THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Committee Item
INFORMATION

Subcommittee on CAMP4W

9/30/2025 Subcommittee on CAMP4W

3c

Subject

Preliminary CAMP4W Assessments for Pure Water and Sites Reservoir

Executive Summary

In April 2025, The Metropolitan Water District of Southern California's Board of Directors approved the Climate Adaptation Master Plan for Water (CAMP4W) Five-Year Implementation Strategy. The Implementation Strategy integrates water resources, climate considerations, and financial planning to facilitate Metropolitan's continued reliability and resilience in the face of change and uncertainty.

CAMP4W comprises multiple components that together form a living master planning program. The assessments of projects under the CAMP4W framework only identify and characterize potential projects, programs, and portfolios that would help meet the time-bound targets and policy goals outlined in the CAMP4W Five-Year Implementation plan. Implementation timelines in the plan anticipated CAMP4W assessments for both individual projects and various portfolios of projects.

To familiarize the Board with the assessment process, staff first completed in July 2025 an initial assessment of Pure Water's 150 million gallons per day (MGD) project. Subsequently, staff revised the initial assessment of Pure Water 150 MGD and included new assessments for 45 MGD and 75 MGD. Staff also provided an initial assessment of the Sites Reservoir project.

This item presents the staff's initial evaluation of the staged Pure Water project and of Sites Reservoir. These assessments (Attachments 1–4) should still be considered preliminary and pre-decisional. The projects were assessed according to six criteria: reliability, resilience, financial sustainability and affordability, adaptability and flexibility, equity, and environmental co-benefits. The assessments strengthen decision-making on project investments through greater transparency and more holistic and uniform analyses. Recommendations for action on specific investments will be brought to the Board separately, when and as appropriate.

In the upcoming months, staff will bring further assessments of the Delta Conveyance Project and Metropolitan's Water Efficiency Program, both alone and in combined portfolios.

Fiscal Impact

None

Applicable Policy

By Minute Item 53436, dated April 8, 2025, the Board approved the Climate Adaptation Master Plan for Water Five-Year Implementation Strategy.

9/30/2025

Elizabeth Crosson *Date*
Chief Sustainability, Resilience and Innovation Officer

9/30/2025

Deven Upadhyay *Date*
General Manager

Attachment 1 – Pure Water Southern California CAMP4W Preliminary Assessment 45 MGD

Attachment 2 – Pure Water Southern California CAMP4W Preliminary Assessment 75 MGD

Attachment 3 – Pure Water Southern California CAMP4W Preliminary Assessment 150 MGD

Attachment 4 – CAMP4W Preliminary Assessment of Sites Reservoir

Ref# SRI12708083

Attachment No. 1

CAMP4W Preliminary Assessment for Pure Water Southern California (45 mgd)

Metropolitan is committed to meeting its mission in the face of a changing climate by developing projects and programs that advance Time-Bound Targets, consistent with the Board's priorities. This comprehensive assessment is a key part of the Climate Decision-Making Framework and will be used to support Board deliberations on which projects and programs Metropolitan should pursue.

Summary of Assessment and Staff Recommendation

Each criteria and attribute presented on the following pages includes a description of the quantitative and qualitative measures relevant to the proposed project or programs, as well as Metropolitan staff's recommendation.

Project/Program/Portfolio at a Glance

Title of Project/Program/Portfolio

Pure Water Southern California (45 mgd)

Status (planning/design/implementation)

Conceptual Planning & Design

Capacity:

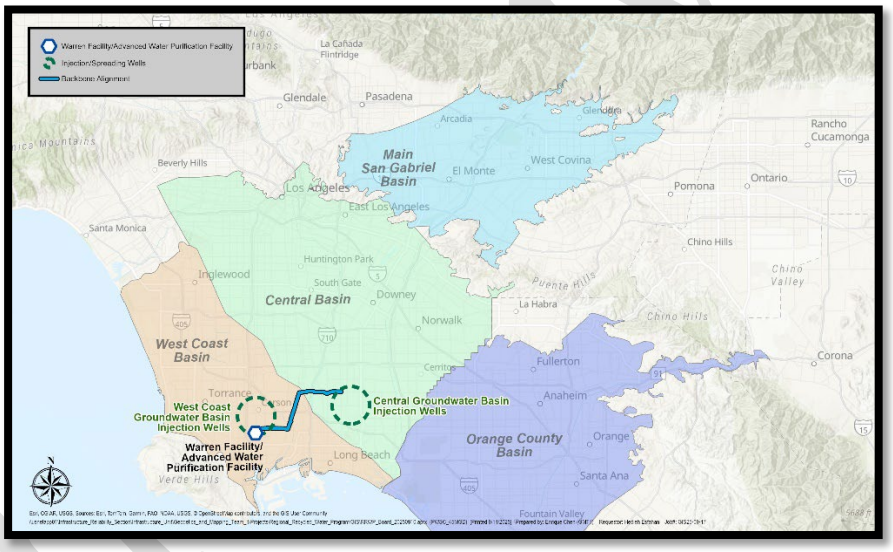
45 mgd (46,400 AFY)

Capital Cost:

$2.7 Billion

Operation/Maintenance or Ongoing Cost:

$89 Million/year



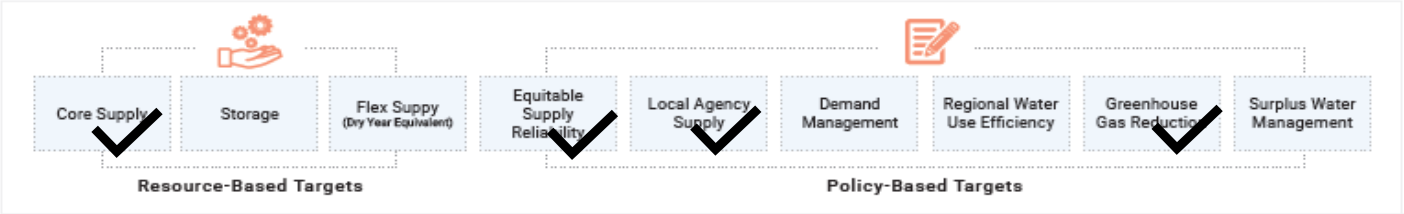
Description and how the project/program/portfolio supports water supplies, reliability and/or delivery

Pure Water Southern California (PWSC or Pure Water) is a partnership between Metropolitan and the Los Angeles County Sanitation Districts (Sanitation Districts) to beneficially reuse cleaned wastewater currently discharged to the ocean from the Sanitation Districts' A.K. Warren Water Resource Facility (Warren Facility) in Carson. The program at full build-out is 150 mgd; however, Metropolitan is considering implementing the program in phases or stages. This assessment is for an initial stage of 45 mgd, which includes the construction of an Advanced Water Purification Facility (AWPF) with an initial capacity of 45 mgd, less than 10 miles of large diameter pipeline from the AWPF to Long Beach, three service connections for member agencies, and recharge facilities primarily for indirect potable reuse (IPR) in the West Coast Basin and Central Basin. Direct potable reuse (DPR) would not yet be implemented in this stage. The project would create a new sustainable water supply by creating 46,400 acre-feet per year (AFY) or 45 mgd of purified water by 2035. The project would create a new regional water supply to balance local water supplies with imported Colorado River and State Water Project supplies, both of which are facing increased stress and long-term uncertainty. As such, the project would increase Metropolitan's water supply reliability and regional water security by diversifying the regional supply portfolio, reducing reliance on imported water, increase operational flexibility, and enhance regional and cross-state partnerships.

Portfolio view and additional potential companion projects/programs/portfolios

Pure Water, as an early implementation project, would not only provide enhanced system flexibility to improve supply reliability in the near term but would also provide long-term reliability by developing infrastructure and new supplies to meet increased demand and offset existing supply deterioration due to climate change. The early implementation of Pure Water allows for strengthening the reliability of the region's water supplies and benefiting State Water Dependent Areas in the near term. The addition of new surface storage projects would further strengthen the project benefits through the storage of purified water during wet years for use in dry years.

What Time-Bound Targets Does the Project/Program/Portfolio Address?



Boxes with check marks (✓) indicate that the project/program/portfolio advances a Time-Bound Target.

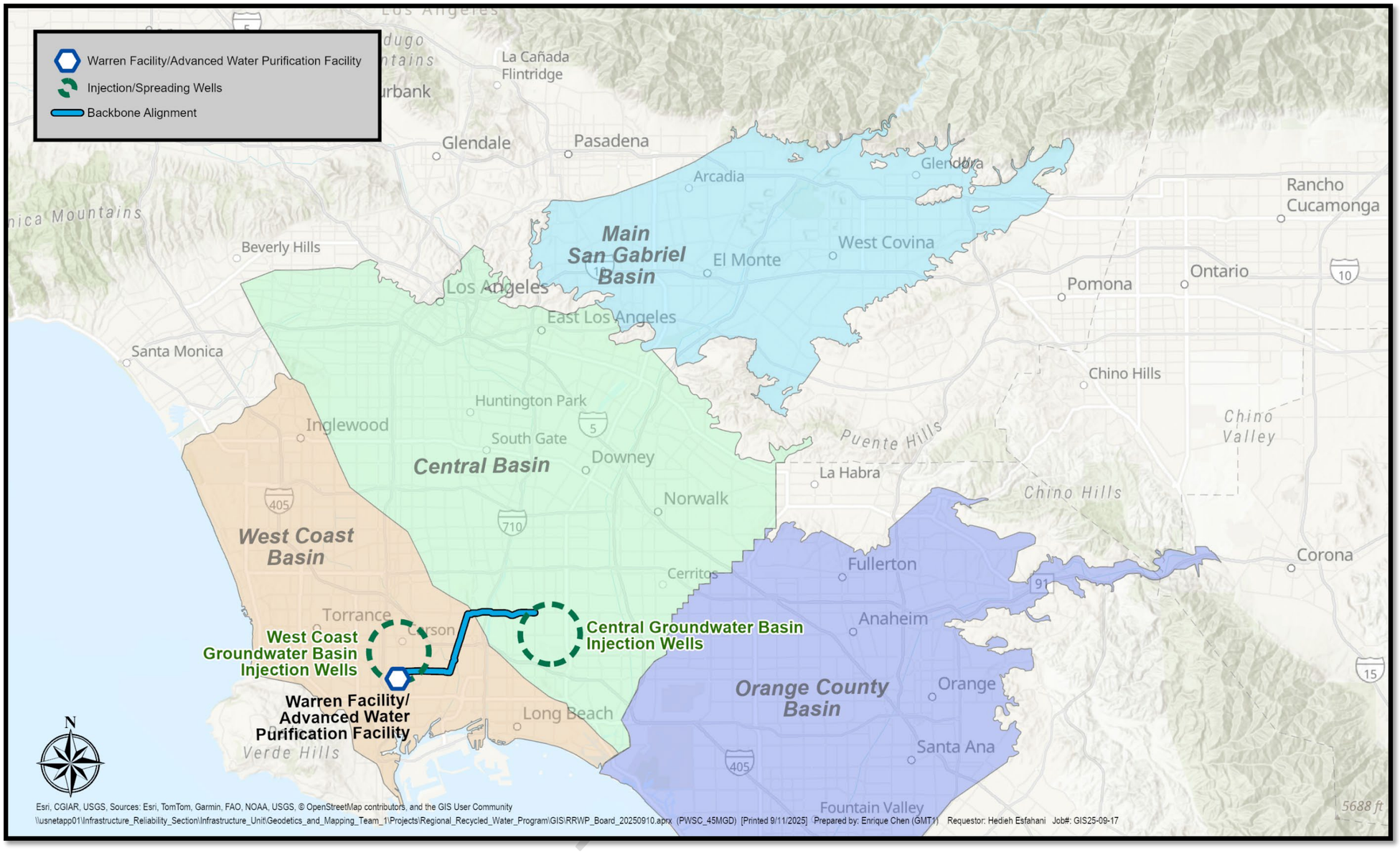
Summary of Assessment and Staff Recommendation *(see footnote on Page 2 for ranking guidelines)*

Reliability	Resilience	Financial Sustainability and Affordability	Adaptability and Flexibility	Equity	Environmental Co-Benefits
Moderate	Significant	Very High Cost	Moderate	Significant	Limited

Ranking Guidelines at the Attribute Level

Defining to which level a project, program or portfolio will deliver CAMP4W objectives for each attribute category.

Exceptional	The project/program/portfolio directly and completely addresses the benefits being assessed by the question/statement.
Significant	The project/program/portfolio directly addresses most elements of the benefits being assessed by the question/statement.
Moderate	The project/program/portfolio only addresses some elements of the benefits being assessed by the question/statement or addresses them indirectly.
Limited	The project/program/portfolio only addresses few or minor elements of the benefits being assessed by the question/statement or provides minor indirect benefits.
Very Limited	The project/program/portfolio does not provide any or very limited benefits to those being assessed by the question/statement.
Undetermined or Not Applicable	The ranking for this project/program/portfolio is not determined at this time or the attribute is not applicable



Flow:
- 45 mgd IPR

Year Complete:
- 2035

Facilities:
- AWPF
- Reaches 1 & 2A
- 3 service connections
  - Los Angeles
  - West Basin
  - Long Beach
- No backbone pump stations

Assessment

<table>
<tr><th>Evaluative Criteria</th><th>Attributes</th><th>Assessment</th><th>Value</th></tr>
<tr>
<td rowspan="2">Reliability
Supply Performance
Equitable Reliability</td>
<td>1. To what extent does it help meet regional supply reliability objectives under changing climate conditions?</td>
<td>
<u>Assumptions for Pure Water 45 MGD</u>
• Total new supply modeled from Pure Water 45 MGD is approximately 14,500 AF
• Total imported water supply offset modeled from Pure Water 45 MGD is approximately 15 MGD or ~15,500 AF (30 MGD assumed to replace existing recycled water use that may translate to imported water demand without PWSC)”
• Operational date of 2035
• No modeled benefits for SWPDA served by Jensen, as these benefits are not realized without the construction of LADWP’s Pure Water Los Angeles
• Modeled new replenishment demands for West Basin and Long Beach that could be served by the Project. This would likely lead to increased groundwater pumping, offsetting a demand on Metropolitan.
• No DPR component for Pure 45 MGD

<u>Analysis and Results</u>

Tables 1 and 2 reflect the probability of shortage results from the reliability analysis. The tables compare the probability of shortage from the IRP 2025 Update results (herein referred to as “Base Case”) measured against the probability of shortage for the modeling results that incorporate Pure Water 45 MGD (referred to as “Pure Water 45 MGD”). Table 1 shows that Pure Water 45 MGD reduces the probability of shortage in Scenario C in forecast years 2040 and 2045. Table 2 shows that Pure Water 45 MGD reduces the probability of shortage in Scenario D in forecast years 2035, 2040 and 2045. Thus, in both Scenarios C and D, Pure Water 45 MGD enhances Metropolitan’s reliability within the forecast period when compared to the Base Case.

In Scenario C, the Base Case results show a maximum magnitude of shortage in 2045 of 607 TAF, which is reduced to 578 TAF when Pure Water 45 MGD is operational. Similarly, Scenario D of the Base Case show a maximum magnitude of shortage in 2045 of 1.31 MAF and is reduced to 1.30 MAF when Pure Water 45 MGD is online.

Table 3 provides insight into the difference in storage (defined as the “benefits”) from a specific project for 2045 with two metrics: the 2045 Average Benefit and the 2045 Maximum Benefit. In Table 3, the 2045 Average Benefit reflects the storage benefit of Pure Water 45 MGD across hydrologic conditions for 2045, on average. The 2045 Maximum Benefit is the maximum storage benefit of Pure Water 45 MGD across hydrologic conditions for 2045. These metrics are achieved by subtracting the storage amounts in 2045 between the Base Case and Pure Water 45 MGD for Scenarios C and D. For example, in 2045 Scenario C, Pure Water 45 MGD provides an average storage benefit of 41 TAF and a maximum storage benefit of 161 TAF. The quantities shown in Table 3 represents supply that was produced and stored but not used to offset shortage in the planning horizon. This value is also helpful in quantifying the amount of resources stored for use beyond the current planning horizon.

While Tables 1 and 2 provide an understanding of the likelihood shortage, Table 4 quantifies the reduction in shortage as a result of implementing the proposed project. One limitation when comparing the probability of shortage, as is done in Tables 1 and 2, is that the likelihood of shortage is only reduced if the project is able to fully eliminate the shortage. Table 4 provides insight into the total reduction in shortage (defined as the “benefits”) from a specific project over the planning horizon (2025 to 2045) with two metrics: the Average Cumulative Benefit and the Maximum Cumulative Benefit. The Average Cumulative Benefit reflects the benefit of Pure Water 45 MGD across hydrologic conditions for the planning horizon, on average. The Maximum Cumulative Benefit is the maximum benefit of Pure Water 45 MGD across hydrologic conditions for the planning horizon. These metrics are achieved by subtracting the shortage amounts between the Base Case and Pure Water 45 MGD for Scenarios C and D. For example, in Scenario C, Pure Water 45 MGD provides an average benefit of 29 TAF and a maximum benefit of 164 TAF, across the planning horizon.

While Pure Water 45 MGD reduces the shortage probability and magnitude, the proposed project in some cases increases the probability of net surplus. An increase in the probability of net surplus means that there is a higher likelihood of unmanaged supplies. Tables 5 and 6 provide the probability of net surplus for Scenarios C and D in 2045. In Scenario C, the Base Case has a maximum magnitude of net surplus is 1.3 MAF in 2045, which increases to 1.39 MAF with Pure Water 45 MGD online. In Scenario D, the Base Case has a maximum magnitude of net surplus of 770 TAF in 2045, which increases to 884 TAF when Pure Water 45 MGD is operational.

It should be noted that the information shown in Tables 5 and 6 does not alter the reliability assessment scoring; however, it provides valuable context to help decisionmakers identify projects that are efficient, balance supply and demand, and support a fuller understanding of the project’s big picture. Other investments would be needed to realize the benefits of unmanaged supplies.

Table 1
Scenario C: Probability of Shortage
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 45 MGD</th></tr>
<tr><td>2030</td><td>3%</td><td>3%</td></tr>
<tr><td>2035</td><td>4%</td><td>4%</td></tr>
<tr><td>2040</td><td>15%</td><td>14%</td></tr>
<tr><td>2045</td><td>18%</td><td>18%</td></tr>
</table>
Table 2
Scenario D: Probability of Shortage
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 45 MGD</th></tr>
<tr><td>2030</td><td>7%</td><td>7%</td></tr>
<tr><td>2035</td><td>11%</td><td>10%</td></tr>
<tr><td>2040</td><td>44%</td><td>43%</td></tr>
<tr><td>2045</td><td>58%</td><td>56%</td></tr>
</table>
Table 3: Difference in MWD <u>Storage</u> between Base Case and Pure Water 45 MGD in <u>2045</u> (TAF)
<table>
<tr><th>Type</th><th>Scenario C</th><th>Scenario D</th></tr>
<tr><td>2045 Average Benefit</td><td>41</td><td>53</td></tr>
<tr><td>2045 Maximum Benefit</td><td>161</td><td>194</td></tr>
</table>
Table 4: Difference in <u>Shortage</u> between Base Case and Pure Water 45 MGD for <u>2025-2045</u> (TAF)
<table>
<tr><th>Type</th><th>Scenario C</th><th>Scenario D</th></tr>
<tr><td>Average Cumulative Benefit</td><td>29</td><td>82</td></tr>
<tr><td>Maximum Cumulative Benefit</td><td>164</td><td>218</td></tr>
</table>
Table 5
Scenario C: Probability of Net Surplus in 2045
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 45 MGD</th></tr>
<tr><td>2045</td><td>26%</td><td>28%</td></tr>
</table>
Table 6
Scenario D: Probability of Net Surplus in 2045
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 45 MGD</th></tr>
<tr><td>2045</td><td>1%</td><td>1%</td></tr>
</table>
</td>
<td>Limited</td>
</tr>
<tr>
<td>2. To what extent does it advance equitable supply reliability?</td>
<td>
• Advances equitable water supply by delivering a climate-resilient and sustainable supply that enhances overall reliability for all agencies. The benefits of Pure Water can be examined by region:
  ○ SWP Dependent Agencies served by Rialto Pipeline – Pure Water would provide supplies to help meet untreated replenishment demand from Central Basin MWD. By using Pure Water supplies to meet this replenishment demand, State Water Project (SWP) supplies could be preserved for State Water Project Dependent Areas (SWPDAs), particularly in years where supplies are limited. However, it should be noted that replenishment demands are often the first to be foregone in times of limited supply. Pure Water could allow for continued replenishment delivery in dry years.
• Frees up capacity in the existing conveyance, distribution, and storage systems and thus help increase flexibility by capturing and conveying water supplies. Increasing system flexibility helps Metropolitan better manage supplies during times of limited supplies, by allowing Metropolitan to redirect limited SWP supplies to the most critical needs and allowing Metropolitan to use available conveyance infrastructure more flexibly to provide supply reliability.
</td>
<td>Significant</td>
</tr>
</table>

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Reliability Supply Performance Equitable Reliability	3. When will it be operational? What is the useful life of the project/program/portfolio? How will benefits continue beyond the 2045 planning horizon under changing climate conditions?	• **Online Date and Phasing**: Pure Water would deliver purified recycled water by 2035, which would allow Metropolitan to implement Pure Water to support time-bound targets, integrate planning with other Metropolitan and/or regional projects and balance financial impacts. • **Useful Life of Facilities**: Pure Water facilities are expected to have a useful life of 100 years or longer. Pure Water's useful life is based on the type of infrastructure, materials to be used, anticipated construction standards, operational stress, technological innovation, and Metropolitan and Sanitation Districts' rigorous maintenance programs. • **Changing Climate Conditions**: The water supply reliability results modeled using IRPSIM (Question 1) only reflect benefits through the forecast year 2045. Continued benefits are anticipated beyond the 2045 horizon based on the useful life of the facilities, but these benefits are not reflected in the provided modeling. The Sanitation Districts' *Climate Change Vulnerability Assessment and Management Plan* highlighted potential climate-related hazards affecting the Warren Facility and due to the co-location of the Pure Water AWPF at this, the same hazards (wildfire, flood, extreme temperatures, drought and high winds) are anticipated to impact the Pure Water facilities. Many of the vulnerabilities posed by these natural phenomena are predicted to be exacerbated by climate change. Drought can be a major concern as decreased frequency of rainfall and resulting inflow and infiltration and reduced wastewater flows can potentially introduce risks to recycled water projects. ○ For Pure Water, the region provides a relatively reliable supply source from 4.8 million residents and with strict conservation measures in place the treated wastewater flows are anticipated to remain relatively stable during droughts. The 45 mgd stage as designed will use approximately 17% of the current wastewater flows (260 mgd), which are anticipated to increase by 2045 and beyond to a maximum permitted flow of 400 mgd. • Metropolitan is currently developing a Climate Risk Assessment for the Pure Water program. However, the flexibility and adaptability embedded in the design and operations will help Metropolitan provide reliable water supplies throughout the region under numerous climate scenarios beyond 2045.	Exceptional
	4. Are there additional projects/programs/portfolios that could be added to improve this project/program/portfolio's effectiveness for water supply reliability?	• Metropolitan is considering Treated Water Augmentation (TWA) at the Second Lower Feeder. This could eventually be incorporated into the 45 mgd project by adding up to 10 mgd of TWA at some time in the future. *IRPSIM modeling for this project did not include the proposed TWA project.*	Moderate
	5. How does this project/program/portfolio improve the water supply reliability of existing projects/programs/systems?	• **Existing Treatment, Conveyance and Delivery Systems:** Pure Water's design, leveraging existing infrastructure, would free up capacity in Metropolitan's existing conveyance, distribution, and storage systems providing increased flexibility in capturing and conveying water supplies and allowing Metropolitan to distribute recycled water efficiently across the Metropolitan service area. Pure Water's regional pipeline network allows for the dynamic reallocation of water supplies across the system based on real-time needs, maintenance schedules and emergencies. • **Ground Water Storage:** Pure Water enhances the reliability and effectiveness of the Metropolitan's groundwater storage programs by providing a consistent, regional water supply that supports groundwater recharge and operational flexibility, increasing local storage capacity, reducing reliance on surface reservoirs, and improving seasonal flexibility. This allows Metropolitan to store more water during wet years and rely on regional groundwater during dry years which is essential for both long-term storage and short-term use. • **SWP/Colorado River Aqueduct Infrastructure:** Project could free reduce demand on the SWP and Colorado River Aqueduct systems. By reducing the volume of imported water that must be conveyed, the project creates operational headroom in SWP pipelines and reservoirs for other uses.	Moderate

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Plans/Policies and Initiatives:** • **Integrated Water Resources Plan (IRP):** Pure Water advances IRP goals of diversifying water sources and increasing local supply resilience. • **Water Supply Reliability Program:** Enhances reliability through local control, reuse, and groundwater replenishment. • **Conjunctive Use and Cyclic Storage Programs:** The project enhances Metropolitan's storage programs by providing a reliable source or recharge water, increasing stored reserves and improving drought-year reliability. **Time Bound Targets:** CAMP4W sets strategic goals to ensure long-term water reliability under climate stress. Pure Water contributes by: • **Creating a drought-resilient supply:** Reduces reliance on the State Water Project and Colorado River. • **Supporting carbon neutrality:** Reduces energy-intensive water imports, aligning with Metropolitan's goal of carbon neutrality by 2045. • **Enhancing adaptive capacity:** Provides a flexible, scalable supply that can be expanded as climate conditions evolve. • **Equitable supply reliability:** Provides access to State Water Project Dependent Areas and increases supply capacity through 2045. **Partnerships/Collaborations:** • **Strengthens Regional and Cross-State Partnerships:** The project encourages collaboration across agencies, jurisdictions, and state boundaries to build a more integrated, resilient water system improving system-wide efficiency and reducing duplication of efforts, thereby meeting current and future regional supply reliability objectives. The project strengthens partnerships by encouraging collaboration with regional and out-of-state partners through shared infrastructure and investments, encouraging coordinated water management across the region, and by fostering shared research, modeling, and forecasting tools to better understand and respond to climate impacts on water supply. • **Tribal Partnerships:** There are 10 federally recognized member tribes that make up the Colorado River Basin Tribes Partnership and hold a significant amount of quantified and unquantified water rights to the Colorado River and its tributaries. With 20% of Metropolitan's water deliveries conveyed through the CRA, Pure Water's reduces the need for imported water supply thereby making additional water available to the tribal partners in the Lower Basin region during shortages. • **Colorado River:** Pure Water advances equitable supply reliability by reducing Metropolitan's reliance on imported water via the Colorado River Aqueduct by providing a new regional supply, which enables Metropolitan to stabilize its local supplies, helping ensure equitable access to safe, reliable water regardless of geography or income. The project serves to free up imported water supplies, enabling more flexible water transfers and collaborative drought response among Colorado River Basin states and agencies.

Overall Assessment

The overall score for reliability is largely assessed by the project's ability to meet regional supply reliability objectives (Question 1) and its ability to advance equitable supply reliability (Question 2). It should be noted that the regional supply reliability ranking (Question 1) is a composite score made up of the various reliability components discussed in the narrative.

Scenario C: Pure Water 45 MGD did not decrease the probability of shortage in 2045 for Scenario C. The cumulative benefits from both the increase in storage and the reduction in shortage ranked between "Limited" and "Moderate". While Pure Water 45 MGD does provide equitable supply reliability for a portion of the SWPDA, its limited gains in regional supply reliability for Scenario C yields an overall assessment of "Moderate".

Scenario D: Pure Water 45 MGD only slightly reduces the probability of shortage in 2045 for Scenario D. Additionally, the cumulative benefits from both the increase in storage and the reduction in shortage all ranked "Moderate". While Pure Water 45 MGD does provide equitable supply reliability for a portion of the SWPDA, its limited gains in regional supply reliability for Scenario D yields an overall assessment of "Moderate".

Overall Assessment Value

Moderate

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Resilience Addresses known risks and vulnerabilities Project, Program or Portfolio's ability to perform under climate impacts	1. How does it perform under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? **Drought is addressed in Reliability*	Metropolitan identified the primary climate vulnerabilities and hazards with the potential to impact water operations through the development of a draft Local Hazard Mitigation Plan. Additionally, the Sanitation Districts conducted a climate vulnerability assessment for the A.K. Warren Water Resources Facility (Warren Facility) to highlight potential climate-related hazards and documented study findings in the Climate Change Vulnerability Assessment and Management Plan. Metropolitan is currently conducting a climate vulnerability risk assessment for Pure Water using the latest data from California's Fifth Climate Assessment. The following hazards have demonstrated the potential to pose a higher risk due to climate change. Pure Water incorporates design features in its facilities to increase survivability against these hazards. • **Extreme Heat:** Existing resilience measures to extreme heat are implemented at the Sanitation Districts' Warren Facility. ○ Warren Facility: Much of the facility is climate controlled and wastewater temperatures are also monitored. The Sanitation Districts has developed a Heat Illness Prevention Program for employees at the Warren Facility as a part of their Environmental Health and Safety Manual. Additionally, shade covers for chemical tanks and high temperature resistant electrical equipment have been employed at the asset level. As the design team advances the Pure Water AWPF design, project design criteria and attributes would adhere to identified compliance requirements and design elements to mitigate extreme heat impacts. Recommendations include heat blowers for critical equipment and periodic electrical upgrades per the Vulnerability Assessment. These long-term recommendations would help to maintain system reliability. ○ Alternate Power Supply: Metropolitan and Sanitation Districts are committed to designing and installing alternative power sources to sustain purified water operations during service interruptions related to extreme heat. The project team is currently evaluating several options for backup power supply, including the construction of two independent substations (one for Sanitation Districts and one for Metropolitan) or an interconnected substation with two separate power lines. In addition, both agencies are also evaluating green power sources to augment the power supply. • **Flood:** The risk of flooding is relatively low at the Warren Facility (and planned AWPF site) and along the backbone conveyance alignment- (https://hazards.fema.gov/nri/map). ○ Warren Facility: At the Warren Facility, where the AWPF would be located, the facility includes comprehensive storm drainage systems as well as stormwater storage basins with separate operational procedures to reduce flooding potential. These allow wet weather pumps to relieve plants and discharge flow in the event of storms. The Sanitation Districts staff have developed procedures in the event of a flood with a guideline matrix for catastrophic events. ○ Conveyance Pipeline: Limited flooding impacts are anticipated along the backbone conveyance pipeline as the assets would be below ground, and pump stations would be designed to protect against flooding. The groundwater recharge sites may be impacted by an in-region flood event, with recharge operation likely to be suspended during major rain events. Treatment/pumping facilities would be designed to prevent flood damage. • **Wildfire:** The Warren Facility is in a densely urbanized area of Carson, Los Angeles County, and falls outside of the Moderate, High, or Very High Fire Hazard Severity Zones per the Fire Hazard Severity Zone Viewer (FHSZ). In addition, Warren Facility buildings have an existing fire suppression system and similar systems would be integrated into the AWPF facility design. Pure Water's conveyance system consists mainly of underground pipes and tunnels that would be resistant to the wildfire hazard. Pure Water's treatment and pumping facilities would be situated in urban areas with fire-resistant boundaries to prevent the spread of wildfires into the facilities. All building materials would be designed with fire-resistant materials. Emergency procedures and safety precautions would also be established in the event of a fire. • **Wind:** The risk of severe wind in the Pure Water area is very low (https://hazards.fema.gov/nri/map) as its treatment and pumping facilities are situated in lower wind exposure areas. Warren Facility infrastructure includes wind resiliency measures as identified in site-specific environmental health and safety measures. While facilities are being considered for alternative power supply options like the wildfire response, if power is shut down due to high winds, the inherent operational function of these facilities would also allow for power accommodation related to outages. • **Power Supply Interruptions:** Pure Water deliveries account for a 92% online factor which accommodates for planned outages and downtime. To address power supply interruptions due to natural or climate related events (e.g. wildfire, wind, or heat), the design of Pure Water facilities would likely include the provision of an alternative power supply (e.g. emergency generators at the Warren Facility, or portable emergency generators) to provide sufficient backup power to maintain operation of critical facilities. If an alternative power supply isn't developed, Metropolitan may need to provide backup water supply for some of the industrial facilities. In addition, the AWPF design includes the provision for solar power which could support AWPF operations to some degree in an emergency. The AWPF pump station clearwell is also sized with added capacity to serve as a buffer for a limited time until power is restored or emergency generators brought onsite.	Moderate
	2. How does it maintain system reliability, including delivery and water quality, under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? **Drought is addressed in Reliability*	Pure Water has the potential to improve overall system resiliency against climate-change-induced hazards, mainly due to the locally supplied source water (treated wastewater) and its adjacency to main delivery points. Compared to imported supplies, which require lengthy conveyance lines to bring source water to the service area, Pure Water minimizes the exposure of its conveyance and distribution system that could be vulnerable to potential hazards. • **Extreme Heat:** Higher surface temperatures could exacerbate heat waves in urban areas, leading to higher water consumption during these periods. Metropolitan's exposure and vulnerability would likely increase because of the extreme heat hazard, intensified by climate change. Pure Water represents a unique opportunity to invest in local alternatives that would provide additional sources of potable water to aid in extreme heat events. Utilizing Pure Water as a regional supply would supplement the imported water sources that may be susceptible to outages associated with high temperatures. The Pure Water AWPF facilities could shed its power usage for 1-2 days during extreme heat events to avoid blackouts in the region. Since the AWPF facility doesn't require 24/7 operation, as it doesn't serve water directly to consumers, it could take part in an Emergency Load Reduction Program. • **Flood:** Metropolitan's exposure and vulnerability to flood hazards may increase because of climate change impacts, as was recently demonstrated by the soil cover erosion at CRA siphons and tunnels in recent desert storms. Pure Water is an asset that can hedge the potential risk of imported supplies with a local source less impacted by out-of-region flood events. Pure Water enhances regional resilience by increasing groundwater storage and augmenting raw water supplies at the Weymouth Plant in the event of a flooding emergency affecting imported supplies. However, its effectiveness is limited when an in-region flood event affects the water system operation because of restrictions in groundwater basin operations. • **Wildfire:** Pure Water would increase regional water supply storage that could be utilized in the event of a wildfire. Its backbone conveyance pipeline extends approximately 10 miles across the cities of Carson and Long Beach, which increases its effectiveness in fighting regional wildfires with multiple storage facilities. • **Wind:** The vulnerability to wind is tied predominantly to the loss of power, as most of Metropolitan's imported water supplies are power-dependent. Pure Water serves as a regional backup against potential interruption of imported supplies due to power loss along the CRA or SWP aqueduct.	Significant

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Resilience Addresses known risks and vulnerabilities Project, Program or Portfolio's ability to perform under climate impacts	3. Describe any resilience co-benefits (e.g., seismic) achieved through this project, program, or portfolio.	***Seismic Resilience*** • Metropolitan's service area is in a seismically active region subject to seismic events. The imported supplies conveyed by the Colorado River Aqueduct and California Aqueduct East and West Branches cross the San Andreas Fault, making them seismically vulnerable. A medium or large magnitude earthquake can halt all water deliveries without warning and cause significant disruption in imported water deliveries to Southern California. Potential outages for these existing conveyance lines are estimated to range from a few months to up to two years. In such an event, besides the emergency storage that could sustain the region for approximately 6 months, the region would need to rely entirely on local supplies while repairs are made. • Pure Water is located on the coastal side of the San Andreas Fault, which could make the water produced by Pure Water available during a seismic event. Pure Water could substantially increase the region's and Metropolitan's seismic resilience by providing locally produced supplies. • Pure Water is estimated to increase regional supplies by up to 2%, which supplements Metropolitan's storage reserves. It enhances seismic resilience by providing water to maintain storage levels in surrounding groundwater basins before a seismic event. This would provide source water for the surrounding Regional Water Authorities (RWA) and Metropolitan in the event of a seismic emergency. In addition, the storage in local groundwater basins from Pure Water supplies could supplement member agency demands when the distribution system is compromised and unable to deliver Metropolitan's imported supplies. • Pure Water helps reduce Metropolitan's dependence on imported water supplies, which are susceptible to seismic activity, by creating a regional, drought-resilient supply. A lengthy conveyance system is more vulnerable to natural disasters such as fire, landslides, and earthquakes. Such a disaster could impact any component of the State Water Conveyance System and the Colorado River Aqueduct System, resulting in significant impacts on imported supplies. Pure Water reduces Metropolitan's reliance on imported water by providing a year-round, sustainable, and locally managed purified water source that can be utilized by Metropolitan to meet year-round water demands. ***Water Quality Co-Benefits*** • Under future climate change conditions, it is anticipated that constituents such as TDS, sulfate, chloride, and nitrate would increase in source waters from the SWP and Colorado River. • Because of the treatment process proposed, Pure Water is expected to improve the concentrations of constituents such as nitrate, sulfate, and chloride, which would be affected by a warmer climate. Pure Water will also help Metropolitan manage sulfate, chloride, and nitrate concentration changes due to climate change. o Purified water from Pure Water would also help with any blending and long-term salt balance for the three groundwater basins served by Pure Water. o The project provides purified water free of golden mussels and quagga mussels to replenish groundwater basins served by Pure Water.	Exceptional

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Resiliency for the Broader Colorado River Basin:** • By reducing Southern California's dependence on the Colorado River, Pure Water helps preserve supplies for other users (e.g., Arizona, Nevada, tribal nations) who may be affected by climate-related disruptions or seismic events. By leveraging partnerships (further discussed in the • Financial Sustainability and Affordability Criterion), Pure Water builds resiliency in cross-state water supply by integrating water supply planning not just across six counties but also across state borders. The project continues to promote partnerships and encourages joint decision-making and cost-sharing, thereby increasing buy-in and long-term sustainability in water supplies. **Time Bound Targets:** • CAMP4W sets strategic goals to ensure long-term water reliability under climate stress. • Creating resiliency in Local Agency Supplies by providing a regional supply source with local benefits. Pure Water is a locally controlled, climate-resilient, and seismically protected source of water that can be used to stabilize aquifers to ensure water supplies for local agency partners.

