Southern California and Regional Conveyance

Pure Water Southern California – Updated Cost-of-Service Allocations and Projected Rate Impacts

Item 3a.1
March 26, 2024

Item 3a.1

PWSC Cost Recovery Alternatives

Subject

- Pure Water Southern California – Update on Cost-of-Service Allocations and Projected Rate Impacts

Purpose

- Based on the November 28, 2023 PWSC Phase 1 project cost estimate presented to the Subcommittee on PWSC and Regional Conveyance
  - (1) provide an update on the functional allocations for each of the cost recovery alternatives, and
  - (2) provide a projection of overall rate impact

PWSC Cost Recovery Allocations

Summary of Alternatives

Raftelis' Proposed Cost Recovery Alternatives

1	Existing Rates and Charges	Capital and O&M costs are recovered on existing rate elements (Tier 1 Supply, SAR, RTS, CC)
2	Functionalized Fixed Charge	Capital costs are recovered on a new fixed charge. O&M costs are recovered on T1 Supply and SAR
3	Members Subscribe as Direct Investors	Direct Investment → Participating MA Indirect portion → MET rates & charges for all MA

Additional Cost Recovery Alternatives

4	PWSC Surcharges	PWSC costs are recovered on new, separate volumetric surcharges for supply and transportation
5	New GO Bond Ad-Valorem Property Tax	New GO Bond AV Tax for capital costs O&M costs are recovered on T1 Supply and SAR
6	DPR and Recycled Surcharges	Recycled and DPR water costs that exceed revenue from such water are charged to surcharges that are allocated 100% to supply.

Alternative 1: Existing Rates and Charges

Cost	Component	Previous Allocation %(1)	Updated Allocation%(2)	Rate or Charge	Billing Basis
Capital Financing	**Supply** (Advanced Water Treatment (AWT))	52%	47%	T1 Supply ($/AF)	Water Sales
	Transportation (Conveyance)	19%	20%	SAR ($/AF)	All Transactions
		13%	19%	RTS	Existing RTS
		16%	14%	CC ($/CFS)	Existing CC
O&M	**Supply** (AWT Power, Labor, Overhead)	67%	82%	T1 Supply ($/AF)	Water Sales
	Transportation (Pumping Power, Labor, Overhead)	33%	18%	SAR ($/AF)	All Transactions

(1) The allocation percentages when the project is completed and fully operational were estimated using the full program cost from the 2020 Regional Recycled Water Program White Paper No. 2.

(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative 2: Functionalized Fixed Charge

Cost	Component	Previous Allocation %(1)	Updated Allocation %(2)	Rate or Charge	Billing Basis
Capital Financing	**Supply Portion** (Advanced Water Treatment (AWT))	52%	47%	New Fixed Charge	10-Yr Avg Sales
	Transportation Portion (Conveyance)	48%	53%		10-Yr Avg Transactions
O&M	**Supply** (AWT Power, Labor, Overhead)	67%	82%	T1 Supply ($/AF)	Water Sales
	Conveyance (Pumping Power, Labor, Overhead)	33%	18%	SAR ($/AF)	All Transactions

(1) The allocation percentages when the project is completed and fully operational were estimated using the full program cost from the 2020 Regional Recycled Water Program White Paper No. 2.

(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative 3: Members Subscribe as Direct Investors

Cost	Component	Cost Recover Mechanism
Direct Investment Portion	Portion of project subscribed by direct investors.	Fixed cost recovery in proportion to each investor's share of the project. Take-or-Pay contract.
Remaining Portion	Remaining project costs allocated to Member Agencies after subtracting the Direct Investment Portion.	Alternative 1 = Existing Rate Elements Alternative 2 = New Fixed Charge

- Updated allocations do not change the Direct Investment Portion of the project costs. Direct investors would pay in proportion to their share of the project.
- The Remaining Portion would be recovered either through Alternative 1 or Alternative 2. The update allocations were presented in two previous slides.

Alternative 4: PWSC Surcharges

Cost	Component	Previous Allocation %(1)	Updated Allocation %(2)	Rate or Charge	Billing Basis
Capital Financing and O&M Costs	**Supply** – Advanced Water Treatment (AWT) and AWT Power, Labor, and Overhead	52%	47%	PWSC Supply Surcharge ($/AF)	Water Sales
	Transportation – Distribution, Pumping System Power, Labor, and Overhead	48%	53%	PWSC Transportation Surcharge ($/AF)	All Transactions

(1) The allocation percentages when the project is completed and fully operational were estimated using the full program cost from the 2020 Regional Recycled Water Program White Paper No. 2.

(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative 5: New GO Bond Ad-Valorem Property Tax

Cost	Component	Previous Allocation %(1)	Updated Allocation %(2)	Rate or Charge	Billing Basis
Capital Financing	Supply and Transportation	100%	100%	New GO AV Tax	AV Tax on properties within service area
O&M	AWT Power, Labor, Overhead	67%	82%	T1 Supply ($/AF)	Water Sales
	Pumping System Power, Labor, Overhead	33%	18%	SAR ($/AF)	All Transactions

(1) The allocation percentages when the project is completed and fully operational were estimated using the full program cost from the 2020 Regional Recycled Water Program White Paper No. 2.

(2) The updated allocation percentages when the project is completed and fully operational were estimated using the Phase 1 program cost presented at the November 28, 2023 Subcommittee on Pure Water Southern California and Regional Conveyance. The percentages are based on an average of the high and low contribution scenarios. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

Alternative Scenario 6
(Proposed by the FAIRP Committee Chair)

Cost	Component	Approx %	Rate or Charge	Billing Basis
Capital Financing and O&M Costs	Advanced Treated Recycled Water (100% to Supply)	78% (90mgd, Phase 1)	PWSC Recycled + PWSC Recycled Surcharge	PWSC Recycled Sales + New PWSC Recycled Surcharge
	Direct Potable Reuse Water (100% to Supply)	22% (25mgd; Phase 1)	PWSC DPR + PWSC DPR Surcharge	PWSC DPR Sales + New PWSC DPR Surcharge

- Updated allocation percentages for the cost-of-service functions do not change the surcharge allocations under Director Smith's proposal, as they are allocated 100% to supply under all conditions.

PWSC Unit Cost Projections

Project and Financial Assumptions

Project Assumptions	
Project Start	2023
First Year Project Operational	2033 (10 years)
Design Capacity	115 MGD
Production Average Yield (assumed 92%)	118 TAF/yr
Engineering Fees & PM Fees	25% + 5%
Contingency - Capital	35%
Contingency – O&M	15%

Financial Assumptions	
Escalation Rate	4%
Discount Rate	4%
% PAYGO	0%
Debt Issuance	
Fixed Interest Rate	4.5%
Term	30 years
Cost of Issuance	0.5%
Bond Reserve	0%

PWSC Project Costs – Nov 2023 Update

PWSC – Phase 1	Low Contribution	Mid Contribution	High Contribution	units
Yield				
Design Capacity	115	115	115	mgd
Average Yield (92%)	118	118	118	TAF
Construction Duration	10	10	10	Years
Capital Cost				
Total Construction Costs	3,380	3,380	3,380	2023 $M
Engineering (25%) and Program Mgmt Fees (5%)	1,014	1,014	1,014	2023 $M
Total Capital Costs	**4,394**	**4,394**	**4,394**	2023 $M
Contingency (35%)	1,538	1,538	1,538	2023 $M
Community Benefit	457	457	457	2023 $M
Less State / Federal Grants	(136)	(237)	(339)	2023 $M
Less Partner Carried Costs	(1,662)	(2,074)	(2,487)	2023 $M
Net MWD Capital Costs	**4,590**	**4,077**	**3,563**	**2023 $M**
Annual Operations and Maintenance Cost(1)				
Annual O&M (1)	228	228	228	**2023 $M/YR**
Less Partner Carried Costs	(37)	(58)	(79)	**2023 $M/YR**
Net Annual O&M Cost	**191**	**170**	**149**	**2023 $M/YR**
Capital Financing				
Financing Term	30	30	30	Years
Interest Rate	4.50%	4.50%	4.50%	
Financing Cost	**238**	**212**	**185**	**2023 $M/YR**
Annual Cost				
Financing Costs	238	212	185	2023 $M/YR
O&M Costs	191	170	149	2023 $M/YR
Total Annual Cost (1)	**429**	**382**	**334**	**2023 $M/YR**

(1) When project fully operational, including 15% contingency

PWSC Project Unit Costs and Overall Rate Impact

Nov 2023 Update

PWSC – Phase 1	Low Contribution	Mid Contribution	High Contribution	units
Unit Cost				
Capital Costs	2,012	1,787	1,562	2023 $/AF
O&M Cost	1,612	1,435	1,258	2023 $/AF
Total Unit Cost	**3,624**	**3,222**	**2,820**	**2023 $/AF**
Adv. Treatment Facilities (Supply)	2,338	2,005	1,672	2023 $/AF
Conveyance & Recharges Facilities	1,285	1,216	1,148	2023 $/AF
Total Unit Cost	**3,624**	**3,222**	**2,820**	**2023 $/AF**
Cost Impact				
MWD Overall Cost Increase (1,2)	**24%**	**22%**	**19%**	
Annual cost increase (1,2,3)	2.7%	2.4%	2.1%	
Average Cost Increase per AF (1,4)	279	248	217	2023 $/AF

(1) When project fully operational
(2) based on Metropolitan's 2023/24 Revenue Requirement of $1,764 M
(3) based on construction duration less one year
(4) based on Metropolitan's 2023/24 Budget of 1.54 MAF


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928

Review of Cost Recovery Alternative 6

(Proposed by the FAIRP Committee Chair)

