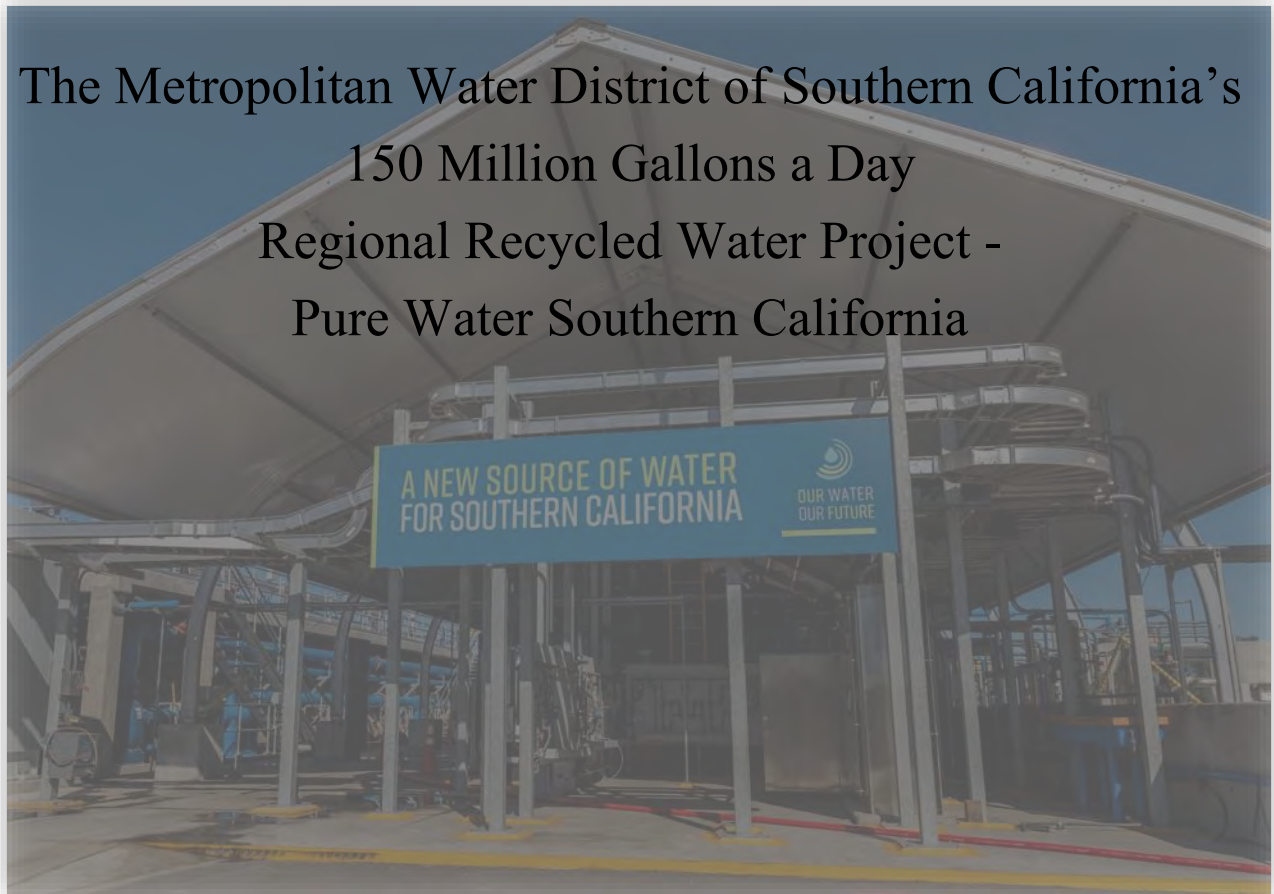


The Metropolitan Water District of Southern California's
150 Million Gallons a Day
Regional Recycled Water Project -
Pure Water Southern California



**Title: Large-Scale Water Recycling Planning for
Pure Water Southern California**

Date: February 28, 2023

Applicant: The Metropolitan Water District of Southern California
700 Alameda Street Los Angeles, CA 90012

Project Contact: Raymond Jay
700 North Alameda Street
Los Angeles, California 90012
RJay@mwdh20.com
(213) 217-5777

TABLE OF CONTENTS

I. TECHNICAL PROPOSAL1

A. Executive Summary1

B. Project Location1

C. Project Description2

 Applicant Category2

 Eligibility of Applicant:2

 Goals2

 Approach.....2

D. Evaluation Criterion.....4

 Evaluation Criteria 1: Project Planning and Analysis4

Subcriterion No.1a-Water Recycling Needs and Opportunities (15 Points)4

Subcriterion No.1b-Evaluation of Project Alternatives (15 Points)8

 Evaluation Criteria 2: Stretching Water Supplies (20 points)10

 Evaluation Criteria 3: Environment and Water Quality (20 points).....14

 Evaluation Criteria 4: Department of the Interior Priorities (15 points).....16

 Evaluation Criteria 5: Watershed Perspective and Stakeholder Involvement
 (15 points)19