Overall Assessment

The project includes design considerations, such as adequate backup power and site selection to avoid high fire risk zones, to prevent interruption of operation from climate-change-induced hazards and ensure a sustainable operation. However, local flood events may affect the groundwater basin replenishment operations, which affects the project's effectiveness. By providing a reliable local supply source, which has significantly lower exposure to climate-related and seismic hazards than imported supply sources, the project demonstrates excellent benefits in enhancing climate and seismic resilience for Metropolitan and the region. Although the scale of regional benefit in firefighting is less with the 45 MGD installation due to less reach to the region's storage assets with a shorter backbone pipeline, the overall resilience value of the project is still significant.

Overall Assessment Value

Significant

Assessment

Evaluative Criteria	Attributes	Assessment	
Financial Sustainability and Affordability Unit cost	1. What is the cost of the project?	The total cost of the 45-mgd Project based on the latest 2025 program cost update is $3.6 Billion (B). Estimate is inclusive of planning, design and construction expenditures for both Metropolitan and the Sanitation Districts. Deducting the Sanitation Districts' costs associated with the membrane bioreactor, pre-treatment facilities, and secured grant funding to date, Metropolitan's cost of the project is therefore only **$2.7 B for 45-mgd (2025 dollars).**	
	2. What are the projected impacts to rates and budget?	The overall rate impacts of Pure Water for 45 mgd, including Operation and Maintenance (O&M), are summarized below: **Pure Water Project** — **45 mgd** **Capital Construction Cost**[a] — **$2.7B** Annual Capital Financing Costs[b] — $154M Annual O&M Cost — $89M Annual R&R Cost — $33M Production Yield — 46,400 AFY Year of Completion[c] — 2035 **Overall Melded Cost Increase**[d] — 14% **Average Annual Cost Increase Over Construction Period**[e] — 1.6%/yr Notes: a. *Capital costs in 2025 dollars are net of Sanitation District scope items, no upsized pipe, and secured grant awards, which are described in more detail in Section 5 below.* *b. Assumes 100% debt financed for this analysis at 4% rate/30-year term.* *c. Assumes deliveries start in 2035.* *d. Calculation assumes the project is 100% debt financed over the construction period. If the project is partially funded by PAYGO it will increase the short-term rate impact.* *e. Based on Metropolitan's 2025/26 Revenue Requirement of $1,693 M, over the period from 2026-2035.* Partner Contributions: Contributions from the Sanitation Districts and Colorado River partners can provide a significant contribution towards the capital construction cost, thereby reducing the overall Metropolitan contribution by a commensurate amount. This could reduce the overall anticipated rate payer impacts associated with the Pure Water project. Question 5 provides additional details on secured and potential partner contributions.	
	3. If applicable, what is the unit cost/acre foot in current year dollars? For storage projects, what is the cost/capacity?	Metropolitan utilized multiple unit cost methodologies: 1) Point-in-time unit cost that assumes all debt for the project is issued at once in year one of construction and the project is in full operation in year one; and 2) Lifecycle unit cost that estimates the average unit cost over the 100-year project life and includes needed replacements and refurbishments (R&R). **45 mgd** **Point-in-Time Unit Cost**[a] — $5,200/AF **Lifecycle Unit Cost**[b] — $3,100/AF a. *All costs are shown in 2025 dollars and include Planning, Design, Construction and Financing costs* *b. Assumes deliveries start in 2035 (45 mgd)*	
	4. Does considering life cycle cost change the Financial Sustainability and Affordability?	• Yes, considering life-cycle costs (LCC) provides a more complete picture of financial sustainability and affordability beyond the initial construction period. During the first 30 years following project completion, capital financing costs for the construction of Pure Water represent the most significant expenditure. Once the debt is fully repaid, only O&M and capital repair and replacement (R&R) costs remain. The life cycle cost analysis accounts for all construction-related costs, ongoing O&M, periodic R&R, and projected production yields over a 100-year operational horizon. • A unique aspect of the Pure Water project is Metropolitan's direct influence over the program's capital, O&M and replacement costs and timing – which can provide more surety in planning for investments as well as financial sustainability and affordability of the project.	Value Very High Cost
	5. Is it eligible for federal and/or state grants? If so, what are the estimated target amount(s)? Is there a local match requirement? If so, how much?	**Partner Contributions** • **Secured ($16.6M):** The Sanitation Districts, Southern Nevada Water Authority (SNWA), and the Arizona Department of Water Resources (ADWR) have contributed a combined total of $16.6 M to date to advance Pure Water planning activities ($6 M each from SNWA and ADWR; $4.6 M from the Sanitation Districts). • **Future (TBD):** o Sanitation Districts (approximately $700 M for 45-mgd project): The Sanitation Districts have committed to providing the required wastewater flows and land at the Warren Facility for the AWPF. In addition, the Sanitation Districts has also committed to paying for necessary pre-treatment facilities upstream of Metropolitan's advanced water treatment facilities, the membrane bioreactor (MBR) and related Warren Facility upgrades to shared assets. Sanitation District's contribution has been accounted for in the financial analysis. The unit cost and financial impact analysis above deducts the approximately $700 M in contributions from the total capital costs. o Colorado River Partners: Partnership discussions are underway with SNWA, ADWR and the Central Arizona Water Conservation District; which could potentially provide a significant infusion of capital as well as contributions to O&M costs. SNWA has expressed interest in contributing $1 B to the project for potential exchange of Colorado allocations. Importantly, while cross-state partnerships would reduce Metropolitan's overall share of capital costs, it does not change the point-in-time and lifecycle unit costs. No future Colorado River Partner contributions are assumed in the financial analysis. **Federal and State Funding** • **Secured ($212.2M):** Federal grants and state funding secured to date, includes: State of California Direct Grant ($80M; no match), State of California Pilot Study Grant ($1M, no match), U.S. Department of the Interior, Bureau of Reclamation (Reclamation) WaterSMART: Large-Scale Water Recycling Program (LSWRP) Grant ($125M total, 75% match), Reclamation FY 2022 Planning and Design Grant ($5M, 75% match), and Reclamation WaterSMART Water Reclamation and Reuse Research Grant ($750K, 50% match). • **Future (TBD):** Potential programs include: o Low Interest Loans: Environmental Protection Agency (EPA) (Water Innovation Finance and Infrastructure Act (offers up to 49% of the total eligible project costs, with no maximum) and the State of California SWRCB Clean Water/Drinking Water Revolving Fund (CWSRF/DWSRF) Programs (up to $50M per project/agency). o Grants: EPA Programs (Brownfield, other), Reclamation Programs (LSRWP Grant (3rd Round has $132 million in funding; 75% match), Title XVI Water Infrastructure Improvement for the Nation (WIIN) Recycled Water Program (up to $30M per Project – partner projects), Desalination and Water Purification Research (up to $1M per research effort), Drought Projects and Water and Energy Efficiency Programs ($3 M per project)); Federal Emergency Management Agency (Southern California Wildfire Recovery Funds (Public Assistance) and Hazard Mitigation Grant Program (HMGP); Congressional Directed Spending Requests; State of California Proposition 4 Climate Bond (State Water Resources Control Board, Water Recycling Program (Total $386M available; grants up to $15M per eligible phase; no match required), Department of Water Resources (DWR) Urban Infrastructure and Climate Adaptation and State Coastal Conservancy Programs); DWR Sustainable Groundwater Management Act; Office of Planning and Research Regional Resilience Grant Program; and CA Coastal Conservancy and Ocean Protection Council - Climate Ready Grant. Match requirements will vary by grant program (typical 25% to 75%).	N/A

Assessment

Evaluative Criteria	Attributes	Assessment	
	6. Does it have a revenue generation component that helps offset costs?	Pure Water presents opportunities for revenue generation, including the following: • **Solar Power:** Metropolitan plans to utilize 11 acres of roof area at the Joint Plant site to maximize energy production for the AWPF. Approximately 1.5 MW of solar power can be generated at the Joint Plant site, but may vary with peak solar hours. Will require the use of batteries to store excess power. The cost of the solar facilities is included in the project capital and O&M cost estimates. • **Electric Vehicle (EV) Charging Stations:** The project includes the construction of three parking facilities with canopy covers that will accommodate 150 to 200 cars. Revenue could be generated associated with utilization of EV Chargers from selling carbon credits through voluntary or compliance carbon markets (e.g. Low Carbon Fuel Standard credits, Voluntary Carbon offsets), and demand management and grid services (e.g. Utility incentives, Time-of-Use Optimization, and Vehicle-to-Grid). The cost of these facilities is included in the project capital and O&M cost estimates. • **Water Sales or Exchanges**: Pure Water is expected to have contracts with direct recipients (local water agencies, industrial and other users) that would commit those agencies to purchase a minimum amount of water. In addition, exchanges with out-of-state partners like SNWA and CAP would allow Metropolitan to retain or trade Colorado River allocations.	N/A

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	Metropolitan commissioned the Institute for Applied Economics of the Los Angeles County Economic Development Corporation (LAEDC) in 2025 to complete a study that analyzed the projected economic and fiscal impact of both construction expenditures and ongoing activity associated with Pure Water (LAEDC 2025). Please refer to the 150-mgd assessment for these quantities as reported in the LAEDC report. These benefits would also apply to the 45-mgd Project but to a slightly less extent.

Overall Assessment

Although the 45-mgd project does have significant opportunity to secure federal and state funding and partner contributions, the overall assessment for Financial Sustainability and Affordability is guided by the rating for the life-cycle cost of the project, which is significantly higher than Metropolitan's 2025 Full Service Untreated Rate of $912 (more than 3x).

Overall Assessment Value

Very High Cost

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Adaptability and Flexibility Flexibility of existing assets Ease/Complexity Scalability	1. Describe how it works with and/or improves the flexibility of existing assets, plans, policies or programs and how it improves the ability to adjust to systemwide changes (water quality, source water, distribution interruption).	Pure Water serves as a supply augmentation, allowing Metropolitan to preserve existing sources while bolstering storage both within and outside Metropolitan's service area by offsetting demands on SWP and Colorado River supplies. This is especially valuable when core supplies (e.g., SWP and CRW) are limited due to climate change, regulatory requirements, agreements, or other factors. This new regional supply can augment Metropolitan's existing sources based on regional needs, offering adaptive capacity during dry years or emergencies, by: • Providing an additional 15 mgd of a new regional water supply source, thus increasing the options available to meet demands and manage storage within and outside Metropolitan's service area. The 45 MGD would provide non-potable reuse (NPR) and indirect-potable reuse (IPR) to LADWP, West Basin, and Long Beach in the West Coast and Central basins. New infrastructure will deliver water to new service connections for non-potable uses and groundwater replenishment. • Freeing up capacity in the existing conveyance, distribution, and storage systems, increasing flexibility to capture, convey, and manage water supplies. **System Wide Flexibility** Pure Water provides purified water to meet demands in the Central Pool. • **Existing Infrastructure:** The AWPF at the Warren Facility would also include improvements such as a workforce-training center and expanded treatment facilities. Improvements to both facilities help to support the expanded operations necessary for Pure Water, with added improvements to existing conveyance infrastructure. • **Seasonal Flows:** There are 3 service connections that are expected to have variable demands on a daily or seasonal basis. It is expected that NPR demand will fluctuate with higher demands during the summer months and lower during the winter months. This will provide more water available for IPR during winter months and less during summer months. Under the 45 mgd option, there are limited IPR demands to buffer the seasonal changes in NPR. Significant storage will be needed, which may not be needed in higher levels of flow, which could result in a stranded asset. This variability would add to the complexity of operations. **Adjust to System-Wide Changes** • **Water Quality Interruptions**: Pure Water provides high-quality purified water that offers improvements in key constituents like TDS while requiring careful management of others. The purified water is also free of golden mussels and quagga mussels used to replenish groundwater basins. Pure Water would be able to buffer changes in quality from other imported water sources. Pure Water may pose an increased risk of nitrification within Metropolitan's distribution system, especially in those areas already at risk of nitrification, as Pure Water may reduce the demand for treated water, resulting in longer detention times in pipelines. ○ **Source Water Interruption:** During low SWP or emergency drought conditions, Pure Water would offset 15 mgd of imported water in the Central Pool. Existing recycled water in West Basin's system is currently about 30 mgd, and Pure Water would serve this 30 mgd. Because the existing demand is recycled water, for the purpose of this assessment there is no imported water offset considered for this 30 mgd. • **Distribution Interruption:** During a distribution system interruption (e.g., seismic event), Pure Water could continue operating and delivering water for NPR and IPR, provided it is not directly impacted by the same event. As a new, independent source of supply and conveyance, Pure Water provides redundancy for such as event and can support the region.	Limited
	2. Explain how complex the day-to-day operations might be (example: staffing, maintenance, preparation).	The Pure Water project would require oversight to maintain day-to-day operations of the new IPR treatment process, auxiliary facilities, and a new regional conveyance system. ***Staffing:*** Specialized staff would be required to maintain day-to-day operations across the entire program. • AWPF would be staffed 24/7 with an onsite water quality laboratory for testing and compliance. Conceptual planning efforts estimate approximately 53 full-time-equivalent (FTE) staff would be needed to support the 45-mgd capacity AWPF, which would include Operations, Lab, Maintenance, Process Control, and administrative staff onsite at the AWPF. • Approximately 3 FTE operators at the Eagle Rock Operations Control Center would be required to maintain both day and night shifts for the entire conveyance system; approximately 2 FTEs for the maintenance of conveyance would also be required, in addition to 2 FTEs for water quality monitoring and compliance along the conveyance system; FTE estimations will be further refined as the program progresses.	Moderate
	3. How can it be phased (i.e., near-term value of an initial phase; using phasing to manage existing uncertainty; using phasing to allow for adjustments in the project/program/portfolio as new information is developed)?	• Pure Water would provide 45 mgd (46,400 AFY) of non-potable reuse (NPR) and IPR to start, with an ultimate buildout capacity of 150-mgd. While this assessment is based on the 45 mgd concept, Metropolitan is also considering phases and/or stages of 75 mgd and 115 mgd. • Metropolitan is also considering Treated Water Augmentation (TWA) at the Second Lower Feeder. This could eventually be incorporated into the 45 mgd (46,400 AFY) project by adding up to 10 mgd of TWA at some time in the future.	Limited
	4. What is the implementation risk and/or complexity of implementation?	Pure Water includes a comprehensive risk management program, both at the program level as well as for each of the individual projects/elements as these projects advance to the design and construction phases of implementation. The Pure Water team has completed a risk assessment for the program and first two pipeline reaches currently in preliminary design. Risks were identified ranging from funding to social context, including the following highest priority risks: • **Funding Availability and Timing (Funding):** A project of this scale and function requires access to a variety of funding opportunities that range from direct payment to debt financing. However, the 45-mgd project would not require as much funding in comparison to the 75- and 150-mgd projects. • **Public Acceptance (Social Context and Stakeholders):** Concerns surrounding treated wastewater as a potential source water may pose to be an obstacle to Pure Water. To alleviate these concerns Metropolitan continues to host tours and engage communities, building public understanding by providing information and fact-based explanations. • **Permitting and Environmental Compliance (Permitting and Regulatory Requirements):** Metropolitan has undergone an Environmental Impact Analysis and consulted with experts to help mitigate concerns related to regulatory compliance. Permitting and right-of-way easements would also be required along the conveyance system, including most significantly Army Corps Section 408 permits at water body crossings, Union Pacific easements at railroad crossings, and Caltrans easements at freeway crossings. However, the 45-mgd project would require fewer permits and easements in comparison to the 75- and 150-mgd projects simply due to the need for fewer pipeline reaches, no recharge basins, or DPR components. • **Staffing for Operations and Maintenance (Resources):** Daily operations require a high degree of flexibility and technical expertise, and specialized certifications and training will be needed. Metropolitan, in its planning, has determined the need for a Workforce Training Center to provide training and certifications for future operators. However, the 45-mgd project would require fewer resources along the conveyance system in comparison to the 75- and 150-mgd projects. • **Market Volatility Supply Chain, Market Escalation, Labor Resources (Procurement):** Inability to maintain cost estimates or manage that uncertainty can lead to escalation of costs and delay. Contractor's availability may vary, further hindering the progress of the program. Technical expertise would be required in construction, potentially limiting the variety of options. • **Complex Operations/Processes:** A mixture of advanced treatment facilities, conveyance backbone systems (Reaches 1 and 2 only), non-potable facilities, and additional support facilities all necessitate extensive planning to effectively function. Storage along the conveyance system and recharge basins would not yet be available in the 45-mgd project; only limited storage would be available in the AWPF pump station clearwell and the Sanitation Districts' Ocean outfall. However, the 45-mgd project would be less complex overall in comparison to the 75- and 150-mgd projects, as it only requires the first two pipeline reaches, no backbone pump stations, no recharge basins, or DPR components.	Significant

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Design Flexibility:** The flexibility and adaptability embedded in the design and operations of Pure Water would help Metropolitan provide reliable water supplies throughout the region under numerous climate scenarios beyond 2045. **Metropolitan Plans/Policies and Initiatives:** Pure Water builds on and strengthens Metropolitan's existing resiliency plans, policies, and initiatives by aligning with and advancing key strategic goals including the following. • **CAMP4W:** Long-term climate resilience planning through CAMP4W combined with Pure Water's technological innovations such as advanced data analytics, data monitoring, and digital tools would allow Metropolitan to leverage adaptive management to provide reliable water supplies changing conditions beyond 2045. • **Integrated Water Resource Plan (IRP):** To meet the IRP's goal of a flexible supply, Pure Water allows for an adaptive approach in its phasing. Pure Water provides opportunities to integrate with existing programs and projects. • **Water Supply Reliability Program:** Local control, reuse, and groundwater replenishment through Pure Water allows increased flexibility to provide water in times of high demand. Pure Water also allows adjustments to address issues due to interruptions. **Time Bound Targets:** Pure Water is designed to meet specific resource and policy based timebound targets in line with established CAMP4W strategic goals. The following summarizes how the project aligns with applicable targets from the perspective of flexibility and adaptability. • **Equitable Access to Supply:** The flexibility of Pure Water allows for equitable access to purified water in SWPDAs (once this project is expanded) and future integration with other projects.

Overall Assessment

The Pure Water 45 mgd project would enhance flexibility within Metropolitan's distribution system as a new independent source of supply and conveyance that can help address a portion of the Central Pool demands during drought conditions. The benefits of the project would be moderate during dry years, when Pure Water reduces reliance on other supplies (SWP and CRW) and frees capacity with the existing distribution system. The project has moderate operational complexities and limited flexibility to phase. While this assessment is based on the 45 mgd concept, this project can be expanded into phases and/or stages of 75 mgd and 115 mgd.

Overall Assessment Value

Moderate

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Equity Programs for underserved communities Scale of community engagement Public health benefits Workforce development	1. What percentage of the area served by the project, program, or portfolio includes underserved communities and what percentage of the project/program/portfolio area is in underserved communities?	• Based on CalEPA's OEHHA California Communities Environmental Health Screening Tool (CalEnviroScreen) and CalEnviroScreen 4.0 data: o Approximately 50% of the area that would be served by Pure Water is disadvantaged. o Areas where new program facilities would be built, approximately 58% of the population that is within one mile of the proposed AWPF and 10-mile backbone conveyance system, falls within disadvantaged communities. Specifically, much of Carson, where many facilities would be located, ranks in the highest percentile of disadvantaged communities. • Based on Water Code §79505.5 which defines DACs based on income (specifically, households earning 80% or less of the statewide median household income): o Approximately 38% of the area served by Pure Water qualifies as disadvantaged, and approximately 17% of the population within one mile of the proposed AWPF and backbone conveyance system reside within disadvantaged areas. • Pure Water's 45-mgd facilities and components would traverse numerous census tracts (including tracts within the city of Carson), however, potential environmental impacts (e.g. air, noise and hazardous materials) arise mainly during construction and are addressed by identified mitigation measures. o Approximately 5.3 million people would be direct recipients of water from a 45-mgd project. This includes the population of West Basin, LADWP, Torrance and Long Beach. Most of the communities where new facilities are planned would directly benefit from the reliable, high-quality water supply. Many of these communities, in particular disadvantaged communities, rely solely on groundwater basins for their water supply. o Pure Water enables Metropolitan to fill supply shortfalls with 46,400 AFY of drought resilient water supplies, which augments local groundwater basins by filling 2% of the supply deficit thereby helping ensure the long-term sustainability of these basins and supply reliability.	Significant
	2. What specific community benefits are included in the project, program, or portfolio?	• **Workforce Development:** Per the Los Angeles Economic Development Corporation economic impact study, construction of Pure Water at full build-out would create 75,660 direct and industry-related job years. Pure Water operations would be expected to support nearly 2,500 jobs annually. Note this is based on the 150 mgd program; job data is not available for the 45 mgd stage. The Pure Water project labor agreement (PLA) would set a goal for 60% local worker participation and Metropolitan continues to explore apprenticeship opportunities. In early 2025, an MOU to advance work readiness opportunities and increase the qualified candidate pool for job opportunities was signed by the City of Carson, Metropolitan, Sanitation Districts, West Basin Municipal Water District, and the South Bay Workforce Investment Board. Metropolitan and the Sanitation Districts are planning for a workforce training center next to the AWPF, providing career pathways both for Pure Water operations and for the broader water sector. • **Small Business Opportunities:** Pure Water fosters small business growth by providing diverse and equitable procurement opportunities, with a focus on local business participation through Metropolitan's Business Outreach Program. In March 2024, Metropolitan hosted a MetWorks event aimed at sharing information on contracting opportunities with small businesses. Metropolitan also hosted a construction and apprenticeship resource fair. • **Water quality:** Pure Water would produce high quality water low in total dissolved solids (TDS) and free of golden mussels and quagga mussels, which would improve groundwater water quality in terms of lowering TDS, nitrate, sulfate, and chloride concentrations, thereby protecting the public water supply and the health of the communities that depend on these basins. • **Community benefits program:** A framework for a potential community benefits approach is currently in development. The framework focuses on providing benefits to communities located near the proposed AWPF and pipeline alignment that may experience environmental impacts from a program designed to serve the broader region. Potential benefits may include both direct actions and the creation of a community benefits fund to help address local impacts by advancing priority projects and initiatives that enhance climate resilience and improve overall quality of life. • **Community space:** Pure Water may include ancillary facilities, such as meeting rooms, tour facilities, native gardens, and a learning center, that may be designed for multifunctional use and would encourage education, collaboration, and greater community involvement. • **Good Neighbor Guidelines:** When undertaking construction projects, Metropolitan and Sanitation Districts strive to minimize the impact of work on local communities and restore impacted areas to their original condition or better. The agencies are committed to communicating potential impacts, responding to inquiries in a timely manner and maintaining an active dialogue before and during construction. • **Additional community and environmental elements:** o Plans for the AWPF site also include plugging oil wells located on site and installing EV charging stations, which could be available for public use. o Metropolitan and Sanitation Districts are also considering planting additional trees and vegetation within the AWPF footprint and near Pure Water components to help offset greenhouse gas emissions. o Metropolitan intends to pursue Envision verification, a sustainable infrastructure framework that includes standards to promote public health and enhance quality of life for surrounding communities.	Exceptional

Assessment

Evaluative Criteria	Attributes	Assessment	Value

Equity
Programs for underserved communities
Scale of community engagement
Public health benefits
Workforce development
	3. What level of community, tribal, and partner engagement is included in the project, program, or portfolio?	An Outreach Charter guides outreach efforts and includes a commitment to engaging with disadvantaged communities to listen, communicate transparently, and involve those impacted by the program. Outreach and communications plans provide a framework for implementing outreach activities.
		• **Community Engagement:** Outreach efforts to date include:
		  ○ In-person and virtual tours of the Grace F. Napolitano Pure Water Southern California Innovation Center, including school field trips, public tours, and special events.
		  ○ Metropolitan staff briefings and presentations for community groups, business organizations, at conferences, and city councils.
		  ○ Booths at community events throughout the program area to share information and connect with residents.
		  ○ Partnering with community-based organizations located near proposed facility sites to create unique engagement opportunities to involve residents in program development.
		  ○ Regular collaboration with regulators to provide program updates and seek feedback. Regular meetings and listening sessions with environmental organizations.
		  ○ Staff continue to actively engage with cities, jurisdictions, organizations, and property owners in areas where proposed program facilities may be located.
		• **Environmental Review (CEQA) Process**: Metropolitan conducted an extensive outreach campaign for both the Notice of Preparation and the Draft Environmental Impact Report (DEIR). Activities included hosting public meetings; mailing postcards to addresses within 500 feet of proposed facilities and components; placing ads in English and Spanish newspapers; issuing a press release; distributing flyers to public libraries and other community locations; developing a dedicated webpage; creating easy-to-understand informational materials on the environmental review process; sharing updates on Metropolitan's and the Sanitation Districts' social media channels; hosting booths at local events; and meeting with business organizations, environmental groups, and community-based organizations.
		• **Communications/Website:** A variety of communication resources have helped engage the public and raise awareness about the program. Metropolitan has developed a robust program website that serves as an information hub, as well as videos, multi-lingual brochures, hundreds of social media posts, and a dedicated Pure Water quarterly e-newsletter with more than 1,000 subscribers. Pure Water has been featured in both local and national news coverage. Once the program is approved, extensive outreach would expand to include communities that would directly receive water from the program and evolve to include engagement on design and construction.
		• **Tribal engagement:** Metropolitan has engaged with tribes and tribal organizations with meetings, discussions, and regular program updates. Staff reached out to dozens of contacts and connected with the Gabrieleño Band of Mission Indians-Kizh Nation, Gabrieleno/Tongva Band of Mission Indians, Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians), Soboba Band of Luiseño Indians, Fernandeño Tataviam Band of Mission Indians, United American Indian Involvement, American Indian Chamber of Commerce, and Sacred Places Institute. Furthermore, Metropolitan extensively consulted with the Gabrieleño Band of Mission Indians-Kizh Nation on the development of the Tribal Cultural Resources analysis of the Draft EIR. Their feedback was incorporated into the environmental review, and as a result Metropolitan would provide environmental awareness training prior to construction and secure a Native American (Tribal) Monitor from or approved by the Gabrieleño Band of Mission Indians-Kizh Nation during construction.
		• **Water Reuse Collaborative:** Metropolitan also partnered with program participants and other water reuse agencies to establish the Water Reuse Collaborative, which brings together leadership from the region's key water recycling entities to coordinate strategy, combine resources, and set shared goals to advance water recycling efforts. The Collaborative meets quarterly to support long-term success of water reuse projects and regional initiatives.
			Exceptional

	4. Describe the extent and reasons why there is broad community support/opposition or potential for support/opposition.	**Community Support:** • Organizations across a wide range of sectors including business, labor, environmental, and civic groups, recognize the importance of developing a new climate-resilient water supply that also enhances seismic resiliency and reduces reliance on imported water sources. Additional benefits, such as replenishing groundwater basins and improving basin water quality, further strengthen public support. • Public opinion research conducted in 2022 and 2024, along with feedback collected from tours of the demonstration facility, further confirms public support for Pure Water Southern California. • Workforce development opportunities, community-focused design, and potential for additional community and environmental benefits also contribute to strong community backing. • Tours of the Napolitano Innovation Center and explanations of the advance purification process help build support and understanding of the high-quality water that would be provided by the program. • Community members and stakeholders continue to express strong support for the program as reflected in the 72 letters of support submitted as part of Metropolitan's application for the U.S. Department of the Interior's Bureau of Reclamation WaterSMART Large-Scale Water Recycling Program Grant, with endorsements from congressional leaders, state and local officials, environmental organizations, cities, and regional agencies. **Community Concerns:** • There are concerns related to energy use, greenhouse gas emissions, overall costs, and water quality, steps are being taken to address these issues.	Significant

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Partnerships and Collaborations:** • Pure Water is a product of the creative and collaborative partnership between Metropolitan and the Sanitation Districts. Pure Water continues to foster new partnerships, including member agencies (, West Basin MWD, City of Torrance, Long Beach Utilities, Los Angeles Department of Water and Power, and others); groundwater basin managers (Water Replenishment District); Colorado River partners (Southern Nevada Water Authority, Arizona Department of Water Resources, Central Arizona Project); and other key partners (U.S. Army Corps of Engineers, the State Water Resources Control Board's Division of Drinking Water, Southern California Edison, Los Angeles County Department of Public Works, California Department of Transportation, and other regulators). • Pure Water has received support from the U.S. Bureau of Reclamation, California Department of Water Resources and other agencies and continues to promote federal and state engagement. • Pure Water continues to encourage the development of partnerships with universities, research institutions, and technology providers to advance water purification science, monitoring, and public health protections; provides an opportunity for partnerships with community-based organizations that have helped build trust and relationships for Metropolitan with underserved communities; and created opportunities for collaboration with the environmental community to advance the program. **Metropolitan, Regional and Multi-State plans, policies, and initiatives:** • Pure Water meets the goals and objectives of multiple Metropolitan plans, policies and initiatives including CAMP4W, Integrated Resources Plan (2020), Water Shortage Contingency Plan (2021) and Urban Water Management Plan (2020). Pure Water builds upon Metropolitan's Diversity, Equity and Inclusion (DEI) commitment and initiatives and supports the DEI framework by promoting inclusion, broad stakeholder engagement and workforce development while reinforcing Metropolitan's commitment to equitable water access • Pure Water meets the water supply and quality objectives of State and regional resource management plans (including 2023 California Water Resiliency Portfolio, California Water Plan (2023), SWRCB Recycled Water Policy, Water Quality Control Plan for the Los Angeles Region (Basin Plan), and the Greater Los Angeles County Integrated Regional Water Management Plan). • Advances several multi-state plans including the Lower Basin DCP, Colorado River Interim Guidelines for Lower Basin Shortages, and Coordinated Operations of Lake Powell and Lake Mead (2007 Interim Guidelines), setting the framework for sustainable management of the Lower Colorado Basin.

Overall Assessment

A 45-mgd Pure Water program would provide water to an area of which 38-50% of the communities are considered disadvantaged. Approximately 17-58% of the communities within one mile of program facilities are considered disadvantaged. The program would provide many community benefits including workforce development, business opportunities, educational programs, community space and groundwater quality improvements. Community, tribal and partner engagement is extensive and meaningful. Pure Water has strong support and steps are being taken to address any community concerns related to energy use, greenhouse gas emissions, overall costs, and water quality.