March 26, 2024

Item 3a.2

RAFTELIS

PWSC Summary of Alternatives Evaluated

Raftelis Proposed Cost Recovery Alternatives

	Alternative	Component
1.	Existing Rates and Charges	Capital and O&M costs are recovered on existing rate elements (Tier 1 Supply, SAR, RTS, CC)
2.	Functionalized Fixed Charge	Capital costs are recovered on a new fixed charge. O&M costs are recovered on T1 Supply and SAR
3.	Members Subscribe as Direct Investors	Direct Investment → Participating member agencies Indirect Portion → MET rates & charges for all member agencies

Additional Cost Recovery Alternatives

	Alternative	Component
4.	PWSC Surcharges	PWSC costs are recovered on new, separate volumetric surcharges for supply and transportation
5.	New GO Bond Ad Valorem Property Tax	New GO Bond AV Tax for capital costs O&M costs are recovered on T1 Supply and SAR

Review of Alternative 6
(Proposed by the FAIRP Committee Chair)

Cost	Component	Approx %	Rate or Charge	Billing Basis
Capital financing and O&M Costs	Advanced Treated Recycled Water	78% (90 mgd, Phase 1)	PWSC Recycled + PWSC Recycled Surcharge	PWSC Recycled Sales + New PSWC Recycled Surcharge
	Direct Potable Reuse Water	22% (25 mgd, Phase 1)	PWSC DPR + PWSC DPR Surcharge	PWSC DPR Sales + New PWSC DPR Surcharge

PWSC Recycled Surcharge (Allocated 100% to Supply)

$$= \frac{\text{PWSC Recycled Cost} - \text{PWSC Recycled Sales}}{\text{MWD Water Sales}}$$

PWSC Recycled Sales = Recycled Volume x PWSC Recycled Rate

PWSC Recycled Rate = Use current full service untreated volumetric cost (Tier 1)

PWSC DPR Surcharge (Allocated 100% to Supply)

$$= \frac{\text{PWSC DPR Cost} - \text{PWSC DPR Sales}}{\text{MWD Water Sales}}$$

PVSC DPR Sales = DPR Volume x PWSC DPR Rate

PWSC DPR Rate = Use negotiated contracted amounts (at cost or negotiated at market or direct investment, or full service untreated volumetric cost (Tier 1)

Alternative 6 – Assumptions
(Proposed by the FAIRP Committee Chair)

1. Capital financing and O&M costs are allocated to recycled water charges and DPR charges based on the proportional share of production from PWSC. Therefore, Alt 6 assumes that two different water supplies are produced by PWSC with different benefits and costs. The unit costs of these new supplies exceed Metropolitan's current full-service untreated rate.
2. The member agencies that are direct recipients of the recycled water, and which are necessary for the successful operation of PWSC, should not be solely responsible for paying the recycled water costs. The recipients of DPR water should pay an appropriate rate that offloads all or some of the DPR cost burden from Metropolitan's member agencies.
3. Recycled water charges are divided into a Recycled Rate, which is set equal to the untreated water rate, and a Recycled Surcharge. By setting the Recycled Rate equal to the untreated rate, the direct recipients of recycled water will not have to bear the full costs allocated to recycled water, given that the recycled unit cost is assumed to be higher than the untreated rate. The remainder of the recycled water costs are recovered through water sales via a $/AF surcharge allocated 100% to supply.
4. DPR water charges are divided into a DPR Rate and a DPR Surcharge. The DPR Rate would be a negotiated rate, market rate, or potentially set to Metropolitan's untreated water rate. Depending on the volume of DPR water under contract and the rate at which it is sold, it is possible that the DPR surcharge is equal to zero. However, if DPR allocated costs exceed the amount recovered through DPR sales (DPR contract volume multiplied by DPR Rate), the excess DPR costs are recovered through water sales via a $/AF surcharge allocated 100% to supply.

Alternative 6 – Assumptions
(Proposed by the FAIRP Committee Chair)

5. Recipients or IPR (or Recycled) water will be charged Metropolitan's untreated water rate, which is first calculated by excluding PWSC costs and excluding any effects from existing water sales being replaced by PWSC sales
   - The PWSC recycled water surcharge will be paid by all member agencies based on their water sales (including IPR and regular MWD water)
6. Phase 1 of PWSC will deliver DPR water to the headworks of Weymouth Treatment Plant and not be delivered directly to member agencies. Therefore:
   - The DPR Rate, which is a contract-based rate, may vary depending on the negotiated rate, and the DPR Surcharge exhibits variability with DPR contract terms
   - PWSC DPR surcharge (net costs after the DPR sale revenues) will be paid by all member agencies receiving MWD water
   - If there are no interested parties in the DPR water, then the PWSC DPR Surcharge will represent the full cost of DRP water
   - The costs for both recycled water and DPR surcharges are allocated 100% to Supply
7. During initial construction, when there are no recycled or DPR water sales, the new surcharges will reflect the annual project costs. For example, in year 5 of construction, there will be capital financing costs for the debt issued to date, yet no recycled or DPR water sales because the plant is not operating. At this point, the capital financing costs will be recovered through water sales via the new surcharges.

Review of Alternative 6
(Proposed by the FAIRP Committee Chair)

- Raftelis reviewed Alternative 6 (proposed by the FAIRP Committee Chair) in the same way as other alternatives were reviewed.
- We considered whether the cost recovery alternative:
  - Reflects the benefits of PWSC on Metropolitan's system and services and is consistent with cost recovery principles
  - Is simple, relatively easy to understand
  - Provides ease of implementation and administration
  - Is consistent with common industry practices for recovery of water resiliency projects
  - Helps MET align fixed costs with fixed cost recovery
  - Provides Member Agencies with an option for project direct investment

The Cost Recovery Alternatives were evaluated for conformance with Cost Recovery Principles

Full cost recovery in proportion to the benefits received and the cost to serve

(See next slide for discussion)

May consider other objectives that result in a reasonable fit for the utility.

Metropolitan's Rate Structure Framework

Stability of revenue and coverage of cost	Fairness	Certainty and predictability	No significant economic disadvantage	Reasonably simple and easy to understand	Dry-year allocation should be based on need

The Regional Benefits of PWSC were reviewed to assess whether cost recovery under Alternative 6 reflects the benefits of PWSC

Since PWSC provides integrated system benefits to both the supply and transportation and Alt 6 allocates costs 100% to supply (and not transportation), Alt 6 is inconsistent with cost recovery principles that should reflect cost recovery in proportion to the benefits received.

The Regional Benefits of PWSC (from Whitepaper 2) include:

- Reduced risk of net water shortages including the benefit of reduced reliance on SWP deliveries, allowing SWP deliveries to be used in other areas and supply exchanges with other contractors on the SWP system.
- Improved resiliency of water supply to climate change
- Enhanced reliability and flexibility of the water supply including helping to free up transportation capacity and reduce the use of, and burden on, MET's transportation system used to meet peak day demands, and also providing seismic resilience of transportation infrastructure.

Review of Alternative 6
(Proposed by the FAIRP Committee Chair)

Considerations

1. This alternative is more complex than the other alternatives analyzed. The COS analysis requires a multi-step modeling process, compared to one now. As the recycled water sales are replacing existing sales, excluding recycled water sale revenues from existing system will change the COS and rate calculations. Any change to the underlying COS analysis would require changes to the downstream models because of the interconnected components.
2. Costs are proposed to be allocated 100% to supply, but there is also a transportation function. There are benefits to both Metropolitan's supply and an integrated, regional transportation system, so those using the transportation system may rightly be expected to share in the costs.
3. The PWSC project would add a significant amount of fixed costs, but the proposed cost recovery would be 100% variable and based on the amount of water sales, potentially adding revenue volatility in future years.
4. The surcharge amounts could vary considerably during the construction period and be higher because there would be no DPR and recycled water sales. Once the system is operational, DPR and recycled sales will offset the surcharges and be lower.

Examples of Cost Recovery of Other Water Resiliency Projects

Several Cost Recovery approaches for other water resiliency projects were examined to help assess whether Alt 6 is consistent with Common Industry Practices

Examples include:

- San Diego County Water Authority, CA - Carlsbad Desalination Project
- El Paso, TX - Water Desalination Project
- Orange County, CA - Groundwater Replenishment System
- Water Replenishment District of Southern California, CA

Examples of Cost Recovery Approaches from Other Water Agencies

Water Agency	Water Supply	Cost Recovery Approach
San Diego County Water Authority	Desalination Water	Costs of the desal project are allocated to supply, treatment, and transportation functions. The dedicated desal pipeline is charged to transportation. Desalination costs are blended with other water supply and transportation costs and recovered through SDCWA's existing rates and charges
El Paso TX	Desalination Water	Costs are allocated to supply, treatment, and transportation functions. Desalination costs are blended with other water costs and recovered through El Paso's existing rates and charges.
Orange County, CA – Groundwater Replenishment System	Recycled Water	Costs are combined with other water sources and charged to customers as a uniform rate per acre-ft of groundwater production.
Water Replenishment District of Southern California, CA	Recycled Water	Costs are combined with other water sources and charged to water producers as replenishment assessment. Assessment is a single blended uniform rate per AF on all water pumped regardless of which water source is used to replenish the groundwater basins.

Attributes of Cost Recovery Alternative 6
(Proposed by the FAIRP Committee Chair)

	Alternative 6 Recycled & DPR Surcharges
Consistent with Cost Recovery Principles	
Simple – Relatively Easy to Understand	
Ease of Implementation and Administration	?
Consistent with Common Industry Practices	✓*
Aligns Fixed Costs with Fixed Revenue Recovery	
Provides Member Agencies w/ Direct Investment Option	

* Assessing a surcharge is a common industry practice. However, identifying the surcharge as marginal rate above an average rate is not common and is more of a novel / innovative approach.

- Note that some of the other alternatives evaluated align with these attributes better than Alternative 6.

RAFTELIS

Thank you!

