



MWDOC Joint Board Workshop

Pure Water Southern California Cost Recovery Alternatives

December 6, 2023

PURE
WATER
SOUTHERN
CALIFORNIA

Agenda

1. Program Overview
2. Raftelis - Cost Recovery Alternatives
3. Additional Cost Recovery Alternatives

Pure Water Southern California

How it works



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Purpose of Pure Water Southern California

With a service area spanning 5,200 square miles in six counties, Metropolitan has built an integrated conveyance and distribution system to ensure consistent supplies, reliability, and flexibility throughout the region.

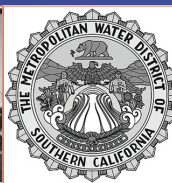
How does Pure Water function as part of Metropolitan's integrated service?



Treat and convey up to 150 mgd from JWPCP to meet member agency needs (115 mgd for Phase 1)



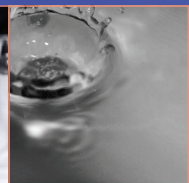
90 mgd for groundwater recharge and industrial demands
Up to 60 mgd for DPR (25 for phase 1) via raw water augmentation at Weymouth and Diemer WTP that would be conveyed to MA through existing integrated system



Project serves up to 8 Member Agencies directly
West Basin MWD, Los Angeles Long Beach, Torrance, Central Basin MWD, Upper District, Three Valleys, and IEUA



DPR via Weymouth and Diemer WTP serves Central Pool, which provides water to majority of LA and Orange Counties. 60% of the project would reduce SWP deliveries while 40% would reduce CRA deliveries

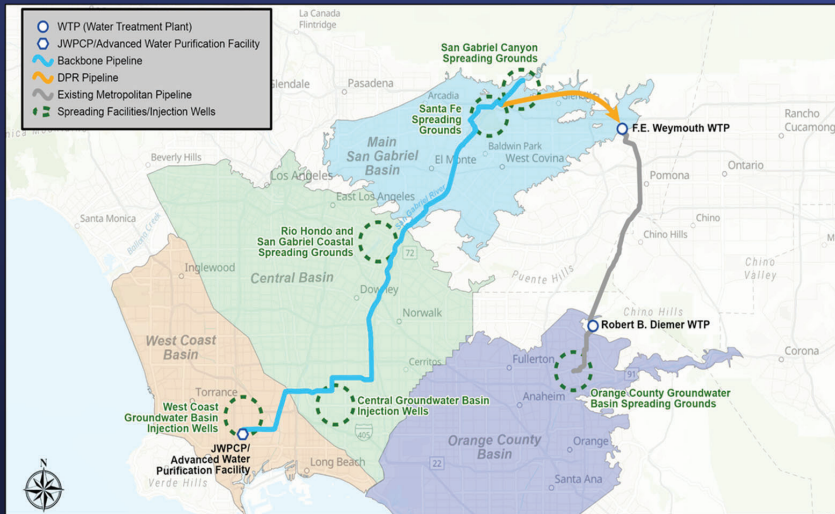


Pure Water Southern California is part of Metropolitan's integrated service in the same way that SWP and CRA are part of Metropolitan's service

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Infrastructure at a Glance

AWT (Supply) and Pipelines (Conveyance)