Overall Assessment Value

Significant

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Environmental Co-Benefits Greenhouse gas emissions	1. What are the estimated greenhouse gas emissions or enhanced carbon sequestration, and how does it impact the carbon budget, as defined by the Climate Action Plan?	Based on the Pure Water Draft Environmental Impact Report (DEIR), the potential impacts associated with construction and operation of Pure Water facilities, include: • Total construction-related greenhouse gas (GHG) emissions are estimated to total 21,522 metric tons (MT) CO_2e across all project-level components. • For the first year of full operations (expected in 2035), annual emissions are estimated to total 29,726 MT CO_2e. By 2045, annual emissions are projected to be 13,124 MT CO_2e, due to compliance with Senate Bill 100 requiring a 100% carbon-free electricity grid. Metropolitan has committed to a series of up-front measures to offset Pure Water's GHG emissions including but not limited to: • **Onsite Renewable Energy:** Installation of photovoltaic solar panels with a total power rating of at least 1.5 megawatts at the A.K. Warren Water Resources Facility. • **Electric Vehicle Charging:** Installation of 100 Level 2 and 15 Level 3 electric vehicle chargers at the Warren Facility. • **Energy Recovery:** Installation of inter-stage pumps in the reverse osmosis system to reduce energy use; and installation of Energy Recovery Devices on the concentrate pumping systems to recover energy. • **Biogenic Carbon Supplement:** Addition of a biogenic carbon supplement, such as glycerin-based MicroC-2000 manufactured by Environmental Operating Solutions, Inc., to support both denitrification and biological phosphorus removal at the AWPF. • **Plug Oil Wells:** Plugging of eight existing oil wells currently located at the Joint Treatment Site. Metropolitan was below its 2022 Climate Action Plan milestone GHG emissions budget for the 2005-2022 period, with Metropolitan having emitted approximately 5,408,096 MT CO_2e, representing just over half (55%) of the maximum emissions budgeted through 2022. The overall carbon budget has 9,252,380 MT CO_2e remaining for the 2023-2045 period. Metropolitan has strategies listed in the CAP to reduce overall GHG emissions by 2,003,695 MT CO_2e using Phase 1 actions under the high emissions scenario. Therefore, the forecasted carbon budget exceedance of 800,702 MT CO_2e under the high emissions scenario can be addressed by implementation of the 2020 CAP. • Pure Water was evaluated for consistency with this budget and under the highest emissions forecast scenario, implementation of CAP measures would allow Metropolitan to remain within its carbon budget and achieve both its 2030 and 2045 targets. Pure Water would be consistent with the CAP through both 2030 and 2045 and would not result in a significant impact related to GHG emissions.	Moderate
Benefits Ecosystem services Habitat/wildlife benefits	2. In what way and to what degree does it provide additional ecosystem services?	• The Sanitation Districts may implement an enhanced source control program, which would reduce certain constituents in wastewater effluent that is currently discharged to the ocean via the outfall, which could improve the quality of future wastewater discharges. • Pure Water produces an average of 46,400 AFY of purified water for groundwater recharge into the West Coast and Central basins, thus contributing to sustaining groundwater levels. Sustained groundwater levels: support ecosystems, vegetation, and habitat dependent on groundwater; maintain soil moisture; provide a buffer against drought; and support wildlife by preserving habitats and reliable water sources essential for survival. • Reduces reliance on imported water, which could improve the health of both the Colorado River and Sacramento-San Joaquin River watersheds by potentially reducing the amount of SWP and CR water imports to the region.	Limited
	3. To what extent does it protect, improve, or expand wildlife and fish habitat and/or affect flows in ways that improve ecological functions for native species?	• Temporary construction areas would be restored to pre-construction conditions and areas of marginal or poor habitat would be improved, as feasible, by restoring these areas with appropriate native vegetation thereby providing habitat for wildlife. With the avoidance of sensitive areas and restoration and enhancement of temporary construction areas, Pure Water would increase the quality and quantity of suitable habitat for native species. • Groundwater recharge from Pure Water could support riparian vegetation and habitat and provide surface water for federally listed threatened or endangered plant and wildlife species along the backbone alignment and considerably beyond the project area. • Pure Water could offset imported water demands (SWP) on the Sacramento-San Joaquin River watershed, or its diversions timed to balance environmental water demands thereby providing benefits to the sensitive ecosystem of the Bay Delta, which serves as a critical habitat for listed species. Reducing dependence upon imported sources would help increase the sustainability of both watersheds to improve the health of the ecosystems. • The Draft Environmental Impact Report for Pure Water identifies wildlife and environmental stewardship measures, including Environmental Awareness Training, Temporary Construction Fencing, Nesting Bird and Raptor Avoidance, Nighttime Lighting, Invasive Plant Species, and Protected Tree Avoidance and Mitigation to protect and improve wildlife and fish habitat.	Limited

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Metropolitan, Regional and Multi-State plans, policies, and initiatives:** • Climate Adaptation and Emissions Goals: Pure Water aligns with Metropolitan's Climate Adaptation Master Plan for Water (CAMP4W) and Climate Action Plan (CAP) by 1) advancing reliable, equitable, and climate-resilient water supplies; and by 2) reducing the energy use and emissions associated with long-distance water imports. The project lowers groundwater pumping costs and related pumping emissions by raising groundwater water table levels, especially in overdraft scenarios. • Pure Water supports innovation in water purification and reuse on a regional scale, thereby setting a precedent for other regions to adopt similar methods and sustainable practices. Pure Water's innovative treatment approaches, contingent on regulatory approval, opens the door for other agencies to invest in similarly innovative processes, benefiting from the many years of research and demonstration through testing Pure Water. • Project supports both Metropolitan's CAP and UWMP in reducing emissions from daily operations.

Overall Assessment

The 45 mgd Pure Water Program would provide limited environmental co-benefits. The program would recharge an average of 46,400 AFY of purified water to sustain groundwater levels in the West Coast and Central groundwater basins, support ecosystems, and provide a buffer against drought. It would reduce reliance on imported water supplies, with indirect benefits to sensitive ecosystems such as the Bay-Delta, while remaining consistent with Metropolitan's Climate Action Plan. Environmental stewardship measures such as oil well closures, renewable energy features, and habitat restoration would further reduce impacts and contribute to long-term climate resilience.

Overall Assessment Value

Limited

Attachment No. 2

CAMP4W Preliminary Assessment for Pure Water Southern California (75 mgd)

Metropolitan is committed to meeting its mission in the face of a changing climate by developing projects and programs that advance Time-Bound Targets, consistent with the Board's priorities. This comprehensive assessment is a key part of the Climate Decision-Making Framework and will be used to support Board deliberations on which projects and programs Metropolitan should pursue.

Summary of Assessment and Staff Recommendation

Each criteria and attribute presented on the following pages includes a description of the quantitative and qualitative measures relevant to the proposed project or programs, as well as Metropolitan staff's recommendation.

Project/Program/Portfolio at a Glance

Title of Project/Program/Portfolio

Pure Water Southern California (75 mgd)

Status (planning/design/implementation)

Conceptual Planning & Design

Capacity:

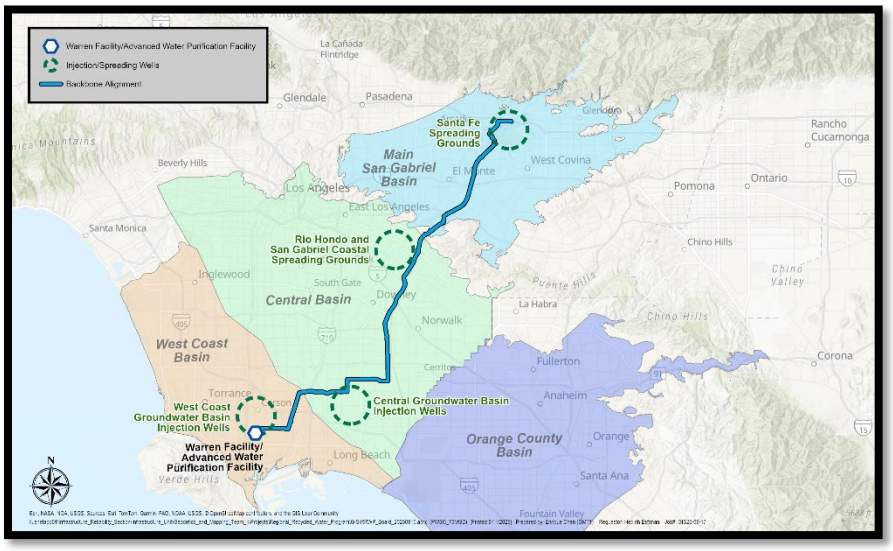
75 mgd (77,300 AFY)

Capital Cost:

$6.9 Billion

Operation/Maintenance or Ongoing Cost:

$125 Million/year



Description and how the project/program/portfolio supports water supplies, reliability and/or delivery

Pure Water Southern California (PWSC or Pure Water) is a partnership between Metropolitan and the Los Angeles County Sanitation Districts (Sanitation Districts) to beneficially reuse cleaned wastewater currently discharged to the ocean from the Sanitation Districts' A.K. Warren Water Resource Facility (Warren Facility) in Carson. The program at full build-out is 150 mgd; however, Metropolitan is considering implementing the program in phases or stages. This assessment is for an initial stage of 75 mgd, which includes the construction of an Advanced Water Purification Facility (AWPF) with an initial capacity of 75 mgd, over 37 miles of large diameter pipeline from the AWPF to the Santa Fe Spreading Grounds, one backbone pump station near Whittier Narrows, eight service connections for member agencies, and various recharge facilities primarily for indirect potable reuse (IPR). Direct potable reuse (DPR) would not yet be implemented in this stage. The project would create a new sustainable water supply by creating 77,300 acre-feet per year (AFY) or 75 mgd of purified water by 2036. Purified water would be used to recharge the West Coast, Central, and Main San Gabriel groundwater basins. The project would create a new regional water supply to balance local water supplies with imported Colorado River and State Water Project supplies, both of which are facing increased stress and long-term uncertainty during increasing climate variations and institutional agreements and are vulnerable to seismic events. As such, the project would increase Metropolitan's water supply reliability and regional water security by diversifying the regional supply portfolio, reducing reliance on imported water, increasing operational flexibility, and enhancing regional and cross-state partnerships.

Portfolio view and additional potential companion projects/programs/portfolios

Pure Water, as an early implementation project, would not only provide enhanced system flexibility to improve supply reliability in the near term but would also provide long-term reliability by developing infrastructure and new supplies to meet increased demand and offset existing supply deterioration due to climate change. The early implementation of Pure Water allows for strengthening the reliability of the region's water supplies and benefiting State Water Dependent Areas in the near term. Pure Water also provides opportunities for integration with longer-term projects in the Drought Mitigation Action Portfolio such as the East West Conveyance Pipeline for increased operational flexibility. The addition of new surface storage projects would further strengthen the project benefits through the storage of purified water during wet years for use in dry years.

What Time-Bound Targets Does the Project/Program/Portfolio Address?

Boxes with check marks (✓) indicate that the project/program/portfolio advances a Time-Bound Target.

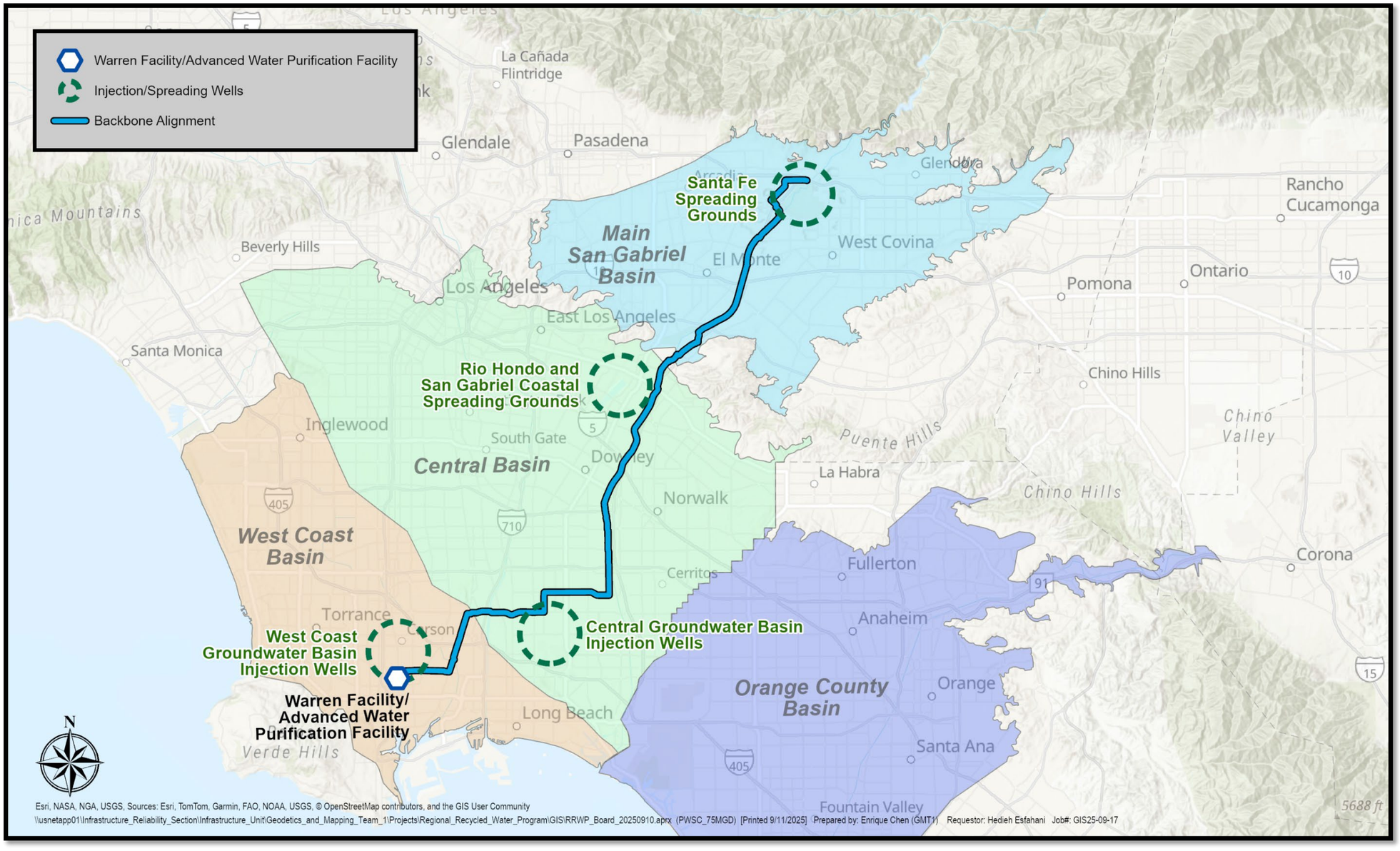
Summary of Assessment and Staff Recommendation *(see footnote on Page 2 for ranking guidelines)*

Reliability	Resilience	Financial Sustainability and Affordability	Adaptability and Flexibility	Equity	Environmental Co-Benefits
Significant	Significant	Very High Cost	Moderate	Significant	Limited

Ranking Guidelines at the Attribute Level

Defining to which level a project, program or portfolio will deliver CAMP4W objectives for each attribute category.

Exceptional	The project/program/portfolio directly and completely addresses the benefits being assessed by the question/statement.
Significant	The project/program/portfolio directly addresses most elements of the benefits being assessed by the question/statement.
Moderate	The project/program/portfolio only addresses some elements of the benefits being assessed by the question/statement or addresses them indirectly.
Limited	The project/program/portfolio only addresses few or minor elements of the benefits being assessed by the question/statement or provides minor indirect benefits.
Very Limited	The project/program/portfolio does not provide any or very limited benefits to those being assessed by the question/statement.
Undetermined or Not Applicable	The ranking for this project/program/portfolio is not determined at this time or the attribute is not applicable



Flow:

- 75 mgd IPR

Year Complete:

- 2036

Facilities:

- AWPF
- Reaches 1 to 8A
- 8 service connections
- 1 backbone pump station

Assessment

<table>
<tr><th>Evaluative Criteria</th><th>Attributes</th><th>Assessment</th><th>Value</th></tr>
<tr><td rowspan="3">Reliability
Supply Performance
Equitable Reliability</td><td>1. To what extent does it help meet regional supply reliability objectives under changing climate conditions?</td><td>
Assumptions for Pure Water 75 MGD
• Assumes Pure Water 45 million gallons per day (MGD) is online in 2035.
• Assumes the additional supply from Pure Water 75 MGD is operational in 2036.
• Total imported water supply offset modeled from Pure Water 75 MGD is approximately 45 mgd (46,500 AF). (30 mgd assumed to replace existing recycled water use that may translate to imported water demand without Pure Water.)
• No modeled benefits for State Water Project Dependent Area (SWPDA) served by Jensen, as these benefits are not realized without the construction of Pure Water Los Angeles (LA).
• Modeled new replenishment demands for West Basin and Long Beach that could be served by the Project. This would likely lead to increased groundwater pumping, offsetting a demand on Metropolitan.
• Assumes existing untreated replenishment demand from Central Basin Municipal Water District (MWD), Upper Water, and Three Valleys, to be met by the Project.
• No DPR component for Pure Water 75 MGD.

<u>Analysis and Results</u>

Tables 1 and 2 below reflect the probability of shortage results from the reliability analysis. The tables compare the probability of shortage from the IRP 2025 Update results (herein referred to as “Base Case”) measured against the probability of shortage for the modeling results that incorporate Pure Water 75 MGD (referred to as “Pure Water 75 MGD”). Table 1 shows that Pure Water 75 MGD reduces the probability of shortage in Scenario C in forecast years 2040 and 2045. Table 2 shows that Pure Water 75 MGD reduces the probability of shortage in Scenario D in forecast years 2035, 2040 and 2045. Thus, in both Scenarios C and D, Pure Water 75 MGD enhances Metropolitan’s reliability within the forecast period when compared to the Base Case.

In Scenario C, the Base Case results show a maximum magnitude of shortage in 2045 of 607 TAF, which is reduced to 481 TAF when Pure Water 75 MGD is operational. Similarly, Scenario D of the Base Case show a maximum magnitude of shortage in 2045 of 1.31 MAF and is reduced to 1.25 MAF when Pure Water 75 MGD is online.

Table 3 provides insight into the difference in storage (defined as the “benefits”) from a specific project for 2045 with two metrics: the 2045 Average Benefit and the 2045 Maximum Benefit. In Table 3, the 2045 Average Benefit reflects the storage benefit of Pure Water 75 MGD across hydrologic conditions for 2045, on average. The 2045 Maximum Benefit is the maximum storage benefit of Pure Water 75 MGD across hydrologic conditions for 2045. These metrics are achieved by subtracting the storage amounts in 2045 between the Base Case and Pure Water 75 MGD for Scenarios C and D. For example, in 2045 Scenario C, Pure Water 75 MGD provides an average storage benefit of 165 TAF and a maximum storage benefit of 512 TAF. The quantities shown in Table 3 represents supply that was produced and stored but not used to offset shortage in the planning horizon. This value is also helpful in quantifying the amount of resources stored for use beyond the current planning horizon.

While Tables 1 and 2 provide an understanding of the likelihood shortage, Table 4 quantifies the reduction in shortage as a result of implementing the proposed project. One limitation when comparing the probability of shortage, as is done in Tables 1 and 2, is that the likelihood of shortage is only reduced if the project is able to fully eliminate the shortage. Table 4 provides insight into the total reduction in shortage (defined as the “benefits”) from a specific project over the planning horizon (2025 to 2045) with two metrics: the Average Cumulative Benefit and the Maximum Cumulative Benefit. The Average Cumulative Benefit reflects the benefit of Pure Water 75 MGD across hydrologic conditions for the planning horizon, on average. The Maximum Cumulative Benefit is the maximum benefit of Pure Water 75 MGD across hydrologic conditions for the planning horizon. These metrics are achieved by subtracting the shortage amounts between the Base Case and Pure Water 75 MGD for Scenarios C and D. For example, in Scenario C, Pure Water 75 MGD provides an average benefit of 110 TAF and a maximum benefit of 407 TAF, across the planning horizon.

While Pure Water 75 MGD reduces the shortage probability and magnitude, the proposed project increases the probability of net surplus. An increase in the probability of net surplus means that there is a higher likelihood of unmanaged supplies. Tables 5 and 6 below provide the probability of net surplus for Scenarios C and D in 2045. In Scenario C, the Base Case has a maximum magnitude of net surplus is 1.3 MAF in 2045, which increases to 1.44 MAF with Pure Water 75 MGD online. In Scenario D, the Base Case has a maximum magnitude of net surplus of 770 TAF in 2045, which increases to 956 TAF when Pure Water 75 MGD is operational.

It should be noted that the information shown in Tables 5 and 6 does not alter the reliability assessment scoring; however, it provides valuable context to help decisionmakers identify projects that are efficient, balance supply and demand, and support a fuller understanding of the project’s big picture. Other investments would be needed to realize the benefits of unmanaged supplies.

Table 1
Scenario C: Probability of Shortage
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 75 MGD</th></tr>
<tr><td>2030</td><td>3%</td><td>3%</td></tr>
<tr><td>2035</td><td>4%</td><td>4%</td></tr>
<tr><td>2040</td><td>15%</td><td>11%</td></tr>
<tr><td>2045</td><td>18%</td><td>13%</td></tr>
</table>
Table 2
Scenario D: Probability of Shortage
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 75 MGD</th></tr>
<tr><td>2030</td><td>7%</td><td>7%</td></tr>
<tr><td>2035</td><td>11%</td><td>10%</td></tr>
<tr><td>2040</td><td>44%</td><td>40%</td></tr>
<tr><td>2045</td><td>58%</td><td>54%</td></tr>
</table>
Table 3: Difference in MWD <u>Storage</u> between Base Case and Pure Water 75 MGD in <u>2045</u> (TAF)
<table>
<tr><th>Type</th><th>Scenario C</th><th>Scenario D</th></tr>
<tr><td>2045 Average Benefit</td><td>165</td><td>230</td></tr>
<tr><td>2045 Maximum Benefit</td><td>512</td><td>524</td></tr>
</table>
Table 4: Difference in <u>Shortage</u> between Base Case and Pure Water 75 MGD for <u>2025-2045</u> (TAF)
<table>
<tr><th>Type</th><th>Scenario C</th><th>Scenario D</th></tr>
<tr><td>Average Cumulative Benefit</td><td>110</td><td>332</td></tr>
<tr><td>Maximum Cumulative Benefit</td><td>407</td><td>768</td></tr>
</table>
Table 5
Scenario C: Probability of Net Surplus in 2045
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 75 MGD</th></tr>
<tr><td>2045</td><td>26%</td><td>34%</td></tr>
</table>
Table 6
Scenario D: Probability of Net Surplus in 2045
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 75 MGD</th></tr>
<tr><td>2045</td><td>1%</td><td>2%</td></tr>
</table>
</td><td>Significant</td></tr>
<tr><td>2. To what extent does it advance equitable supply reliability?</td><td>
• Advances equitable water supply by delivering a climate-resilient and sustainable supply that enhances overall reliability for all agencies. The benefits of Pure Water can be examined by region:
  ○ SWP Dependent Agencies served by Jensen – Delivering Pure Water supplies to West Basin Metropolitan Water District (MWD) and Los Angeles Department of Water and Power (LADWP) would help bolster their local supply, thus reducing demands for imported supply via Jensen. However, this benefit is only realized if Pure Water Los Angeles is constructed.
  ○ SWP Dependent Agencies served by Rialto Pipeline – Pure Water would provide supplies to help meet untreated replenishment demand from Central Basin MWD, Upper San Gabriel MWD, and Three Valleys MWD. By using Pure Water supplies to meet this replenishment demand, State Water Project (SWP) supplies could be preserved for State Water Project Dependent Areas (SWPDAs), particularly in years where supplies are limited. However, it should be noted that replenishment demands are often the first to be foregone in times of limited supply. Pure Water could allow for continued replenishment delivery in dry years.
• Frees up capacity in the existing conveyance, distribution, and storage systems and thus help increase flexibility by capturing and conveying water supplies. Increasing system flexibility helps Metropolitan better manage supplies during times of limited supplies, by allowing Metropolitan to redirect limited SWP supplies to the most critical needs and allowing Metropolitan to use available conveyance infrastructure more flexibly to provide supply reliability.
</td><td>Significant</td></tr>
<tr><td></td><td>3. When will it be operational? What is the useful life of the project/program/portfolio? How will</td><td>• Online Date and Phasing: Pure Water would deliver purified recycled water by 2036. The project team is further evaluating the potential to deliver Pure Water in incremental stages, which would allow Metropolitan to implement Pure Water to support time-bound targets, integrate planning with other Metropolitan and/or regional projects and balance financial impacts.</td><td>Exceptional</td></tr>
</table>

Assessment

Evaluative Criteria	Attributes	Assessment	Value
	benefits continue beyond the 2045 planning horizon under changing climate conditions?	• **Useful Life of Facilities**: Pure Water facilities are expected to have a useful life of 100 years or longer. Pure Water's useful life is based on the type of infrastructure, materials to be used, anticipated construction standards, operational stress, technological innovation, and Metropolitan and Sanitation Districts' rigorous maintenance programs. • **Changing Climate Conditions (Drought-Resilient)**: The water supply reliability results modeled using IRPSIM (Question 1) only reflect benefits through the forecast year 2045. Continued benefits are anticipated beyond the 2045 horizon based on the useful life of the facilities. The Sanitation Districts' *Climate Change Vulnerability Assessment and Management Plan* highlighted potential climate-related hazards affecting the Warren Facility and due to the co-location of the Pure Water AWPF at this site, the same hazards are anticipated to impact the Pure Water facilities. Many of the vulnerabilities posed by these natural phenomena are predicted to be exacerbated by climate change. Drought can be a major concern as decreased frequency of rainfall and resulting inflow and infiltration and reduced wastewater flows can potentially introduce risks to recycled water projects. • For Pure Water, the region provides a relatively reliable supply source from 4.8 million residents and with strict conservation measures in place the treated wastewater flows are anticipated to remain relatively stable during droughts. The 75 mgd stage as designed will use less than 20% of the current wastewater flows (260 mgd), which are anticipated to increase by 2045 and beyond to a maximum permitted flow of 400 mgd. • Metropolitan is currently developing a Climate Risk Assessment for the Pure Water program. However, the flexibility and adaptability embedded in the design and operations will help Metropolitan provide reliable water supplies throughout the region under numerous climate scenarios beyond 2045.	
	4. Are there additional projects/programs/portfolios that could be added to improve this project/program/portfolio's effectiveness for water supply reliability?	• **East-West Conveyance –** The East-West Conveyance Pipeline is a proposed expansion project of existing infrastructure that aims to provide Metropolitan greater delivery flexibility by moving Colorado River water and stored DVL supplies into the western part of Metropolitan's service area. Pure Water is another potential supply that could be conveyed through the East-West Conveyance to Jensen Water Treatment Plant, which further improves supply reliability for the region. • **Reservoir and Pump Back to Metropolitan Feeder –** The 75 mgd stage may include the purchase of a gravel pit for groundwater recharge or storage in the Santa Fe Dam area. Pure Water could also be expanded to include up to 15,000 AF reservoir in the Main San Gabriel Basin for groundwater recharge and water storage that could be pumped into the Upper Feeder, Middle Feeder, Glendora Tunnel, or the proposed East-West Conveyance Pipeline, helping increase the flexibility of Pure Water to provide additional water supply reliability benefits. Pure Water is also exploring other storage opportunities to maximize the benefits of this project. • *IRPSIM modeling for this project did not include the proposed projects.*	Moderate
	5. How does this project/program/portfolio improve the water supply reliability of existing projects/programs/systems?	• **Existing Treatment, Conveyance and Delivery Systems:** Pure Water's design, leveraging existing infrastructure, would free up capacity in Metropolitan's existing conveyance, distribution, and storage systems providing increased flexibility in capturing and conveying water supplies and allowing Metropolitan to distribute recycled water efficiently across the Metropolitan service area. Pure Water's regional pipeline network allows for the dynamic reallocation of water supplies across the system based on real-time needs, maintenance schedules and emergencies. • **Groundwater Storage:** Pure Water enhances the reliability and effectiveness of the Metropolitan's groundwater storage programs by providing a consistent, regional water supply that supports direct groundwater recharge and operational flexibility – increasing local storage capacity, reducing reliance on surface reservoirs and improving seasonal flexibility. This allows Metropolitan to store more water during wet years and rely on regional groundwater during dry years – which is essential for both long-term storage and short-term use. • **SWP/Colorado River Aqueduct Infrastructure:** Project could reduce demand on the SWP and Colorado River Aqueduct systems. By reducing the volume of imported water that must be conveyed, the project creates operational headroom in SWP pipelines and reservoirs for other uses.	Significant

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Plans/Policies and Initiatives:** • **Integrated Water Resources Plan (IRP):** Pure Water advances IRP goals of diversifying water sources and increasing local supply resilience. • **Water Supply Reliability Program:** Enhances reliability through local control, reuse, and groundwater replenishment. • **Conjunctive Use and Cyclic Storage Programs:** The project enhances Metropolitan's storage programs by providing a reliable source of recharge water, increasing stored reserves and improving drought-year reliability. **Time Bound Targets:** CAMP4W sets strategic goals to ensure long-term water reliability under climate stress. Pure Water contributes by: • **Creating a drought-resilient supply:** Reduces reliance on the State Water Project and Colorado River. • **Supporting carbon neutrality:** Reduces energy-intensive water imports, aligning with Metropolitan's goal of carbon neutrality by 2045. • **Enhancing adaptive capacity:** Provides a flexible, scalable supply that can be expanded as climate conditions evolve. • **Equitable supply reliability:** Provides access to State Water Project Dependent Areas and increases supply capacity through 2045. **Partnerships/Collaborations:** • **Strengthens Regional and Cross-State Partnerships:** Encourages collaboration across agencies, jurisdictions, and state boundaries to build a more integrated, resilient water system improving system-wide efficiency and reducing duplication of efforts, thereby meeting current and future regional supply reliability objectives. Strengthens partnerships by encouraging collaboration with regional and out-of-state partners through shared infrastructure and investments, encouraging coordinated water management across the region, and by fostering shared research, modeling, and forecasting tools to better understand and respond to climate impacts on water supply. • **Tribal Partnerships:** There are 10 federally recognized member tribes that make up the Colorado River Basin Tribes Partnership and hold a significant amount of quantified and unquantified water rights to the Colorado River and its tributaries. With 20% of Metropolitan's water deliveries conveyed through the CRA, Pure Water's reduces the need for imported water supply thereby making additional water available to the tribal partners in the Lower Basin region during shortages. • **Colorado River:** Pure Water advances equitable supply reliability by reducing Metropolitan's reliance on imported water via the Colorado River Aqueduct by providing a new regional supply, which enables Metropolitan to stabilize its local supplies, helping ensure equitable access to safe, reliable water regardless of geography or income. The project serves to free up imported water supplies, enabling more flexible water transfers and collaborative drought response among Colorado River Basin states and agencies.

Overall Assessment

The overall score for reliability is largely assessed by the project's ability to meet regional supply reliability objectives (Question 1) and its ability to advance equitable supply reliability (Question 2). It should be noted that the regional supply reliability ranking (Question 1) is a composite score made up of the various reliability components discussed in the narrative.

Scenario C: Pure Water 75 MGD slightly reduces the probability of shortage in 2045 for Scenario C. The cumulative benefits from both the increase in storage and the reduction in shortage ranked between "Moderate" to "Exceptional". Pure Water 75 MGD also provides an equitable supply reliability benefit for a portion of the SWPDA. The overall assessment for Pure 75 MGD for Scenario C is "Significant."

Scenario D: Pure Water 75 MGD slightly reduces the probability of shortage in 2045 for Scenario D. The cumulative benefits from both the increase in storage and the reduction in shortage ranked between "Significant" and "Exceptional". Pure Water 75 MGD also provides an equitable supply reliability benefit for a portion of the SWPDA. While Pure Water 75 MGD does provide cumulative benefits for storage and shortage reduction, a large probability of shortage still remains in Scenario D, even with the project online. As a result, the overall reliability assessment for Pure Water 75 MGD in Scenario D is "Significant".

Overall Assessment Value

Significant

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Resilience Addresses known risks and vulnerabilities Project, Program or Portfolio's ability to perform under climate impacts	1. How does it perform under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? *Drought is addressed in Reliability	Metropolitan identified the primary climate vulnerabilities and hazards with the potential to impact water operations through the development of a draft Local Hazard Mitigation Plan. Additionally, the Sanitation Districts conducted a climate vulnerability assessment for the A.K. Warren Water Resources Facility (Warren Facility) to highlight potential climate-related hazards and documented study findings in the Climate Change Vulnerability Assessment and Management Plan. Metropolitan is currently conducting a climate vulnerability risk assessment for Pure Water using the latest data from California's Fifth Climate Assessment. The following hazards have demonstrated the potential to pose a higher risk due to climate change. Pure Water incorporates design features in its facilities to increase survivability against these hazards. • **Extreme Heat:** Existing resilience measures to extreme heat are implemented at the Sanitation Districts' Warren Facility. ○ Warren Facility: Much of the facility is climate-controlled, and wastewater temperatures are also monitored. The Sanitation Districts has developed a Heat Illness Prevention Program for employees at the Warren Facility as a part of their Environmental Health and Safety Manual. Additionally, shade covers for chemical tanks and high-temperature-resistant electrical equipment have been employed at the asset level. As the design team advances the Pure Water AWPF design, project design criteria and attributes would adhere to identified compliance requirements and design elements to mitigate extreme heat impacts. Recommendations include heat blowers for critical equipment and periodic electrical upgrades per the Vulnerability Assessment. These long-term recommendations would help to maintain system reliability. ○ Alternate Power Supply: Metropolitan and Sanitation Districts are committed to designing and installing alternative power sources to sustain purified water operations during service interruptions related to extreme heat. The project team is currently evaluating several options for backup power supply, including the construction of two independent substations (one for Sanitation Districts and one for Metropolitan) or an interconnected substation with two separate power lines. In addition, both agencies are also evaluating green power sources to augment the power supply. • **Flood:** The risk of flooding is relatively low at the Warren Facility (and planned AWPF site) and along the backbone conveyance alignment, except along the San Gabriel River (https://hazards.fema.gov/nri/map). ○ Warren Facility: At the Warren Facility, where the AWPF would be located, the facility includes comprehensive storm drainage systems as well as stormwater storage basins with separate operational procedures to reduce flooding potential. These allow wet weather pumps to relieve plants and discharge flow in the event of storms. The Sanitation Districts staff have developed procedures in the event of a flood with a guideline matrix for catastrophic events. ○ Conveyance Pipeline: Limited flooding impacts are anticipated along the backbone conveyance pipeline as the assets would be below ground, and pump stations would be designed to protect against flooding. The groundwater recharge sites may be impacted by an in-region flood event, with recharge operation likely to be suspended during major rain events. Treatment/pumping facilities would be designed to prevent flood damage. • **Wildfire:** The Warren Facility is in a densely urbanized area of Carson, Los Angeles County, and falls outside of the Moderate, High, or Very High Fire Hazard Severity Zones per the Fire Hazard Severity Zone Viewer (FHSZ). In addition, Warren Facility buildings have an existing fire suppression system, and similar systems would be integrated into the AWPF facility design. Pure Water's conveyance system consists mainly of underground pipes and tunnels that would be resistant to the wildfire hazard. Pure Water's treatment and pumping facilities would be situated in urban areas with fire-resistant boundaries to prevent the spread of wildfires into the facilities. All building materials would be designed with fire-resistant materials. Emergency procedures and safety precautions would also be established in the event of a fire. • **Wind**: The risk of severe wind in the Pure Water area is very low (https://hazards.fema.gov/nri/map) as its treatment and pumping facilities are situated in lower wind exposure areas. Warren Facility infrastructure includes wind resiliency measures as identified in site-specific environmental health and safety measures. While facilities are being considered for alternative power supply options like the wildfire response, if power is shut down due to high winds, the inherent operational function of these facilities would also allow for power accommodation related to outages. • **Power Supply Interruptions:** Pure Water deliveries account for a 92% online factor, which accounts for planned outages and downtime. To address power supply interruptions due to natural or climate-related events (e.g., wildfire, wind, or heat), the design of Pure Water facilities would likely include the provision of an alternative power supply (e.g., emergency generators at the Warren Facility, or portable emergency generators) to provide sufficient backup power to maintain operation of critical facilities. If an alternative power supply isn't developed, Metropolitan may need to provide a backup water supply for some of the industrial facilities. In addition, the AWPF design includes the provision for solar power which could support AWPF operations to some degree in an emergency. The AWPF pump station and conveyance backbone pump station clearwells are also sized with added capacity to serve as a buffer for a limited time until power is restored or emergency generators brought onsite.	Moderate
	2. How does it maintain system reliability, including delivery and water quality, under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? **Drought is addressed in Reliability*	Pure Water has the potential to improve overall system resiliency against climate-change-induced hazards, mainly due to the locally supplied source water (treated wastewater) and its adjacency to main delivery points. Compared to imported supplies, which require lengthy conveyance lines to bring source water to the service area, Pure Water minimizes the exposure of its conveyance and distribution system, which could be vulnerable to potential hazards. • **Extreme Heat:** Higher surface temperatures could exacerbate heat waves in urban areas, leading to higher water consumption during these periods. Metropolitan's exposure and vulnerability would likely increase because of the extreme heat hazard, intensified by climate change. Pure Water represents a unique opportunity to invest in local alternatives that would provide additional sources of potable water to aid in extreme heat events. Utilizing Pure Water as a regional supply would supplement the imported water sources that may be susceptible to outages associated with high temperatures. The Pure Water AWPF facilities could shed their power usage for 1-2 days during extreme heat events to avoid blackouts in the region. Since the AWPF facility doesn't require 24/7 operation, as it doesn't serve water directly to consumers, it could take part in an Emergency Load Reduction Program. • **Flood:** Metropolitan's exposure and vulnerability to flood hazards may increase because of climate change impacts, as was recently demonstrated by the soil cover erosion at CRA siphons and tunnels in recent desert storms. Pure Water is an asset that can hedge the potential risk of imported supplies with a local source less impacted by out-of-region flood events. Pure Water enhances regional resilience by increasing groundwater storage in the event of a flooding emergency affecting imported supplies. However, its effectiveness is limited when an in-region flood event affects the water system operation because of restrictions in groundwater basin operations. • **Wildfire:** Pure Water would increase regional water supply storage that could be utilized in the event of a wildfire. Its backbone conveyance pipeline extends approximately 37 miles across Los Angeles County, which increases its effectiveness in fighting regional wildfires with multiple storage facilities. • **Wind:** The vulnerability to wind is tied predominantly to the loss of power, as most of Metropolitan's imported water supplies are power-dependent. Pure Water serves as a regional backup against potential interruption of imported supplies due to power loss along the CRA or SWP aqueduct.	Exceptional

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Resilience Addresses known risks and vulnerabilities Project, Program or Portfolio's ability to perform under climate impacts	3. Describe any resilience co-benefits (e.g., seismic) achieved through this project, program, or portfolio.	***Seismic Resilience*** • Metropolitan's service area is in a seismically active region subject to seismic events. The imported supplies conveyed by the Colorado River Aqueduct and California Aqueduct East and West Branches cross the San Andreas Fault, making them seismically vulnerable. A medium or large magnitude earthquake can halt all water deliveries without warning and cause significant disruption in imported water deliveries to Southern California. Potential outages for these existing conveyance lines are estimated to range from a few months to up to two years. In such an event, besides the emergency storage that could sustain the region for approximately 6 months, the region would need to rely entirely on local supplies while repairs are made. • Pure Water is located on the coastal side of the San Andreas Fault, which could make the water produced by Pure Water available during a seismic event. Pure Water could substantially increase the region's and Metropolitan's seismic resilience by providing locally produced supplies. • Pure Water is estimated to increase regional supplies by up to 8%, which supplements Metropolitan's storage reserves. It enhances seismic resilience by providing water to maintain storage levels in surrounding groundwater basins before a seismic event. This would provide source water for the surrounding Regional Water Authorities (RWA) and Metropolitan in the event of a seismic emergency. In addition, the storage in local groundwater basins from Pure Water supplies could supplement member agency demands when the distribution system is compromised and unable to deliver Metropolitan's imported supplies. • Pure Water helps reduce Metropolitan's dependence on imported water supplies, which are susceptible to seismic activity, by creating a drought-resilient local supply. A lengthy conveyance system is more vulnerable to natural disasters such as fire, landslides, and earthquakes. Such a disaster could impact any component of the State Water Conveyance System and the Colorado River Aqueduct System, resulting in significant impacts on imported supplies. Pure Water reduces Metropolitan's reliance on imported water by providing a year-round, sustainable, and locally managed purified water source that can be utilized by Metropolitan to meet year-round water demands. ***Water Quality Co-Benefits*** • Under future climate change conditions, it is anticipated that constituents such as TDS, sulfate, chloride, and nitrate would increase in source waters from the SWP and Colorado River. • Because of the treatment process proposed, Pure Water is expected to improve the concentrations of constituents such as nitrate, sulfate, and chloride, which would be affected by a warmer climate. Pure Water will also help Metropolitan manage sulfate, chloride, and nitrate concentration changes due to climate change. • Purified water from Pure Water would also help with any blending and long-term salt balance for the three groundwater basins served by Pure Water. • The project provides purified water free of golden mussels and quagga mussels to replenish groundwater basins served by Pure Water.	Exceptional

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Resiliency for the Broader Colorado River Basin:** • By reducing Southern California's dependence on the Colorado River, Pure Water helps preserve supplies for other users (e.g., Arizona, Nevada, tribal nations) who may be affected by climate-related disruptions or seismic events. By leveraging partnerships (further discussed in the Financial Sustainability and Affordability Criterion), Pure Water builds resiliency in cross-state water supply by integrating water supply planning not just across six counties but also across state borders. The project continues to promote partnerships and encourages joint decision-making and cost-sharing, thereby increasing buy-in and long-term sustainability in water supplies. Specific to resiliency, Pure Water contributes by: **Time Bound Targets:** CAMP4W sets strategic goals to ensure long-term water reliability under climate stress. • Creating a drought-resilient supply: Produces up to 75 mgd of purified water by harvesting one of the region's largest untapped sources of cleaned wastewater, a drought-resilient source. • Creating resiliency in Local Agency Supplies by providing a regional supply source with local benefits. Pure Water is a locally controlled, climate-resilient, and seismically safe source of water that can be used to stabilize aquifers to ensure water supplies for local agency partners.