Contact: John Mastracchio
518 391 8944/ jmastracchio@raftelis.com

SDCWA Carlsbad Desalination Project
Cost Allocation Example

- **SDCWA allocates the costs of the desal project to supply, treatment, and transportation functions:**
  - A portion of the cost of production of water from desal system is allocated to supply and the remaining portion is allocated to treatment. SDCWA justifies this allocation because the project provides a new water source and produces water that meets drinking water regulations.
  - **SDCWA allocates the cost of the desalination delivery pipeline to the transportation function.**
- This is a relevant cost recovery example because it involves a project creating a supplemental water source treated to potable drinking water standards, like the PWSC DPR project component.
- However, PWSC's DPR component is not anticipated to produce water meeting potable drinking water standards in Phase 1, and unlike PWSC, there is no untreated water service provided by this project.

The San Diego County Water Authority (SDCWA) receives treated water from the Carlsbad Desalination project through a water purchase agreement that supplements SDCWA's other water supply sources.

Desalination costs are blended with other water supply and transportation costs and recovered through SDCWA's existing rates and charges:

- Volumetric Rates – Supply, transportation, and treatment rates charged per unit of metered water delivery.
- Service Charges – Customer service, storage, and supply reliability charges apportioned based on three- or five-year rolling average water purchases. The supply reliability charge is set at the difference between the cost of local sources and the MWD Tier 1 rate multiplied by 25 percent.

El Paso, Texas Water Desalination Project
Cost Allocation Example

- **El Paso's Desalination project costs are allocated to supply, treatment, and transportation functions**
  - The wells that supply the desalination plant with water are allocated to supply. The desal plant O&M and capital costs are allocated to treatment, and the water produced is conveyed through T&D mains. The T&D mains are allocated to transportation.
- This is a relevant cost recovery example because it involves a project creating a supplemental water source treated to potable drinking water standards, like the PWSC DPR project component.
- However, PWSC's DPR component is not anticipated to produce water meeting potable drinking water standards in Phase 1, and unlike PWSC, there is no untreated water service provided by this project.

The City of El Paso, TX operates the Kay Bailey Hutchinson Desalination Plant that produces 27.5 MGD of desalination water and supplements El Paso's other water supply sources.

The desalination costs are blended with other costs and recovered through El Paso's existing rates and charges:

- Volumetric Rates – Supply, treatment, and distribution costs recovered from block usage charges per ccf based on metered customer consumption.
- Fixed Charges – El Paso has a fixed charge called a Water Supply Replacement Charge used to help fund future water supply projects.

Orange County Groundwater Replenishment System (GWRS)
Cost Allocation Example

- OCWD combines the annual cost of each of its water supply sources into a **replenishment assessment that is charged to customer agencies as a uniform rate per acre-ft** of groundwater production.
- This cost recovery approach is similar to PWSC Cost Recovery Alt 1 as there is no separate rate and charge structure for recovery of the cost of the GWRS.
- This is a relevant cost recovery example because it involves a supplemental reclaimed water source treated to non-potable standards, like a portion of the PWSC project.
- However, unlike PWSC, there is no DPR component of GWRS and no exchange transactions that require identification of transportation costs.

The Orange County Water District (OCWD) regulates and protects the Orange County Groundwater Basin, and one of its functions is to facilitate the recharge the basin. It does this with percolation facilities and injection wells using diverted surface water from the Santa Ana River, GWRS, and water purchases from MET.

The GWRS is comprised of an advanced water purification facility, pump station, dedicated pipeline, and injection wells that produce, convey, and primarily injects 100 – 130 MGD of purified recycled water back into the aquifer for groundwater recharge.

The OCWD levies an assessment to 19 water producers within the County for their withdrawal of groundwater from the basin.

Water Replenishment District of Southern California (WRD)
Cost Allocation Example

- **WRD charges water producers a replenishment assessment that is a single blended uniform rate** in $ / AF on all water pumped from the Central Basin and West Coast Basin regardless of which water source is used by WRD to replenish the groundwater basins
- Rationale is that WRD replenishment activities benefit all groundwater producers on a direct and indirect basis.
- This is a relevant cost recovery example because it involves multiple sources of water supply used for groundwater replenishment, like a portion of the PWSC project.
- However, unlike PWSC, there is no direct potable reuse of WRD's water sources and no exchange transactions that require identification of transportation costs.

The WRD is the largest groundwater management agency in California that manages the Central Basin and the West Coast Basin in Southern California.

WRD purchases recycled water from LADWP, the Sanitation Districts of LA County, and from the West Basin MWD. It also purchases water from the Central Basin MWD, the Long Beach Water Department and the West Basin MWD for groundwater basin replenishment.

It charges rates to water producers for groundwater basin replenishment.

Subcommittee on Pure Water Southern California and Regional Conveyance

Pure Water Southern California Quarterly Update

Item 3b

March 26, 2024

Item 3b PWSC Quarterly Update

Subject

Pure Water Southern California Quarterly Program Update

Purpose

To provide an update on the PWSC recent program tasks and accomplishments

Next Steps

Continue planning and design efforts and work to meet the Program goals and objectives

Item 3b
PWSC Quarterly Update

PURE WATER SOUTHERN CALIFORNIA

Agenda

- Independent review of regional reuse programs
- Program outreach events
- Program schedule
- Stakeholder agreements
- Program costs and grants
- Alternative approaches to Program phasing

Item 3b
PWSC
Quarterly
Update

Address Director Questions

- Respond to questions raised at previous meetings
  - Environmental assessment of treated water augmentation
  - Status of Program agreements
  - Program re-phasing alternatives
  - Summary of program's projected demands
  - Additional discussion of cost methodology

Item 3b PWSC Quarterly Update

Purpose: How to maximize wastewater recycling projects in the Los Angeles region while minimizing cost and negative environmental and community impacts.

Independent Review of Regional Reuse Programs

- Technical Advisory Committee (TAC) workshop
- Agencies: MWD, LACSD, City of LA, WBMWD, Las Virgenes MWD
- TAC: Universities, agencies/GMs, NGOs
- Introduction: February 9, 2024
- Summary: February 22, 2024
- Technical information provided for review
- Summary report to be provided

UCLA IoES UCLA WATER RESOURCES GROUP

LOS ANGELES WATERKEEPER®

UNIVERSITY OF CALIFORNIA Agriculture and Natural Resources

Item 3b
PWSC
Quarterly
Update

Key Themes for Regional Reuse Review

- Overall system design to maximize benefits while minimizing impacts
- Cost affordability of the programs
- Potential to reduce negative ecological impacts
- Opportunities to ensure safe drinking water
- Ensuring community engagement
- Governance and agency coordination

Item 3b
PWSC
Quarterly
Update

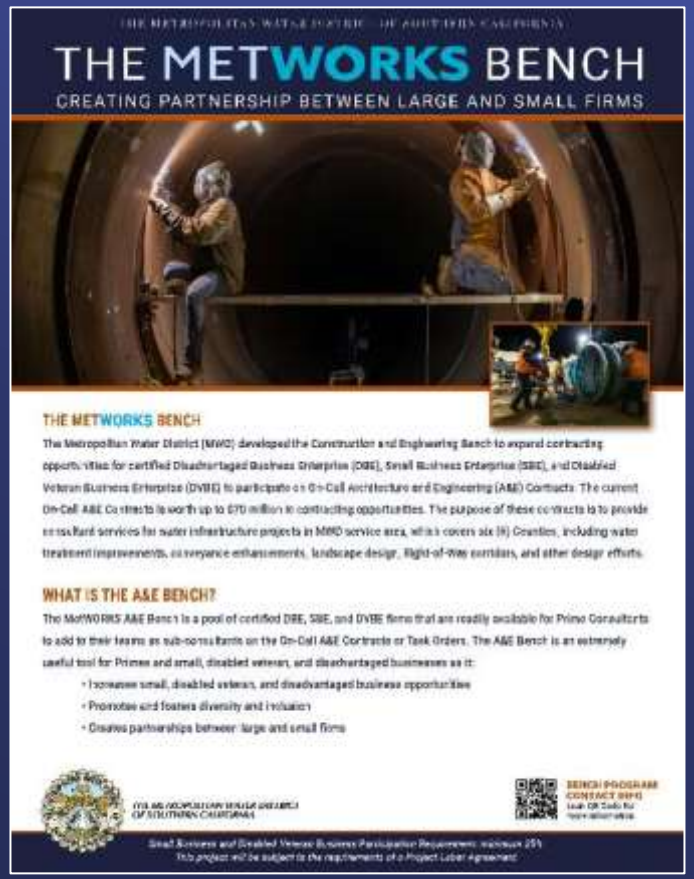
Program Outreach Events & Tours

- Continued Napolitano Innovation Center tours
- Research on attitudes and awareness of the PWSC and DPR
- Community Benefits research & development