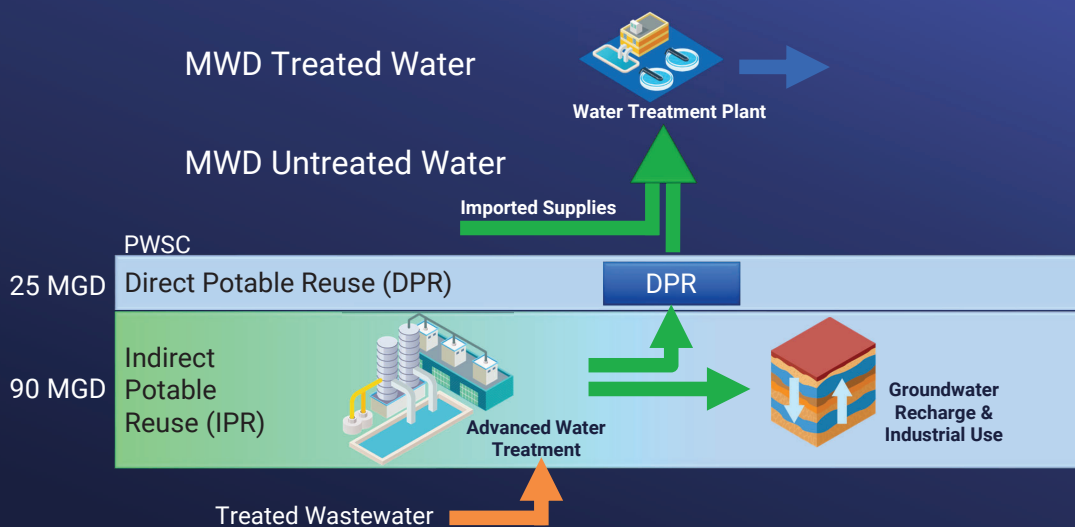


- Phase 1: 115 mgd of treatment capacity
- 90 mgd of IPR through replenishment and industry uses
- 25 mgd of DPR through raw water augmentation
- 42 miles of backbone pipeline to Canyon Spreading Grounds
- Repurpose existing Azusa Pipeline to convey water to Weymouth Plant for DPR

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PWSC adds a New Water Supply to Metropolitan's Supply Mix

Current Project (Phase 1 - 115 MGD)



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PUREWATER

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Conceptual Cost Recovery Alternatives

October 10, 2023



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RAFTELIS

Introductions



John M. Mastracchio, ASA, CFA, P.E.

- Executive Vice President at Raftelis
- Nearly 30 years of utility rate and finance experience
- Advisor to some of the largest water utilities across North America
- Contributor to Industry Manuals on capital financing and rate setting
- Past Chair of the AWWA Finance, Accounting, and Management Controls Committee



John Wright, CPA

- Senior Manager at Raftelis
- More than 25 years of utility rate and finance experience
- Advisor to many water utilities in California
- Extensive experience in cost of service evaluations for water supply projects
- Contributor to Industry Manuals on cost of service and rate setting

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Who is Raftelis?

One of the most experienced utility financial and management consulting practice in the nation.



Raftelis has provided financial/organizational assistance for

1,500+

public agencies and utilities

that serve more than

25%

of the U.S. population

including the agencies serving

38/50

of the nation's 50 largest cities

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Objectives of the Study

- Develop a recommendation for recovery of Pure Water Southern California (PWSC) Program capital and operating costs for MWD Board consideration
- Consider the following:
 - › The benefits of PWSC on Metropolitan's system and services
 - › Consistency with cost recovery principles
 - › Common industry practices for recovery of water resiliency projects
 - › Aligning fixed costs with fixed cost recovery
 - › Providing Member Agencies with an option for project direct investment

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Cost Recovery Principles

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



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
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Conceptual Cost Recovery Alternatives

1. Cost Recovery Consistent with Metropolitan's Existing Rates and Charges
2. Cost Recovery with a Functional Fixed Charge
3. Cost Recovery through Member Agency Subscriptions as Direct Investors

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Cost Recovery Alternative 1 – Existing Rates and Charges

Cost	Component	Approx % ⁽¹⁾	Rate or Charge	Billing Basis
Capital Financing	Supply (Advanced Water Treatment (AWT))	52%	T1 Supply (\$/AF)	Water Sales
	Transportation (Conveyance)	19%	SAR (\$/AF)	All Transactions
		13%	RTS	Existing RTS
		16%	CC (\$/CFS)	Existing CC
O&M	AWT Power, Labor, Overhead	67%	T1 Supply (\$/AF)	Water Sales
	Pumping System Power, Labor, Overhead	33%	SAR (\$/AF)	All Transactions

