Finance, Audit, Insurance, and Real Property Committee

Pure Water Southern California Cost Recovery Alternatives

Item 6a

October 10, 2023

Agenda

1. Raftelis - Conceptual Cost Recovery Alternatives
2. Metropolitan – Additional Cost Recovery Alternatives

Appendix: Program Overview and Updates

PUREWATER SOUTHERN CALIFORNIA

Conceptual Cost Recovery Alternatives

October 10, 2023

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

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

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

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

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

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.

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.

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.

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

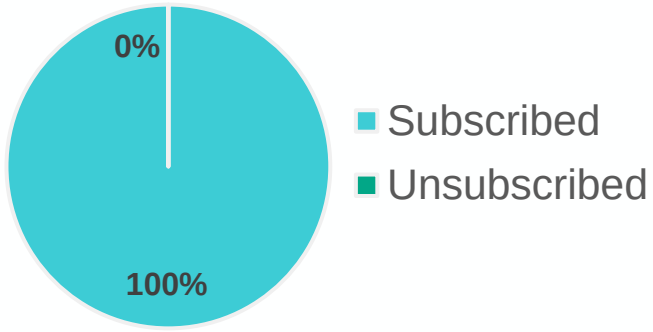
Alternative 3 – Member Agency Example

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

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

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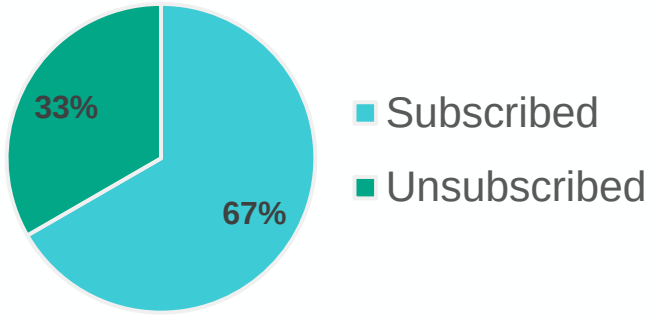
Scenario 2 – Partially Subscribed



- 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.

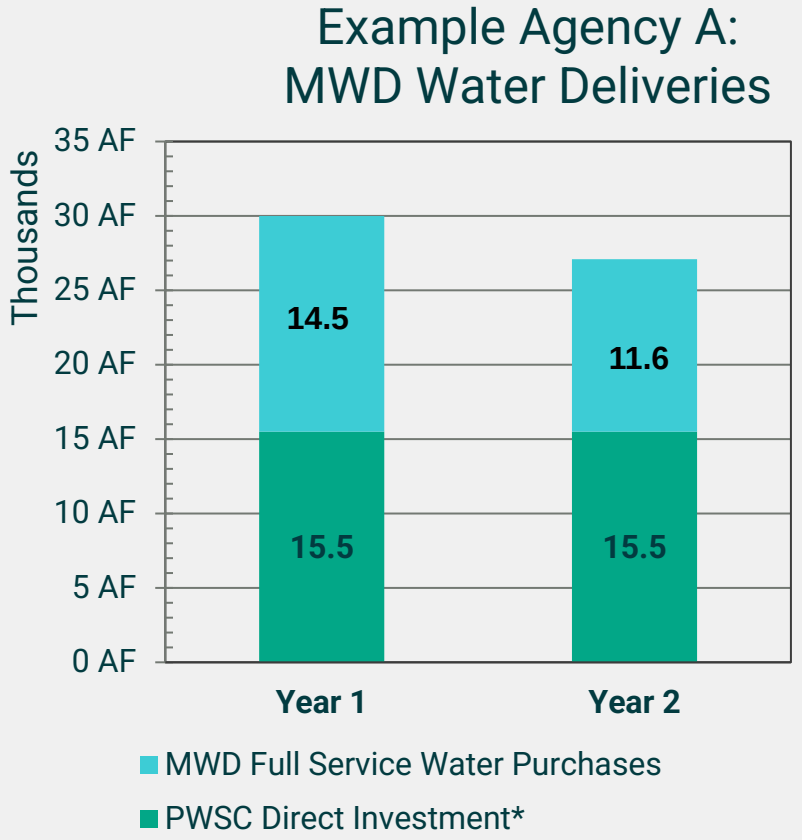
Alternative 3 – Member Agency Example (cont'd)

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



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

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.