Public Tour on Feb. 24

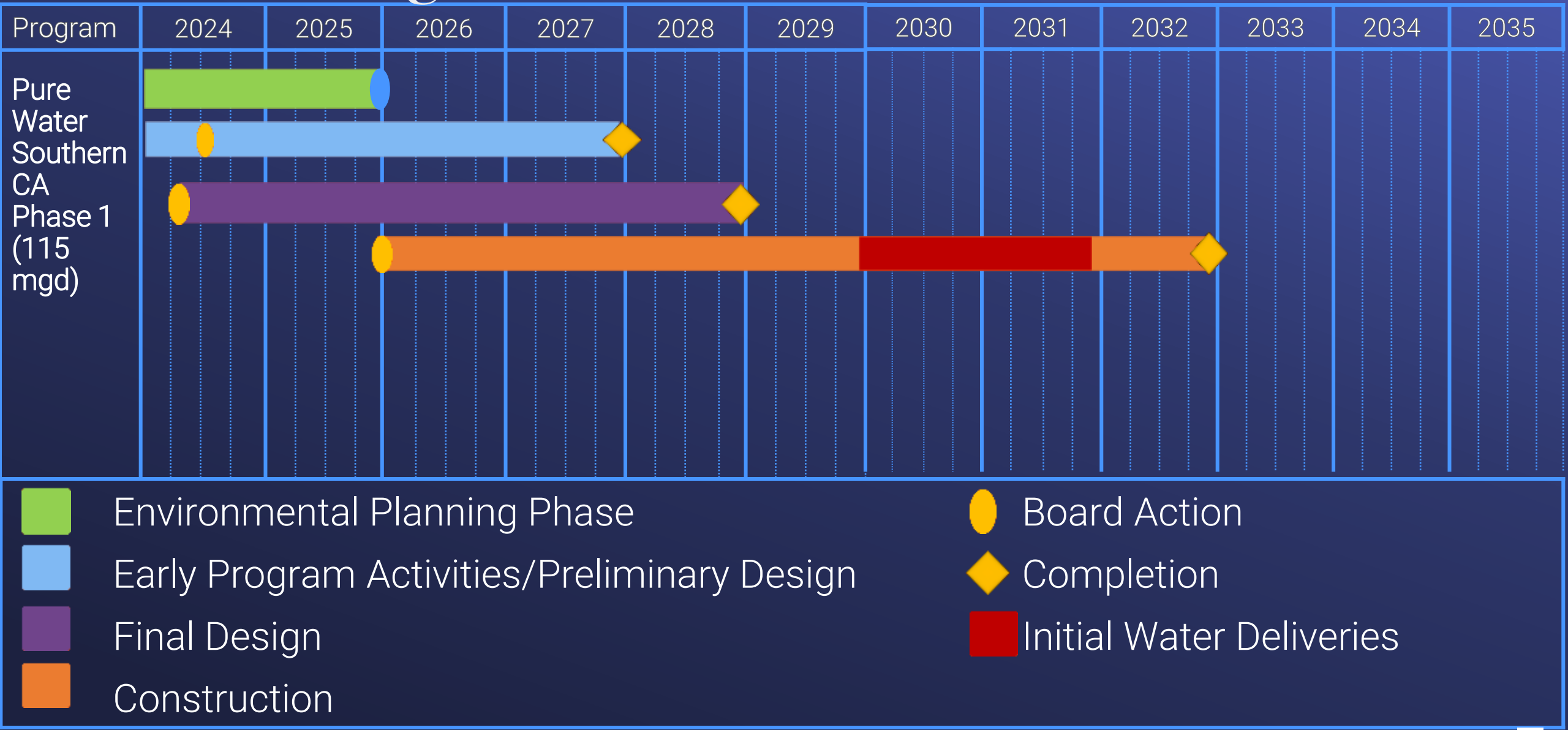
MetWorks Event on March 7

Industry Outreach & Networking Event



- Held March 7, 2024 @ Carson Events Center
- MetWorks Outreach/Networking: >600 participants
- Construction Career Fair: approximately 100 participants

Current Program Schedule



Environmental Planning Schedule

- Most facilities at detailed EIR level
- DPR/recharge facilities at Program level
- Sections 1-4 currently being reviewed

Notice of Preparation	Scoping Phase	PEIR/EIR
Distributed September 30, 2022 **COMPLETED**	Occurred between September 30, 2022, to November 14, 2022 **COMPLETED**	Draft Environmental Impact Report **4th Quarter 2024** Final Environmental Impact Report **4th Quarter 2025**

→ **Technical Studies Continuing** →

Item 3b
PWSC
Quarterly
Update

PWSC Agreements

- Agreements are needed to provide a foundation for implementing the PWSC
- Letters of Intent completed in 2022
- LACSD: Warren Facility/MBR participation
- Member Agency Agreements
  - Term sheets this summer
  - MOUs by end of 2024 or early 2025
  - Potential term to include:
    - demands, delivery schedules, cost & payment

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Program Agreements

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

Metropolitan Member Agencies

Upper San Gabriel Valley Municipal Water District
Central Basin Municipal Water District
West Basin Municipal Water District
City of Long Beach Incorporated 1897
A Balanced City • Industrial • Residential • Commercial — Torrance
Three Valleys MWD
LA DWP

Groundwater Basin Managers

WRD Water Replenishment District
Main San Gabriel Basin Watermaster

Colorado River Partners

Southern Nevada Water Authority
Arizona Department of Water Resources
CAP Central Arizona Project

Other Key Partners

San Gabriel Valley Municipal Water District
US Army Corps of Engineers
Southern California Edison — Energy for What's Ahead™
Public Works Los Angeles County

Item 3b
PWSC
Quarterly
Update

Grant Updates

- WaterSMART: awarded $5M, SOW being finalized
- LSWR: requested $125M
  - April 2023 notification of acceptance & amount
  - All federal grants have a 3x match requirement
  - Scope of work would be modified to match award amount
- Agency contributions and other grants could reduce Metropolitan's share of matching funds
- Staff will return to the Board to authorize acceptance of the award & request a matching funds commitment

2023 PWSC Cost Estimate Phase I

Item 3b
PWSC
Quarterly
Update

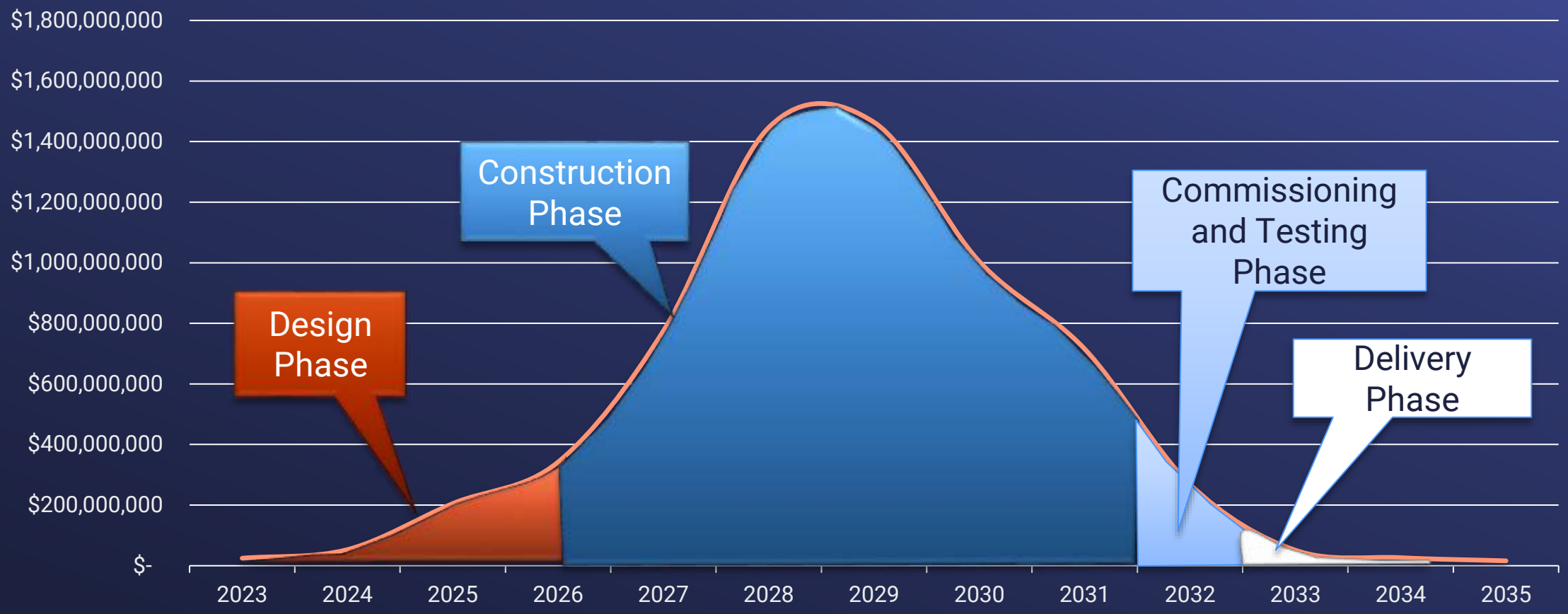
Review and discussion of 2023 cost estimate, originally presented to Subcommittee in January 2024

Description	Cost ($M)[1]
Treatment Facilities	$2,120
Conveyance Facilities	$2,120
Recharge Facilities	$180
DPR Facilities to Weymouth	$140
Subtotal	**$4,560**
Design/CM	$1,370
Property/Permitting	$390
Mitigation Measures/Community Benefits	$70
Total	**$6,390**

[1] Costs are in 2023 dollars and include a 35% contingency and no escalation

PWSC Phase I Cash Flow

- Cashflow: Phase 1 only
- Phase 1 2023 cost estimate: $6.4B
- Escalation: 4% per year to mid 2029
- Phase 1 escalated cost to midpoint of construction: $8.2B



Alternative Approaches to Program Phasing

Basis for Re-phasing the PWSC

- Purpose: Provide an example of an alternative to current Phase 1 scope and costs
- Approach:
  - Develop multiple sub-phases within current Phase 1
  - Identify logical groupings of phased water deliveries
  - Build out treatment and pipelines facilities to clustered groupings of potential delivery locations
  - Construction of sub-phases are sequential to one another
- Conclusions:
  - Reduces initial expenditures on program while ensuring water deliveries
  - Increases overall cost and duration of Phase 1
  - Additional alternatives can be developed