Overall Assessment

The project includes design considerations, such as adequate backup power and site selection to avoid high fire risk zones, to prevent interruption of operation from climate-change-induced hazards; and ensure a sustainable operation. However, local flood events may affect the groundwater basin replenishment operations, which affects the project's effectiveness. By providing a reliable local supply source, which has significantly lower exposure to climate-related and seismic hazards than imported supply sources, the project demonstrates excellent benefits in enhancing climate and seismic resilience for Metropolitan and the region. The overall assessment value is significant.

Overall Assessment Value

Significant

Assessment

Evaluative Criteria	Attributes	Assessment	
Financial Sustainability and Affordability Unit cost	1. What is the cost of the project?	The total cost of the 75-mgd Project based on the latest 2025 program cost update is $8.1 Billion (B). Estimate is inclusive of planning, design and construction expenditures for both Metropolitan and the Sanitation Districts. Deducting the Sanitation Districts' costs associated with the membrane bioreactor and pre-treatment facilities and secured grant funding to date, Metropolitan's cost of the project is therefore only **$6.9 B for 75-mgd (2025 dollars).**	
	2. What are the projected impacts to rates and budget?	The overall rate impacts of Pure Water for 75 mgd, including Operation and Maintenance (O&M), are summarized below: **Pure Water Project** / **75 mgd** **Capital Construction Cost[a]** — **$6.9 B** Annual Capital Financing Costs[b] — $401 M Annual O&M Cost — $125 M Annual R&R Cost — $78 M Production Yield — 77,300 AFY Year of Completion[c] — 2036 **Overall Melded Cost Increase[d]** — 31% **Average Annual Cost Increase Over Construction Period[e]** — 3.1%/yr Notes: a. *Capital costs in 2025 dollars are net of Sanitation District scope items and secured grant awards, which are described in more detail in Section 5 below.* b. *Assumes 100% debt financed for this analysis at 4% rate/30-year term.* c. *Assumes deliveries start in 2036 (75 mgd).* d. *Calculation assumes the project is 100% debt financed over the construction period. If the project is partially funded by PAYGO it will increase the short-term rate impact.* e. *Based on Metropolitan's 2025/26 Revenue Requirement of $1,693 M, over the period from 2026-2036.* Partner contributions from the Sanitation Districts and Colorado River partners can provide a significant contribution towards the capital construction cost, thereby reducing the overall Metropolitan contribution by a commensurate amount. This could reduce the overall anticipated rate payer impacts associated with the Pure Water project. Question 5 provides additional details on secured and potential partner contributions.	
	3. If applicable, what is the unit cost/acre foot in current year dollars? For storage projects, what is the cost/capacity?	Metropolitan utilized multiple unit cost methodologies: 1) Point-in-time unit cost that assumes all debt for the project is issued at once in year one of construction and the project is in full operation in year one; and 2) Lifecycle unit cost that estimates the average unit cost over the 100-year project life and includes needed replacements and refurbishments (R&R). **75 mgd** **Point-in-Time Unit Cost[a]** — $6,800/AF **Lifecycle Unit Cost[b]** — $3,400/AF a. *All costs are shown in 2025 dollars and include Planning, Design, Construction and Financing costs* b. *Assumes deliveries start in 2036 (75 mgd).*	
	4. Does considering life cycle cost change the Financial Sustainability and Affordability?	• Yes, considering life-cycle costs (LCC) provides a more complete picture of financial sustainability and affordability beyond the initial construction period. During the first 30 years following project completion, capital financing costs for the construction of Pure Water represent the most significant expenditure. Once the debt is fully repaid, only O&M and capital repair and replacement (R&R) costs remain. The life cycle cost analysis accounts for all construction-related costs, ongoing O&M, periodic R&R, and projected production yields over a 100-year operational horizon. • A unique aspect of the Pure Water project is Metropolitan's direct influence over the program's capital, O&M and replacement costs and timing – which can provide more surety in planning for improvements as well as financial sustainability and affordability of the project.	Value Very High Cost
	5. Is it eligible for federal and/or state grants? If so, what are the estimated target amount(s)? Is there a local match requirement? If so, how much?	**Partner Contributions** • **Secured ($16.6M):** The Sanitation Districts, Southern Nevada Water Authority (SNWA) and the Arizona Department of Water Resources (ADWR), have contributed a combined total of $16.6 M to date to advance Pure Water planning activities ($6 M each from SNWA and ADWR; $4.6 M from the Sanitation Districts). • **Future (TBD):** ○ Sanitation Districts (approximately $1.1 B for 75-mgd project): The Sanitation Districts have committed to providing the required wastewater flows and land at the Warren Facility for the AWPF. In addition, the Sanitation Districts has also committed to paying for necessary pre-treatment facilities upstream of Metropolitan's advanced water treatment facilities, the membrane bioreactor (MBR) and related Warren Facility upgrades to shared assets. Sanitation District's contribution has been accounted for in the financial analysis. The unit cost and financial impact analysis above deducts the approximately $1.1 B in contributions from the total capital costs. ○ Colorado River Partners: Partnership discussions are underway with SNWA, ADWR and the Central Arizona Water Conservation District; which could potentially provide a significant infusion of capital as well as contributions to O&M costs. SNWA has expressed interest in contributing $1 B to the project for potential exchange of Colorado allocations. Importantly, while cross-state partnerships would reduce Metropolitan's overall share of capital costs, it does not change the point-in-time and lifecycle unit costs. No future Colorado River Partner contributions are assumed in the financial analysis. **Federal and State Funding** • **Secured ($212.2M):** Federal grants and state funding secured to date, includes: State of California Direct Grant ($80M; no match), State of California Pilot Study Grant ($1M, no match), U.S. Department of the Interior, Bureau of Reclamation (Reclamation) WaterSMART: Large-Scale Water Recycling Program (LSWRP) Grant ($125M total, 75% match), Reclamation FY 2022 Planning and Design Grant ($5M, 75% match), and Reclamation WaterSMART Water Reclamation and Reuse Research Grant ($750K, 50% match). • **Future (TBD):** Potential programs include: ○ Low Interest Loans: Environmental Protection Agency (EPA) (Water Innovation Finance and Infrastructure Act (offers up to 49% of the total eligible project costs, with no maximum) and the State of California SWRCB Clean Water/Drinking Water Revolving Fund (CWSRF/DWSRF) Programs (up to $50M per project/agency). ○ Grants: EPA Programs (Brownfield, other), Reclamation Programs (LSRWP Grant (3rd Round has $132 million in funding; 75% match), Title XVI Water Infrastructure Improvement for the Nation (WIIN) Recycled Water Program (up to $30M per Project – partner projects), Desalination and Water Purification Research (up to $1M per research effort), Drought Projects and Water and Energy Efficiency Programs ($3 M per project)); Federal Emergency Management Agency (Southern California Wildfire Recovery Funds (Public Assistance) and Hazard Mitigation Grant Program (HMGP); Congressional Directed Spending Requests; State of California Proposition 4 Climate Bond (State Water Resources Control Board, Water Recycling Program (Total $386M available; grants up to $15M per eligible phase; no match required), Department of Water Resources (DWR) Urban Infrastructure and Climate Adaptation and State Coastal Conservancy Programs); DWR Sustainable Groundwater Management Act; Office of Planning and Research Regional Resilience Grant Program; and CA Coastal Conservancy and Ocean Protection Council - Climate Ready Grant. Match requirements will vary by grant program (typical 25% to 75%).	N/A

Assessment

Evaluative Criteria	Attributes	Assessment	
	6. Does it have a revenue generation component that helps offset costs?	Pure Water presents opportunities for revenue generation, including the following: • **Solar Power:** Metropolitan plans to utilize 11 acres of roof area at the Joint Plant site to maximize energy production for the AWPF. Approximately 1.5 MW of solar power can be generated at the Joint Plant site, but may vary with peak solar hours. Will require the use of batteries to store excess power. The cost of the solar facilities is included in the project capital and O&M cost estimates. • **Electric Vehicle (EV) Charging Stations:** The project includes the construction of three parking facilities with canopy covers that will accommodate 150 to 200 cars. Revenue could be generated associated with utilization of EV Chargers from selling carbon credits through voluntary or compliance carbon markets (e.g. Low Carbon Fuel Standard credits, Voluntary Carbon offsets), and demand management and grid services (e.g. Utility incentives, Time-of-Use Optimization, and Vehicle-to-Grid). The cost of these facilities is included in the project capital and O&M cost estimates. • **Water Sales or Exchanges:** Pure Water is expected to have contracts with direct recipients (local water agencies, industrial and other users) that would commit those agencies to purchase a minimum amount of water. In addition, exchanges with out-of-state partners like SNWA and CAP would allow Metropolitan to retain or trade Colorado River allocations.	N/A

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies and initiatives at Metropolitan.	Metropolitan commissioned the Institute for Applied Economics of the Los Angeles County Economic Development Corporation (LAEDC) in 2025 to complete a study that analyzed the projected economic and fiscal impact of both construction expenditures and ongoing activity associated with Pure Water (LAEDC 2025). Please refer to the 150-mgd assessment for these quantities as reported in the LAEDC report. These benefits would also apply to the 75-mgd Project but to a slightly less extent.

Overall Assessment

Although the 75-mgd project does have significant opportunity to secure federal and state funding and partner contributions, the overall assessment for Financial Sustainability and Affordability is guided by the rating for the life-cycle cost of the project, which is significantly higher than Metropolitan's 2025 Full Service Untreated Rate of $912 (more than 3x).

Overall Assessment Value

Very High Cost

Assessment

Evaluative Criteria	Attributes	Assessment	Value

Adaptability and Flexibility
Flexibility of existing assets Ease/Complexity Scalability
	1. Describe how it works with and/or improves the flexibility of existing assets, plans, policies, or programs and how it improves the ability to adjust to systemwide changes (water quality, source water, distribution interruption).	Pure Water serves as a supply augmentation, allowing Metropolitan to preserve existing sources while bolstering storage both within and outside Metropolitan's service area by offsetting demands on SWP and Colorado River supplies. This is especially valuable when core supplies (e.g., SWP and CRW) are limited due to climate change, regulatory requirements, agreements, or other factors. This new regional supply can augment Metropolitan's existing sources based on regional needs, offering adaptive capacity during dry years or emergencies, by:
		• Providing an additional 77,300 AFY or 75 mgd of a new regional water supply, thus increasing the options available to meet demands and manage storage within and outside Metropolitan's service area. The 75 MGD would provide non-potable reuse (NPR) and indirect-potable reuse (IPR) to Central Basin, San Gabriel Valley MWD, and Three Valleys MWD. New infrastructure will deliver water to existing service connections for groundwater replenishment.
		• Freeing up capacity in the existing conveyance, distribution, and storage systems, increasing flexibility to capture, convey, and manage water supplies.
		System-Wide Flexibility: Pure Water provides purified water to meet demands in the SWP dependent area (SWPDA) agencies supplied by the East Branch of the SWP and agencies in the Central Pool area.
		• ***State Water Project Dependent Areas***: It is estimated that Pure Water will offset approximately 30,000 AFY (30 mgd) of SWP replenishment demands East Branch SWPDA through replenishment in the Central and Main San Gabriel Basins (Central Basin, Upper District, and Three Valleys). This project would help maintain groundwater storage levels during a drought and support the agencies from deferring their deliveries during a drought. These agencies manage their basins with local and imported supplies and have deferred over 40 TAF per year during the dry years of 2021 and 2022. By helping support groundwater basins during dry years, Pure Water can free up additional supplies for other member agencies to use.
		• ***Existing Infrastructure:*** The AWPF at the Warren Facility would also include improvements such as a workforce-training center and expanded treatment facilities. Improvements to both facilities help to support the expanded operations necessary for Pure Water, with added improvements to existing conveyance infrastructure.
		• ***Seasonal Flows:*** There are 8 service connections that are expected to have variable demands on a daily or seasonal basis. It is expected that NPR demand will fluctuate with higher demands during the summer months and lower during the winter months. This will provide more water available for IPR during winter months and less during summer months. This variability would add to the complexity of operations.
		Adjust to System-Wide Changes
		• ***Water Quality Interruptions:*** Pure Water provides high-quality purified water that offers improvements in key constituents like TDS while requiring careful management of others. The purified water is also free of golden mussels and quagga mussels used to replenish groundwater basins. Pure Water would be able to buffer changes in quality from other imported water sources. Pure Water may pose an increased risk of nitrification within Metropolitan's distribution system, especially in those areas already at risk of nitrification, as Pure Water may reduce the demand for treated water resulting in longer detention times in pipelines.
		• ***Source Water Interruption:***
		  ○ During low SWP or emergency drought conditions, Pure Water would offset 30,000 AFY (30 mgd) of demand in SWPDAs and 15,000 AFY (15 mgd) in the Central Pool. Pure Water would allow Upper District and Three Valleys to continue groundwater replenishment during dry years (do not need to defer their deliveries as in 2021 and 2022).
		  ○ During high SWP periods, the need for Pure Water supplies would dimmish as abundant SWP supplies could be used to replenish the groundwater basins. To address this reduced need of Pure Water supplies, production from AWPF could be reduced to 45 MGD to serve 46,000 AFY of NPR demands. Metropolitan is considering purchasing a gravel pit in the Main San Gabriel Basin for dedicated recharge and operational storage capacity that will help store water when the spreading basins are full (e.g., taking flood waters).
		• ***Distribution Interruption:*** During a distribution system interruption (e.g., seismic event), Pure Water could continue operating and delivering water for NPR and IPR, provided it is not directly impacted by the same event. As a new, independent source of supply and conveyance, Pure Water provides redundancy for such an event and can support the region, including partial support to the SWPDAs.
			Moderate

	2. Explain how complex the day-to-day operations might be (example: staffing, maintenance, preparation).	The Pure Water project would require oversight to maintain day-to-day operations of the new IPR treatment process, auxiliary facilities, and a new regional conveyance system. ***Staffing:*** Specialized staff would be required to maintain day-to-day operations across the entire program. • AWPF would be staffed 24/7 with an on-site water quality laboratory for testing and compliance. Conceptual planning efforts estimate approximately 77 full-time-equivalent (FTE) staff would be needed to support the 75-mgd capacity AWPF, which would include Operations, Lab, Maintenance, Process Control, and administrative staff onsite at the AWPF. • One backbone pump station, while not regularly staffed, would require regular maintenance and robust remote monitoring capabilities; approximately 4 FTE operators at the Operations Control Center would be required to maintain both day and night shifts for the entire conveyance system; approximately 3 FTEs for the maintenance of conveyance would also be required, in addition to 3 FTEs for water quality monitoring and compliance along the conveyance system; FTE estimations will be further refined as the program progresses. • To help with operational compellability, Metropolitan is currently exploring the purchase of a gravel pit in the Main San Gabriel Basin for operational storage, which will need to be maintained on a continual basis once operational.	Moderate
	3. How can it be phased (i.e., near-term value of an initial phase; using phasing to manage existing uncertainty; using phasing to allow for adjustments in the project/program/portfolio as new information is developed)?	• Pure Water would provide 75 mgd (77,300 AFY) of non-potable reuse (NPR) and IPR to start, with an ultimate buildout capacity of 150-mgd. While this assessment is based on the 75 mgd concept, Metropolitan is also considering phases and/or stages of 45 mgd and 115 mgd. • Approximately 12 miles of the backbone conveyance pipeline is anticipated to have a larger diameter to potentially accommodate future integration with Pure Water Los Angeles at the Whittier Narrows pump station. The intent of Pure Water is to provide an added layer of flexibility to accommodate future initiatives that would be beneficial to the region, such as Pure Water Los Angeles and the East-West Conveyance Pipeline.	Significant
	4. What is the implementation risk and/or complexity of implementation?	Pure Water includes a comprehensive risk management program, both at the program level as well as for each of the individual projects/elements as these projects advance to the design and construction phases of implementation. The Pure Water team has completed a risk assessment for the program and first two pipeline reaches currently in preliminary design. Risks were identified ranging from funding to social context, including the following highest priority risks: • **Funding Availability and Timing (Funding):** A project of this scale and function requires access to a variety of funding opportunities that range from direct payment to debt financing. The 75-mgd project would require more funding in comparison to the 45-mgd project, but less than the 150-mgd project. • **Public Acceptance (Social Context and Stakeholders):** Concerns surrounding treated wastewater as a potential source water may pose to be an obstacle to Pure Water. To alleviate these concerns Metropolitan continues to host tours and engage communities, building public understanding by providing information and fact-based explanations. • **Permitting and Environmental Compliance (Permitting and Regulatory Requirements):** Metropolitan has undergone an Environmental Impact Analysis and consulted with experts to help mitigate concerns related to regulatory compliance. Permitting and right-of-way easements would also be required along the conveyance system, including most significantly Army Corps Section 408 permits at water body crossings, Union Pacific easements at railroad crossings, and Caltrans easements at freeway crossings. The 75-mgd project would require more permits and easements in comparison to the 45-mgd project, but less than the 150-mgd project simply due to the need for fewer pipeline reaches, fewer pump stations, and no DPR components. • **Staffing for Operations and Maintenance (Resources):** Daily operations require a high degree of flexibility and technical expertise, and specialized certifications and training will be needed. Metropolitan, in its planning, has determined the need for a Workforce Training Center to provide training and certifications for future operators. The 75-mgd project would require more resources along the conveyance system in comparison to the 45-mgd project, but less than the 150-mgd project. • **Market Volatility Supply Chain, Market Escalation, Labor Resources (Procurement):** Inability to maintain cost estimates or manage that uncertainty can lead to escalation of costs and delay. Contractor's availability may vary, further hindering the progress of the program. Technical expertise would be required in construction, potentially limiting the variety of options.	Moderate

Assessment

Evaluative Criteria	Attributes	Assessment	Value
		• **Complex Operations/Processes:** A mixture of advanced treatment facilities, conveyance backbone systems (Reaches 1 through 8A and pump station), recharge facilities, non-potable facilities, and additional support facilities all necessitate extensive planning to effectively function. Storage capacity along the conveyance system and recharge basins would be available in the 75-mgd project, in addition to the AWPF pump station clearwell and the Sanitation Districts' Ocean outfall. The 75-mgd project would also be less complex in comparison to the 150-mgd project, as it requires fewer reaches, fewer pump stations, and no DPR components. • **Competing Water Supplies in Wet Years:** At times, Metropolitan's available supplies exceed its capacity to beneficially use or store them, resulting in lost or unmanaged water. This occurred most recently in 2023, and typically occurs in years with lower demands and higher SWP allocations. Since Pure Water would operate continuously, even during years of abundant supplies, the project could contribute to additional unmanaged supplies under such conditions.	

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Design Flexibility:** The flexibility and adaptability embedded in the design and operations of Pure Water would help Metropolitan provide reliable water supplies throughout the region under numerous climate scenarios beyond 2045. **Plans/Policies and Initiatives:** Pure Water builds on and strengthens Metropolitan's existing resiliency plans, policies, and initiatives by aligning with and advancing key strategic goals, including the following. • **CAMP4W:** Long-term climate resilience planning through CAMP4W, combined with Pure Water's technological innovations such as advanced data analytics, data monitoring, and digital tools, would allow Metropolitan to leverage adaptive management to provide reliable water supplies in changing conditions beyond 2045. • **Integrated Water Resource Plan (IRP):** To meet the IRP's goal of a flexible supply, Pure Water allows for an adaptive approach in its phasing. Pure Water provides opportunities to integrate with existing programs and projects. • **Water Supply Reliability Program:** Local control, reuse, and groundwater replenishment through Pure Water allows increased flexibility to provide water in times of high demand. Pure Water also allows adjustments to address issues due to interruptions. **Time Bound Targets:** • **Equitable Access to Supply**: The flexibility of Pure Water allows for equitable access to purified water in SWPDAs and future integration with other projects. • **Local Agency Supply:** Provides access to purified water for all 26 member agencies supplied by Metropolitan, including delivery during times of drought as well as customized delivery options based on agency needs.

Overall Assessment

The Pure Water 75 mgd project would enhance flexibility within Metropolitan's distribution system as a new independent source of supply and conveyance that can help address a portion of the SWPDA demands during drought conditions. The benefits of the project would be most significant during dry years, when Pure Water reduces reliance on other supplies (SWP and CRW) and frees capacity with the existing distribution system. However, the project introduces significant operational complexities, including increased staffing needs, required pumping to the groundwater basins, and challenges associated with managing operations during wet years when significant supply surpluses occur. Phasing the project provides flexibility to adapt to the region's evolving water supply and demand needs.

Overall Assessment Value

Moderate

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Equity Programs for underserved communities Scale of community engagement Public health benefits Workforce development	1. What percentage of the area served by the project, program, or portfolio includes underserved communities and what percentage of the project/program/portfolio area is in underserved communities?	• Based on CalEPA's OEHHA California Communities Environmental Health Screening Tool (CalEnviroScreen) and CalEnviroScreen 4.0 data: o Approximately 50% of the area that would be served by Pure Water is disadvantaged. o Areas where new program facilities would be built, approximately 71% of the population that is within one mile of the proposed AWPF and 37-mile backbone conveyance system, falls within disadvantaged communities. Specifically, much of Carson, where many facilities would be located, ranks in the highest percentile of disadvantaged communities. • Based on Water Code §79505.5, which defines DACs based on income (specifically, households earning 80% or less of the statewide median household income): o Approximately 35% of the area served by Pure Water qualifies as disadvantaged, and approximately 35% of the population within one mile of the proposed AWPF and backbone conveyance system reside within disadvantaged areas. • Pure Water's facilities and components would traverse numerous census tracts (including tracts within cities of Carson, Norwalk, Santa Fe Springs, Pico Rivera, Industry, El Monte, Baldwin Park and Irwindale), however, potential environmental impacts (e.g., air, noise, and hazardous materials) arise mainly during construction and are addressed by identified mitigation measures. o Approximately 8.2 million people would be direct recipients of water from a 75-mgd project. This includes the population of West Basin, LADWP, Torrance, Long Beach, Central Basin, Compton, Upper Water, and Three Valleys. All communities where new facilities are planned would directly benefit from the reliable, high-quality water supply. Many of these communities, in particular disadvantaged communities, rely solely on groundwater basins for their water supply. o Pure Water enables Metropolitan to fill supply shortfalls with 77,300 AFY of drought-resilient water supplies, which augments local groundwater basins by filling 15% of the supply deficit, thereby helping ensure the long-term sustainability of these basins and supply reliability.	Significant
	2. What specific community benefits are included in the project, program, or portfolio?	• **Workforce Development:** Per the Los Angeles Economic Development Corporation economic impact study, construction of Pure Water at full build-out would create 75,660 direct and industry-related job years. Pure Water operations would be expected to support nearly 2,500 jobs annually. Note this is based on the 150 mgd program; job data is not available for the 75 mgd stage but is expected to be more than half this amount. The Pure Water project labor agreement (PLA) would set a goal for 60% local worker participation, and Metropolitan continues to explore apprenticeship opportunities. In early 2025, an MOU to advance work readiness opportunities and increase the qualified candidate pool for job opportunities was signed by the City of Carson, Metropolitan, Sanitation Districts, West Basin Municipal Water District, and the South Bay Workforce Investment Board. Metropolitan and the Sanitation Districts are planning for a workforce training center next to the AWPF, providing career pathways both for Pure Water operations and for the broader water sector. • **Small Business Opportunities:** Pure Water fosters small business growth by providing diverse and equitable procurement opportunities, with a focus on local business participation through Metropolitan's Business Outreach Program. In March 2024, Metropolitan hosted a MetWorks event aimed at sharing information on contracting opportunities with small businesses. Metropolitan also hosted a construction and apprenticeship resource fair. • **Water quality:** Pure Water would produce high-quality water low in total dissolved solids (TDS) and free of golden mussels and quagga mussels, which would improve groundwater quality in terms of lowering TDS, nitrate, sulfate, and chloride concentrations, thereby protecting the public water supply and the health of the communities that depend on these basins. • **Community benefits program:** A framework for a potential community benefits approach is currently in development. The framework focuses on providing benefits to communities located near the proposed AWPF and pipeline alignment that may experience environmental impacts from a program designed to serve the broader region. Potential benefits may include both direct actions and the creation of a community benefits fund to help address local impacts by advancing priority projects and initiatives that enhance climate resilience and improve overall quality of life. • **Community space:** Pure Water may include ancillary facilities, such as meeting rooms, tour facilities, native gardens, and a learning center, that may be designed for multifunctional use and would encourage education, collaboration, and greater community involvement. • **Good Neighbor Guidelines:** When undertaking construction projects, Metropolitan and Sanitation Districts strive to minimize the impact of work on local communities and restore impacted areas to their original condition or better. The agencies are committed to communicating potential impacts, responding to inquiries in a timely manner, and maintaining an active dialogue before and during construction. • **Additional community and environmental elements:** o Plans for the AWPF site also include plugging oil wells located on the site and installing EV charging stations, which could be available for public use. o Metropolitan and Sanitation Districts are also considering planting additional trees and vegetation within the AWPF footprint and near Pure Water components to help offset greenhouse gas emissions. o Metropolitan intends to pursue Envision verification, a sustainable infrastructure framework that includes standards to promote public health and enhance quality of life for surrounding communities.	Exceptional

Assessment

Evaluative Criteria	Attributes	Assessment	Value

Equity
Programs for underserved communities
Scale of community engagement
Public health benefits
Workforce development
	3. What level of community, tribal, and partner engagement is included in the project, program, or portfolio?	An Outreach Charter guides outreach efforts and includes a commitment to engaging with disadvantaged communities to listen, communicate transparently, and involve those impacted by the program. Outreach and communications plans provide a framework for implementing outreach activities.
		• **Community Engagement:** Outreach efforts to date include:
		  ○ In-person and virtual tours of the Grace F. Napolitano Pure Water Southern California Innovation Center, including school field trips, public tours, and special events.
		  ○ Metropolitan staff briefings and presentations for community groups, business organizations, at conferences, and city councils.
		  ○ Booths at community events throughout the program area to share information and connect with residents.
		  ○ Partnering with community-based organizations located near proposed facility sites to create unique engagement opportunities to involve residents in program development.
		  ○ Regular collaboration with regulators to provide program updates and seek feedback. Regular meetings and listening sessions with environmental organizations.
		  ○ Staff continue to actively engage with cities, jurisdictions, organizations, and property owners in areas where proposed program facilities may be located.
		• **Environmental Review (CEQA) Process**: Metropolitan conducted an extensive outreach campaign for both the Notice of Preparation and the Draft Environmental Impact Report (DEIR). Activities included hosting public meetings; mailing postcards to addresses within 500 feet of proposed facilities and components; placing ads in English and Spanish newspapers; issuing a press release; distributing flyers to public libraries and other community locations; developing a dedicated webpage; creating easy-to-understand informational materials on the environmental review process; sharing updates on Metropolitan's and the Sanitation Districts' social media channels; hosting booths at local events; and meeting with business organizations, environmental groups, and community-based organizations.
		• **Communications/Website:** A variety of communication resources have helped engage the public and raise awareness about the program. Metropolitan has developed a robust program website that serves as an information hub, as well as videos, multi-lingual brochures, hundreds of social media posts, and a dedicated Pure Water quarterly e-newsletter with more than 1,000 subscribers. Pure Water has been featured in both local and national news coverage. Once the program is approved, extensive outreach will expand to include communities that would directly receive water from the program and evolve to include engagement on design and construction.
		• **Tribal engagement:** Metropolitan has engaged with tribes and tribal organizations with meetings, discussions, and regular program updates. Staff reached out to dozens of contacts and connected with the Gabrieleño Band of Mission Indians-Kizh Nation, Gabrieleno/Tongva Band of Mission Indians, Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians), Soboba Band of Luiseño Indians, Fernandeño Tataviam Band of Mission Indians, United American Indian Involvement, American Indian Chamber of Commerce, and Sacred Places Institute. Furthermore, Metropolitan extensively consulted with the Gabrieleño Band of Mission Indians-Kizh Nation on the development of the Tribal Cultural Resources analysis of the Draft EIR. Their feedback was incorporated into the environmental review, and as a result Metropolitan would provide environmental awareness training prior to construction and secure a Native American (Tribal) Monitor from or approved by the Gabrieleño Band of Mission Indians-Kizh Nation during construction.
		• **Water Reuse Collaborative:** Metropolitan also partnered with program participants and other water reuse agencies to establish the Water Reuse Collaborative, which brings together leadership from the region's key water recycling entities to coordinate strategy, combine resources, and set shared goals to advance water recycling efforts. The Collaborative meets quarterly to support the long-term success of water reuse projects and regional initiatives.
			Exceptional

	4. Describe the extent and reasons why there is broad community support/opposition or potential for support/opposition.	Community Support: • Organizations across a wide range of sectors, including business, labor, environmental, and civic groups, recognize the importance of developing a new climate-resilient water supply that also enhances seismic resiliency and reduces reliance on imported water sources. Additional benefits, such as replenishing groundwater basins and improving basin water quality, further strengthen public support. • Public opinion research conducted in 2022 and 2024, along with feedback collected from tours of the demonstration facility, further confirms public support for Pure Water Southern California. • Workforce development opportunities, community-focused design, and potential for additional community and environmental benefits also contribute to strong community backing. • Tours of the Napolitano Innovation Center and explanations of the advanced purification process help build support and understanding of the high-quality water that would be provided by the program. • Community members and stakeholders continue to express strong support for the program as reflected in the 72 letters of support submitted as part of Metropolitan's application for the U.S. Department of the Interior's Bureau of Reclamation WaterSMART Large-Scale Water Recycling Program Grant, with endorsements from congressional leaders, state and local officials, environmental organizations, cities, and regional agencies. Community Concerns: • There are concerns related to energy use, greenhouse gas emissions, overall costs, and water quality; steps are being taken to address these issues.	Significant

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Partnerships and Collaborations:** • Pure Water is a product of the creative and collaborative partnership between Metropolitan and the Sanitation Districts. Pure Water continues to foster new partnerships with more than 15 program partners, including member agencies (Central Basin Municipal Water District [MWD], West Basin MWD, City of Torrance, Long Beach Utilities, Three Valleys MWD, Los Angeles Department of Water and Power, Upper San Gabriel Valley MWD, and others); groundwater basin managers (Water Replenishment District, Main San Gabriel Basin Watermaster); Colorado River partners (Southern Nevada Water Authority, Arizona Department of Water Resources, Central Arizona Project); and other key partners (U.S. Army Corps of Engineers, the State Water Resources Control Board's Division of Drinking Water, Southern California Edison, Los Angeles County Department of Public Works, California Department of Transportation, and other regulators). • Pure Water has received support from the U.S. Bureau of Reclamation, California Department of Water Resources, and other agencies and continues to promote federal and state engagement. • Pure Water continues to encourage the development of partnerships with universities, research institutions, and technology providers to advance water purification science, monitoring, and public health protections; provides an opportunity for partnerships with community-based organizations that have helped build trust and relationships for Metropolitan with underserved communities; and created opportunities for collaboration with the environmental community to advance the program. **Metropolitan, Regional and Multi-State plans, policies, and initiatives:** • Pure Water meets the goals and objectives of multiple Metropolitan plans, policies, and initiatives, including CAMP4W, Integrated Resources Plan (2020), Water Shortage Contingency Plan (2021), and Urban Water Management Plan (2020). Pure Water builds upon Metropolitan's Diversity, Equity and Inclusion (DEI) commitment and initiatives and supports the DEI framework by promoting inclusion, broad stakeholder engagement, and workforce development while reinforcing Metropolitan's commitment to equitable water access • Pure Water meets the water supply and quality objectives of State and regional resource management plans (including 2023 California Water Resiliency Portfolio, California Water Plan (2023), SWRCB Recycled Water Policy, Water Quality Control Plan for the Los Angeles Region (Basin Plan), and the Greater Los Angeles County Integrated Regional Water Management Plan). • Pure Water advances several multi-state plans, including the Lower Basin DCP, the Colorado River Interim Guidelines for Lower Basin Shortages, and the Coordinated Operations of Lake Powell and Lake Mead (2007 Interim Guidelines), helping set the framework for sustainable management of the Lower Colorado Basin.