E. Budget Proposal21

F. Budget Narrative.....22

 Budget Form23

II. ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE.....23

 Surrounding Environment.....24

 Species and Habitat.....25

 Wetlands and Waters25

 Construction of Water Delivery System25

 Irrigation System Modifications26

 National Register of Historic Places26

 Archeological Sites26

 Low Income and Minority Populations26

 Tribal Lands26

 Noxious Weeds and Invasive Species27

III. REQUIRED PERMITS AND APPROVALS.....27

 Section 404 of the Clean Water Act & Section 10 of the Rivers and Harbors Act of
 1899:27

 Section 7 of the Endangered Species Act27

 Section 106 of the National Historic Preservation Act.....27

 Title 22 California Code of Regulations.....27

 Basin Plan Objectives28

 National Pollutant Discharge Elimination System Permit.....28

IV. OFFICIAL RESOLUTION28

V. LETTERS OF SUPPORT28

VI. OVERLAP OR DUPLICATION OF EFFORT28

VII. UNIFORM AUDIT AND REPORTING STATEMENT28

List of Tables

Table 1: List of Analyses Conducted..... 9
Table 2: Major Tasks and Milestones During the Grant Period 10
Table 3: Summary of Non-Federal and Federal Funding Sources 21
Table 4: Total Project Cost Table 21
Table 5: Total LSWR Feasibility Study and Preliminary Breakdown 21
Table 6: Estimated Preliminary Design Phase Budget Expenditures 22
Table 7: Budget Narrative Descriptions 23
Table 8: Environmental Impacts and Typical Mitigation Measures..... 24

List of Figures

Figure 1: Pure Water Southern California Program 3
Figure 2: Preliminary Design Services 4
Figure 3: Frequency of Net Shortage by 2045..... 6
Figure 4: Location Map of Joint Water Pollution Control Plant 7
Figure 5: Preliminary Pure Water Program Schedule..... 10
Figure 6: Benefit of Pure Water to Frequency of Net Shortage in 2045 12
Figure 7: Benefit of Pure Water to Groundwater..... 12
Figure 8: Location of Pure Water Relative to the San Andreas Fault 13
Figure 9: Disadvantaged Communities in the Service Area..... 17
Figure 10: Economic Benefits 18
Figure 11: Program Partners 20

Abbreviations

AWP	Advanced Water Purification plan
AF	Acre-foot
CRA	Colorado River Aqueduct
DAC	Disadvantaged Community
DPR	Direct Potable Reuse
DWR	California Department of Water Resources
EIR	Environmental Impact Report
GWRS	Groundwater Replenishment System
IPR	Indirect Potable Reuse
IRP	Integrated Water Resources Plan
JWPCP	Joint Water Pollution Control Plant
LACSD	Los Angeles County Sanitation District
LRP	Local Resources Program
MAF	Million Acre-feet
MBR	Membrane bioreactor
Metropolitan	Metropolitan Water District of Southern California
MGD	Million gallons per day
NdN	Nitrification-denitrification
NEPA	National Environmental Policy Act
Program	Pure Water Southern California
Project	WS: WR&DP grant
PWSC	Pure Water Southern California Program
Reclamation	Bureau of Reclamation
RO	Reverse osmosis
RRWP	Regional Recycled Water Program
RWA	Raw Water Augmentation
sMBR	Submerged Membrane bioreactor
SNWA	Southern Nevada Water Authority
SOW	Scope of Work
TAFY	Thousand Acre-feet per year
TDS	Total Dissolved Solids
UWMP	Urban Water Management Plan

I. Technical Proposal

This section includes the executive summary, technical project description, and the responses to the evaluation criteria for the Pure Water Southern California Program (PWSC or Program) and, specifically, the Feasibility Study/Preliminary Design Project (Project).

A. Executive Summary

Applicant: The Metropolitan Water District of Southern California
City/County/State: Los Angeles/Los Angeles County, California
Date: February 27, 2023

The Metropolitan Water District of Southern California is making a major investment in a new, drought-resilient water supply. The Pure Water Southern California program (PWSC) will produce 150 million gallons per day (mgd), enough water for more than half a million households per year, making it one of the largest recycled water projects in the world. The PWSC is a partnership with the Los Angeles County Sanitation Districts (Sanitation Districts). It will purify treated wastewater from the Sanitation Districts’ Joint Water Pollution Control Plant (JWPCP) and deliver recycled water to groundwater basins within Metropolitan’s service area for indirect potable reuse (IPR) and eventually to two Metropolitan treatment plants for direct potable reuse (DPR). By connecting to Metropolitan’s treatment plants, the PWSC leverages the delivery infrastructure already in place and provides a new supply to most of Metropolitan’s 5,200 square-mile service area, serving 19 million people. This funding request is to complete the feasibility study requirements of WTR TRMR-128, including a project alternatives analysis, economic analysis, and independent peer review to ensure the project will be eligible to apply for Large-Scale Recycled Water (LSWR) program funding. Additionally, funding is requested for preliminary design work for initial reaches of the PWSC conveyance pipeline and modifications to the JWPCP to manage nitrogen in the new water supply. This planning grant proposal will help evaluate alternate water supplies and reuse alternative strategies for Southern California, assess options to sustainably address drought and climate change, assist Reclamation and local communities secure drought-resistant supplies, and help expedite planning and design work for future PWSC construction. The proposed Project work will be completed by October 2025 and will facilitate full-scale PWSC construction by 2032. This Project is not a federal facility and will not involve federal land. For this application, “PWSC” typically refers to the overall/full scale Program while “Project” describes the work being contemplated for this grant.