Item 3b PWSC Quarterly Update

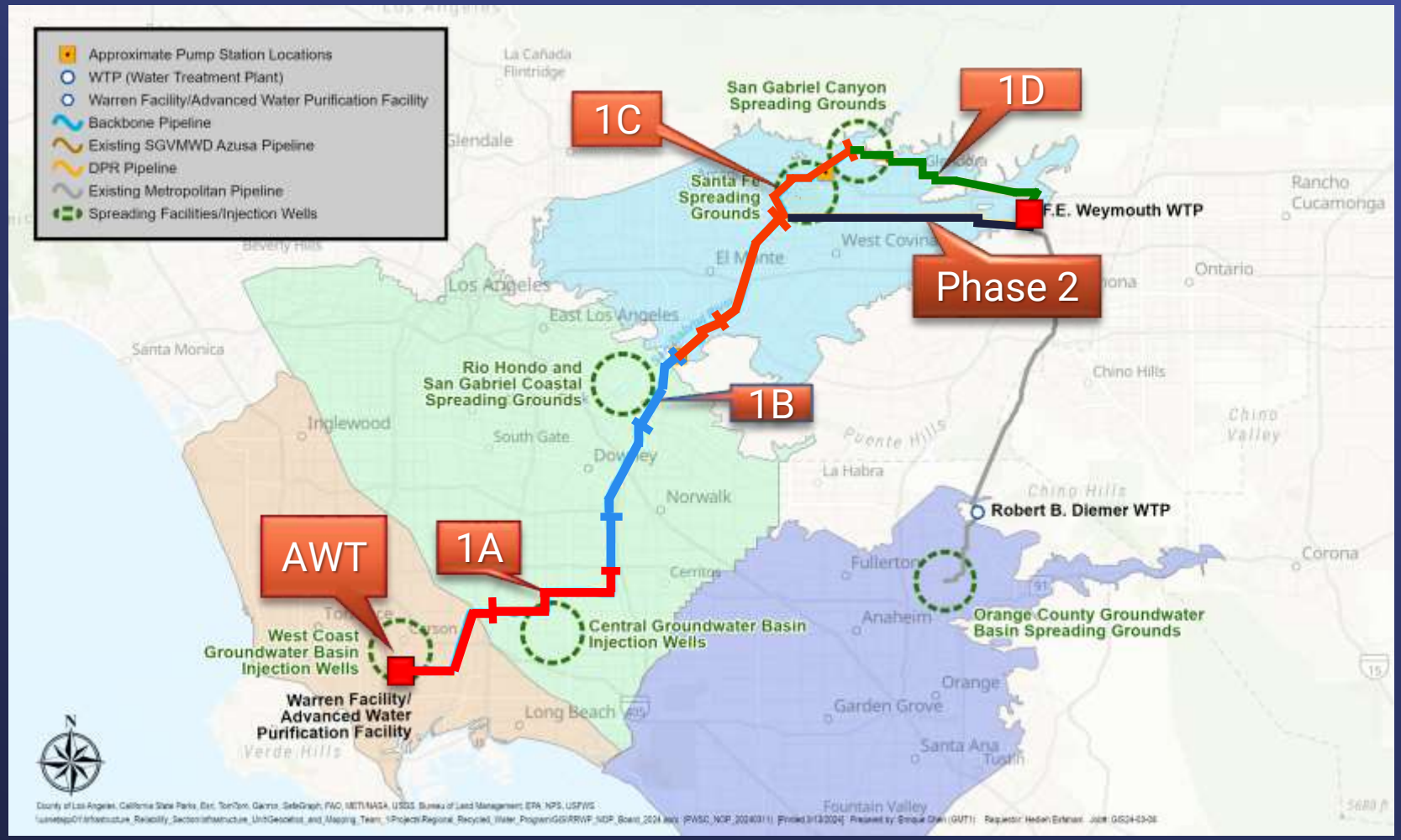
Current Approach to Program Phasing

Phase 1: 115 MGD
Phase 2: 35 MGD
Total Program: 150 MGD

Example of Potential Approach to Program Re-phasing

Item 3b PWSC Quarterly Update

Phase 1A: 30 MGD
Phase 1B: 10 MGD
Phase 1C: 50 MGD
Phase 1D: 25 MGD
Phase 2: 35 MGD
Total Program: 150 MGD

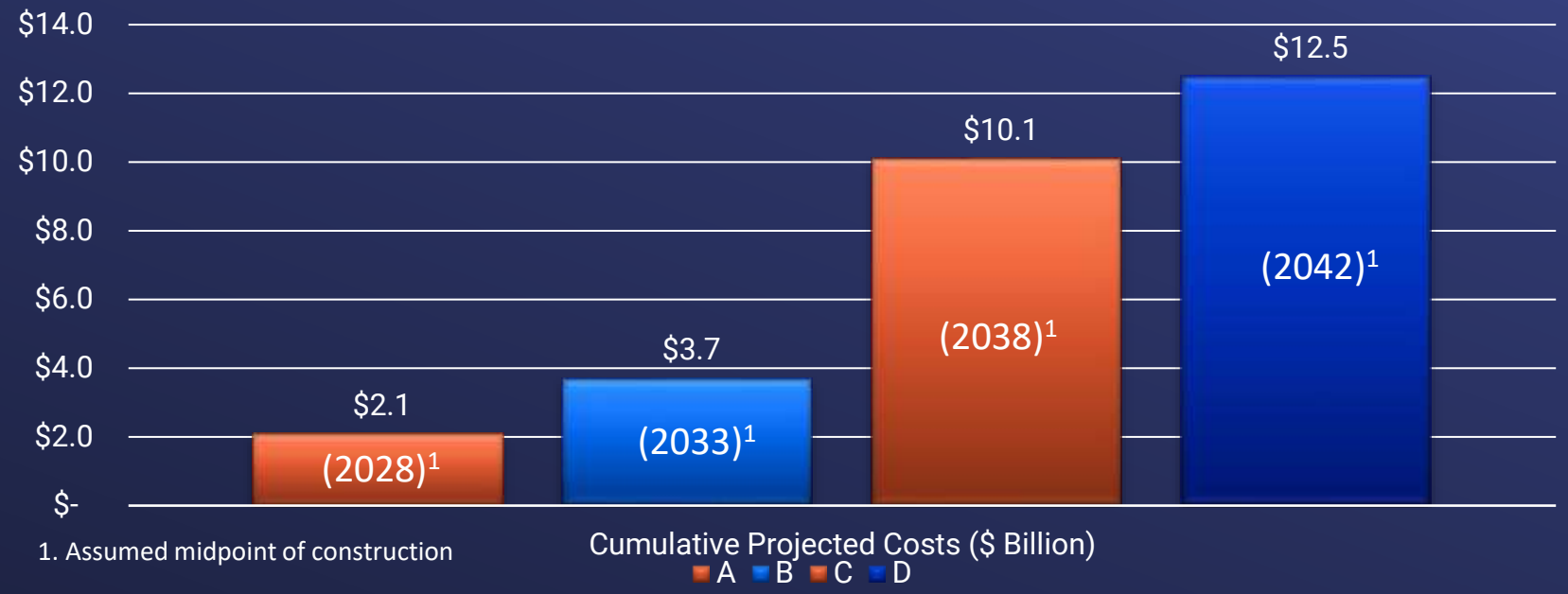


Item 3b PWSC Quarterly Update

Example of Potential Approach to Program Re-phasing

Item	Current Phase 1	Re-phased
Capacity (mgd)	115	up to 115
Length (mi)	53	up to 53
Cost ($B)	$8.2	$12.5
Completion	2032	2043

Phasing Assumptions (Phase 1 only – Escalated dollars)				
Phase	Miles	AWT Capacity	Cost	Completion
1A	14	30	$2.1B	2030
1B	13	10	$1.6B	2036
1C	15	50	$6.4B	2040
1D	11	25	$2.4B	2043



1. Assumed midpoint of construction

Item 3b
PWSC
Quarterly
Update

Next Steps

- Complete draft EIR and publish for public comment
- Complete conceptual design of AWT
- Complete development of AWT Request for Qualifications (RFQ)
- Complete White Paper on DPR
- Continue preliminary design of pipeline reaches 1 & 2
- Continue negotiation of stakeholder agreements
- Continue cost recovery discussions with Board
- Develop strategy for acceptance of grant funds, if awarded


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
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Subcommittee on Pure Water Southern California and Regional Conveyance

Pure Water Southern California Demonstration Testing and Activities Update

Item 3c

March 26, 2024

Item 3c
Demonstration Testing and Activities Update

Subject

Pure Water Southern California Demonstration Testing and Activities Update

Purpose

To provide an update on the recent program demonstration testing and related activities

Next Steps

Continue testing and support efforts to meet the program goals and objectives

Outline

- Role of Demonstration Testing
- Science Advisory Panel Workshop
- Demonstration Testing Activities
- Direct Potable Reuse Update
- Next Steps

PURE WATER SOUTHERN CALIFORNIA

Role of Demonstration Testing

- Confirm treatment processes required to meet potable reuse requirements
- Generate data for regulatory acceptance
- Optimize design criteria and operational strategies
- Verify source water quality criteria
- Characterize concentrate and residual streams
- Confirm capital and operating costs
- Provide venue for public engagement and dialogue

Napolitano Innovation Center Testing To-Date

Secondary Effluent *(2019-2021)*

Primary Effluent *(2021-2023)*

***Tertiary* MBR (tMBR) Testing** *(2019-2021)*

Demonstration Facility

MBR → Reverse Osmosis → UV/AOP → Discharge to Sewer

***Secondary* MBR (sMBR) Testing** *(2021-2023)*

Engagement with the Independent Science Advisory Panel

- Expert panel required to review alternative approaches for meeting existing regulations
- The National Water Research Institute has facilitated seven program workshops since 2018

Areas of Expertise
Microbiology
Toxicology
Chemistry
Hydrogeology
Wastewater Treatment
Regulations/Permitting
Corrosion
Advanced Water Treatment

Independent Science Advisory Panel Workshop No. 7

Workshop No. 7
March 5-6, 2024
Hybrid at LACSD Headquarters

- Topics covered included
  - sMBR testing results
  - NdN tMBR testing update
  - DPR approach
- Panel feedback will inform planning, design, and permitting
- Draft panel report anticipated April 2024

sMBR: Secondary MBR
tMBR: Tertiary MBR
NDN: Nitrifying/Denitrifying
DPR: Direct Potable Reuse

Demonstration Facility Improvements (Nov – Dec 2023)

Grace F. Napolitano Innovation Center

- Partnered with LACSD to develop the scope for improvements and share costs
- Established new test configurations with equipment, modifications, and programming
- Increased flexibility, enhanced reliability for future testing
- Completed critical equipment and facility