Overall Assessment

A 75-mgd Pure Water program would provide water to an area of which 35-50% of the communities are considered disadvantaged. Approximately 35-70% of the communities within one mile of program facilities are considered disadvantaged. The program would provide many community benefits including workforce development, jobs, business opportunities, educational programs, community space and groundwater quality improvements. Community, tribal and partner engagement is extensive and meaningful. Pure Water has strong support and steps are being taken to address any community concerns related to energy use, greenhouse gas emissions, overall costs, and water quality.

Overall Assessment Value

Significant

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Environmental Co-Benefits Greenhouse gas emissions Benefits Ecosystem services Habitat/wildlife benefits	1. What are the estimated greenhouse gas emissions or enhanced carbon sequestration, and how does it impact the carbon budget, as defined by the Climate Action Plan?	Based on the Pure Water Draft Environmental Impact Report (DEIR), the potential impacts associated with construction and operation of Pure Water facilities, include: • Total construction-related greenhouse gas (GHG) emissions are estimated to total 69,536 metric tons (MT) CO_2e across all project-level components. • For the first year of full operations (expected in 2036), annual emissions are estimated to total 58,184 MT CO_2e. By 2045, annual emissions are projected to be 21,795 MT CO_2e, due to compliance with Senate Bill 100 requiring a 100% carbon-free electricity grid. Metropolitan has committed to a series of up-front measures to offset Pure Water's GHG emissions including but not limited to: • **Onsite Renewable Energy:** Installation of photovoltaic solar panels with a total power rating of at least 1.5 megawatts at the A.K. Warren Water Resources Facility. • **Electric Vehicle Charging:** Installation of 100 Level 2 and 15 Level 3 electric vehicle chargers at the Warren Facility. • **Energy Recovery:** Installation of inter-stage pumps in the reverse osmosis system to reduce energy use; and installation of Energy Recovery Devices on the concentrate pumping systems to recover energy. • **Biogenic Carbon Supplement:** Addition of a biogenic carbon supplement, such as glycerin-based MicroC-2000 manufactured by Environmental Operating Solutions, Inc., to support both denitrification and biological phosphorus removal at the AWPF. • **Plug Oil Wells:** Plugging of eight existing oil wells currently located at the Joint Treatment Site. Metropolitan was below its 2022 Climate Action Plan milestone GHG emissions budget for the 2005-2022 period, with Metropolitan having emitted approximately 5,408,096 MT CO_2e, representing just over half (55%) of the maximum emissions budgeted through 2022. The overall carbon budget has 9,252,380 MT CO_2e remaining for the 2023-2045 period. Metropolitan has strategies listed in the CAP to reduce overall GHG emissions by 2,003,695 MT CO_2e using Phase 1 actions under the high emissions scenario. Therefore, the forecasted carbon budget exceedance of 1,068,138 MT CO_2e under the high emissions scenario can be addressed by implementation of the 2020 CAP. • Pure Water was evaluated for consistency with this budget and under the highest emissions forecast scenario, implementation of CAP measures would allow Metropolitan to remain within its carbon budget and achieve both its 2030 and 2045 targets. • Pure Water would be consistent with the CAP through both 2030 and 2045 and would not result in a significant impact related to GHG emissions.	Moderate
	2. In what way and to what degree does it provide additional ecosystem services?	• The Sanitation Districts may implement an enhanced source control program, which would reduce certain constituents in wastewater effluent that is currently discharged to the ocean via the outfall, which could improve the quality of future wastewater discharges. • Pure Water produces an average of 77,300 AFY of purified water for groundwater recharge into the West Coast, Central, and Main San Gabriel basins, thus contributing to sustaining groundwater levels. Sustained groundwater levels: support ecosystems, vegetation, and habitat dependent on groundwater; maintain soil moisture; provide a buffer against drought; and support wildlife by preserving habitats and reliable water sources essential for survival. • Reduces reliance on imported water, which could improve the health of both the Colorado River and Sacramento-San Joaquin River watersheds by potentially reducing the amount of SWP and CR water imports to the region.	Limited
	3. To what extent does it protect, improve, or expand wildlife and fish habitat and/or affect flows in ways that improve ecological functions for native species?	• Temporary construction areas would be restored to pre-construction conditions and areas of marginal or poor habitat would be improved, as feasible, by restoring these areas with appropriate native vegetation thereby providing habitat for wildlife. With the avoidance of sensitive areas and restoration and enhancement of temporary construction areas, Pure Water would increase the quality and quantity of suitable habitat for native species. • Groundwater recharge from Pure Water could support riparian vegetation and habitat and provide surface water for federally listed threatened or endangered plant and wildlife species along the backbone alignment and considerably beyond the project area. • Pure Water could offset imported water demands (SWP) on the Sacramento-San Joaquin River watershed, or its diversions timed to balance environmental water demands thereby providing benefits to the sensitive ecosystem of the Bay Delta, which serves as a critical habitat for listed species. Reducing dependence upon imported sources would help increase the sustainability of both watersheds to improve the health of the ecosystems. • The Draft Environmental Impact Report for Pure Water identifies wildlife and environmental stewardship measures, including Environmental Awareness Training, Temporary Construction Fencing, Nesting Bird and Raptor Avoidance, Nighttime Lighting, Invasive Plant Species, and Protected Tree Avoidance and Mitigation to protect and improve wildlife and fish habitat.	Limited

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Metropolitan, Regional and Multi-State plans, policies, and initiatives:** • Climate Adaptation and Emissions Goals: Pure Water aligns with Metropolitan's Climate Adaptation Master Plan for Water (CAMP4W) and Climate Action Plan (CAP) by 1) advancing reliable, equitable, and climate-resilient water supplies; and by 2) reducing the energy use and emissions associated with long-distance water imports. The project lowers groundwater pumping costs and related pumping emissions by raising groundwater water table levels, especially in overdraft scenarios. • Pure Water supports innovation in water purification and reuse on a regional scale, thereby setting a precedent for other regions to adopt similar methods and sustainable practices. Pure Water's innovative treatment approaches, contingent on regulatory approval, opens the door for other agencies to invest in similarly innovative processes, benefiting from the many years of research and demonstration through testing Pure Water. • Project supports both Metropolitan's CAP and UWMP in reducing emissions from daily operations.

Overall Assessment

The 75-mgd Pure Water Program would provide limited environmental co-benefits. The program would recharge an average of 77,300 AFY of purified water into the West Coast, Central, and Main San Gabriel groundwater basins to help sustain groundwater levels; support ecosystems; and provide a buffer against drought. It would reduce reliance on imported water supplies, with indirect benefits to sensitive ecosystems such as the Bay-Delta, while remaining consistent with Metropolitan's Climate Action Plan. Environmental stewardship measures such as oil well closures, renewable energy features, habitat restoration, and wildlife protection practices would further reduce impacts and contribute to long-term climate resilience.

Overall Assessment Value

Limited

Attachment No. 3

CAMP4W Preliminary Assessment for Pure Water Southern California (150 mgd)

Metropolitan Water District of Southern California
CAMP4W Preliminary Assessment of PWSC 150

September 30, 2025

Metropolitan is committed to meeting its mission in the face of a changing climate by developing projects and programs that advance Time-Bound Targets, consistent with the Board's priorities. This comprehensive assessment is a key part of the Climate Decision-Making Framework and will be used to support Board deliberations on which projects and programs Metropolitan should pursue.

Summary of Assessment and Staff Recommendation

Each criteria and attribute presented on the following pages includes a description of the quantitative and qualitative measures relevant to the proposed project or programs, as well as Metropolitan staff's recommendation.

Project/Program/Portfolio at a Glance

Title of Project/Program/Portfolio

Pure Water Southern California (150 mgd)

Status (planning/design/implementation)

Conceptual Planning & Design

Capacity

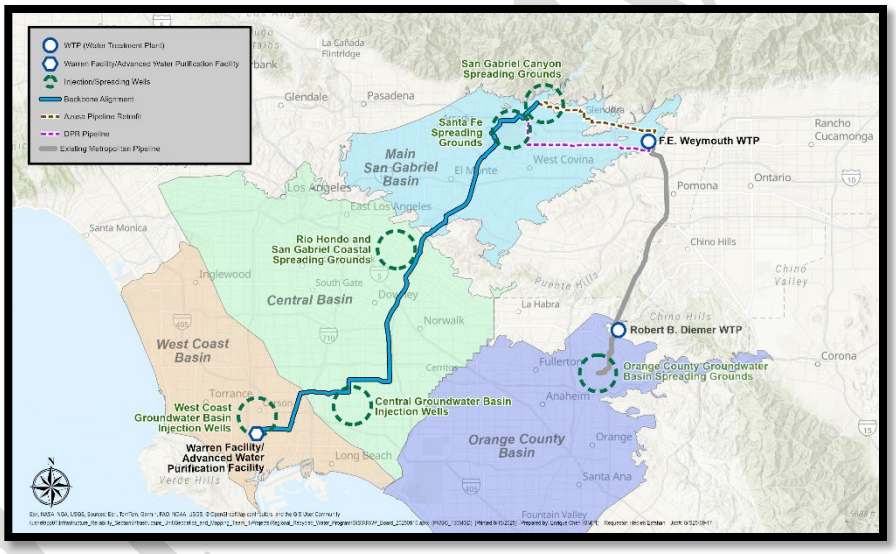
150 mgd (155,000 AFY)

Capital Cost:

$9.6 Billion

Operation/Maintenance or Ongoing Cost:

$245 Million/year



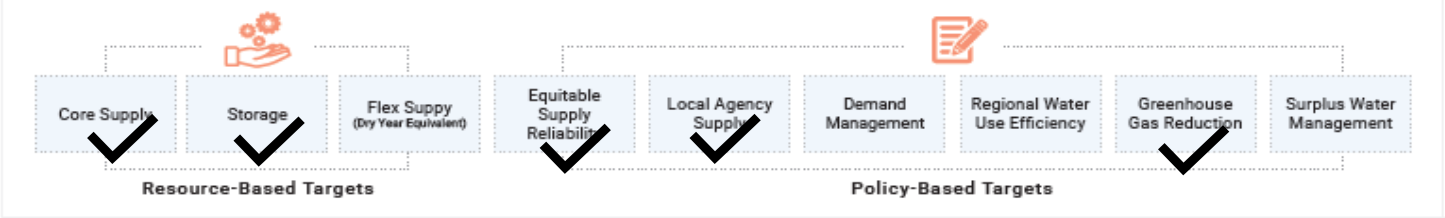
Description and how the project/program/portfolio supports water supplies, reliability and/or delivery

Pure Water Southern California (PWSC or Pure Water) is a partnership between Metropolitan and the Los Angeles County Sanitation Districts (Sanitation Districts) to beneficially reuse cleaned wastewater currently discharged to the ocean from the Sanitation Districts' A.K. Warren Water Resource Facility (Warren Facility) in Carson. Pure Water includes the construction of an Advanced Water Purification Facility (AWPF), over 50 miles of large diameter pipeline from Carson to La Verne, six pump stations, nine service connections, and various recharge facilities. The project creates a new sustainable water supply by creating 155,000 acre-feet per year (AFY) or 150 mgd of purified water by 2041. Purified water would be used to recharge the West Coast, Central, and Main San Gabriel groundwater basins for indirect potable reuse (IPR) and supplement supplies at two of Metropolitan's existing treatment plants for direct potable reuse (DPR). Envisioned to be accomplished in two phases: Phase 1 would deliver up to 115 mgd by 2036 and Phase 2 would deliver an additional 35 mgd by 2041. Metropolitan is evaluating the staging of Phase 1 deliveries to better address anticipated supply gaps, reduce the cost impacts of the program, as well as allow for an earlier delivery of purified water by 2035. The project creates a new regional water supply to balance local water supplies with imported Colorado River and State Water Project supplies. The project would increase Metropolitan's water supply reliability and regional water security by diversifying the regional supply portfolio, reducing reliance on imported water, increase operational flexibility, and enhance regional and cross-state partnerships.

Portfolio view and additional potential companion projects/programs/portfolios

Pure Water, as an early implementation project, provides enhanced system flexibility to improve supply reliability in the near term and long-term reliability by developing infrastructure and new supplies to meet increased demand and offset existing supply deterioration due to climate change. The early implementation of Pure Water allows for integration with Metropolitan's Drought Mitigation Action Portfolio Category 1 Projects (including Diamond Valley Lake to Rialto Interconnection and Sepulveda Feeder Pump Station #2), strengthening the reliability of the region's water supplies and benefiting State Water Dependent Areas. Pure Water also provides opportunities for integration with longer-term projects in the Drought Mitigation Action Portfolio such as the East West Conveyance Pipeline for increased operational flexibility. There are opportunities to coordinate with other regional projects including Pure Water Los Angeles. The addition of new surface storage projects would further strengthen the Project benefits through the storage of purified water during wet years for use in dry years.

What Time-Bound Targets Does the Project/Program/Portfolio Address?



Boxes with check marks (✓) indicate that the project/program/portfolio advances a Time-Bound Target.

Summary of Assessment and Staff Recommendation *(see footnote on Page 2 for ranking guidelines)*

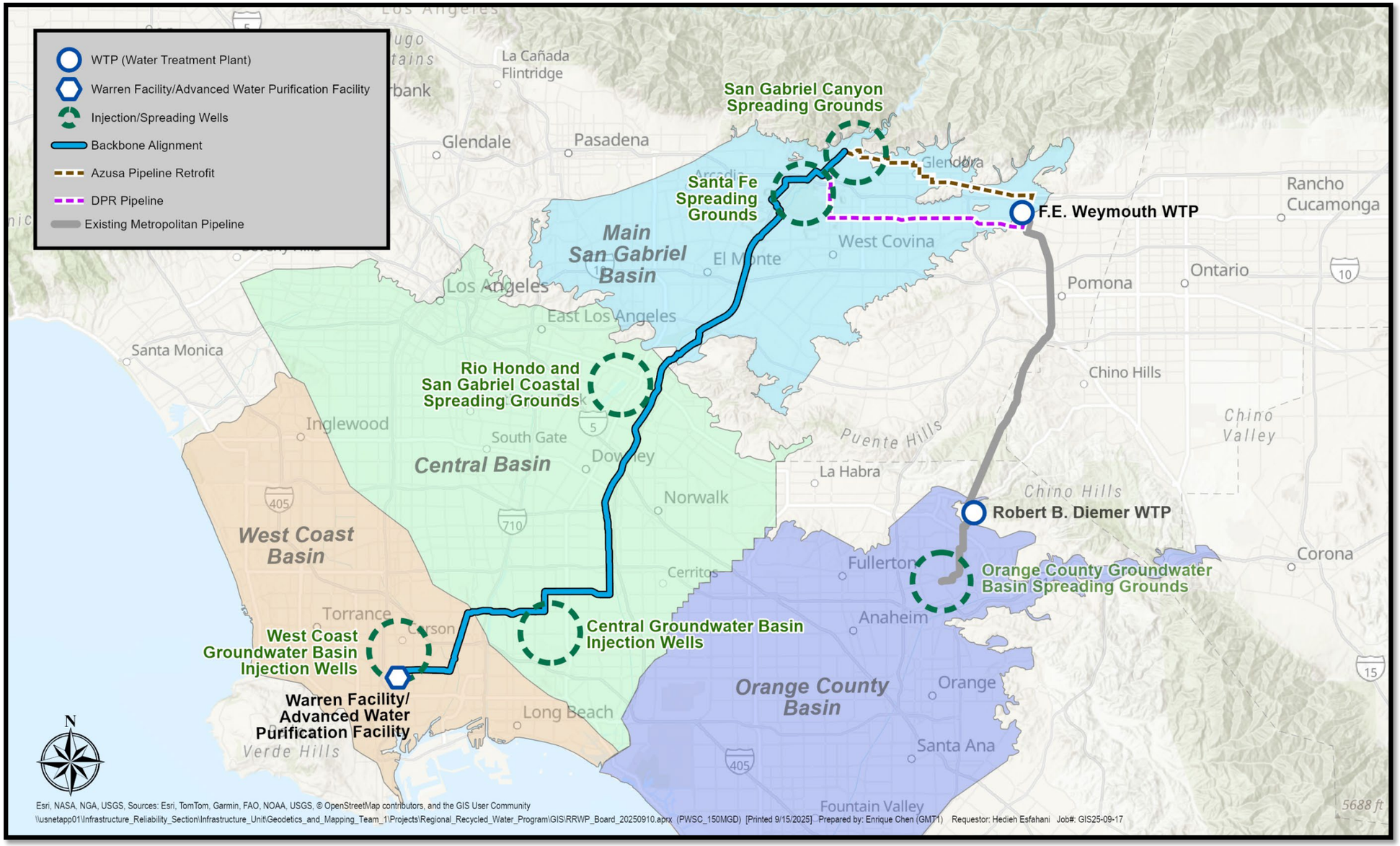
Reliability	Resilience	Financial Sustainability and Affordability	Adaptability and Flexibility	Equity	Environmental Co-Benefits
Significant	Significant	Very High Cost	Moderate	Significant	Moderate

Ranking Guidelines at the Attribute Level

Defining to which level a project, program or portfolio will deliver CAMP4W objectives for each attribute category.

Exceptional	The project/program/portfolio directly and completely addresses the benefits being assessed by the question/statement.
Significant	The project/program/portfolio directly addresses most elements of the benefits being assessed by the question/statement.
Moderate	The project/program/portfolio only addresses some elements of the benefits being assessed by the question/statement or addresses them indirectly.
Limited	The project/program/portfolio only addresses few or minor elements of the benefits being assessed by the question/statement or provides minor indirect benefits.
Very Limited	The project/program/portfolio does not provide any or very limited benefits to those being assessed by the question/statement.
Undetermined or Not Applicable	The ranking for this project/program/portfolio is not determined at this time or the attribute is not applicable

Map or Location Information Related to the Project, Program or Portfolio



Flows:
- 90 mgd IPR
- 60 mgd DPR

Year Complete:
- 2041

Facilities:
- AWPF
- Reaches 1 to 8B
- 9 service connections
- 2 backbone pump stations
- New DPR pipeline & pump station
- Satellite DPR Facility

Assessment

<table>
<tr><th>Evaluative Criteria</th><th>Attributes</th><th>Assessment</th><th>Value</th></tr>
<tr><td rowspan="2">Reliability
Supply Performance
Equitable Reliability</td><td>1. To what extent does it help meet regional supply reliability objectives under changing climate conditions?</td><td>
<u>Assumptions for Pure Water 150 MGD</u>
• Assumes Pure Water 45 million gallons per day (MGD) is online in 2035 and Pure Water 75 MGD is online in 2036.
• Additional supply from Phase 1 of Pure Water 150 MGD is also operational in 2036.
• The remaining supply from Phase 2 of Pure Water 150 MGD is operational in 2041.
• Total imported water supply offset modeled from Pure Water 150 MGD is approximately 120 mgd (123,600 AF). (30 mgd assumed to replace existing recycled water use that may translate to imported water demand without Pure Water.)
• No modeled benefits for State Water Project Dependent Areas (SWPDA) served by Jensen, as these benefits are not realized without the construction of Pure Water Los Angeles (LA).
• Modeled new replenishment demands for West Basin and Long Beach that could be served by the Project. This would likely lead to increased groundwater pumping, offsetting a demand on Metropolitan.
• Assumes existing untreated replenishment demand from Central Basin Municipal Water District (MWD), Upper Water, and Three Valleys, to be met by the Project.
• Model assumes Metropolitan receives San Gabriel Valley Municipal Water District's (SGVMWD) Table A allocation each year in exchange for Metropolitan delivering 11,300 AF to SGVMWD.

<u>Analysis and Results</u>
Tables 1 and 2 reflect the probability of shortage results from the reliability analysis. The tables compare the probability of shortage from the IRP 2025 Update results (herein referred to as “Base Case”) measured against the probability of shortage for the modeling results that incorporate Pure Water 150 MGD (referred to as “Pure Water 150 MGD”). Table 1 shows that Pure Water 150 MGD reduces the probability of shortage in Scenario C in forecast years 2040 and 2045. Table 2 shows that Pure Water 150 MGD reduces the probability of shortage in Scenario D in forecast years 2035, 2040 and 2045. Thus, in both Scenarios C and D, Pure Water 150 MGD enhances Metropolitan’s reliability within the forecast period when compared to the Base Case.

In Scenario C, the Base Case results show a maximum magnitude of shortage in 2045 of 607 TAF, which is reduced to 424 TAF when Pure Water 150 MGD is operational. Similarly, Scenario D of the Base Case show a maximum magnitude of shortage in 2045 of 1.31 MAF and is reduced to 1.18 MAF when Pure Water 150 MGD is online.

Table 3 provides insight into the difference in storage (defined as the “benefits”) from a specific project for 2045 with two metrics: the 2045 Average Benefit and the 2045 Maximum Benefit. In Table 3, the 2045 Average Benefit reflects the storage benefit of Pure Water 150 MGD across hydrologic conditions for 2045, on average. The 2045 Maximum Benefit is the maximum storage benefit of Pure Water 150 MGD across hydrologic conditions for 2045. These metrics are achieved by subtracting the storage amounts in 2045 between the Base Case and Pure Water 150 MGD for Scenarios C and D. For example, in 2045 Scenario C, Pure Water 150 MGD provides an average storage benefit of 265 TAF and a maximum storage benefit of 829 TAF. The quantities shown in Table 3 represents supply that was produced and stored, but not used to offset shortage in the planning horizon. This value is also helpful in quantifying the amount of resources stored for use beyond the current planning horizon.

While Tables 1 and 2 provide an understanding of the likelihood shortage, Table 4 quantifies the reduction in shortage as a result of implementing the proposed project. One limitation when comparing the probability of shortage, as is done in Tables 1 and 2, is that the likelihood of shortage is only reduced if the project is able to fully eliminate the shortage. Table 4 provides insight into the total reduction in shortage (defined as the “benefits”) from a specific project over the planning horizon (2025 to 2045) with two metrics: the Average Cumulative Benefit and the Maximum Cumulative Benefit. The Average Cumulative Benefit reflects the benefit of Pure Water 150 MGD across hydrologic conditions for the planning horizon, on average. The Maximum Cumulative Benefit is the maximum benefit of Pure Water 150 MGD across hydrologic conditions for the planning horizon. These metrics are achieved by subtracting the shortage amounts between the Base Case and Pure Water 150 MGD for Scenarios C and D. For example, in Scenario C, Pure Water 150 MGD provides an average benefit of 522 TAF and a maximum benefit of 1,166 TAF, across the planning horizon.

While Pure Water 150 MGD reduces the shortage probability and magnitude, the proposed project increases the probability of net surplus. An increase in the probability of net surplus means that there is a higher likelihood of unmanaged supplies. Tables 5 and 6 provide the probability of net surplus for Scenarios C and D in 2045. In Scenario C, the Base Case has a maximum magnitude of net surplus is 1.3 MAF in 2045, which increases to 1.51 MAF with Pure Water 150 MGD online. In Scenario D, the Base Case has a maximum magnitude of net surplus of 770 TAF in 2045, which increases to 1.1 MAF when Pure Water 150 MGD is operational.

It should be noted that the information shown in Tables 5 and 6 does not alter the reliability assessment scoring; however, it provides valuable context to help decisionmakers identify projects that are efficient, balance supply and demand, and support a fuller understanding of the project’s big picture. Other investments would be needed to realize the benefits of unmanaged supplies.

Table 1
Scenario C: Probability of Shortage
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 150 MGD</th></tr>
<tr><td>2030</td><td>3%</td><td>3%</td></tr>
<tr><td>2035</td><td>4%</td><td>4%</td></tr>
<tr><td>2040</td><td>15%</td><td>11%</td></tr>
<tr><td>2045</td><td>18%</td><td>10%</td></tr>
</table>
Table 2
Scenario D: Probability of Shortage
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 150 MGD</th></tr>
<tr><td>2030</td><td>7%</td><td>7%</td></tr>
<tr><td>2035</td><td>11%</td><td>10%</td></tr>
<tr><td>2040</td><td>44%</td><td>38%</td></tr>
<tr><td>2045</td><td>58%</td><td>49%</td></tr>
</table>
Table 3: Difference in MWD <u>Storage</u> between Base Case and Pure Water 150 MGD in <u>2045</u> (TAF)
<table>
<tr><th>Type</th><th>Scenario C</th><th>Scenario D</th></tr>
<tr><td>2045 Average Benefit</td><td>265</td><td>378</td></tr>
<tr><td>2045 Maximum Benefit</td><td>829</td><td>842</td></tr>
</table>
Table 4: Difference in <u>Shortage</u> between Base Case and Pure Water 150 MGD for <u>2025-2045</u> (TAF)
<table>
<tr><th>Type</th><th>Scenario C</th><th>Scenario D</th></tr>
<tr><td>Average Cumulative Benefit</td><td>155</td><td>522</td></tr>
<tr><td>Maximum Cumulative Benefit</td><td>603</td><td>1,166</td></tr>
</table>
Table 5
Scenario C: Probability of Net Surplus in 2045
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 150 MGD</th></tr>
<tr><td>2045</td><td>26%</td><td>41%</td></tr>
</table>
Table 6
Scenario D: Probability of Net Surplus in 2045
<table>
<tr><th>Forecast Year</th><th>Base Case</th><th>Pure Water 150 MGD</th></tr>
<tr><td>2045</td><td>1%</td><td>4%</td></tr>
</table>
</td><td>Significant</td></tr>
<tr><td>2. To what extent does it advance equitable supply reliability?</td><td>
Advances equitable water supply by delivering a climate-resilient and sustainable supply that enhances overall reliability for all agencies, as follows:
• SWP Dependent Agencies served by Jensen – Delivering Pure Water supplies to West Basin Metropolitan Water District (MWD) and Los Angeles Department of Water and Power (LADWP) would help bolster their local supply, reducing demands for imported supply via Jensen. However, this benefit is only realized if Pure Water Los Angeles is constructed.
• SWP Dependent Agencies served by Rialto Pipeline – Provides supplies to help meet untreated replenishment demand from Central Basin MWD, Upper San Gabriel MWD, and Three Valleys MWD, thereby preserving SWP for State Water Project Dependent Areas (SWPDAs), particularly in years where supplies are limited. It should be noted that replenishment demands are often the first to be foregone in times of limited supply. Pure Water could allow for continued replenishment delivery in dry years.
• Central Pool (Weymouth/Diemer WTPs) - Delivers additional treated replenishment supplies to West Basin MWD and the City of Long Beach, reducing demands on the Central Pool. The direct potable reuse (DPR) component would also add an overall supply delivered to the Central Pool. Additional supply in the Central Pool could be delivered to the SWPDAs during drought operations via Weymouth and Diemer WTPs using the Greg Ave Pump Station and the Sepulveda Pump Station. This improves reliability for many agencies and provides another supply source that could be routed to SWPDAs in times of limited supply.
Frees up capacity in the existing conveyance, distribution, and storage systems and thus helps increase flexibility by capturing and conveying water supplies, which enables Metropolitan to better manage supplies, by allowing it to redirect limited SWP supplies to the most critical needs and using available conveyance infrastructure more flexibly to provide supply reliability.
</td><td>Exceptional</td></tr>
</table>

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Reliability Supply Performance Equitable Reliability	3. When will it be operational? What is the useful life of the project/program/portfolio? How will benefits continue beyond the 2045 planning horizon under changing climate conditions?	• **Online Date and Phasing**: Pure Water could deliver up to 155,000 AFY (150 mgd) of purified recycled water by 2041. The project is envisioned to be delivered in two phases: Phase 1, providing up to 118,600 AFY (115 mgd) by 2036, and Phase 2, providing an additional 35 mgd of DPR by 2041. The project team is also evaluating the potential to deliver Phase 1 in incremental stages. • **Useful Life of Facilities**: Pure Water facilities are expected to have a useful life of 100 years or longer. • **Changing Climate Conditions**: Water supply reliability results modeled using IRPSIM (Question 1) only reflect benefits through the forecast year 2045. Continued benefits are anticipated beyond the 2045 horizon based on the useful life of the facilities. The Sanitation Districts' *Climate Change Vulnerability Assessment and Management Plan* highlighted potential climate-related hazards affecting the Warren Facility, and due to the co-location of the Pure Water AWPF, the same hazards (wildfire, flood, extreme temperatures, drought, and high winds) are anticipated to impact the Pure Water facilities. Many of these vulnerabilities are predicted to be exacerbated by climate change. Drought can be a major concern as decreased frequency of rainfall and resulting inflow and infiltration, and reduced wastewater flows can potentially introduce risks to recycled water projects. • For Pure Water, the region provides a relatively reliable supply source from 4.8 million residents, and with strict conservation measures in place, the treated wastewater flows are anticipated to remain relatively stable during droughts. Pure Water uses less than 40% of the current Warren Facility wastewater flows (260 mgd), which are anticipated to increase to a maximum permitted flow of 400 mgd. • The flexibility and adaptability embedded in the design and operations of Pure Water will help Metropolitan provide reliable water supplies throughout the region under numerous climate scenarios beyond 2045.	Exceptional
	4. Are there additional projects/programs/portfolios that could be added to improve this project/program/portfolio's effectiveness for water supply reliability?	• **East-West Conveyance –** The East-West Conveyance Pipeline aims to provide Metropolitan greater delivery flexibility by moving Colorado River water and stored Diamond Valley Lake (DVL) supplies into the western part of Metropolitan's service area. The raw water East-West Conveyance would enable delivery of raw water to the Jensen Water Treatment Plant (WTP), which would improve supply reliability for the western SWPDA. Pure Water is another potential supply that could be conveyed through the East-West Conveyance to Jensen Water Treatment Plant, which further improves supply reliability for the region. • **Pure Water Los Angeles –** LADWP's Pure Water Los Angeles project would utilize approximately 230 mgd of advanced treated water from their Hyperion Plant for reuse. The City is considering a connection to Pure Water's backbone conveyance facilities to help enhance the reliability of the entire region. Approximately 14 miles of the backbone pipeline is anticipated to have increased capacity to accommodate supplies from Pure Water Los Angeles. • **Reservoir and Pump Back to Metropolitan Feeder –** Pure Water includes the purchase of a gravel pit for groundwater recharge or storage. Pure Water could be expanded to include up to 15,000 AF reservoir in the Main San Gabriel Basin for groundwater recharge and water storage that could be pumped into the Upper Feeder, Middle Feeder, Glendora Tunnel, or the proposed East-West Conveyance Pipeline, providing additional water supply reliability benefits. • **Sites Reservoir or other Storage –** Pure Water increases the chances of unmanaged water. A reservoir, like Sites or other storage north of the East Branch/West Branch split, could help to manage the supplies on the SWP and increase reliability in the SWPDA. *Note: IRPSIM modeling for this project did not include the proposed projects mentioned above.*	Moderate
	5. How does this project/program/portfolio improve the water supply reliability of existing projects/programs/systems?	• **Existing Treatment, Conveyance and Delivery Systems:** Pure Water's design, which leverages existing infrastructure, would free up capacity in existing conveyance, distribution, and storage systems providing increased flexibility in capturing and conveying water supplies and allowing Metropolitan to distribute recycled water efficiently across the Metropolitan service area, based on real-time needs, maintenance schedules and emergencies. • **Ground Water Storage:** Pure Water enhances the reliability and effectiveness of the Metropolitan's groundwater storage programs by providing a consistent, regional water supply that supports groundwater recharge and operational flexibility – increasing local storage capacity, reducing reliance on surface reservoirs, and improving seasonal flexibility. This allows Metropolitan to store more water during wet years and rely on regional groundwater during dry years – which is essential for both long-term storage and short-term use. • **SWP/Colorado River Aqueduct Infrastructure:** Project could reduce demand on the SWP and Colorado River Aqueduct systems. By reducing the volume of imported water that must be conveyed, the project creates operational headroom in SWP pipelines and reservoirs for other uses. **Pure Water will help with the following drought reliability projects:** • **Sepulveda Feeder Pump Project** – The SFPP enables delivery of treated Colorado River water and DVL supplies from the Common Pool area to the western SWPDA during drought periods. During extended droughts, these supplies could become limited, impacting the ability to use the SFPP. o Pure Water would improve local groundwater conditions, which would allow member agencies to use more local supplies during an extended drought period and thus help prolong the availability of Colorado River and DVL supplies. Phase 2 of Pure Water would augment supplies to Weymouth and Diemer WTPs, via raw water augmentation (RWA), providing direct benefit to the SWPDA via the SFPP. • **Diamond Valley Lake to Rialto**. Four planned projects will convey water from DVL to the Rialto Pipeline to serve three SWPDA agencies: Inland Empire Utilities Agency, Three Valleys MWD, and Upper San Gabriel Valley District. o Pure Water is intended to be a base-loaded supply for recharge thereby making the water more reliable during drought periods. Agencies in the San Gabriel Valley would continue to be able to purchase imported water.	Exceptional

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Plans/Policies and Initiatives:** • **Integrated Water Resources Plan (IRP):** Pure Water advances IRP goals of diversifying water sources and increasing local supply resilience. • **Water Supply Reliability Program:** Enhances reliability through local control, reuse, and groundwater replenishment. • **Conjunctive Use and Cyclic Storage Programs:** The project enhances Metropolitan's storage programs by providing a reliable source of recharge water, increasing stored reserves and improving drought-year reliability. • I**nfrastructure Resiliency and Redundancy:** By adding redundancy to the regional system by supplementing water supplies to key treatment plants. • **Systemwide Flexibility:** Supports system-wide flexibility with its regional pipeline network, allowing water to be shifted based on need. **Time Bound Targets:** CAMP4W sets strategic goals to ensure long-term water reliability under climate stress. Pure Water contributes by: • **Creating a drought-resilient supply:** Reduces reliance on the State Water Project and Colorado River. • **Supporting carbon neutrality:** Reduces energy-intensive water imports, aligning with Metropolitan's goal of carbon neutrality by 2045. • **Enhancing adaptive capacity:** Provides a flexible, scalable supply that can be expanded as climate conditions evolve. • **Equitable supply reliability:** Provides access to State Water Project Dependent Areas and increases supply capacity through 2045. **Partnerships/Collaborations:** • Encourages collaboration across agencies, jurisdictions, and state boundaries to build a more integrated, resilient water system improving system-wide efficiency and reducing duplication of efforts, thereby meeting current and future regional supply reliability objectives. Strengthens partnerships by encouraging collaboration with regional and out-of-state partners through shared infrastructure and investments, encouraging coordinated water management across the region, and by fostering shared research, modeling, and forecasting tools to better understand and respond to climate impacts on water supply. • Advances equitable supply reliability along the Colorado River by reducing regional reliance on imported water by providing a new regional supply, enabling Metropolitan to stabilize local supplies and ensure equitable access to safe, reliable water regardless of geography or income.