Additional Cost Recovery Alternatives

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.

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)

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

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

Future Items

- Staff will bring an update on PWSC Cost Estimates to the Pure Water Sub-Committee in November 2023, which will necessitate further discussion on project scope and cost recovery alternatives
- 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

Appendix: Program Overview and Updates

Pure Water Southern California Program

Overview

- Partnership between Metropolitan and Los Angeles County Sanitation Districts
- Construction of advanced water treatment plant, conveyance pipelines, spreading facilities, and injection wells
- Creates 150 million gallons daily new supply

Benefits

- Provide new local source of reliable, high quality, climate-resilient water to meet demands on Metropolitan
- Reduce likelihood of regional net shortage
- Enhance Metropolitan's operational reliability and flexibility
- Contribute to water quality of regional groundwater basins
- Increased reliability during seismic event

Pure Water Southern California

How it works

① Used water (wastewater) from homes, businesses, and industries in LA County

② Cleaned at Sanitation Districts' Joint Water Pollution Control Plant

③ Purified at Metropolitan's advanced water purification facility

④ Conveyed through over 60 miles of pipeline to groundwater basins, industries, or Metropolitan's drinking water plants

⑤ A new climate-resilient source of water for Southern California

Infrastructure at a Glance

AWT (Supply) and Pipelines (Conveyance)

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

90 mgd for groundwater recharge and industrial demands

Up to 60 mgd for DPR 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

Pure Water
Southern California

Addendum to White Paper No. 2

White Paper No. 2 was published in October 2020. Since that time, the first phase of the 2020 IRP was adopted by the Board, draft DPR regulations were released, and the Colorado River partners expressed interest in the project.

What's changed since White Paper No. 2 was published?

Adoption of the 2020 IRP and CAMP4 Water

- The Board unanimously adopted the Regional Needs Assessment of the 2020 IRP in April 2022
- Metropolitan's CAMP4Water integrates current climate, water resources, hazard mitigation, and financial planning efforts to prepare for climate change.

Partnerships

- Colorado River partners (SNWA, CAP, AZDWR) and a SWP contractor (SGVMWD) have each expressed interest in the Program and formalized Letters of Intent

Project Description

- The SWRCB proposed criteria for direct potable reuse. RWA DPR now part of Phase 1
- Potential to deliver a portion of the Program early
- Updating the treatment process and nitrogen limits based on DDW requirements.

Pure Water Southern California

Need for Pure Water Southern California

Why does Metropolitan need Pure Water Southern California?