SAR = System Access Rate, RTS = Readiness to Serve, CC = Capacity Charge

- › Relatively simple approach and simple to administer
- › Consistent with cost recovery principles
- › Common recovery approach for water resiliency projects

(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. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

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Cost Recovery Alternative 2 – Functionalized Fixed Charge

Cost	Component	Approx % ⁽¹⁾	Rate or Charge	Billing Basis
Capital Financing	Supply Portion (Advanced Water Treatment (AWT))	52%	New Fixed charge (\$)	10-Yr Avg Sales
	Transportation Portion (Conveyance)	48%		10-Yr Avg Transactions
O&M	AWT Power, Labor, Overhead	67%	T1 Supply (\$/AF)	Water Sales
	Pumping System Power, Labor, Overhead	33%	SAR (\$/AF)	All Transactions

- › Relatively simple approach and simple to administer
- › Consistent with cost recovery principles
- › Helps align fixed cost with fixed cost recovery
- › Common recovery approach for water resiliency projects

(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. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

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Cost Recovery Alternative 3 – Members Subscribe as Direct Investors

Investors: Member Agencies that choose to purchase project shares

- May or may not be direct recipients of PWSC Water
- Can be member agencies or third-party investors

Cost Allocation:

- **For Investors:** Water production and project costs are allocated according to their percentage share of the project. Take-or-pay contract.
- **All Member Agencies:** Unpurchased shares are allocated among all member agencies.
- Costs ramp up over time as the project is constructed.

Benefits:

- **For Investors:** Increases supply reliability for investors during water shortage allocations - Water is considered extraordinary local supply for purposes of Water Supply Allocation Plan.
- **For MWD:** Provides new fixed funding source that increases revenue stability for MWD.

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Cost Recovery Alternative 3 – Members Subscribe as Direct Investors

Project Cost Recovery Portions	Description	Cost Recovery 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

- › Aligns fixed cost with fixed cost recovery
- › Provides Member Agencies with a direct investment option
- › Consistent with cost recovery principles – Direct linkage between cost recovery and benefits received

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Alternative 3 – Member Agency Example

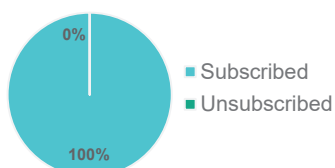
Assume that the project produces 155,000 AF and Agency A makes a 10% direct investment

- Agency A:
 - › Pays annually for its direct investment under a take-or-pay contract
 - › Receives 10% of projected production – 15,500 AF
 - › Pays 10% of project capital financing and O&M costs
 - › Pays a share of the unsubscribed project portion through Metropolitan's rates and charges according to either:
 - Alternative 1 (existing rates and charges)
 - Alternative 2 (new fixed charge)
- During periods of water supply allocation, Agency A has 15,500 AF of local supply in addition to its regional allotment

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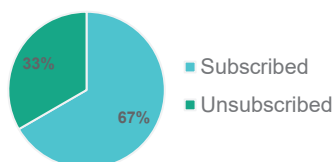
Agency A is a direct project investor and subscribes to 10% of the project or 15,500 AF

Scenario 1 – Fully Subscribed



- Agency A pays for its subscribed portion per take-or-pay contract
- Other Agencies subscribe to the project, and the project is fully subscribed
- There is no allocation of the unsubscribed portion to non-investor member agencies

Scenario 2 – Partially Subscribed



- Agency A pays for its subscribed portion per a take-or-pay contract
- Other Agencies subscribe to the project, but the project is not fully subscribed
- Agency A and all other agencies pay for and receive a share of the unsubscribed project portion through Metropolitan's rates and charges.
- Costs of the unsubscribed portion recovered per Alternative 1 or 2.