New Chemical Tubing

Bioreactor Improvements

Operations Trailer Roof Replacement

Demonstration Testing

- Plant restarted in December 2023 in tMBR mode
  - Address nutrient removal challenges observed in 2019
  - Metropolitan staff leading plant O&M, monitoring, testing
  - LACSD supporting treatment evaluation and optimization
- Testing Scope for NDN tMBR + RO + UV/AOP
  - Establish operating conditions and evaluate performance
  - Conduct optimization studies to enhance full-scale design
  - Gather data to inform future DPR testing

RO: Reverse Osmosis
UV/AOP: Ultraviolet Light/ Advanced Oxidation Process

Tertiary MBR Testing Startup Activities (Jan to Mar 2024)

RO Element Installation

Routine Field Water Quality Monitoring

MBR Membrane Maintenance

Instrument Verification

Tour for LACSD Laboratory Staff

Pathogen Analysis Training for LACSD Staff

MBR Filtrate Pump Replacement

Inform and Support Program Integration

Demonstration Testing Benefits

- Design Criteria and Engineering Report
  - Water quality goals
  - Operational targets
  - Operations plan
  - Performance monitoring and response
- Concentrate and residuals management
- Operator training and development

CALIFORNIA WATER BOARDS
State Water Resources Control Board

Ongoing DPR Research

Testing for DPR through Raw Water Augmentation

- Recent **bench-scale** testing evaluated alternatives
- **Pilot-scale** testing may include ozone, BAC/GAC
- Panel to provide feedback on bench-scale results and proposed pilot test alternatives for evaluation

Bench-scale "jar testing" for treatability

Bench-scale GAC testing setup

DPR regulations adopted by the State Board in **Dec 2023**

Rulemaking in progress; to become effective in **2024**

Next Steps

MBR Testing

- Complete NDN **t**MBR testing
- Develop plans for Nitrifying-only **t**MBR testing
- Submit **s**MBR testing report to regulators

DPR Testing

- Refine approach for DPR pilot testing incorporating Panel feedback
- Commence DPR pilot-scale equipment design and test plan development
- Complete a White Paper on Metropolitan's recommended approach for DPR


THE METROPOLITAN WATER DISTRICT OF
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Subcommittee on Pure Water Southern California and Regional Conveyance

Pure Water Southern California Demand Projections

Item 3d
March 26, 2024

Item 3d PWSC Demand Projections and Considerations Update

Subject

Pure Water Southern California Demand Projections and Considerations Update

Purpose

To provide an update of the demand projections for Pure Water Southern California

Next Steps

Begin term sheet and agreement development with Pure Water Southern California project partners

PWSC Demand Objectives

Target of 115 mgd by 2032

Other Considerations for Pure Water Deliveries

SWP Dependent Areas

- Serves SWP dependent areas, including:
  - Main San Gabriel Basin
  - Central Basin

Regional Program

- Raw water augmentation (RWA) directly serves multiple member agencies
- All Metropolitan member agencies benefit from program

Online Factor

- Water production planned to be 92% online
- Demands identified must be relatively constant

Demand Projection Process

LOIs 2018-2022

- Completed in 2022
- Signed by each party
- Identified “anticipated” quantity of PWSC supply
- Non-binding
- Expressed intent to work together to develop program terms

Outreach with MA 2022-present

- Multiple sessions with member agencies and groundwater managers focusing on how to maximize Pure Water deliveries
  - Spreading basins
  - New and existing injection wells
  - Non-potable users

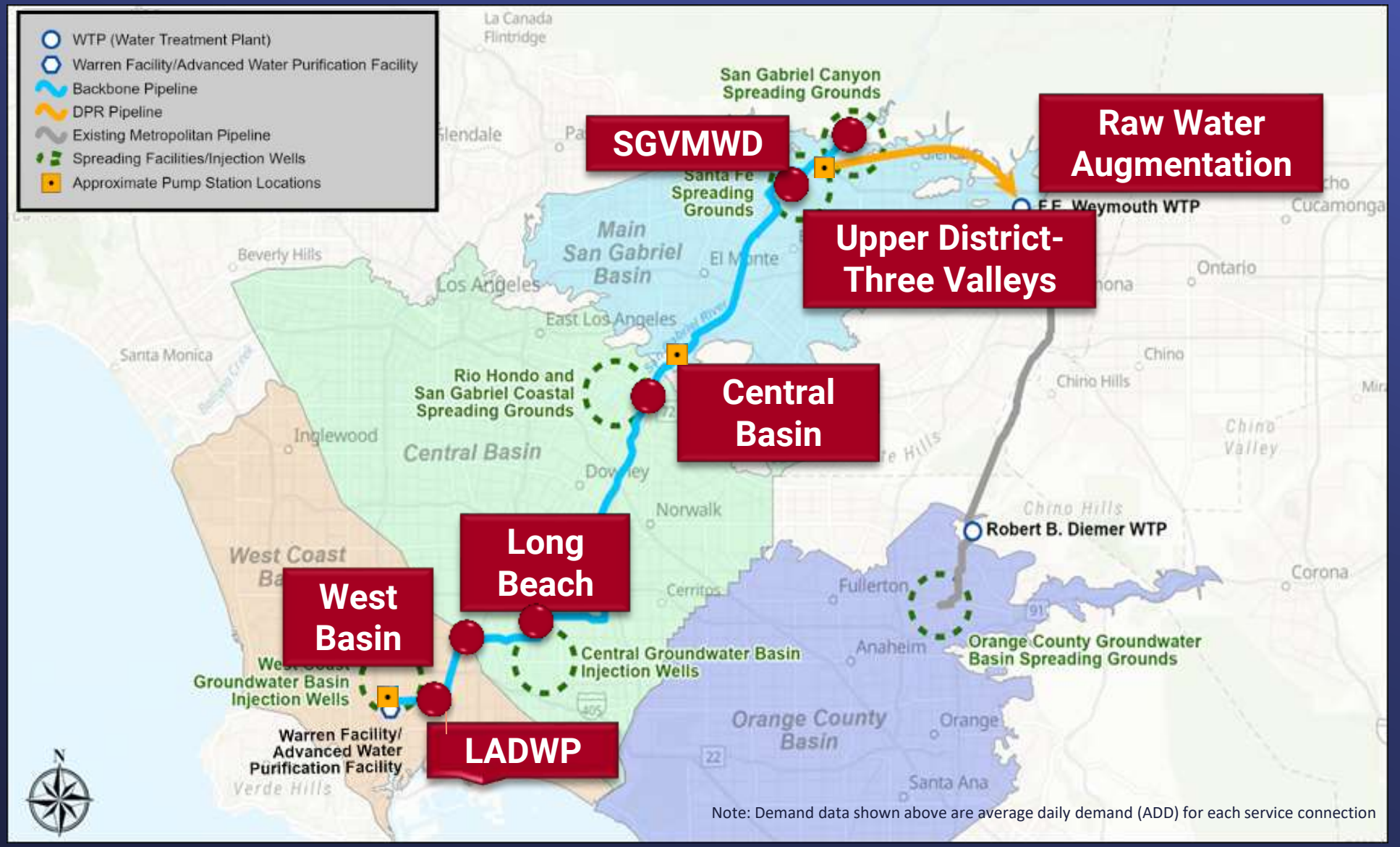
Demand Projections for PWSC What's included in Phase 1 (115 mgd /119 TAFY) of Pure Water?

Replenishment Demands 68 TAF	Non-Potable Demands 25 TAF	Raw Water Augmentation 26 TAF
• Central Basin 9 TAF • Main San Gabriel Basin 56 TAF • West Coast Basin 3 TAF	• LADWP 9 TAF • West Basin MWD 16 TAF	• Weymouth & Diemer 26 TAF

Data shown include 92% online factor and expected annual average deliveries rounded to nearest 1,000 AF.

PWSC Service Connections

- Phase 1 (115 mgd)
  - 35 mgd in Central/West Coast Basins
  - 55 mgd in Main SG Basin
  - 25 mgd RWA @ Weymouth and/or Diemer via Azusa Pipeline

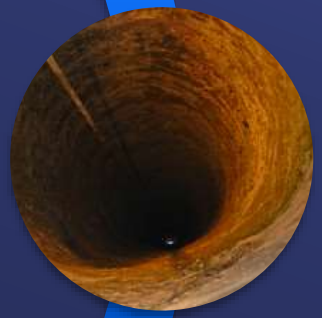


Maintaining Deliveries during Wet Periods

Program goal is to maintain full-capacity deliveries 92% of time

What happens when existing LA County spreading grounds aren't available?

Acquiring property for a project-specific spreading basin in Main San Gabriel Basin is part of PWSC scope



Construction of up to 14 injection wells are included as part of PWSC scope

Provisions to send additional water to Weymouth or Diemer for RWA may be possible

Phase 2

Demand Projections for PWSC What are the options for Phase 2?