Need for Pure Water Southern California

Risk of Shortage or Allocation

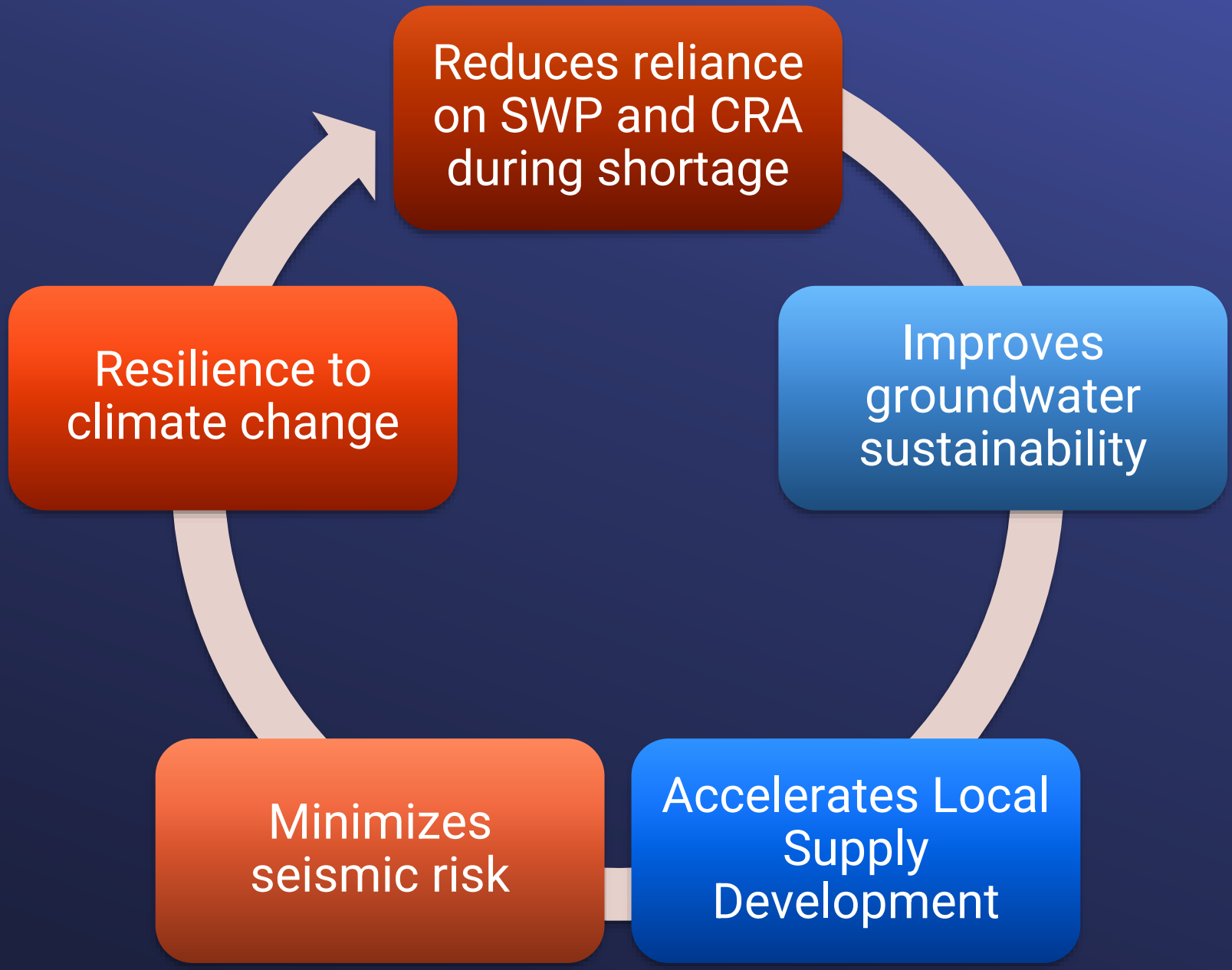
- **Up to 1.22 MAF of net shortage by 2045**
  - Would require up to 650 TAF additional core supply
  - Needs primarily in SWP-dependent areas
- **Net Shortage up to 66% of the time**
  - 2% chance that storage would go below 1 MAF

Declining Groundwater Levels

- Despite favorable hydrologic conditions this year, 48 percent of groundwater basins are still below their established operating range
- Loss of groundwater production by up to as much as 10 percent by 2040
- Cumulative additional recharge need 1.1 to 1.6 MAF by 2040

Slow Development of Local Supplies

- Despite significant investment in local supplies, the Potential shortfall in local supplies development of approximately 400,000 AF



Regional Benefits of Pure Water Southern California

Why do all member agencies benefit from Pure Water Southern California?

Summary of Needs and Regional Benefits of PWSC

Topic	Need	Benefits
Reliance on SWP and CRA during shortage	• Risk of a net shortage up to 66 percent of the time • Need for up to 650,000 TAFY of new core supply • Risk of storage below 1 MAF up to 2%	• Reduces risk of net shortage by 9 percent • Reduces need for additional supply to 495,000 TAFY • Reduces risk of storage below 1 MAF by 50%
Groundwater sustainability	• Projected up to 17 percent of the groundwater basins would be unsustainable • Risk of loss of groundwater production by up to 10 percent	• Prevents a portion of the loss of groundwater production in Main San Gabriel, West Coast, Central, and Orange County Basins. • Reduces percent of unsustainable basins from 17 percent to 15 percent.
Local Supply Development	• Stagnant growth in local supply development	• Increases local supply by 155 TAFY
Seismic Event	• Significant loss of imported supply capacity for up to 24 months due to catastrophic seismic event	• Increases the effective local supply during a seismic emergency by up to 15 percent • DPR could help maintain flow at WTPs
Operational Flexibility	• Operational flexibility may be limited during times of emergency or drought	• Improves flexibility to meet demands and maintain regional storage


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928