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Alternative 3 – Member Agency Example (cont'd)

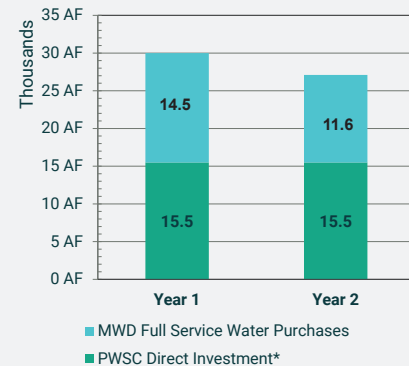
Year 1: Agency A purchases 30,000 AF from MWD

- › Receives 15,500 AF from PWSC subscribed portion (10% of projected production)
- › Pays for 14,500 AF through MWD's full-service rates

Year 2: Extreme drought causes water supply allocations

- › Receives 15,500 AF from PWSC subscribed portion (10% of projected production)
- › Receives and pays for regional allotment of 11,600 AF from MWD through MWD's full-service rates

Example Agency A:
MWD Water Deliveries



** Direct investor's share of PWSC program water production is drought resilient as it will not be reduced in periods of drought.*

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Attributes of the Cost Recovery Alternatives

	Alternative 1 Existing Rates and Charges	Alternative 2 New Fixed Charge	Alternative 3 Member Agency Direct Investment
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			✓

* The recovery of the capacity based on the purchase of shares of the project is a relatively common approach. However, the combination of cost recovery through purchased shares and recovery of the remaining costs through either Alternative 1 or 2 is a more novel concept that is tailored to the benefits of the project that would accrue to member agencies.

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Additional Cost Recovery Alternatives

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Alternative 4: PWSC Surcharges

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

- PWSC costs are recovered on new, separate volumetric surcharges for supply and transportation

(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. The actual percentages will vary from year to year and be based on the actual project costs including grant awards and contractual contributions.

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Alternative 5: New GO Bond Ad-Valorem Property Tax

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

- Metropolitan may pursue a new property tax to cover PWSC capital costs
 - Tax collected = GO bond debt service payments for PWSC Program
 - As the project is building and GO Bonds are issued, tax will be adjusted annually to recover for GO Bond debt service payments
 - 2/3 majority vote requirement – of all voters in MWD service area
- O&M costs will be recovered T1 Supply and SAR rates (\$/AF)

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Summary of Alternatives Evaluated

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

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Alternative Scenario 6 (Proposed by FAIRP Committee Chair)

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

$$\text{PWSC Recycled Surcharge (Allocated 100\% to Supply)} = \frac{\text{PWSC Recycled Costs} - \text{PWSC Recycled Sales}}{\text{MWD Water Sales}}$$

$$\text{PWSC DPR Surcharge (Allocated 100\% to Supply)} = \frac{\text{PWSC DPR Costs} - \text{PWSC DPR Sales}}{\text{MWD Water Sales}}$$

PWSC Recycled Rate = Use Current Full Service Untreated Volumetric Cost (Tier I)

PWSC DPR Rate = Use Negotiated Contracted Amounts (at cost or negotiated at market or Direct Investment or Full Service Untreated Volumetric Costs (Tier I))

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Other Considerations

- This is not an exhaustive list of PWSC cost recovery alternatives that could be considered by the Board
 - Additional alternatives may be incorporated into a new rate structure / business model through the ongoing CAMP4W planning processes
 - However, Raftelis evaluated a wide range of cost recovery alternatives and considered the project benefits, cost recovery principles, industry practices, cost alignment and providing direct investment options and recommends Alternative 1, 2 and 3 as outlined above
- Further discussion of the impacts of the PWSC cost recovery alternatives on the SDCWA-MWD Exchange Agreement payments

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Recent updates and future items

- November 2023 Pure Water Sub-Committee - update Cost Estimates
 - Costs have increase to \$6.39 B for Phase 1 in 2023 \$
 - Unit cost estimated between \$2,820/AF to \$3,624/AF depending on the level of contributions and grants
 - capital costs financed at 4.5% / 30yrs including O&M in 2023\$
 - Feb 2024 FAIRP - Cost recovery alternatives will be updated to reflect updated cost estimate
- Funding of the PWSC planning and design activities in the next biennial budget (FY2024/25 and FY2025/26) will be funded by the \$80 million State Water Resources Control Board grant

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