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

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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.

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Thank you!

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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.