Overall Assessment

The overall score for reliability is largely assessed by the project's ability to meet regional supply reliability objectives (Question 1) and its ability to advance equitable supply reliability (Question 2). It should be noted that the regional supply reliability ranking (Question 1) is a composite score made up of the various reliability components discussed in the narrative.

Scenario C: Pure Water 150 MGD reduces the probability of shortage in 2045 for Scenario C. The cumulative benefits from both the increase in storage and the reduction in shortage ranked between "Significant" and "Exceptional". Pure Water 150 MGD also provides equitable supply for the service area. The overall assessment for Pure Water 150 MGD in Scenario C is "Significant".

Scenario D: Pure Water 150 MGD reduces the probability of shortage in 2045 for Scenario D. Pure Water 150 MGD also yields a substantial amount of cumulative benefits from both the increase in storage and the reduction in shortage, ranking "Exceptional" in that evaluation. The project provides a large amount of new supply, and advanced equitable supply reliability for the service area, however there still remains an overall large probability of shortage with the project operational. The overall reliability assessment of Pure 150 MGD for Scenario D is "Significant".

Overall Assessment Value

Significant

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Resilience Addresses known risks and vulnerabilities Project, Program or Portfolio's ability to perform under climate impacts	1. How does it perform under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? **Drought is addressed in Reliability*	Metropolitan identified primary climate vulnerabilities and hazards with the potential to impact water operations through the development of a draft Local Hazard Mitigation Plan. The Sanitation Districts conducted a climate vulnerability assessment for the A.K. Warren Water Resources Facility (Warren Facility) to highlight potential climate-related hazards (*Climate Change Vulnerability Assessment and Management Plan)*. Metropolitan is currently conducting a climate vulnerability risk assessment for Pure Water using the latest data from California's Fifth Climate Assessment. Pure Water incorporates design features in its facilities to increase survivability against the following hazards, which have demonstrated the potential to pose a higher risk due to climate change: • **Extreme Heat:** Existing resilience measures to extreme heat are implemented at the Sanitation Districts' Warren Facility. ○ **Warren Facility:** Much of the facility is climate-controlled, and wastewater temperatures are also monitored. The Sanitation Districts has developed a Heat Illness Prevention Program for employees at the Warren Facility as a part of their Environmental Health and Safety Manual. Additionally, shade covers for chemical tanks and high-temperature-resistant electrical equipment have been employed at the asset level. Pure Water AWPF design criteria and attributes would similarly adhere to identified compliance requirements and design elements to mitigate extreme heat impacts. ○ **Alternate Power Supply:** Metropolitan and Sanitation Districts are committed to installing alternative power sources to sustain purified water operations during service interruptions related to extreme heat. ○ Pure Water team is currently evaluating options for backup power supply, including the construction of two independent substations or an interconnected substation with two separate power lines. Both agencies are also evaluating green power sources to augment the power supply. • **Flood:** The risk of flooding is relatively low at the Warren Facility and along the 39-mile backbone conveyance alignment, except along the San Gabriel River (https://hazards.fema.gov/nri/map). ○ **Warren Facility:** The Warren Facility (AWPF will be co-located) includes comprehensive storm drainage systems as well as stormwater storage basins with separate operational procedures to reduce flooding potential. These allow wet weather pumps to relieve plants and discharge flow in the event of storms. ○ **Conveyance Pipeline:** Limited flooding impacts are anticipated along the backbone conveyance pipeline as the assets would be below ground, and pump stations would be designed to protect against flooding. The groundwater recharge sites may be impacted by an in-region flood event, with recharge operation likely to be suspended during major rain events. Infrastructure would be designed to prevent flood damage. • **Wildfire:** The Warren Facility is in a densely urbanized area of Carson, Los Angeles County, and falls outside of the Moderate, High, or Very High Fire Hazard Severity Zones per the Fire Hazard Severity Zone Viewer (FHSZ). Warren Facility buildings have an existing fire suppression system and similar system would be integrated into the AWPF facility design. Pure Water's conveyance system consists mainly of underground pipes and tunnels that would be resistant to the wildfire hazard. Pure Water's treatment and pumping facilities would be situated in urban areas with fire-resistant boundaries to prevent the spread of wildfire into the facilities. All building materials would be designed with fire-resistant materials. Emergency procedures and safety precautions would also be established in the event of a fire. • **Wind:** The risk of severe wind in the Pure Water area is very low (https://hazards.fema.gov/nri/map) as its treatment and pumping facilities are situated in lower wind exposure areas. Warren Facility infrastructure includes wind resiliency measures as identified in site-specific environmental health and safety measures. While facilities are being considered for alternative power supply options like the wildfire response, if power is shut down due to high winds, the inherent operational function of these facilities would also allow for power accommodation related to outages. • **Power Supply Interruptions:** Pure Water deliveries account for a 92% online factor which accommodates for planned outages and downtime. To address power supply interruptions, the Pure Water design would include the provision of an alternative power supply (e.g. emergency generators at the Warren Facility, or portable emergency generators) to provide sufficient backup power to maintain operation of critical facilities. If an alternative power supply isn't developed, Metropolitan may need to provide backup water supply for some of the industrial facilities. In addition, the AWPF design includes the provision for solar power which could support AWPF operations to some degree in an emergency. The AWPF pump station and conveyance backbone pump station clearwells are also sized with added capacity to serve as a buffer for a limited time until power is restored or generators brought onsite.	Moderate
	2. How does it maintain system reliability, including delivery and water quality, under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? **Drought is addressed in Reliability*	Pure Water has the potential to improve overall system resiliency against climate-change-induced hazards, mainly due to the locally supplied source water (treated wastewater) and its adjacency to main delivery points. Compared to imported supplies, which require lengthy conveyance lines to bring source water to the service area, Pure Water minimizes the exposure of its conveyance and distribution system that could be vulnerable to potential hazards. • **Extreme Heat:** Higher surface temperatures could exacerbate heat waves in urban areas, leading to higher water consumption during these periods. Metropolitan's exposure and vulnerability would likely increase because of the extreme heat hazard, intensified by climate change. Pure Water represents a unique opportunity to invest in local alternatives that would provide additional sources of potable water to aid in extreme heat events. Utilizing Pure Water as a regional supply would supplement the imported water sources that may be susceptible to outages associated with high temperatures. The Pure Water AWPF facilities could shed its power usage for 1-2 days during extreme heat events to avoid blackouts in the region. Since the AWPF facility doesn't require 24/7 operation, as it doesn't serve water directly to consumers, it could take part in an Emergency Load Reduction Program. • **Flood:** Metropolitan's exposure and vulnerability to flood hazards may increase because of climate change impacts, as was recently demonstrated by the soil cover erosion at CRA siphons and tunnels in recent desert storms. Pure Water is an asset that can hedge the potential risk of imported supplies with a local source less impacted by out-of-region flood events. Pure Water enhances regional resilience by increasing groundwater storage and augmenting raw water supplies at the Weymouth Plant in the event of a flooding emergency affecting imported supplies. However, its effectiveness is limited when an in-region flood event affects the water system operation because of restrictions in groundwater basin operations. • **Wildfire:** Pure Water would increase regional water supply storage that could be utilized in the event of a wildfire. Its backbone conveyance pipeline extends over 39 miles across Los Angeles County, which increases its effectiveness in fighting regional wildfires with multiple storage facilities. • **Wind:** The vulnerability to wind is tied predominantly to the loss of power, as most of Metropolitan's imported water supplies are power-dependent. Pure Water serves as a regional backup against potential interruption of imported supplies due to power loss along the CRA or SWP aqueduct.	Exceptional

Assessment

Evaluative Criteria	Attributes	Assessment	Value
	3. Describe any resilience co-benefits (e.g., seismic) achieved through this project, program, or portfolio.	***Seismic Resilience*** • Metropolitan's service area is in a seismically active region subject to seismic events. The imported supplies conveyed by the Colorado River Aqueduct and California Aqueduct East and West Branches cross the San Andreas Fault, making them seismically vulnerable. A medium or large magnitude earthquake can halt all water deliveries without warning and cause significant disruption in imported water deliveries to Southern California. Potential outages for these existing conveyance lines are estimated to range from a few months to up to two years. In such an event, besides the emergency storage that could sustain the region for approximately 6 months, the region would need to rely entirely on local supplies while repairs are made. Pure Water is located on the coastal side of the San Andreas Fault, which could make the water produced by Pure Water available during a seismic event. • Pure Water could substantially increase regional and Metropolitan's seismic resilience by providing locally produced supplies. • Pure Water is estimated to increase regional supplies by up to 15%, which supplements Metropolitan's storage reserves. It enhances seismic resilience by providing water to maintain storage levels in surrounding groundwater basins before a seismic event. This would provide source water for the surrounding Regional Water Authorities (RWA) and Metropolitan in the event of a seismic emergency. The storage in local groundwater basins from Pure Water supplies could supplement member agency demands when the distribution system is compromised and unable to deliver Metropolitan's imported supplies. • Pure Water helps reduce Metropolitan's dependence on imported water supplies, which are susceptible to seismic activity, by creating a local supply. A lengthy conveyance system is more vulnerable to natural disasters such as fire, landslides, and earthquakes. Such a disaster could impact any component of the State Water Conveyance System and the Colorado River Aqueduct System, resulting in significant impacts on imported supplies. Pure Water reduces Metropolitan's reliance on imported water by providing a year-round, sustainable, and locally managed purified water source that can be utilized by Metropolitan to meet year-round water demands. ***Water Quality Co-Benefits*** • Under future climate change conditions, it is anticipated that constituents such as TDS, sulfate, chloride, and nitrate would increase in source waters from the SWP and Colorado River. • Because of the treatment process proposed, Pure Water is expected to improve the concentrations of constituents such as nitrate, sulfate, and chloride, which would be affected by a warmer climate. Pure Water will also help Metropolitan manage sulfate, chloride, and nitrate concentration changes due to climate change. • Purified water from Pure Water would also help with any blending and long-term salt balance for the three groundwater basins served by Pure Water. • The project provides purified water free of golden mussels and quagga mussels to replenish groundwater basins served by Pure Water.	Exceptional

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Resiliency for the Broader Colorado River Basin** • By reducing Southern California's dependence on the Colorado River, Pure Water helps preserve supplies for other users (e.g., Arizona, Nevada, tribal nations) who may be affected by climate-related disruptions or seismic events. By leveraging partnerships (further discussed in the Financial Sustainability and Affordability Criterion), Pure Water builds resiliency in cross-state water supply by integrating water supply planning not just across six counties but also across state borders. The project continues to promote partnerships and encourages joint decision-making and cost-sharing, thereby increasing buy-in and long-term sustainability in water supplies. **Time Bound Targets:** CAMP4W sets strategic goals to ensure long-term water reliability under climate stress. • Creating a drought-resilient supply: Produces up to 150 mgd of purified water by harvesting one of the region's largest untapped sources of cleaned wastewater, a drought-resilient source. • Creating resiliency in Local Agency Supplies by providing a regional supply source with local benefits. Pure Water is a locally controlled, climate-resilient, and seismically safe source of water that can be used to stabilize aquifers to ensure water supplies for local agency partners.

Overall Assessment

The project includes design considerations, such as adequate backup power and site selection to avoid high fire risk zones, to prevent interruption of operation from climate-change-induced hazards and ensure a sustainable operation. However, local flood events may affect the groundwater basin replenishment operations, which affects the project's effectiveness. By providing a reliable local supply source, which has significantly lower exposure to climate-related and seismic hazards than imported supply sources, the project demonstrates excellent benefits in enhancing climate and seismic resilience for Metropolitan and the region. The overall assessment value is significant.

Overall Assessment Value

Significant

Assessment

<table>
<tr><th>Evaluative Criteria</th><th>Attributes</th><th>Assessment</th><th></th></tr>
<tr><td rowspan="5">Financial Sustainability and Affordability
Unit cost</td><td>1. What is the cost of the project?</td><td>The total cost of the 150-mgd program based on the latest 2025 program cost update is $11.3 Billion (B). Estimate is inclusive of planning, design and construction expenditures for both Metropolitan and the Sanitation Districts. Deducting the Sanitation Districts' costs associated with the membrane bioreactor and pre-treatment facilities and secured grant funding to date, Metropolitan's cost of the project is therefore only $9.6 B for 150-mgd (2025 dollars).</td><td></td></tr>
<tr><td>2. What are the projected impacts to rates and budget?</td><td>The overall rate impacts of Pure Water for the 150-mgd program, including Operation and Maintenance (O&M), are summarized below:
<table><tr><th>Pure Water Project</th><th>150 mgd</th></tr><tr><td>Capital Construction Cost[a]</td><td>$9.6B</td></tr><tr><td>Annual Capital Financing Costs[b]</td><td>$557M</td></tr><tr><td>Annual O&M Cost</td><td>$245M</td></tr><tr><td>Annual R&R Cost</td><td>$125M</td></tr><tr><td>Production Yield</td><td>154,600 AFY</td></tr><tr><td>Year of Completion[c]</td><td>2041</td></tr><tr><td>Overall Melded Cost Increase[d]</td><td>47%</td></tr><tr><td>Average Annual Cost Increase Over Construction Period[e]</td><td>3.2%/yr</td></tr></table>Notes:
a. Capital costs in 2025 dollars are net of Sanitation District scope items, no upsized pipe, and secured grant awards , which are described in more detail in Section 5 below.
b. Assumes 100% debt financed for this analysis at 4% rate/30-year term.
c. Assumes full delivery in 2041 with Phase 1 deliveries anticipated as early as 2035. The final financial analysis for the November assessment will incorporate the phased deliveries timing in the analysis.
d. Calculation assumes the project is 100% debt financed over the construction period. If the project is partially funded by PAYGO it will increase the short-term rate impact.
e. Based on Metropolitan's 2025/26 Revenue Requirement of $1,693 M, over the period from 2026-2041.
Partner Contributions: Sanitation Districts and Colorado River partners can provide a significant contribution towards the capital construction cost, thereby reducing the overall Metropolitan contribution by a commensurate amount. This could reduce the overall anticipated rate payer impacts associated with the Pure Water project. Question 5 provides additional details on secured and potential partner contributions.</td><td></td></tr>
<tr><td>3. If applicable, what is the unit cost/acre foot in current year dollars? For storage projects, what is the cost/capacity?</td><td>Metropolitan utilized multiple unit cost methodologies: 1) Point-in-time unit cost that assumes all debt for the project is issued at once in year one of construction and the project is in full operation in year one; and 2) Lifecycle unit cost that estimates the average unit cost over the 100-year project life and includes needed replacements and refurbishments (R&R).
<table><tr><th></th><th>150 mgd</th></tr><tr><td>Point-in-Time Unit Cost[a]</td><td>$5,200/AF</td></tr><tr><td>Lifecycle Unit Cost[b]</td><td>$2,900/AF</td></tr></table>a. All costs are shown in 2025 dollars and include Planning, Design, Construction and Financing costs
b. Assumes full delivery start in 2041, with Phase 1 deliveries anticipated as early as 2035. The final financial analysis for the November assessment will incorporate the phased deliveries timing in the analysis.</td><td></td></tr>
<tr><td>4. Does considering life cycle cost change the Financial Sustainability and Affordability?</td><td>• Yes, a life-cycle costs (LCC) provides a more complete picture of financial sustainability and affordability beyond the initial construction period. During the first 30 years following project completion, capital financing costs for the construction of Pure Water represent the most significant expenditure. Once the debt is fully repaid, only O&M and capital repair and replacement (R&R) costs remain. The life cycle cost analysis accounts for all construction-related costs, ongoing O&M, periodic R&R, and projected production yields over a 100-year operational horizon.
• A unique aspect of the Pure Water project is Metropolitan's direct influence over the program's capital, O&M and replacement costs and timing – which can provide more surety in planning for improvements as well as financial sustainability and affordability of the project.</td><td>Value
Very High Cost</td></tr>
<tr><td>5. Is it eligible for federal and/or state grants? If so, what are the estimated target amount(s)? Is there a local match requirement? If so, how much?</td><td><u>Partner Contributions</u>
Secured, $16.6 M: The Sanitation Districts, Southern Nevada Water Authority (SNWA), and the Arizona Department of Water Resources (ADWR) have contributed a combined total of $16.6 M to date to advance Pure Water planning activities ($6 M each from SNWA and ADWR; $4.6 M from the Sanitation Districts).
Future (TBD):
○ <u>Sanitation Districts (approximately $1.7 B for 150-mgd project):</u> The Sanitation Districts have committed to providing the required wastewater flows and land at the Warren Facility for the AWPF. In addition, the Sanitation Districts has also committed to paying for necessary pre-treatment facilities upstream of Metropolitan's advanced water treatment facilities, the membrane bioreactor (MBR), and related Warren Facility upgrades to shared assets The Sanitation District's contributions have been accounted for in the financial analysis. The unit cost and financial impact analysis above deducts the approximately $1.7 B in contributions from the total capital costs.
○ <u>Colorado River Partners (approximately $1 B):</u> Partnerships are underway with SNWA, ADWR and the Central Arizona Water Conservation District; which could potentially provide a significant infusion of capital as well as contributions to O&M costs to Metropolitan's rate payers. SNWA has also expressed interest in contributing $1 B to the project for potential exchange of Colorado allocations. Importantly, while cross-state partnerships would reduce Metropolitan's overall share of costs, and thereby reduce overall rate impacts, it does not change the point-in-time and lifecycle unit costs. No future Colorado River Partner contributions are assumed in the financial analysis.
<u>Federal and State Funding</u>
Secured, $212.2 M: Federal grants and state funding secured to date includes: State of California Direct Grant ($80M; no match), State of California Pilot Study Grant ($1M, no match), U.S. Department of the Interior, Bureau of Reclamation (Reclamation) WaterSMART: Large-Scale Water Recycling Program (LSWRP) Grant ($125M total, 75% match), Reclamation FY 2022 Planning and Design Grant ($5M, 75% match), and Reclamation WaterSMART Water Reclamation and Reuse Research Grant ($750K, 50% match).
Future (TBD): Potential programs include:
○ <u>Low Interest Loans:</u> Environmental Protection Agency (EPA) (Water Innovation Finance and Infrastructure Act (offers up to 49% of the total eligible project costs, with no maximum) and the State of California SWRCB Clean Water/Drinking Water Revolving Fund (CWSRF/DWSRF) Programs (up to $50M per project/agency).
○ <u>Grants:</u> EPA Programs (Brownfield, other), Reclamation Programs (LSRWP Grant (3rd Round has $132 million in funding; 75% match), Title XVI Water Infrastructure Improvement for the Nation (WIIN) Recycled Water Program (up to $30M per Project – partner projects), Desalination and Water Purification Research (up to $1M per research effort), Drought Projects and Water and Energy Efficiency Programs ($3 M per project)); Federal Emergency Management Agency (Southern California Wildfire Recovery Funds (Public Assistance) and Hazard Mitigation Grant Program (HMGP); Congressional Directed Spending Requests; State of California Proposition 4 Climate Bond (State Water Resources Control Board, Water Recycling Program (Total $386M available; grants up to $15M per eligible phase; no match required), Department of Water Resources (DWR) Urban Infrastructure and Climate Adaptation and State Coastal Conservancy Programs); DWR Sustainable Groundwater Management Act; Office of Planning and Research Regional Resilience Grant Program; and CA Coastal Conservancy and Ocean Protection Council - Climate Ready Grant. Match requirements will vary by grant program (typical 25% to 75%).</td><td>N/A</td></tr>
</table>

Assessment

Evaluative Criteria	Attributes	Assessment	
	6. Does it have a revenue generation component that helps offset costs?	Pure Water presents opportunities for revenue generation, including the following: • **Solar Power:** Metropolitan plans to utilize 11 acres of roof area at the Joint Plant site to maximize energy production for the AWPF. Approximately 1.5 MW of solar power can be generated at the Joint Plant site but may vary with peak solar hours. Will require the use of batteries to store excess power. The cost of the solar facilities is included in the project capital and O&M cost estimates. • **Electric Vehicle (EV) Charging Stations:** The project includes the construction of three parking facilities with canopy covers that will accommodate 150 to 200 cars. Revenue could be generated associated with utilization of EV Chargers from selling carbon credits through voluntary or compliance carbon markets (e.g. Low Carbon Fuel Standard credits, Voluntary Carbon offsets), and demand management and grid services (e.g. Utility incentives, Time-of-Use Optimization, and Vehicle-to-Grid). The cost of these facilities is included in the project capital and O&M cost estimates. • **Water Sales or Exchanges:** Pure Water is expected to have contracts with direct recipients (local water agencies, industrial and other users) that would commit those agencies to purchase a minimum amount of water. In addition, exchanges with out-of-state partners like SNWA and CAP would allow Metropolitan to retain or trade Colorado River allocations.	N/A

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	Metropolitan commissioned the Institute for Applied Economics of the Los Angeles County Economic Development Corporation (LAEDC) in 2025 to analyze the projected economic and fiscal impact of construction expenditures and ongoing activity associated with Pure Water (LAEDC 2025). **Construction:** • Construction is expected to generate over $15.1 billion in total economic output and support approximately 75,660 jobs years across the Southern California region, including 43,700 job-years directly to the program and another 31,960 job-years through indirect and induced effects. • Total supported labor income is estimated to be over $6 billion. These jobs would span numerous industry sectors, including engineering, manufacturing, construction, finance, and management. • Estimated that construction of Pure Water would contribute $719.4 million in state and local tax revenue and over $1.4 billion in federal tax revenue. **Ongoing Operations:** • Annual operations and maintenance activities are expected to generate over $640 million in total economic output and support approximately 2,460 job-years across the Southern California region, with the total supported labor income estimated at nearly $239 million. • Activities would contribute over $48 million in state and local taxes and $57.2 million in federal taxes each year (LAEDC 2025). • While much of the impact will occur in the construction industry, other industries will also stand to gain, including health care and social assistance; real estate and rental and leasing; retail trade; accommodation and food services; and administrative and waste services. Each of these industries will see an increase in business revenues and in the number of jobs, as the effects of the increase in construction activity due to Metropolitan's project ripple through the regional economy.

Overall Assessment

Although the 150-mgd project does have significant opportunity to secure federal and state funding and partner contributions, the overall assessment for Financial Sustainability and Affordability is guided by the rating for the life-cycle cost of the project, which is significantly higher than Metropolitan's 2025 Full Service Untreated Rate of $912 (more than 3x).

Overall Assessment Value

Very High Cost

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Adaptability and Flexibility Flexibility of existing assets Ease/Complexity Scalability	1. Describe how it works with and/or improves the flexibility of existing assets, plans, policies, or programs and how it improves the ability to adjust to systemwide changes (water quality, source water, distribution interruption).	Pure Water serves as a supply augmentation, allowing Metropolitan to preserve existing sources while bolstering storage both within and outside Metropolitan's service area by offsetting demands on SWP and Colorado River supplies. This is especially valuable when core supplies (e.g., SWP and CRW) are limited due to climate change, regulatory requirements, agreements, or other factors. This new regional supply can augment Metropolitan's existing sources based on regional needs, offering adaptive capacity during dry years or emergencies, by: • Providing an additional 155,000 AFY or 150 mgd of a new regional water supply, thus increasing the options available to meet demands and manage storage within and outside Metropolitan's service area. The 150 MGD buildout would provide non-potable reuse (NPR), indirect-potable reuse (IPR), and direct-potable reuse (DPR) to West Basin MWD, LADWP, Central Basin, San Gabriel Valley MWD, and Three Valleys MWD. New infrastructure will deliver water to existing service connections for groundwater replenishment and DPR. • Freeing up capacity in the existing conveyance, distribution, and storage systems, increasing flexibility to capture, convey, and manage water supplies during dry or emergency conditions. **System Wide Flexibility:** Pure Water provides purified water to meet demands in the SWP dependent area (SWPDA) agencies supplied by the East Branch of the SWP and agencies in the Central Pool area. • ***State Water Project Dependent Areas:*** It is estimated that Pure Water will offset approximately 30,000 AFY (30 mgd) of SWP replenishment demands East Branch SWPDA through replenishment in the Central and Main San Gabriel Basins (Central Basin, Upper District, and Three Valleys). This project would help maintain groundwater storage levels during a drought and support the agencies from deferring their deliveries during a drought. These agencies manage their basins with local and imported supplies and have deferred over 40 TAF per year during the dry years of 2021 and 2022. By helping support groundwater basins during dry years, Pure Water can free up additional supplies for other member agencies to use. • ***Existing Infrastructure:*** The AWPF at the Warren Facility would also include improvements such as a workforce-training center and expanded treatment facilities. Improvements to both facilities help to support the expanded operations necessary for Pure Water with added improvements to existing conveyance infrastructure. • ***Seasonal Flows:*** The system will have to manage variable daily and seasonal demands. It is expected NPR demand will fluctuate with higher demands during the summer months and lower during the winter months. This will provide more water available for IPR during winter months and less during summer months. This variability would add to the complexity of operations. • ***Sepulveda Feeder Pump Station Project (SFPS):*** Pure Water would benefit projects like the SFPS which would be fed by a blend Pure Water and Colorado River water and supply West Branch SWPDA agencies. In Phase 1 of Pure Water, IPR makes the groundwater basins more sustainable, which would help reduce demands in the SWPDAs. During a dry year, if water is delivered to Weymouth or Diemer WTPs via DPR, the water could be added to the Central Pool and sent to the SFPS, which would expand the benefits of Pure Water. This could make water available to the SWPDA during drought emergencies. • ***Diamond Valley Lake to Rialto:*** Pure Water would deliver up to 25 mgd through the Azusa Pipeline for DPR at Weymouth and Diemer, or for potential delivery to Three Valleys MWD for DPR at their Miramar WTP or Water Facilities Authority if use of the Azusa Pipeline is expanded east in the future. This option would enhance the Diamond Valley Lake to Rialto project. **Adjust to System-Wide Changes** • ***Water Quality Interruptions:*** Pure Water provides high-quality purified water that offers improvements in key constituents like TDS while requiring careful management of others. The purified water is also free of golden mussels and quagga mussels used to replenish groundwater basins. Pure Water would be able to buffer changes in quality, especially with DPR, from other imported water sources. Pure Water may pose an increased risk of nitrification within Metropolitan's distribution system, especially in those areas already at risk of nitrification, as Pure Water may reduce the demand for treated water, resulting in longer detention times in pipelines. • ***Source Water Interruption:*** ○ During low SWP or emergency drought conditions, Pure Water would offset 62,000 AFY (60 mgd) of demand in SWPDAs and 72,000 AFY (70 mgd) in the Central Pool. Pure Water would allow Upper District and Three Valleys to continue groundwater replenishment during dry years (do not need to defer their deliveries as in 2021 and 2022). ○ During high SWP periods, the need for Pure Water supplies would dimmish as abundant SWP supplies could be used to replenish groundwater basins. To address this reduced need for Pure Water supplies, production from AWPF could be reduced to 45 MGD to serve 46,000 AFY of NPR demands. Pure Water may operate below capacity or face limits on groundwater spreading or injection. Metropolitan is evaluating new storage options to address this issue and maintain system adaptability. Metropolitan is considering purchasing a gravel pit in the Main San Gabriel Basin for dedicated recharge and operational storage capacity that will help store water when the spreading basins are full (e.g., taking flood waters). • ***Distribution Interruption***: During a distribution system interruption (e.g., seismic event), Pure Water could continue operating and delivering water for NPR and IPR, provided it is not directly impacted by the same event. As a new, independent source of supply and conveyance, Pure Water provides redundancy for such an event and can support the region, including partial support to the SWPDAs.	Significant
	2. Explain how complex the day-to-day operations might be (example: staffing, maintenance, preparation).	Pure Water would require oversight to maintain day-to-day operations of the IPR treatment process, DPR treatment process, auxiliary facilities, and a new regional conveyance system. ***Staffing***: Specialized staff would be required to maintain day-to-day operations across the entire program. • AWPF would be staffed 24/7 with an onsite water quality laboratory for testing and compliance. Conceptual planning efforts estimate approximately 194 full-time-equivalent (FTE) staff would be needed to support AWPF to produce up to 150 mgd of IPR and DPR water qualities, which would include Operations, Lab, Maintenance, Process Control, and administrative staff onsite at the AWPF. • Up to two pump stations (of a total 6) along the conveyance system while not regularly staffed, would require robust remote monitoring capabilities; approximately 5 FTE operators at the Operations Control Center would be required to maintain both day and night shifts for the entire conveyance system; approximately 3 FTEs for the maintenance of conveyance and distribution would also be required, in addition to 3 FTEs for water quality monitoring and compliance along the conveyance system. Treatment plant operators would require special training and certification at the Weymouth and Diemer Plants for raw water augmentation via DPR at these facilities. • To help with operational compellability, Metropolitan is currently exploring the purchase of a gravel pit in the Main San Gabriel Basin for operational storage as well as for an environmental buffer for DPR, which will need to be maintained on a continual basis once operational.	Limited
	3. How can it be phased (i.e., near-term value of an initial phase; using phasing to manage existing uncertainty; using phasing to allow for adjustments in the project/program/portfolio as new information is developed)?	Pure Water is currently envisioned to be implemented in phases. • Phase 1 would provide 115 mgd (118,600 AFY) of non-potable reuse (NPR), IPR, and DPR. Phase 2 would provide an additional 35 mgd (36,400 AFY) of DPR. Phase 1 deliveries would consist of 24 mgd (24,800 AFY) of NPR and 66 mgd (68,100 AFY) of IPR in groundwater basins, and up to 25 mgd (25,800 AFY) of DPR. The phasing for Pure Water was determined to maximize construction and operational efficiency. Each phase offers opportunities for Metropolitan to adjust key components as necessary. • Metropolitan is also considering initial stages of 45 mgd in 2035 and 75 mgd in 2036 within Phase 1. These stages are envisioned to represent decision points for Pure Water to manage uncertainty and increase flexibility. These stages would help Metropolitan bring Pure Water online sooner to help address potential emergency drought conditions on either the SWP or the CRA earlier. • Approximately 14 miles of the backbone conveyance pipeline is anticipated to have a larger diameter to potentially accommodate future integrated with Pure Water Los Angeles at the Whittier Narrows pump station. The intent of Pure Water is to provide an added layer of flexibility to accommodate future initiatives that would be beneficial to the region, such as Pure Water Los Angeles and East-West Conveyance Pipeline.	Exceptional
	4. What is the implementation risk and/or complexity of implementation?	Pure Water includes a comprehensive risk management program, both at the program level as well as for each of the individual projects/elements as these projects advance to the design and construction phases of implementation. The Pure Water team has completed a risk assessment for the program and first two pipeline reaches currently in preliminary design. Risks were identified ranging from funding to social context, including the following highest priority risks: • **Funding Availability and Timing (Funding):** A project of this scale and function requires access to a variety of funding opportunities that range from direct payment to debt financing. The 150-mgd project would require more funding in comparison to the 45- and 75-mgd projects. • **Public Acceptance (Social Context and Stakeholders):** Concerns surrounding treated wastewater as a potential source water may pose to be an obstacle to Pure Water. To alleviate these concerns Metropolitan continues to host tours and engage communities, building public understanding by providing information and fact-based explanations. • **Permitting and Environmental Compliance (Permitting and Regulatory Requirements):** Metropolitan has undergone an Environmental Impact Analysis and consulted with experts to help mitigate concerns related to regulatory compliance. Permitting and right-of-way easements would also be required along the conveyance system, including most significantly Army Corps Section 408 permits at water body crossings, Union Pacific	Limited

Assessment

Evaluative Criteria	Attributes	Assessment	Value
		easements at railroad crossings, and Caltrans easements at freeway crossings. Any contaminants regulated during the DPR process may pose a challenge from an operations perspective as alternating between water sources could complicate testing and treatment. The 150-mgd project would require more permits and easements in comparison to the 45- and 75-mgd projects simply due to the need for an extensive conveyance system and the addition of DPR. • **Staffing for Operations and Maintenance (Resources):** Daily operations require a high degree of flexibility and technical expertise, and specialized certifications and training will be needed. Metropolitan, in its planning, has determined the need for a Workforce Training Center to provide training and certifications for future operators. The 150-mgd project would require more resources in comparison to the 45- and 75-mgd projects • **Market Volatility Supply Chain, Market Escalation, Labor Resources (Procurement):** Inability to maintain cost estimates or manage that uncertainty can lead to escalation of costs and delay. Contractor's availability may vary, further hindering the progress of the program. Technical expertise would be required in construction, potentially limiting the variety of options. • **Complex Operations/Processes:** A mixture of advanced treatment facilities, conveyance backbone systems (including pumping), recharge facilities, non-potable facilities, and additional support facilities all necessitate extensive planning to effectively function. Storage capacity along the conveyance system and recharge basins would be available in the 150-mgd project, in addition to the AWPF pump station clearwell and the Sanitation Districts' Ocean outfall. However, the 150-mgd project would be more complex overall in comparison to the 45- and 75-mgd projects with the extensive conveyance system required and addition of DPR. • **Competing Water Supplies in Wet Years:** At times, Metropolitan's available supplies exceed its capacity to beneficially use or store them, resulting in lost or unmanaged water. This occurred most recently in 2023, and typically occurs in years with lower demands and higher SWP allocations. Since Pure Water would operate continuously, even during years of abundant supplies, the project could contribute to additional unmanaged supplies under such conditions.	

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Design Flexibility:** • The flexibility and adaptability embedded in the design and operations of Pure Water would help Metropolitan provide reliable water supplies throughout the region under numerous climate scenarios beyond 2045. • Pure Water's ability to integrate and compliment other regional supply infrastructure investments (i.e. Pure Water Los Angeles, Pure Water Las Virgenes) as well as cross-state interagency coordination would provide Metropolitan with more options to reduce water imports, replenish regional ground water, and reserve watershed even without knowing which of the four IRP scenarios would most accurately reflect conditions beyond 2045. • Long-term climate resilience planning through CAMP4W combined with Pure Water's technological innovations such as advanced data analytics, data monitoring, and digital tools would allow Metropolitan to leverage adaptive management to provide reliable water supplies, changing conditions beyond 2045. • Pure Water has the ability to adapt and the flexibility to expand allowing for potential future integration with other regional programs like Pure Water Los Angeles. It also allows for future integration of treated water augmentation should Metropolitan later decide to pursue treated water augmentation applications at any of its existing feeders across the pure water conveyance systems. **Plans/Policies and Initiatives:** • Pure Water builds on and strengthens Metropolitan's existing resiliency plans, policies, and initiatives by aligning with and advancing key strategic goals, including the following. • **CAMP4W:** Long-term climate resilience planning through CAMP4W combined with Pure Water's technological innovations such as advanced data analytics, data monitoring, and digital tools would allow Metropolitan to leverage adaptive management to provide reliable water supplies changing conditions beyond 2045. • **Integrated Water Resource Plan (IRP):** To meet the IRP's goal of a flexible supply, Pure Water allows for an adaptive approach in its phasing. Pure Water provides opportunities to integrate with existing programs and projects. • **Water Supply Reliability Program:** Local control, reuse, and groundwater replenishment through Pure Water allows increased flexibility to provide water in times of high demand. Pure Water also allows adjustments to address issues due to interruptions. **Time Bound Targets:** • **Equitable Access to Supply:** The flexibility of Pure Water allows for equitable access to purified water in SWPDAs and future integration with other projects. • **Local Agency Supply:** Provides access to purified water for all 26 member agencies supplied by Metropolitan, including delivery during times of drought as well as customized delivery options based on agency needs.