Project Options

- Additional Raw Water Augmentation at Weymouth and Diemer
- Potential IPR in Central or West Coast Basins
- Potential West Basin NPR
- Potential IPR/DPR in Six Basins or Chino Basin
- Potential Treated Water Augmentation

Next Steps

Agreement Development Process

LOIs 2018-2022

- Completed in 2022
- Signed by each party
- Identified “anticipated” quantity of PWSC supply
- Non-binding
- Expressed intent to work together to develop program terms

Term Sheets Mid 2024

- Initial Step toward agreement
- Signed by each party
- Commitment to take specified quantity of PWSC supply
- Commitment for short-term until agreement is developed

Agreements Late 2024

- In place by late 2024/early 2025
- MOU or Agreement
- Potentially a take-or-pay agreement for specified quantity of PWSC supply
- Requires resolution of cost recovery discussions
- Commitment for long-term


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA

Subcommittee on Pure Water Southern California and Regional Conveyance

State Water Project Dependent Areas Drought Mitigation Update

Item 3e

March 26, 2024

Item 3e
State Water Project Dependent Areas Drought Mitigation Update

Subject

State Water Project Dependent Areas Drought Mitigation Update

Purpose

To provide an update on the implementation status of near-term projects in the drought mitigation actions portfolio

Next Steps

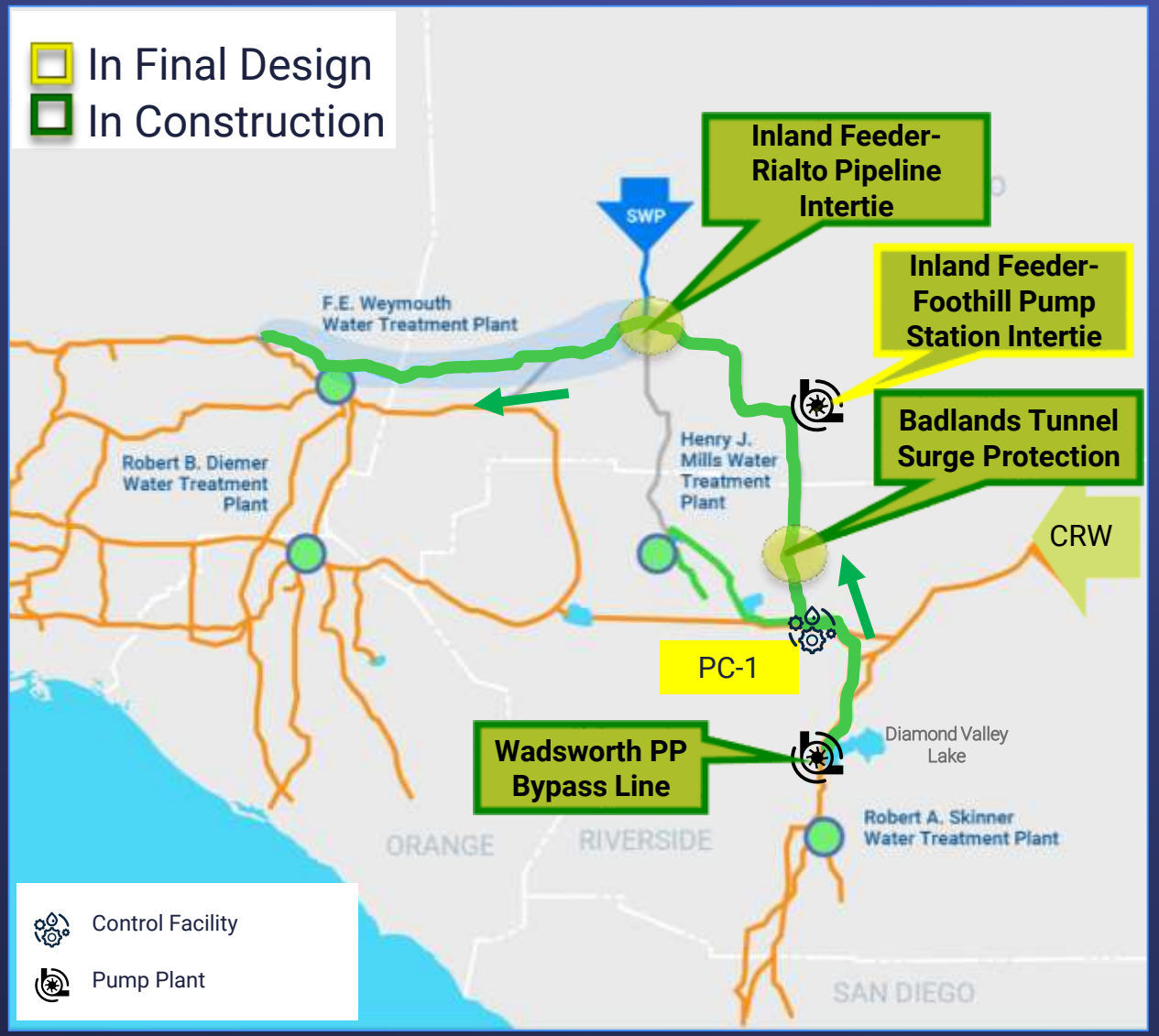
Continue implementation of near-term projects

Long-term projects under evaluation by CAMP4W

Near-Term Drought Mitigation Projects

DVL to Rialto Pipeline Delivery

- Summary of program scope
  - Four inter-related projects
  - Maximizes use of existing infrastructure
  - Up to 120 cfs with full build-out
- Program status
  - Three projects in construction
  - One project in final design
  - Estimated completion in late 2027
  - $50M State grant
    - Invoiced State $2.2 M to date



DVL to Rialto Construction

- Wadsworth Pump Plant Bypass Line
  - Construct 600 feet of 96-inch diameter bypass pipeline & isolation valve
  - Allows continuous pumping operation
- Badlands Tunnel Surge Protection
  - Install passive surge protection system
  - Protects Inland Feeder from surge pressure shocks due to pump trips
- Inland Feeder/Rialto Pipeline Intertie
  - Construct 250 feet of 96-inch diameter WSP intertie pipeline & isolation valve
  - Provides direct connection between Inland Feeder & Rialto Pipeline

New Vault Structure at Wadsworth Power Plant

Wadsworth Pump Plant Bypass Line

- Contract Details
  - Amount: $14,820,500
  - Contractor: Steve P. Rados Inc.
  - Award Date: Jan. 2023
  - Scheduled Completion: Jul. 2024
- Current Status
  - 65% complete
  - Installing & welding steel pipe
  - Installing formwork for encasement
- Upcoming Milestone
  - Construct tie-in during April 2024 Inland Feeder shutdown

Welding Buttstrap

Badlands Tunnel Surge Protection

- Contract Details
  - Amount: $18,840,000
  - Contractor: Steve P. Rados Inc.
  - Award Date: Nov. 2023
  - Scheduled Completion: Summer 2025
- Current Status
  - 4% complete
  - Mobilizing to site
  - Installing BMPs
- Upcoming Milestone
  - Construct tie-in during April 2025 Inland Feeder shutdown

Project Site

Inland Feeder-Rialto Pipeline Intertie

- Contract Details
  - Amount: $15,681,000
  - Contractor: Steve P. Rados Inc.
  - Award Date: Sep. 2023
  - Scheduled Completion: Summer 2025
- Current Status
  - 4% complete
  - Clearing & grubbing
  - Installing BMPs
- Upcoming Milestone
  - Construct tie-in during April 2025 Inland Feeder shutdown

Aerial View of Project Site

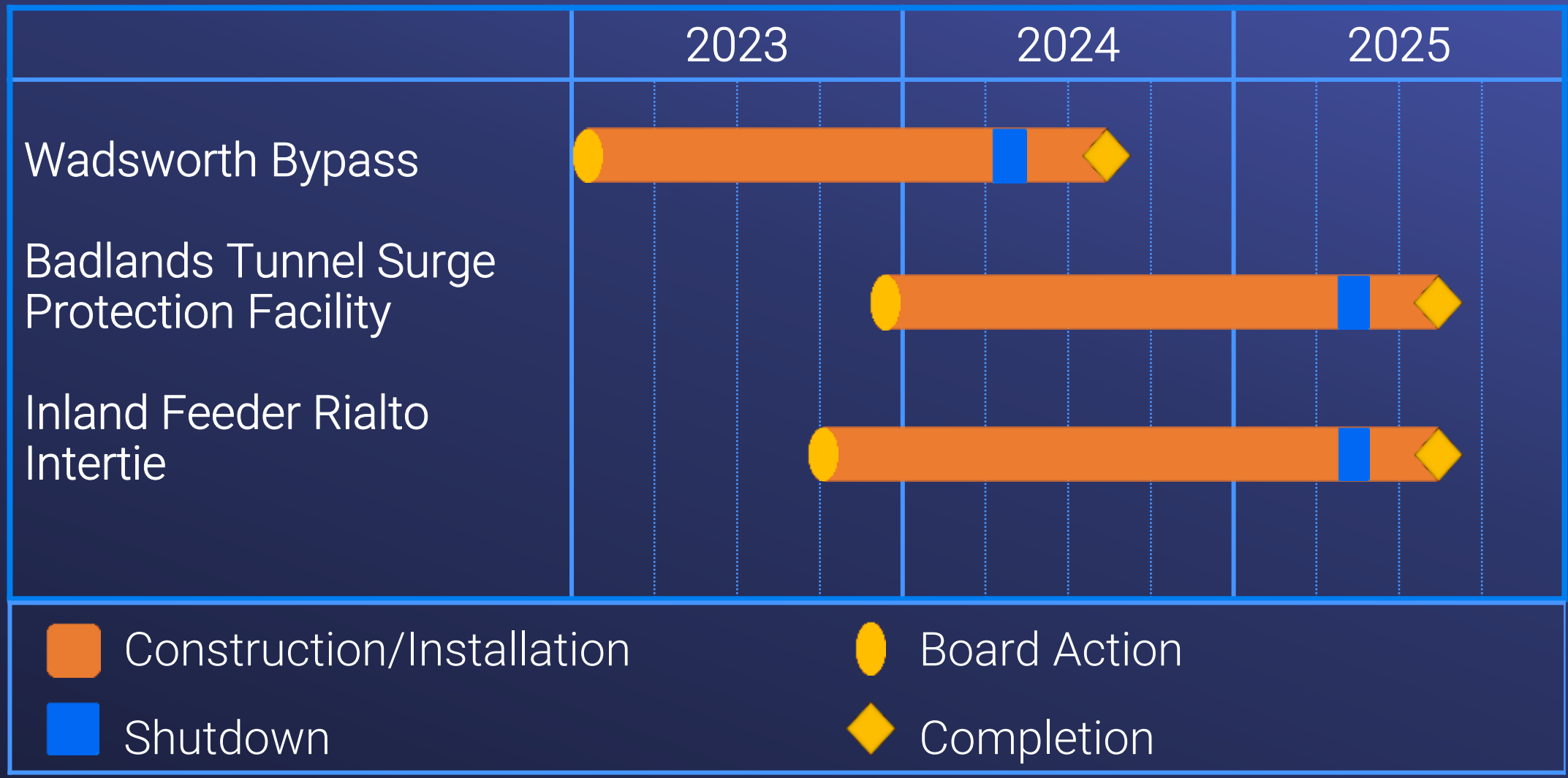
DVL to Rialto Pipeline Valve Procurement

- Butterfly Valves for Wadsworth Bypass Pipeline, Inland Feeder – Rialto Pipeline Intertie, and Badlands Tunnel Surge Protection
  - Three 84-inch diameter valves
  - Amount: $5,647,405
  - Contractor: Sojitz Machinery Corp of America
  - Award Date: Aug. 2022
  - Completed valve assembly
  - Performed functional & leak testing
  - Started exterior coating

DVL to Rialto Pipeline Valve Procurement

- Butterfly Valves for Foothill Pump Station Intertie
  - Two 54-inch diameter valves
  - Amount: $2,601,437
  - Contractor: Sojitz Machinery Corp of America
  - Award Date: May 2023
  - Submittals review in progress
- Butterfly Valve for Foothill Pump Station Intertie
  - One 132-inch diameter valve
  - Amount: $1,779,174
  - Contractor: Vogt Valves
  - Award Date: Mar. 2024

Construction Schedule

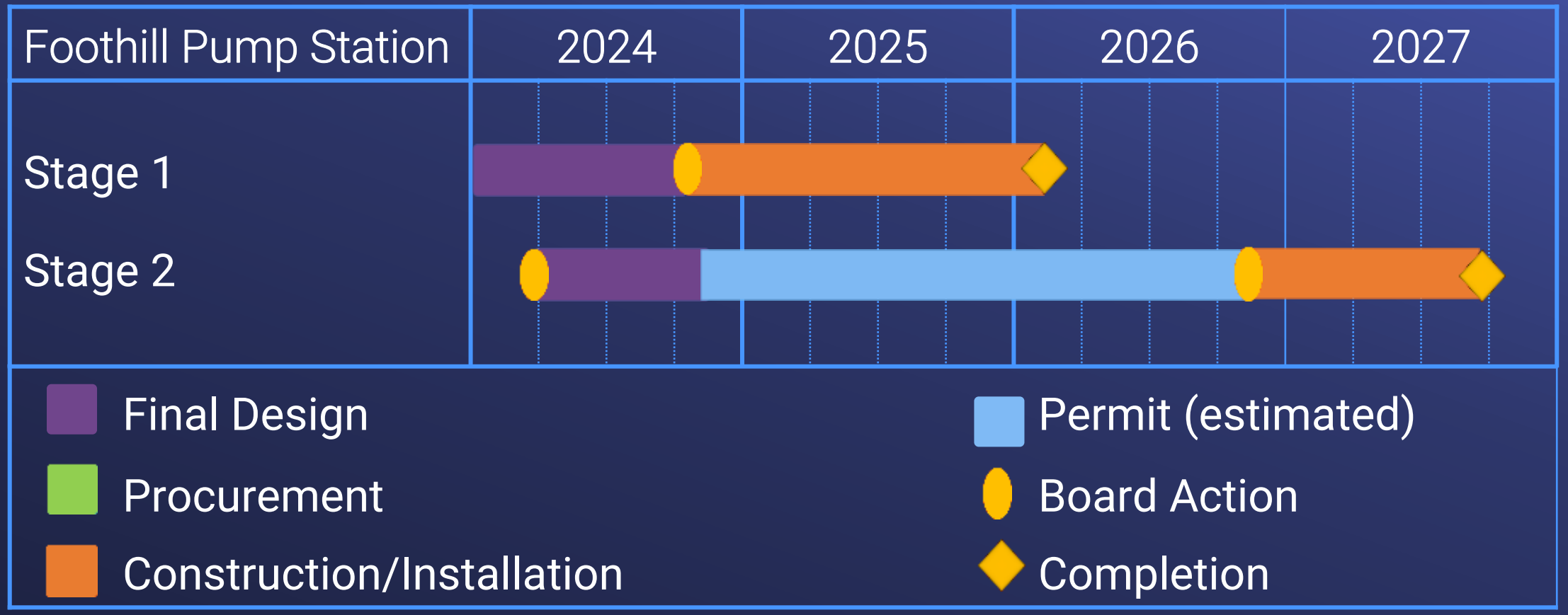


Inland Feeder-Foothill Pump Station Intertie

- Summary of project scope
  - Collaborative effort with San Bernardino Valley MWD (SBVMWD)
  - Connect Inland Feeder with SBVMWD's Foothill Pump Station
  - Construct supply and discharge pipelines, isolation valves, and surge tanks
  - Utilize two-stage construction to expedite installation
- Project status
  - Finalizing CEQA documents
  - Pending Fish & Wildlife permit and BLM right-of-way acquisition

Existing Foothill Pump Station

Inland Feeder-Foothill Pump Station Intertie



- The project was originally estimated to be completed as a single-stage project by mid-2025
- Stage 2 completion may be accelerated if Federal nexus on permitting is achieved

Foothill Pump Station Intertie

On-going partnership with SBVMWD

- Provides mutual benefits
- Bi-weekly project update meeting with SBVMWD
- Draft Joint Operation Agreement under review
- Biological data shared to benefit both agencies
- Joint coordination with Fish & Wildlife

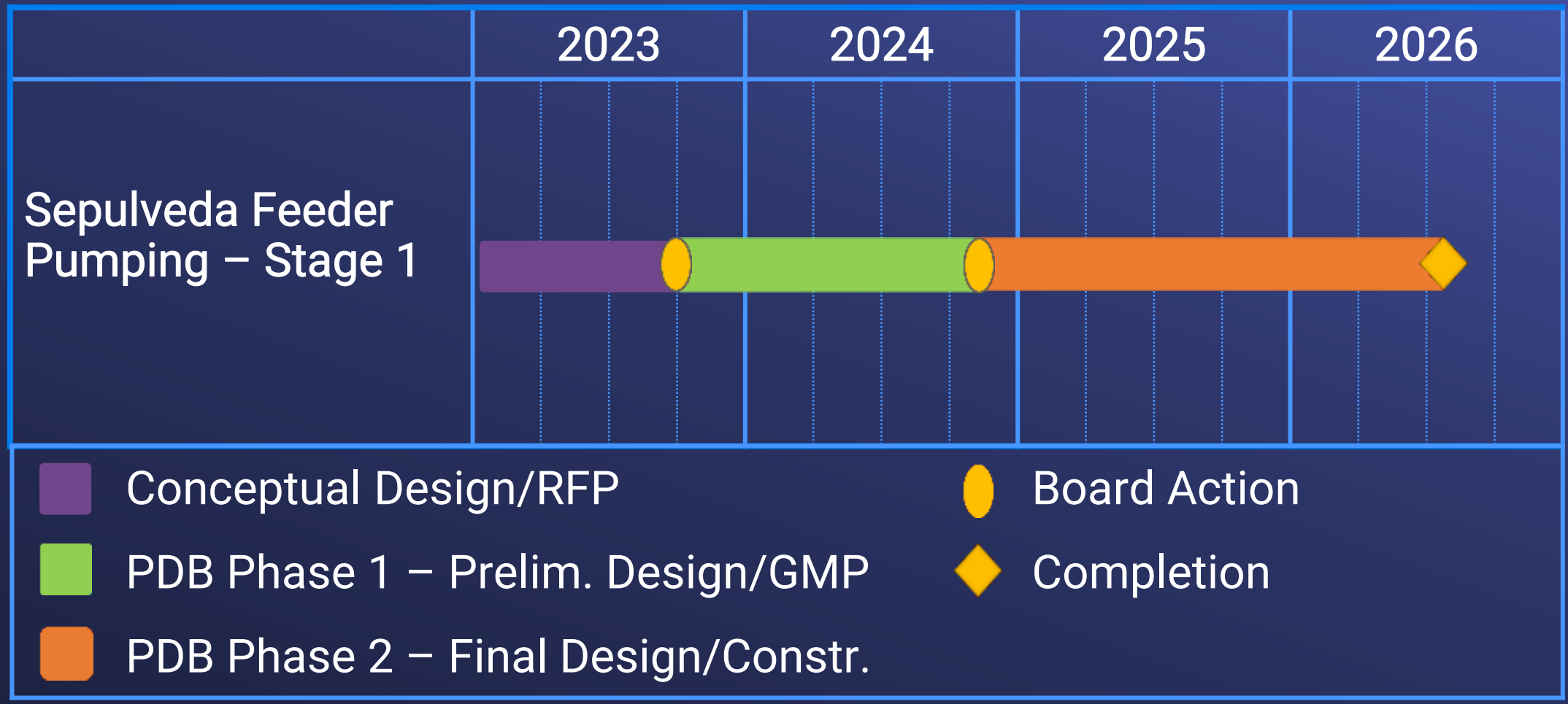
Virtual Meeting to Discuss Terms of Joint Operation Agreement

Biological Site Survey with SBVMWD Staff

Sepulveda Feeder Pumping – Stage 1

- Purpose
  - Augment existing Greg Ave Pump Station to provide up to 30 cfs to Jensen exclusive area on west side
- Project
  - Reverse flow in the Sepulveda Feeder
  - Install pumping stations at two existing pressure control structures
  - Utilize Progressive Design-Build project delivery model
    - Expedite schedule
    - Potential for innovative design ideas

Sepulveda Feeder Pumping – Stage 1



Next Steps

- Continue implementation of near-term projects
  - Pursue Federal nexus on Foothill Pump Station project permitting
  - Work towards development of Guaranteed Maximum Price for Sepulveda Pump Stations project
  - Quarterly reporting to the subcommittee
- Continue collaboration on member agency projects
  - Burbank B-5 to B-5A Shift
  - TVMWD Miramar Pumpback Upgrade
- Support the CAMP4W process to evaluate mid and long-term projects
  - Provide periodic updates to the subcommittee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