Overall Assessment

The Pure Water 150 MGD project would enhance flexibility within Metropolitan's distribution system as a new independent source of supply and conveyance that can help address a portion of the SWPDA demands during drought conditions. The benefits of the project would be most significant during dry years, when Pure Water reduces reliance on other supplies (SWP and CRW) and frees capacity within the existing distribution system. However, the project introduces significant operational complexities, including increased staffing needs, required pumping to the groundwater basins, and challenges associated with managing operations during wet years when significant supply surpluses occur. Phasing the project provides flexibility to adapt to the region's evolving water supply and demand needs.

Overall Assessment Value

Moderate

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Equity Programs for underserved communities Scale of community engagement Public health benefits Workforce development	1. What percentage of the area served by the project, program, or portfolio includes underserved communities and what percentage of the project/program/portfolio area is in underserved communities?	Based on CalEPA's OEHHA California Communities Environmental Health Screening Tool (CalEnviroScreen and CalEnviroScreen 4.0 data: • Approximately 40% of the area that would be served by Pure Water is disadvantaged. • Areas where new program facilities would be built, approximately 71% of the population that is within one mile of the proposed AWPF and 39-mile backbone conveyance system falls within disadvantaged communities. Specifically, much of Carson, where many facilities would be located, ranks in the highest percentile of disadvantaged communities. Based on Water Code §79505.5 which defines DACs based on income (specifically, households earning 80% or less of the statewide median household income): • Approximately 30% of the area served by Pure Water qualifies as disadvantaged, and approximately 35% of the population within one mile of the proposed AWPF and backbone conveyance system reside within disadvantaged areas. Pure Water's facilities and components would traverse numerous census tracts (including tracts within cities of Carson, Norwalk, Santa Fe Springs, Pico Rivera, Industry, El Monte, Baldwin Park and Irwindale), potential environmental impacts (e.g. air, noise and hazardous materials) arise mainly during construction and are addressed by identified mitigation measures. Approximately 12.8 million people would be direct recipients of water from Pure Water Southern California, which includes population of all MA service areas, except Eastern, Western, IEUA and San Diego. • All communities where new facilities are planned would directly benefit from the reliable, high-quality water supply provided by Pure Water. Many of these communities, in particular disadvantaged communities, rely solely on groundwater basins for their water supply. • Pure Water enables Metropolitan to fill supply shortfalls with 93,000 AFY of drought resilient water supplies, which augments local groundwater basins filling 30% of the supply deficit thereby helping ensure the long-term sustainability of these and supply reliability.	Moderate
	2. What specific community benefits are included in the project, program, or portfolio?	**Workforce Development:** • Per the Los Angeles Economic Development Corporation Economic Impact Study, construction of Pure Water would create 75,660 direct and industry-related job years and operations would be expected to support nearly 2,500 jobs annually. • The Pure Water Project Labor Agreement (PLA) would set a goal for 60% local worker participation and Metropolitan continues to explore apprenticeship opportunities. • An MOU was signed in early 2025 to advance work readiness opportunities and increase the qualified candidate pool for job opportunities was signed by the City of Carson, Metropolitan, Sanitation Districts, West Basin MWD and the South Bay Workforce Investment Board. • Metropolitan and the Sanitation Districts are planning a workforce training center next to the AWPF, providing career pathways both for Pure Water operations and for the broader water sector. **Small Business Opportunities:** • Fosters small business growth by providing diverse and equitable procurement opportunities, with a focus on local business participation through Metropolitan's Business Outreach Program. • In March 2024, Metropolitan hosted a MetWorks event, aimed at sharing information on contracting opportunities with small businesses. Metropolitan also hosted a construction and apprenticeship resource fair. **Water quality:** Produces high quality water low in total dissolved solids (TDS) and free of golden mussels and quagga mussels, which would improve groundwater water quality in terms of lowering TDS, nitrate, sulfate, and chloride concentrations thereby protecting the public water supply and the health of the communities that depend on these basins. **Community benefits program:** A framework for a potential community benefits approach is currently in development with a focus on providing benefits to communities located near the proposed AWPF and pipeline alignment that may experience environmental impacts from a program designed to serve the broader region. Benefits may include both direct actions and the creation of a community benefits fund, helping address local impacts by advancing priority projects and initiatives that enhance climate resilience and improve overall quality of life. **Community space:** May include ancillary facilities, such as meeting rooms, tour facilities, and a learning center which would encourage education, collaboration, and greater community involvement. **Good Neighbor Guidelines:** Metropolitan and Sanitation Districts strive to minimize the impact of construction work on local communities and restore impacted areas to their original condition or better. The agencies are committed to communicating potential impacts, responding to inquiries in a timely manner and maintaining an active dialogue before and during construction. **Additional community and environmental elements:** • Plans for the AWPF site include plugging oil wells located on site and installing EV charging stations, many of which could be available for public use. • Consideration of planting additional trees and vegetation within the AWPF footprint and near Pure Water components to help offset greenhouse gas emissions. • Metropolitan intends to pursue Envision verification, a sustainable infrastructure framework that includes standards to promote public health and enhance quality of life for surrounding communities.	Exceptional

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Equity Programs for underserved communities Scale of community engagement Public health benefits Workforce development	3. What level of community, tribal, and partner engagement is included in the project, program, or portfolio?	An outreach charter guides outreach efforts and includes a commitment to engaging with disadvantaged communities to listen, communicate transparently, and involve those impacted by the program. Outreach and communications plans provide a framework for implementing outreach activities. **Community Engagement**: • In-person and virtual tours of the Grace F. Napolitano Pure Water Southern California Innovation Center, including school field trips, public tours, and special events. • Metropolitan staff briefings and presentations for community groups, business organizations, at conferences, and city councils. • Booths at community events throughout the program area to share information and connect with residents. • Partnering with community-based organizations located near proposed facility sites to create unique engagement opportunities to involve residents in program development. • Regular collaboration with regulators to provide program updates and seek feedback. Regular meetings and listening sessions with environmental organizations. **Environmental Review (CEQA) Process:** • Conducted an extensive outreach campaign for the Notice of Preparation and the Draft Environmental Impact Report (DEIR) including public meetings; mailing postcards to addresses within 500 feet of proposed facilities; ads in English and Spanish newspapers; developing a dedicated webpage; creating easy-to-understand informational materials; sharing updates on social media channels; and meeting with business organizations, environmental groups, and community-based organizations. **Communications/Website:** • Developed a robust program website that serves as an information hub, as well as videos, multi-lingual brochures, hundreds of social media posts, and a dedicated Pure Water quarterly e-newsletter (>2,000 subscribers). • Pure Water has been featured in both local and national news coverage. **Tribal engagement:** • Engaged with dozens of tribes and tribal organizations including the Gabrieleño Band of Mission Indians-Kizh Nation, Gabrieleno/Tongva Band of Mission Indians, Yuhaaviatam of San Manuel Nation, Soboba Band of Luiseño Indians, Fernandeño Tataviam Band of Mission Indians, United American Indian Involvement, American Indian Chamber of Commerce, and Sacred Places Institute. • Consulted extensively with the Gabrieleño Band of Mission Indians-Kizh Nation on the development of the Tribal Cultural Resources analysis of the Draft EIR. Feedback was incorporated into the environmental review and resulted in Metropolitan's commitment to providing environmental awareness training prior to construction and secure a Native American Monitor from or approved by the Gabrieleño Band of Mission Indians-Kizh Nation. **Water Reuse Collaborative:** • Partnered with program participants and other water reuse agencies to establish the Water Reuse Collaborative which brings together leadership from the region's key water recycling entities to coordinate strategy, combine resources, and set shared goals to advance water recycling efforts.	Exceptional
	4. Describe the extent and reasons why there is broad community support/opposition or potential for support/opposition.	**Community Support**: • Organizations across a wide range of sectors including business, labor, environmental, and civic groups, recognize the importance of developing a new climate-resilient water supply that also enhances seismic resiliency and reduces reliance on imported water sources. Additional benefits, such as replenishing groundwater basins and improving basin water quality, further strengthening public support. • Public opinion research conducted in 2022 and 2024, along with feedback collected from tours of the demonstration facility, further confirms public support for Pure Water Southern California • Workforce development opportunities, community-focused design, and potential for additional community and environmental benefits also contribute to strong community backing. • Tours of the Napolitano Innovation Center and explanations of the advance purification process help build support and understanding of the high-quality water that would be provided by the program. • Community members and stakeholders continue to express strong support for the program as reflected in the 72 letters of support submitted as part of Metropolitan's application for Reclamation WaterSMART Large-Scale Water Recycling Program Grant, with endorsements from congressional leaders, state and local officials, environmental organizations, cities, and regional agencies. **Community Concerns:** • There are concerns related to energy use, greenhouse gas emissions, overall costs, and water quality, steps are being taken to address these issues.	Significant

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Partnerships and Collaborations:** • Pure Water is a product of the creative and collaborative partnership between Metropolitan and the Sanitation Districts. Pure Water continues to foster new partnerships with more than 15 program partners, including member agencies (Central Basin Municipal Water District [MWD], West Basin MWD, City of Torrance, Long Beach Utilities, Three Valleys MWD, Los Angeles Department of Water and Power, Upper San Gabriel Valley MWD, and others); groundwater basin managers (Water Replenishment District, Main San Gabriel Basin Watermaster); Colorado River partners (Southern Nevada Water Authority, Arizona Department of Water Resources, Central Arizona Project); and other key partners (U.S. Army Corps of Engineers, the State Water Resources Control Board's Division of Drinking Water, Southern California Edison, Los Angeles County Department of Public Works, California Department of Transportation, and other regulators). • Pure Water has received support from the U.S. Bureau of Reclamation, California Department of Water Resources and other agencies and continues to promote federal and state engagement. • Pure Water continues to encourage the development of partnerships with universities, research institutions, and technology providers to advance water purification science, monitoring, and public health protections; provides an opportunity for partnerships with community-based organizations that have helped build trust and relationships for Metropolitan with underserved communities; and created opportunities for collaboration with the environmental community to advance the program. **Metropolitan, Regional and Multi-State plans, policies, and initiatives:** • Pure Water meets the goals and objectives of multiple Metropolitan plans, policies and initiatives including CAMP4W, Integrated Resources Plan (2020), Water Shortage Contingency Plan (2021) and Urban Water Management Plan (2020). Pure Water builds upon Metropolitan's Diversity, Equity and Inclusion (DEI) commitment and initiatives and supports the DEI framework by promoting inclusion, broad stakeholder engagement and workforce development while reinforcing Metropolitan's commitment to equitable water access • Pure Water meets the water supply and quality objectives of State and regional resource management plans (including 2023 California Water Resiliency Portfolio, California Water Plan (2023), SWRCB Recycled Water Policy, Water Quality Control Plan for the Los Angeles Region (Basin Plan), and the Greater Los Angeles County Integrated Regional Water Management Plan). • Pure Water advances several multi-state plans including the Lower Basin DCP, the Colorado River Interim Guidelines for Lower Basin Shortages, and the Coordinated Operations of Lake Powell and Lake Mead (2007 Interim Guidelines), helping set the framework for sustainable management of the Lower Colorado Basin.

Overall Assessment

Pure Water would provide water to an area of which 30-40% of the communities are considered disadvantaged. Approximately 35-70% of the communities within one mile of program facilities are considered disadvantaged. The program would provide many community benefits including workforce development, jobs, business opportunities, educational programs, community space and groundwater quality improvements. Community, tribal and partner engagement is extensive and meaningful. Pure Water has strong support and steps are being taken to address any community concerns related to energy use, greenhouse gas emissions, overall costs, and water quality.

Overall Assessment Value

Significant

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Environmental Co-Benefits Greenhouse gas emissions Benefits Ecosystem services Habitat/wildlife benefits	1. What are the estimated greenhouse gas emissions or enhanced carbon sequestration, and how does it impact the carbon budget, as defined by the Climate Action Plan?	Based on the Pure Water Draft Environmental Impact Report (DEIR) the potential impacts associated with construction and operation of Pure Water facilities include: • Total estimated construction-related greenhouse gas (GHG) emissions are 79,458 metric tons (MT) CO_2e across all project-level components. • In the first year of full operations (expected in 2036), annual operational emissions are estimated to total 115,861 MT CO_2e. By 2045, annual emissions are projected to be 43,083 MT CO_2e. due to compliance with Senate Bill 100 requiring a 100% carbon-free electricity grid. Metropolitan has committed to a series of up-front measures to offset Pure Water's GHG emissions including but not limited to: • **Onsite Renewable Energy:** Installation of photovoltaic solar panels with a total power rating of at least 1.5 megawatts at the A.K. Warren Water Resources Facility. • **Electric Vehicle Charging:** Installation of 100 Level 2 and 15 Level 3 electric vehicle chargers at the Warren Facility. • **Energy Recovery:** Installation of inter-stage pumps in the reverse osmosis system to reduce energy use; and installation of Energy Recovery Devices on the concentrate pumping systems to recover energy. • **Biogenic Carbon Supplement:** Addition of a biogenic carbon supplement to support both denitrification and biological phosphorus removal at the AWPF. • **Plug Oil Wells:** Plugging of eight existing oil wells currently located at the Joint Treatment Site. Metropolitan was below its 2022 CAP milestone GHG emissions budget for the 2005-2022 period, with Metropolitan having emitted approximately 5,408,096 MT CO_2e, representing just over half (55%) of the maximum emissions budgeted through 2022. The overall carbon budget has 9,252,380 MT CO_2e remaining for the 2023-2045 period. Metropolitan has strategies to reduce overall GHG emissions by 2,003,695 MT CO_2e using Phase 1 actions under the high emissions scenario. The forecasted carbon budget exceedance of 1,522,195 MT CO_2e under the high emissions scenario can be addressed by implementation of the 2020 CAP. • Pure Water was evaluated for consistency with this budget and under the highest emissions forecast scenario, implementation of CAP measures would allow Metropolitan to remain within its carbon budget and achieve both its 2030 and 2045 targets. • Pure Water would be consistent with the CAP through both 2030 and 2045 and would not result in a significant impact related to GHG emissions.	Limited
	2. In what way and to what degree does it provide additional ecosystem services?	• The Sanitation Districts may implement an enhanced source control program, which would reduce certain constituents in wastewater effluent that is discharged to the ocean which could improve future quality of wastewater discharges. • Pure Water would produce an average of 155,000 AFY of purified water for groundwater recharge into the West Coast, Central, and Main San Gabriel basins, thus contributing to sustaining groundwater levels. Sustained groundwater levels: support ecosystems, vegetation, and habitat dependent on groundwater; maintain soil moisture; provide a buffer against drought; and support wildlife by preserving habitats and reliable water sources essential for survival. • Pure Water reduces reliance on imported water, which could improve the health of both the Colorado River and Sacramento-San Joaquin River watersheds by potentially reducing the amount of water imports to the region.	Moderate
	3. To what extent does it protect, improve, or expand wildlife and fish habitat and/or affect flows in ways that improve ecological functions for native species?	• Temporary construction areas would be restored to pre-construction conditions and areas of marginal or poor habitat improved, as feasible. With the avoidance of sensitive areas, restoration and enhancement of temporary construction areas, and groundwater recharge, Pure Water would increase the quality and quantity of suitable habitat for native species. • Groundwater recharge from Pure Water could support riparian vegetation and habitat and provide surface water for federally listed threatened or endangered plant and wildlife species along the backbone alignment and considerably beyond the project area. • Pure Water could offset imported SWP water demands on the Sacramento-San Joaquin River watershed, or its diversions timed to balance environmental water demands thereby providing benefits to the sensitive ecosystem of the Bay Delta, which serves as a critical habitat for listed species. Reducing dependence upon imported sources would help increase the sustainability of both watersheds to improve the health of the ecosystems. • The Draft Environmental Impact Report for Pure Water identifies wildlife and environmental stewardship measures, including Environmental Awareness Training, Temporary Construction Fencing, Nesting Bird and Raptor Avoidance, Nighttime Lighting, Invasive Plant Species, and Protected Tree Avoidance and Mitigation to protect and improve wildlife and fish habitat.	Moderate

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies, and initiatives at Metropolitan.	**Metropolitan, Regional and Multi-State plans, policies, and initiatives:** • Climate Adaptation and Emissions Goals: Pure Water aligns with Metropolitan's Climate Adaptation Master Plan for Water (CAMP4W) and Climate Action Plan (CAP) by 1) advancing reliable, equitable, and climate-resilient water supplies; and by 2) reducing the energy use and emissions associated with long-distance water imports. The project lowers groundwater pumping costs and related pumping emissions by raising groundwater water table levels, especially in overdraft scenarios. • Pure Water supports innovation in water purification and reuse on a regional scale, thereby setting a precedent for other regions to adopt similar methods and sustainable practices. Pure Water's innovative treatment approaches, contingent on regulatory approval, opens the door for other agencies to invest in similarly innovative processes, benefiting from the many years of research and demonstration through testing Pure Water. • Project supports both Metropolitan's CAP and UWMP in reducing emissions from daily operations.

Overall Assessment

The 150-mgd Pure Water Program would provide moderate environmental co-benefits. The program would recharge an average of 155,000 AFY of purified water into the West Coast, Central, and Main San Gabriel groundwater basins to help sustain groundwater levels; support ecosystems; and provide a buffer against drought. It would reduce reliance on imported water supplies, with indirect benefits to the health of the Colorado River, Sacramento-San Joaquin River watersheds, and the Bay-Delta ecosystem. The larger scale of operations would result in greater overall GHG emissions, but the program would remain consistent with Metropolitan's Climate Action Plan. Environmental stewardship measures such as oil well closures, renewable energy features, habitat restoration, and wildlife protection practices would further reduce impacts and enhance regional climate resilience.

Overall Assessment Value

Moderate

Attachment No. 4

CAMP4W Preliminary Assessment of Sites Reservoir

Metropolitan Water District of Southern California CAMP4W Preliminary Assessment of Sites Reservoir Project

September 22, 2025

Metropolitan is committed to meeting its mission in the face of a changing climate by developing projects and programs that advance Time-Bound Targets, consistent with the Board's priorities. This comprehensive assessment is a key part of the Climate Decision-Making Framework and will be used to support Board deliberations on which projects and programs Metropolitan should pursue.

Project/Program/Portfolio at a Glance

Title of Project/Program/Portfolio

Sites Reservoir Project

Status (planning/design/implementation) and Date

Planning and Design (August 2025)

Capacity (if applicable)

1.5 Million Acre-Feet (MAF)

Capital Cost:

$7.8 Billion

Operation/Maintenance or Ongoing Cost:

$12.1 Million/year

Description and how the project/program/portfolio supports water supplies, reliability and/or delivery

The Sites Reservoir Project is a partnership between Metropolitan and 21 other entities, including the State of California, the United States Department of Interior Bureau of Reclamation (Reclamation) and several urban and agricultural water providers throughout the state of California. The Sites Reservoir Project will operate with its own water right (separate from the State Water Project) and serve Metropolitan as a dry-year supply, capturing excess flows from the Sacramento River during the winter of wetter years and releasing the stored water during the summer and fall of drier years. At the current level of participation, Metropolitan is expected to receive a long-term average of 32,000 acre-feet per year, with 56,000 acre-feet per year in Dry and Critical years. The project creates a new water supply to supplement Metropolitan's water portfolio and its yield is expected to increase over time with climate change. As such, the Sites Reservoir Project would increase Metropolitan's water supply reliability, increase operational flexibility, and enhance regional and statewide partnerships.

Portfolio view and additional potential companion projects/programs/portfolios

This project provides more supplies to Metropolitan's entire service area, including its State Water Project Dependent Areas (SWPDA), especially during drought conditions.

Summary of Assessment and Staff Recommendation

Each criteria and attribute presented on the following pages includes a description of the quantitative and qualitative measures relevant to the proposed project or programs, as well as Metropolitan staff's recommendation.

What Time-Bound Targets Does the Project/Program/Portfolio Address?

Boxes with check marks (✓) indicate that the project/program/portfolio advances a Time-Bound Target.

Summary of Assessment and Staff Recommendation *(see footnote on Page 2 for ranking guidelines)*

Reliability	Resilience	Financial Sustainability and Affordability	Adaptability and Flexibility	Equity	Environmental Co-Benefits
Significant	Moderate	Low Cost	Significant	Significant	Limited

See the following pages for a detailed assessment across each Evaluative Criteria category.

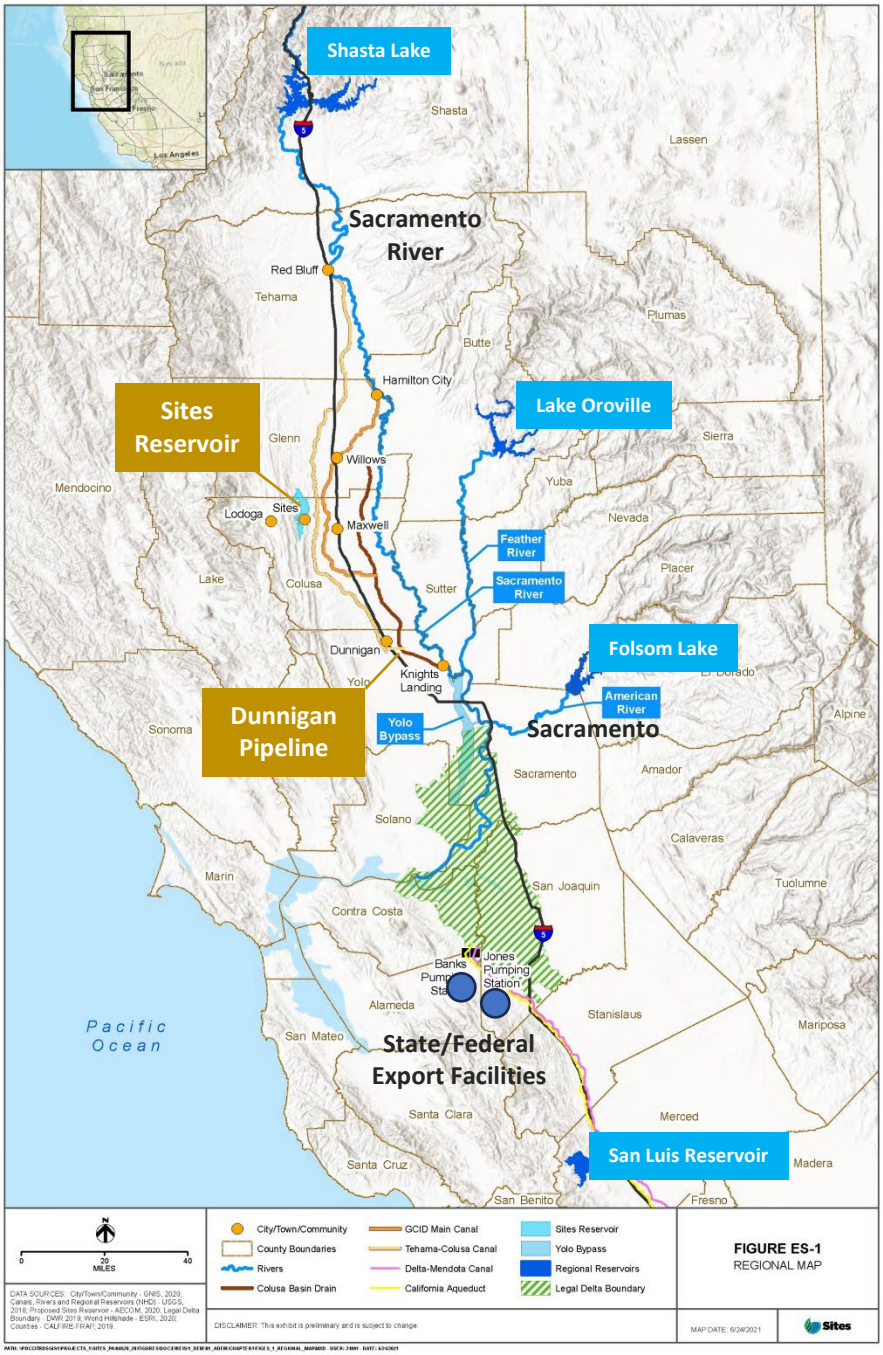
Ranking Guidelines at the Attribute Level

Defining to which level a project, program or portfolio will deliver CAMP4W objectives for each attribute category.

Exceptional	The project/program/portfolio directly and completely addresses the benefits being assessed by the question/statement.
Significant	The project/program/portfolio directly addresses most elements of the benefits being assessed by the question/statement.
Moderate	The project/program/portfolio only addresses some elements of the benefits being assessed by the question/statement or addresses them indirectly.
Limited	The project/program/portfolio only addresses few or minor elements of the benefits being assessed by the question/statement or provides minor indirect benefits.
Very Limited	The project/program/portfolio does not provide any or very limited benefits to those being assessed by the question/statement.
Undetermined or Not Applicable	The ranking for this project/program/portfolio is not determined at this time or the attribute is not applicable.

Map or Location Information Related to the Project, Program or Portfolio

Project Map



Map or Location Information Related to the Project, Program or Portfolio

Detailed Project Description

The Sites Reservoir Project is a proposed 1.5 MAF off-stream storage facility west of Maxwell, CA, designed to capture Sacramento River flows during wet periods under a separate water right from the State Water Project (SWP). Metropolitan is currently the largest participant (22.1% share, ~312 TAF storage) and has invested about $31 million in planning since 2017. The project aims to address climate-driven water supply challenges by providing flexible storage and supporting drought resilience.

Facilities include two main dams, saddle dams, inlet/outlet works, upgraded Red Bluff and Hamilton City screened diversion facilities, regulating reservoirs, conveyance pipelines, recreation areas, and 46 miles of access roads. Diversions will primarily occur in the winter months (December – March) of wetter years when flow criteria are met, with a combined maximum diversion rate of 4,200 cfs from the Sacramento River. Releases will generally occur in drier years during the July – November transfer window for south-of-Delta deliveries. By 2040, average annual diversions into Sites Reservoir are projected to be 234 TAF, with releases averaging 215 TAF (353 TAF in drier years).

The Sites Reservoir Project follows the “beneficiary pays” model, allocating costs and water in proportion to storage shares. Twenty-two entities are currently participating, with another sixteen on the waitlist. South-of-Delta agencies (54% of storage) will rely on summer/fall releases; the State and Reclamation will use their shares for environmental and regulatory purposes. Metropolitan could gain supply reliability in dry years, enhanced operational flexibility, and financial opportunities via transfers and exchanges. The State storage account is funded by the Proposition 1 Water Storage Investment, where funding is based on an assessed value of public benefits (i.e., flood protection, recreation, and ecosystem benefits). On August 20, 2025, the California Water Commission unanimously voted to increase the funding to the Sites Reservoir Project by nearly $219 million, bringing total funding to nearly $1.1 billion.

The Final EIR/EIS was certified in November 2023, litigation resolved in 2024, and a federal Record of Decision is expected in 2025. Permitting progress includes California Endangered Species Act (CESA) Incidental Take Permits for construction (effective through 2034) and operations (through 2039), with mitigation measures in place. The construction Biological Opinion was issued by the United States Fish and Wildlife Service (USFWS) on July 16th, 2025.

The State Water Resources Control Board (State Water Board) is considering the Authority’s petition for a 1977-priority water right (up to 1.5 MAF storage, 2,200 cfs Red Bluff, 2,000 cfs Hamilton City). Most protests have been resolved, including a settlement with State Water Contractors ensuring SWP protection. The Authority seeks a decision from the State Water Board by October 2025 to align with state water policy objectives.

Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Reliability Supply Performance Equitable Reliability	1. To what extent does it help meet regional supply reliability objectives under changing climate conditions?	**Assumptions for Sites Project** • The supply received by Metropolitan from Sites Reservoir is dependent on hydrology, with an average annual delivery projected to be 32 TAF/year for Metropolitan. • Modeling for Sites Reservoir assumed a maximum delivery of 128 TAF • Assumes Sites Reservoir would be operational in the beginning of 2033 **Analysis and Results** Tables 1 and 2 below reflect the probability of shortage results from the reliability analysis. The tables compare the probability of shortage from the IRP 2025 Update results (herein referred to as "Base Case") measured against the probability of shortage for the modeling results that incorporate Sites Reservoir (referred to as "Sites"). Table 1 shows that Sites reduces the probability of shortage in Scenario C in forecast years 2040 and 2045. Table 2 shows that Sites reduces the probability of shortage in Scenario D in forecast years 2035, 2040 and 2045. Thus, in both Scenarios C and D, Sites enhances Metropolitan's reliability within the forecast period when compared to the Base Case. In Scenario C, the Base Case results show a maximum magnitude of shortage in 2045 of 607 TAF, which is reduced to 525 TAF when Sites is operational. Similarly, Scenario D of the Base Case show a maximum magnitude of shortage in 2045 of 1.31 MAF and is reduced to 1.28 MAF when Sites is online.	Moderate

Table 1: Scenario C Probability of Shortage

Forecast Year	Base Case	Sites
2030	3%	3%
2035	4%	4%
2040	15%	10%
2045	18%	13%

Table 2: Scenario D Probability of Shortage

Forecast Year	Base Case	Sites
2030	7%	7%
2035	11%	9%
2040	44%	39%
2045	58%	55%

Table 3 provides insight into the difference in storage (defined as the "benefits") from a specific project for 2045 with two metrics: the 2045 Average Benefit and the 2045 Maximum Benefit. In Table 3, The 2045 Average Benefit reflects the storage benefit of Sites across hydrologic conditions for 2045, on average. The 2045 Maximum Benefit is the maximum storage benefit of Sites across hydrologic conditions for 2045. These metrics are achieved by subtracting the storage amounts in 2045 between the Base Case and Sites for Scenarios C and D. For example, in 2045 Scenario C, Sites provides an average storage benefit of 138 TAF and a maximum storage benefit of 440 TAF. The quantities shown in Table 3 represents supply that was produced and stored, but not used to offset shortage in the planning horizon. This value is also helpful in quantifying the amount of resources stored for use beyond the current planning horizon.

Table 3: Difference in MWD Storage between Base Case and Sites in 2045 (TAF)

Type	Scenario C	Scenario D
2045 Average Benefit	138	93
2045 Maximum Benefit	440	389

While Tables 1 and 2 provide an understanding of the likelihood shortage, Table 4 quantifies the reduction in shortage as a result of implementing the proposed project. One limitation when comparing the probability of shortage, as is done in Tables 1 and 2, is that the likelihood of shortage is only reduced if the project is able to fully eliminate the shortage. Table 4 provides insight into the total reduction in shortage (defined as the "benefits") from a specific project over the planning horizon (2025 to 2045) with two metrics: the Average Cumulative Benefit and the Maximum Cumulative Benefit. The Average Cumulative Benefit reflects the benefit of Sites across hydrologic conditions for the planning horizon, on average. The Maximum Cumulative Benefit is the maximum benefit of Sites across hydrologic conditions for the planning horizon. These metrics are achieved by subtracting the shortage amounts between the Base Case and Sites for Scenarios C and D. For example, in Scenario C, Sites provides an average benefit of 68 TAF and a maximum benefit of 299 TAF, across the planning horizon.

Table 4: Difference in Shortage between Base Case and Sites for 2025-2045 (TAF)

Type	Scenario C	Scenario D
Average Cumulative Benefit	68	248
Maximum Cumulative Benefit	299	639

Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment	Value
		While Sites reduces the shortage probability and magnitude, the proposed project increases the probability of net surplus. An increase in the probability of net surplus means that there is a higher likelihood of unmanaged supplies. Tables 5 and 6 below provide the probability of net surplus for Scenarios C and D in 2045. In Scenario C, the Base Case has a maximum magnitude of net surplus is 1.3 MAF in 2045, which increases to 1.4 MAF with Sites online. In Scenario D, the Base Case has a maximum magnitude of net surplus of 770 TAF in 2045, which increases to 914 TAF when Sites is operational. **Table 5** **Scenario C: Probability of Net Surplus in 2045** **Forecast Year / Base Case / Sites** **2045 / 26% / 31%** **Table 6** **Scenario D: Probability of Net Surplus in 2045** **Forecast Year / Base Case / Sites** **2045 / 1% / 2%** It should be noted that the information shown in Tables 5 and 6 does not alter the reliability assessment scoring; however, it provides valuable context to help decisionmakers identify projects that are efficient, balance supply and demand, and support a fuller understanding of the project's big picture. Other investments would be needed to realize the benefits of unmanaged supplies.	
	2. To what extent does it advance equitable supply reliability?	The Sites Reservoir Project advances equitable water supply by delivering a dry-year supply that enhances overall reliability for Metropolitan's entire service area, including the State Water Project Dependent Areas.	Exceptional
	3. When will it be operational? What is the useful life of the project/program/portfolio? How will benefits continue beyond the 2045 planning horizon under changing climate conditions?	The Sites Reservoir Project is expected to be fully operational in 2033 and is expected to have a useful life of 100 years or longer. The useful life estimate is based on the type of infrastructure, materials to be used, anticipated construction standards, operational stress, technological innovation. The industry assumed standard useful life for identified assets includes dams (50-100 years), canals (30-50 years), conveyance pipelines (75-100 years), pumping/generating stations (30-50 years), and mechanical and electrical equipment (20 years). The water supply reliability results modeled using IRPSIM (Question 1) only reflect benefits through the forecast year 2045. Benefits are anticipated to continue and increase beyond the 2045 horizon based on the useful life of the facilities and climate change projections. The Sites Reservoir Project yield is expected to increase with the projected increase in frequency and magnitude of precipitation events and reduction in snowpack. These benefits are not reflected in the modeling results provided above.	Significant
	4. Are there additional projects/programs/portfolios that could be added to improve this project/program/portfolio's effectiveness for water supply reliability?	Yes, the Delta Conveyance Project (DCP) would improve the effectiveness of the Sites Reservoir Project. The DCP would reduce the carriage water cost associated with transferring non-project water through the Delta, which ranges from 20-35% dependent on hydrology. The Sites Reservoir Project would be complemented by the DCP; it does not require DCP. *IRPSIM modeling for this project did not include the proposed DCP project.*	Moderate
	5. How does this project/program/portfolio improve the water supply reliability of existing projects/programs/systems?	Given that Sites Reservoir Project deliveries would be conveyed through State Water Project (SWP) facilities, it leverages Metropolitan's existing treatment, conveyance, and delivery systems to distribute water efficiently across the Metropolitan service area. Sites Reservoir Project supplies could be stored in Diamond Valley Lake via the Inland Feeder, support groundwater recharge projects, and local recycled water projects.	Exceptional

Preliminary Assessment by Evaluative Criteria

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies and initiatives at Metropolitan.	**Plans, Policies and Initiatives** • **Integrated Water Resources Plan (IRP)**: The Sites Reservoir Project advances IRP goals by diversifying water sources and increasing supply. • **Conjunctive Use and Cyclic Storage Programs:** Enhances Metropolitan's storage programs by providing an additional source of recharge water, increasing stored reserves, and improving drought-year reliability. • **Systemwide Flexibility:** Supports system-wide flexibility by delivering water through SWP facilities, which leverages Metropolitan's existing treatment, conveyance, and delivery systems. **Resource-Based Targets** • Assuming Metropolitan's participation of 22%, the Sites Reservoir Project would provide Metropolitan with an additional 312 TAF storage for use as a dry-year supply (modeled average Dry and Critical year deliveries are 56 TAF/yr). **Policy-Based Targets** • **Equitable Supply Reliability:** Sites Reservoir Project deliveries will be routed through SWP facilities, increasing supply reliability for our SWPDAs.

Overall Assessment

Overall Assessment Value

Significant

Key: Exceptional | Significant | Moderate | Limited | Very Limited | Undetermined or Not Applicable

Ranking Guidelines at the Attribute Level

Defining to which level a project, program or portfolio will deliver CAMP4W objectives for each attribute category.

Exceptional	The project/program/portfolio directly and completely addresses the benefits being assessed by the question/statement.
Significant	The project/program/portfolio directly addresses most elements of the benefits being assessed by the question/statement.
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Very Limited	The project/program/portfolio does not provide any or very limited benefits to those being assessed by the question/statement.
Undetermined or Not Applicable	The ranking for this project/program/portfolio is not determined at this time or the attribute is not applicable

Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Resilience Addresses known risks and vulnerabilities Project, Program or Portfolio's ability to perform under climate impacts	1. How does it perform under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? **Drought is addressed in Reliability*	Extreme Heat: The Sites Reservoir Project mainly relies on electricity during its filling period, wetter winter and spring months. So, heat-related power outage would be extremely unlikely during its filling period. Sites Reservoir Project release operations would still depend on energy and are therefore vulnerable to power outages resulting from extreme heat or other climate hazards (Sites, 2023 Chapter 28 Climate Change). The Sites Reservoir Project team plans to evaluate the inclusion of emergency generators to address this vulnerability. Wildfire: The census tract containing the Sites Reservoir Project area has a relatively high risk of wildfire based on the FEMA National Risk Index. The Sites Reservoir Project Authority has incorporated development and implementation of fire safety plans for prevention and suppression/control during construction and maintenance into their design. The Sites Reservoir Project Authority will coordinate with the State Fire Marshal, CAL FIRE, local fire suppression agencies, and counties prior to construction, during construction, and during maintenance (Sites, 2023 Appendix 2D Best Management Practices, Management Plans, and Technical Studies). Also, while the likelihood may be low, Sites Reservoir could be impacted by a debris flow following a wildfire, reducing the amount of storage. Flooding: The Sites Reservoir Project is resilient to flood hazards and is designed to provide flood protection per California Department of Water Resources Division of Safety of Dams (DSOD). DSOD criteria require a minimum of 1.5 feet freeboard under a probable maximum flood (PMF) event with wind and wave runup. The PMF is an extreme load condition given the most severe combination of meteorological and hydrological conditions that can reasonably occur in the geographic region. References: FEMA. National Risk Index Map. March 2023. Accessed July 7, 2025. https://hazards.fema.gov/nri/map. Sites Reservoir Project Final EIS/EIR. Sites Project Authority and Bureau of Reclamation, November 2023. Ch. 28 Climate Change. Appendix 2D Best Management Practices, Management Plans, and Technical Studies	Moderate
	2. How does it maintain system reliability, including delivery and water quality, under identified climate vulnerabilities and hazards (e.g., extreme heat, wildfire, sea level rise, flooding)? **Drought is addressed in Reliability*	Heat: Heat waves in urban areas increase energy and water demands. During periods of extreme heat, the Sites Reservoir Project is expected to make reservoir releases, requiring little electricity demand, and ultimately generating additional electricity for the power grid. Metropolitan's exposure and vulnerability would likely increase because of the extreme heat hazard, intensified by climate change. The Sites Reservoir Project would provide additional sources of water to aid in extreme heat events. Wildfire: In the event of wildfire interrupting operations at other reservoirs that serve Metropolitan, Sites could add a level of redundancy/flexibility to the system. The reservoir can also serve as an important source of water for firefighting operations in the region. Flooding: It is expected to reduce flood damage in local communities by diverting, storing, and gradually releasing flood water (Sites, 2023 Chapter 28 Climate Change). Although Sites Reservoir is primarily filled with water diverted from the Sacramento River, water from Stone Corral and Funks Creeks will also be impounded in Sites Reservoir. These creeks have historically flooded the communities downstream of the proposed Sites Reservoir Dam location. It is estimated that the Sites Reservoir Project would reduce the 100-year floodplain by approximately 10,000 acres, or 9% (Sites, 2023 Chapter 5 Surface Water Resources). The Sites Reservoir Project is receiving funding from the Water Storage Investment Program (WSIP), administered by the California Water Commission (CWC) for its flood damage reduction benefits to the Colusa County town of Maxwell and surrounding agricultural areas (CWC, 2018). References: California Water Commission (CWC), 2018. Water Storage Investment Program Technical Review: Sites Reservoir Project.	Exceptional
	3. Describe any resilience co-benefits (e.g., seismic) achieved through this project, program, or portfolio.	Metropolitan's service area is in a seismically active region subject to seismic events. The imported supplies conveyed by the Colorado River Aqueduct and California Aqueduct East and West Branches cross the San Andreas Fault, making them seismically vulnerable. Potential outages for these existing conveyance lines are estimated to range from a few months to up to two years (DWR, 2009). In the event of a seismic disruption on the Colorado River Aqueduct, water delivered from the Sites Reservoir Project would supplement State Water Project deliveries. However, if a seismic event or subsidence disrupted conveyance through the California Aqueduct or the Bay-Delta, Metropolitan would be unable to receive deliveries from the Sites Reservoir Project. References: California Department of Water Resources (DWR). 2009. Delta Risk Management Study	Very Limited

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies and initiatives at Metropolitan.	

Preliminary Assessment by Evaluative Criteria

Overall Assessment

The facilities of the Sites Reservoir Project are designed to be resilient to various climate and seismic hazards. The project has incorporated fire safety plans to address wildfire risk and is designed to provide flood protection for communities. However, the reservoir is located in a high fire hazard zone, which may cause soil erosion, if combined with a flood event, and reduce its useful life. The reservoir is expected to enhance system reliability by providing an additional water source during heat waves and wildfires. It can also regulate the flow of local waterways to control potential floods. The project could supplement water supplies if a seismic event disrupts the Colorado River Aqueduct, though its own deliveries would be impacted if a seismic event affects the Bay-Delta or California Aqueduct. The subsidence issue of the California Aqueduct could also affect its delivery effectiveness. Considering its climate resilience benefits and its seismic vulnerability, the overall assessment value is moderate.

Overall Assessment Value

Moderate

Key: Exceptional | Significant | Moderate | Limited | Very Limited | Undetermined or Not Applicable

Ranking Guidelines at the Attribute Level

Defining to which level a project, program or portfolio will deliver CAMP4W objectives for each attribute category.

Exceptional	The project/program/portfolio directly and completely addresses the benefits being assessed by the question/statement.
Significant	The project/program/portfolio directly addresses most elements of the benefits being assessed by the question/statement.
Moderate	The project/program/portfolio only addresses some elements of the benefits being assessed by the question/statement or addresses them indirectly.
Limited	The project/program/portfolio only addresses few or minor elements of the benefits being assessed by the question/statement or provides minor indirect benefits.
Very Limited	The project/program/portfolio does not provide any or very limited benefits to those being assessed by the question/statement.
Undetermined or Not Applicable	The ranking for this project/program/portfolio is not determined at this time or the attribute is not applicable.

Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment
Financial Sustainability and Affordability Unit cost	1. What is the cost of the project?	The total cost of the Sites Reservoir Project based on the 2025 cost update is $7.8 Billion (B), in 2025 dollars. This estimate is inclusive of planning, design, and construction expenditures for the entire project. At our current level of participation, Metropolitan's cost of the project is $1.7 B (2025 dollars) for both base and downstream facilities.
	2. What are the projected impacts to rates and budget?	The overall rate impacts of the Sites Reservoir Project, including Operation and Maintenance (O&M), are summarized below for Metropolitan's share of project costs: **Sites Reservoir Project** **Capital Construction Cost[a]** — **$1.7 B** Base Facilities Capital Cost — $1.6 B Downstream Facilities Capital Cost — $80 M Annual Capital Financing Costs[b] — $100.9 M Annual O&M Cost[c] — $11.9 M Annual R&R Cost — $2.9 M Avg. Annual Yield[d] — 32 TAF Year of Completion — 2033 **Overall Melded Cost Increase[e]** — 7% **Average Annual Cost Increase Over Construction Period[f]** — 1% Notes: *a. Capital costs allocated according to the proportional share of Amendment 3 Storage Allocations among participants: 22.1% of base facilities and 26.9% of downstream facilities* *b. Assumes 100% debt financed for this analysis at 4% rate/30-year term* *c. O&M costs net of assumed power generation credits of $24 per AF released from Sites and inclusive of State Water Project variable power costs (~$9 M)* *d. Average annual yield net of delta carriage losses to Metropolitan's service area* *e. Calculation assumes the project is 100% debt financed over the construction period. If the project is partially funded by PAYGO it will increase the short-term rate impact* *f. Based on Metropolitan's 2025/26 Revenue Requirement of $1,693M, over the period from 2026-2033*
	3. If applicable, what is the unit cost/acre foot in current year dollars? For storage projects, what is the cost/capacity?	Metropolitan utilized two unit cost methodologies to assess the project: 1) Point-in-time unit cost that assumes all debt for the project is issued at once in year one of construction and the project is in full operation in year one; and, 2) Lifecycle unit cost that estimates the average unit cost over a 100-year project life and includes needed replacements and refurbishments (R&R). **Sites Reservoir Project** **Point-in-Time Unit Cost[a]** — $3,500/AF **Lifecycle Unit Cost[b]** — $1,000/AF Notes: *a. All costs are shown in 2025 dollars and include planning, design, construction, and financing costs* *b. O&M costs net of assumed power generation credits of $24 per AF released from Sites and inclusive of State Water Project variable power costs ($287/AF)* *c. Assumes deliveries start in 2033* The Sites Reservoir Project provides both storage and supply reliability benefits. By capturing and storing excess flows during wet periods, the project can deliver critical dry-year yield later when supplies are scarce. Because of its dual-benefit nature, the project does not lend itself exclusively to direct financial or unit cost comparisons with other storage projects. For consistency, however, when evaluating other projects being considered by Metropolitan's board the cost information presented above calculates unit costs based on average annual yield, which follows the same approach used for Delta Conveyance and Pure Water Southern California.

Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment	Value
	4. Does considering life cycle cost change the Financial Sustainability and Affordability?	Yes, considering life-cycle costs (LCC) provides a more appropriate perspective of financial sustainability and affordability beyond the initial construction period. Capital financing costs for the construction of the Sites Reservoir Project represent the most significant expenditure over a 30 to 40 year period, depending on the length of project construction. Once the debt is fully repaid, only O&M and capital repair and replacement (R&R) costs remain. The life cycle cost analysis accounts for all construction-related costs, ongoing O&M, periodic R&R, and projected production yields over a 100-year operational horizon. This extended view is appropriate given the long useful life of certain infrastructure projects, such as Sites.	Low Cost
Financial Sustainability and Affordability Unit cost	5. Is it eligible for federal and/or state grants? If so, what are the estimated target amount(s)? Is there a local match requirement? If so, how much?	Yes, the Sites project is a cooperative of many potential project funders comprised of state, federal and local water agencies. Currently, there are 22 entities, including Metropolitan, actively engaged in evaluating project participation, with another 16 on an interested parties waitlist. Metropolitan's current participation reservation is 22% of base facilities and 26.9% of downstream facilities. The other participants, including irrigation/reclamation districts, urban water districts, the State of California and the United States Bureau of Reclamation, make up the remaining 78% of the funding sources. Participation of other entities does not rely on a match requirement from Metropolitan. The Sites Reservoir Project is in the final stages of negotiating a Water Infrastructure Finance and Innovation Act (WIFIA) Master Agreement that would finance up to 49% of project costs. The WIFIA program provides low interest, flexible financing for participants in the Sites Reservoir Project, potentially reducing the unit costs of water by as much as 10%.	N/A
	6. Does it have a revenue generation component that helps offset costs?	Yes, the Sites Reservoir Project includes the following revenue generation components: • Hydropower Generation: The Sites Reservoir Project include hydroelectric turbines to generate power when water is released from the reservoir. The Sites Reservoir Project will sell the hydropower, generating revenue that offset O&M costs. • Water Sales and Exchanges: Participation in the Sites Reservoir Project could also improve Metropolitan's operational flexibility by providing access to several water transfer and exchange opportunities, such as (1) exchanging water with other participants north and south of the Delta, (2) buying and storing water between participants, and (3) selling water amongst participants or to external parties. These additional avenues for buying and selling water will become even more important in the future as restrictions imposed by the Sustainable Groundwater Management Act, climate change, and other regulatory changes threaten to reduce the volume of water available in the current transfer market.	N/A

Preliminary Assessment by Evaluative Criteria

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies and initiatives at Metropolitan.	

Key: Exceptional | Significant | Moderate | Limited | Very Limited | Undetermined or Not Applicable

Overall Assessment

The Sites Reservoir Project is a proposed water storage project with a total estimated cost of $7.8 billion. The Metropolitan's share of the cost is $1.7 billion. Over the project's life, the cost is estimated to be $1,000 per acre-foot, which includes ongoing operations, maintenance, and future repairs. The project has 21 other participants and is eligible for a Water Infrastructure Finance and Innovation Act (WIFIA) loan, which could finance up to 49% of the project's costs at a lower interest rate. The project would also generate revenue from hydropower, which would help offset some of the operational and maintenance costs. The project's full benefits, including its dual storage and dry year supply reliability, are unique compared to the other projects considered by Metropolitan.

Overall Assessment Value

Low Cost

Ranking Guidelines at the Attribute Level

Defining to which level a project, program or portfolio will deliver CAMP4W objectives for each attribute category.

Exceptional	The project/program/portfolio directly and completely addresses the benefits being assessed by the question/statement.
Significant	The project/program/portfolio directly addresses most elements of the benefits being assessed by the question/statement.
Moderate	The project/program/portfolio only addresses some elements of the benefits being assessed by the question/statement or addresses them indirectly.
Limited	The project/program/portfolio only addresses few or minor elements of the benefits being assessed by the question/statement or provides minor indirect benefits.
Very Limited	The project/program/portfolio does not provide any or very limited benefits to those being assessed by the question/statement.
Undetermined or Not Applicable	The ranking for this project/program/portfolio is not determined at this time or the attribute is not applicable.

Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Adaptability and Flexibility Flexibility of existing assets Ease/Complexity Scalability	1. Describe how it works with and/or improves the flexibility of existing assets, plans, policies or programs and how it improves the ability to adjust to systemwide changes (water quality, source water, distribution interruption).	This is a traditional reservoir project, with the ability to store in wet and average years, and the ability to draw from storage in drought years. Water drawn from this reservoir moves through the Delta, the CA Aqueduct, and Metropolitan facilities, so no new delivery infrastructure is required other than that to allow deliveries in and out of the reservoir. Water from Sites Reservoir can be delivered to the entire service area to cover both shortages in SWP or CRW supplies. This project is especially beneficial to the SWP Dependent Areas (SWPDA), which currently has limited surface storage capacity for multi-year droughts. If Sites Reservoir had been available and full to start the past drought from 2020-2022, no localized allocation would have been needed for the SWPDA. Sites Reservoir enhances the storage capacity for the SWPDA to last through three or four 5% SWP allocation drought years in a row without a localized water allocation to the SWPDA. This project provides more supplies to Metropolitan's entire service area, including its SWPDA, primarily for drought conditions. During dry hydrologic years, the reservoir allows Metropolitan to deliver Sites supplies through the Delta and the CA Aqueduct to the entire service area utilizing the existing conveyance and distribution system. This new reservoir will increase flexibility and reliability for the entire service area and especially the SWPDA. The project is expected to have no considerable impact on water quality for Metropolitan's SWP supply. Based on the Final Environmental Impact Report, Sites Reservoir would have limited effect on the water quality in the Sacramento River due to a substantial dilution by the river flow. In addition, Sites Reservoir water would be further diluted downstream by other source water flows into the Delta, thus would have negligible impact on the SWP supply.	Exceptional
	2. Explain how complex the day-to-day operations might be (example: staffing, maintenance, preparation).	In general, the day-to-day operations of Sites Reservoir would have limited complexity as the operations would require pumping from the Sacramento River into Sites Reservoir or releases back to the river when supplies are needed. It is envisioned that the reservoir would be used primarily for dry-year storage, and would involve daily operational changes, but only as needed, during times of filling or drawing from the reservoir. Regular maintenance of the pump storage system, aeration system, valves, piping, and other associated equipment would be performed by Sites Project Authority. Water quality sampling and monitoring would need to be conducted on a routine basis to ensure acceptable water quality in the reservoir by Sites Project Authority. Since the additional supply would be conveyed through the CA Aqueduct, the project would have no impact on Metropolitan's conveyance and distribution system day-to-day operations, avoiding the complications of adding a new local water supply.	Exceptional
	3. How can it be phased (i.e., near-term value of an initial phase; using phasing to manage existing uncertainty; using phasing to allow for adjustments in the project/program/portfolio as new information is developed)?	There is no expected phasing of the Sites Reservoir Project. It's planned and permitted as a 1.5 MAF reservoir. However, there are means for adjusting Metropolitan's participation in the reservoir. Metropolitan may lease storage from another participant, lease storage to another participant, sell a portion of or its entire participation, or purchase additional storage from another participant. Water supply benefits from the project would proportionally change with Metropolitan's managed share. These options grant flexibility for managing Metropolitan's investment, opportunities to adjust water supply benefits, and opportunities to gain financial benefits.	Moderate

	4. What is the implementation risk and/or complexity of implementation?	The Sites Reservoir Project benefits will be ultimately determined by the result of its water right proceeding with the State Water Resources Control Board (State Water Board) and updates to the State Water Board's Water Quality Control Plan. Unforeseen environmental increase the implementation risk.
		• Bay Delta Water Quality Control Plan Update:
		  ○ On July 24, 2025, the State Water Board published a revised draft of updates to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Watershed. The State Water Board included language around imposing requirements to new water supply projects. Based on the language in the July 2025 revised draft, requirements for new water supply projects would be determined in the Sites Reservoir Project's water rights hearing (see below).
		• Permitting:
		  ○ Endangered Species Act Biological Opinions: The Authority and Reclamation are working toward obtaining project-specific operational Biological Opinions. These are anticipated by the end of calendar year 2025. Reclamation has submitted a revised stand-alone construction Biological Assessment to FWS, and the construction Biological Opinion was issued on July 16th, 2025. See additional information regarding the Sites Reservoir Project permitting under the Environmental Co-Benefits attributes.
		  ○ Water Rights: The State Water Board initiated a public hearing on the Sites Project Authority's petition for the assignment of a 1977 water right application in June 2024. Closing briefs from all parties to the hearing were submitted May 27, 2025. The State Water Board has not provided a schedule for its final decision-making on the petition. The Sites Project Authority has encouraged an expedited conclusion by September 2025 in order to fulfill the State Water Board's 2025 Strategic Plan and to advance numerous goals and objectives of the Governor and Legislature.
			Moderate

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies and initiatives at Metropolitan.	The Sites Reservoir Project would help Metropolitan provide reliable water supplies throughout the region under numerous climate scenarios beyond 2045. The Sites Reservoir Project advances the following resiliency plans, policies, and initiatives: • Integrated Water Resource Plan (IRP): The new source and storage of water meets the IRP's goal of a flexible supply. • Water Supply Reliability Program: Storing water in the Sites Reservoir Project allows increased flexibility to provide water in times of high demand and low supply. The following summarizes how the project aligns with applicable targets from the perspective of flexibility and adaptability. • Equitable Access to Supply: The Sites Reservoir Project would enhance storage available for the SWPDAs, providing more equitable access to water and allow for future integration with other projects. • Local Agency Supply: Provides a water supply that can be delivered throughout Metropolitan's service area, providing access to water for all 26 member agencies, including during times of drought.

Preliminary Assessment by Evaluative Criteria

Overall Assessment

Overall, Sites Reservoir would provide significant adaptability and flexibility to Metropolitan's system and address SWPDA shortages during drought conditions. There is minor operational complexity, limited ability to phase, and potential implementation risks and challenges to overcome.

Overall Assessment Value

Significant

Key: Exceptional | Significant | Moderate | Limited | Very Limited | Undetermined or Not Applicable

Ranking Guidelines at the Attribute Level

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Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Equity Programs for underserved communities Scale of community engagement Public health benefits Workforce development	1. What percentage of the area served by the project, program, or portfolio includes underserved communities and what percentage of the project/program/portfolio area is in underserved communities?	Based on CalEPA's OEHHA California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0), approximately 25% of the population in Sites Reservoir Project's service area is considered disadvantaged. When focusing specifically on Metropolitan's portion of the Sites Reservoir Project's service area, approximately 30% is disadvantaged. Approximately 0% of the area where new facilities would be built is considered disadvantaged. Water Code §79505.5 defines DACs based on income — specifically, households earning less than 80% of the statewide median household income. Using this definition, about 49% of the area served by the Sites Reservoir Project, 30% of MWD's service area, and 59% of the population in the area where new facilities would be built are disadvantaged. Potential environmental impacts (e.g. air, noise and traffic) arise mainly during construction and addressed by identified mitigation measures.	Moderate
	2. What specific community benefits are included in the project, program, or portfolio?	The Sites Authority formed a Local Community Working Group (see Question 3 for details), which developed four policy recommendations aimed at reducing project impacts on the local community while also identifying opportunities to provide community benefits. • Limit construction impacts: Require construction contractors to address Maxwell community needs and include provisions ensuring work aligns with local requirements. • Workforce Development: Set local hiring goals, create training programs, and prioritize contracts and purchases from nearby counties. • Enhance public services: Analyze public service capacity (emergency response, crime prevention, schools) and plan improvements as part to meet long-term community needs. • Improve local infrastructure: Study local infrastructure capacity (broadband, water, sewer) and include upgrades benefiting both the project and surrounding community. The Sites Authority Board adopted these policy recommendations in January 2024. As a result, the Sites Authority has funded the Maxwell Community Plan, adopted a construction workforce policy, included CMAR contract provisions in their July 2025 RFP, included development of a construction equipment, truck and traffic management plan as a best management practices in their Final EIR/EIS, and approved County Development Agreements and Impact Alleviation Agreements. Additional community benefits include recreation and flood control. The Sites Reservoir Project is receiving State Funding through the Proposition 1 Water Storage Investment Program (WSIP) for recreation public benefits. Sites Reservoir will provide recreational areas for picnicking, boating, hiking, equestrian use, and camping. It also received funding for flood control benefits by impounding two ephemeral streams, protecting the rural community of Maxwell, adjacent agricultural lands, and reducing flooding along Interstate 5, a major commerce and emergency evacuation route in Northern California.	Significant
	3. What level of community, tribal, and partner engagement is included in the project, program, or portfolio?	Community engagement: The Sites Project Authority Board Meetings provide opportunities for public input. Additionally, the Authority conducts scheduled meetings and tours with landowners, agencies, and NGOs to maintain open lines of communication, provide updates on project schedule and project facility siting, and receive their feedback on project activities. As part of CEQA/NEPA process, the Authority hosted two virtual public meetings in December 2021 and a public hearing in November 2023. In October 2022, the Authority established a Local Community Working Group with 15-20 community members and representatives from the project area to address local economic and infrastructure issues and identify opportunities. Originally meeting bi-monthly, the Working Group transitioned to quarterly meetings in 2024. Through feedback and engagement with local communities, the Sites Reservoir Project has moved forward on the series of items listed above. The Local Community Working Group is expected to meet through the term of Project construction. The Authority also hosts periodic local community meetings (typically, twice yearly) and both individual and group meetings with landowners whose property may be directly impacted by the project construction. The Sites Reservoir Project team has also collaborated with communities that would benefit from the water supply. Within Metropolitan's service area the Southern California Water Coalition has expressed its support promoting project information and benefits through its website, publications, podcasts, and social media. Additionally, Metropolitan's inspection trips to the State Water Project include a tour of the Sites Reservoir site, giving hundreds of Southern California community leaders the opportunity to learn about the project firsthand. Tribal engagement: The project environmental review has included tribal consultation as required under AB 52 for CEQA and National Historic Preservation Act (NHPA) Section 106 for NEPA. The Authority entered formal AB 52 consultation with Yocha Dehe Wintun Nation and Cachil Dehe Band of Wintun Indians after initiating contact with seven local tribes. Reclamation is the lead agency for the NHPA Section 106 for cultural archaeological resources, and contacted 9 federally recognized tribes. Three tribes responded to the initial contact to request consultation, and one additional tribe requested Section 106 consultation after the RDEIR/SDEIS. As of the Final EIS/EIR, Reclamation has continued Section 106 consultation with these four tribes: Cachil Dehe Band of Wintun Indians, the Yocha Dehe Wintun Nation, Paskenta Band of Nomlaki Indians, and the Shingle Springs Band of Miwok Indians. Outside of AB 52 requirements, Sites Project Authority contacted seven additional tribes that may be impacted by the project outside of the project area during the EIR/EIS process. The Sites Project Authority began a Tribal Government Working Group in June 2022 inviting the six tribes with traditional or cultural affiliation with lands in or near the Project footprint, with the first meetings held in late 2024. The Tribal Government Working Group has held monthly meetings throughout 2025, with the meetings now scheduled monthly into 2026. The Tribal Government Working Group is expected to meet through the life of the Project's construction. Partner engagement: Metropolitan is one of 22 project participants, including water districts, irrigation districts, cities, counties, the State of California, and the U.S. Bureau of Reclamation. Engagement with participants, including drafting agreements and receiving comments on planning documents, is ongoing.	Significant
	4. Describe the extent and reasons why there is broad community support/opposition or potential for support/opposition.	Six environmental advocacy groups filed a lawsuit in 2023 that challenged the Sites Project on CEQA compliance. The plaintiffs were motivated by concerns about harm to protected species, water and habitat quality, climate impacts, and disturbing sensitive tribal cultural resources. These groups are not local to the project; instead, they operate on a statewide or national level. The courts sided with the Authority, but environmental advocacy group opposition on environmental grounds remains. Local governments, water districts, California State and Federal legislators, chambers of commerce, and business, agricultural, and trades organizations have written letters of support for the Sites Project. In total, there are at least 170 entities that have expressed support for the Sites Reservoir Project.	Moderate

Preliminary Assessment by Evaluative Criteria

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies and initiatives at Metropolitan.	As noted above, Metropolitan is one of 22 participating entities, including the United States Bureau of Reclamation, the State of California, public irrigation districts in the Sacramento and San Joaquin Valley, as well as urban areas in Southern California and the Bay Area. Participation in the Sites Reservoir Project furthers Metropolitan's relationships with the Federal Government, the State of California, and irrigation and water districts across the State. The Sites Reservoir Project was certified under Senate Bill 149, which streamlines efforts for Governor-certified projects like the Sites Reservoir Project to proceed expeditiously through California Environmental Quality Act (CEQA) litigation, if any is filed. The Sites Reservoir Project is also featured in California's 2020 Water Resilience Portfolio and its subsequent progress reports.

Overall Assessment

The project would provide water to Metropolitan's entire service area, of which 30% is categorized as disadvantaged per CalEnviroScreen and Water Code §79505.5. According the CalEnviroScreen and Water Code §79505.5, approximately 0% and 59% of the population in the project area are disadvantaged, respectively. The project includes multiple community benefits developed through a Local Community Working Group, such as local hiring goals, infrastructure upgrades, and support for public services, with additional recreation and flood control benefits funded by the state. Engagement has been extensive, including public meetings, community tours, community meetings, landowner meetings, tribal consultations under AB 52 and Section 106, and a Tribal Government Working Group. The project is supported by over 170 organizations, including state and federal legislators and local agencies, though it also faces ongoing opposition from environmental groups concerned with habitat, species, and cultural resource impacts, despite a court ruling in the project's favor.

Overall Assessment Value

Significant

Key: Exceptional | Significant | Moderate | Limited | Very Limited | Undetermined or Not Applicable

Ranking Guidelines at the Attribute Level

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Preliminary Assessment by Evaluative Criteria

Assessment

Evaluative Criteria	Attributes	Assessment	Value
Environmental Co-Benefits Greenhouse gas emissions Benefits Ecosystem services Habitat/wildlife benefits	1. What are the estimated greenhouse gas emissions or enhanced carbon sequestration, and how does it impact the carbon budget, as defined by the Climate Action Plan?	Sites Reservoir Project emissions would not be counted towards Metropolitan's carbon budget, similar to how State Water Project (SWP) emissions contribute to the footprint of the California Department of Water Resources and are not counted towards Metropolitan's carbon budget. Sites Reservoir Project emissions would solely contribute to the carbon footprint of the Sites Project Authority. Water supplied by the Sites Reservoir Project for Metropolitan could reduce the need to pump from the CRA, lowering Metropolitan's indirect greenhouse gas (GHG) emissions from electricity use. Without additional measures, the Sites Reservoir Project is expected to emit roughly 918,000 metric tons of CO2e through 2040. Of the 918,000 metric tons of CO2, about 349,000 metric tons of emissions are from construction and 569,000 metric tons of CO2 are related to operations. This estimate is inclusive of GHG associated with delivering Sites water through SWP facilities to its participants' respective service areas. Project related GHG emissions will decline over time as the electrical power sector transitions to renewable sources of energy. The Sites Reservoir Project will also generate renewable energy when it releases water in the summer of drier years, when energy demands are higher (Sites, 2023). The Sites Project Authority plans to develop and implement a Greenhouse Gas (GHG) Reduction Plan to achieve net-zero emissions. The plan will implement the following strategies (1) using energy efficient equipment and alternative low-carbon fuels, (2) purchasing renewable energy, (3) sponsoring clean energy projects, and (4) off-setting remaining emissions with carbon credits. References: MWD, April 2025. 2024 Climate Action Plan Implementation Third Annual Progress Report. p. 19 Sites Project Authority and Bureau of Reclamation, November 2023. Sites Reservoir Project Final EIS/EIR. Ch. 21 Greenhouse Gas Emissions	Not Applicable
	2. In what way and to what degree does it provide additional ecosystem services?	At full build-out, infiltration of water stored in the reservoir may increase groundwater recharge underneath and immediately adjacent to the reservoir and improve groundwater quality. The Project would permanently convert 152 acres and temporarily disturb 134 acres of Important Farmland and permanently disturb over 15,000 acres of land zoned for agricultural use. However, the Sites Reservoir Project would allow land classified as Important Farmland to remain in production during times it may have otherwise been fallowed or taken out of production due to lack of water. A number of the Sites Reservoir Project participants are irrigation districts for existing agricultural lands, including acres that are Important Farmland (designated under the California Department of Conservation Farmland Mapping and Monitoring Program) in Glenn, Colusa, and Yolo Counties, as well as south-of-Delta. These irrigation districts would primarily receive water from May to November (i.e., irrigation season), particularly in Dry and Critically Dry Water Years, increasing water supply reliability during prolonged drought periods. Flood control benefits in downstream drainages would protect approximately 14,000 acres in the Funks Creek, Stone Corral Creek, and Colusa Basin watersheds from 100-year flood events. References: Sites Project Authority and Bureau of Reclamation, November 2023. Sites Reservoir Project Final EIS/EIR. Ch. 8 Groundwater Resources, Ch. 15 Agriculture and Forestry Resources	Limited
	3. To what extent does it protect, improve, or expand wildlife and fish habitat and/or affect flows in ways that improve ecological functions for native species?	The State of California's participation in the Sites Reservoir Project is funded by the Water Storage Investment Program (WSIP), administered by the California Water Commission (CWC) under Proposition 1, where funding is based on an assessed value of public benefits (i.e., flood protection, recreation, and ecosystem benefits). At least 50% of the WSIP funding must provide ecosystem benefits. The CWC determined that the State's participation in the Sites Reservoir Project would provide measurable improvements to the Delta ecosystem. The Sites Reservoir Project currently dedicates 244 TAF of storage (17% of total available storage) for the State's Proposition 1 WSIP benefits. This investment would deliver Incremental Level 4 refuge water to National Wildlife Refuges, State Wildlife Areas, and privately managed wetlands to improve wetland habitat. The benefit to species vary by refuge, but are generally beneficial to the Pacific Flyway, a major north-south migratory route for several bird species, and a number of State and Federal listed species (CWC, 2018). The United States Bureau of Reclamation (Reclamation) currently is participating at 128 TAF of storage (9% of total available storage). Reclamation may use their Sites Reservoir Project water supply for the following environmental benefits: (1) increase reservoir cold water pool and improve anadromous fish habitat, (2) increase CVP deliveries to wildlife refuges, and (3) provide water to convey food resources to improve the Delta ecosystem (NMFS, 2024). Sites Reservoir is anticipated to benefit the bald eagle as a long-term food source for fish (Sites, 2023). It would also provide an additional prey source to local bird species, including the listed tricolored blackbird, and bats (Sites, 2023). The Sites Reservoir Project diversions are from screened intake facilities, providing protection to fisheries on the Sacramento River. As the project is a new reservoir, it will serve as a new habitat for fishes. The project includes a reservoir management plan that will support fisheries in the reservoir, including stocking strategies (if any), habitat enhancement measures, and monitoring efforts. Species that may be considered include rainbow trout, brown trout, Kokanee salmon, smallmouth bass, largemouth bass, bluegill, green sunfish, channel catfish, and brown bullhead (Sites, 2023). References: California Water Commission (CWC), 2018. Water Storage Investment Program Commission Determinations and Additional Eligibility Requirement. National Marine Fisheries Service (NMFS), 2024, NMFS Programmatic Biological Opinion on the Long-Term Operation of the Central Valley Project and State Water Project. December 2024. Sites Project Authority and Bureau of Reclamation, November 2023. Sites Reservoir Project Final EIS/EIR. Ch. 2 Project Description, Ch. 10 Wildlife Resources	Limited

Preliminary Assessment by Evaluative Criteria

Additional Information

Please describe how the proposed project, program, or portfolio advances the CAMP4W Time-Bound Targets, develops new or improves existing partnerships or collaborations, and builds on existing plans, policies and initiatives at Metropolitan.	

Key: Exceptional | Significant | Moderate | Limited | Very Limited | Undetermined or Not Applicable

Overall Assessment

The Sites Reservoir Project greenhouse gas (GHG) emissions will not affect Metropolitan's carbon budget. Although it will generate GHGs, it's emissions will decline over time as the electrical power sector transitions to renewable sources of energy. By providing a reliable water supply, the project will help maintain agricultural production on Important Farmland during droughts, offer flood protection for downstream communities, and improve groundwater recharge. It will also create new fish and wildlife habitats. Its funding includes dedicated support for ecosystem improvements, such as providing water for wildlife refuges.

Overall Assessment Value

Limited

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