B. Project Location

PWSC facilities are located in Los Angeles County in Southern California. The PWSC begins at the Joint Water Pollution Control Plant in the city of Carson near the Los Angeles Harbor. An Advanced Water Purification plant (AWP) is planned at this site. A proposed conveyance pipeline will extend from Carson to spreading grounds in the cities of Irwindale and Azusa about 40 miles to the northeast, generally following the San Gabriel River. DPR facilities will carry recycled water 12 miles to the east of the spreading grounds to the Weymouth Water Treatment Plant (WTP) in La Verne and Diemer WTP in Yorba Linda. See **Figure 1** on page 3 for a PWSC map showing the Program’s major components.

C. Project Description

Applicant Category: Funding Group II

Eligibility of Applicant:

The PWSC is estimated to cost about \$4 – \$5 billion dollars, well above the \$500 million Group II threshold. The PWSC is located in California and a joint effort of Metropolitan a public water system and special district in California with water delivery authority and the Los Angeles County Sanitation Districts, a regional public agency that collects and treats wastewater. Metropolitan is made up of 26 member agencies serving 19 million people in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. The Sanitation Districts consists of 24 independent special districts that collectively treat wastewater for over 5.5 million people in Los Angeles County. Metropolitan and PWSC partners will provide the required 75 percent local match.

Goals

Metropolitan imports about half of Southern California’s water supply from the Colorado River and Northern California via the State Water Project (SWP). While the Sanitation Districts have been at the forefront of water recycling since the 1960s, wastewater in many areas was not recycled and discharged to the Pacific Ocean. This is a legacy of when many urban communities and regulatory agencies considered sewage a waste rather than a precious resource central to the water portfolio. The region is rapidly attempting to reshape this legacy and the PWSC represents a paradigm shift in water development that can help transform the Southwest’s water portfolio.

This approach acknowledges the steep new challenges facing the water industry. Climate change, water quality degradation, increasing salinity, and regulatory impacts all threaten water supply reliability. In the face of these challenges, the PWSC will create a new local supply of water to help meet Metropolitan’s member agency demands, replenish groundwater basins, protect against earthquakes and natural disasters, and alleviate strain on imported supply and water supply challenges in other states. Southern Nevada Water Authority, Arizona Department of Water Resources, and the Central Arizona Water Conservation District are all investing in the environmental planning phase of this PWSC with an eye towards a potential exchange of supplies on the Colorado River when implemented, offering a truly regional water supply solution. The PWSC will also facilitate the reuse of effluent from the Sanitation District’s JWPCP, their only ocean discharge facility.

Approach

Metropolitan and the Sanitation Districts began exploring the possibility of building a regional recycled water project in 2010 and began operating demonstration plant since 2019 to inform the design of the PWSC. This work laid the foundation for the development of the PWSC, which is now in the environmental planning phase. As part of environmental planning, Metropolitan is evaluating the PWSC’s potential impacts to communities and the environment, assessing the feasibility of mitigation measures and developing reasonable alternatives. In parallel to the environmental review, Metropolitan is ready to begin design of some PWSC elements.

Overview of Pure Water Southern California

PWSC will provide a new source of water to Southern California and enhance the region’s operational resilience, and reliability. The PWSC will produce approximately 150 mgd, or nearly

155,000 acre-feet per year (AFY), of sustainable, high-quality water for IPR and DPR. Once implemented, it will be one of the largest recycled water facilities in the world. Metropolitan currently receives about 25 percent of its water supply from the Colorado River (CR). The PWSC would reduce reliance on the CR supply by up to 13 percent since approximately 60 mgd (62,000 AFY) of the purified water from the PWSC will supplement the CR supply. The PWSC will also reduce Southern California's reliance on the SWP by up to 12 percent; making Metropolitan's regional storage portfolio more resilient. About 60 percent, or about 90 mgd of the 150 mgd full-scale PWSC yield, will reduce demands on the SWP.

The PWSC consists of the following major components: (1) modifications to the JWPCP; (2) nitrogen management processes; (3) a new advanced water treatment plant; (4) backbone conveyance pipelines; (5) recharge facilities; (6) direct potable reuse treatment; and (7) and ancillary facilities. The backbone facilities would extend from the city of Carson in Los Angeles County northeast to near the city of Azusa.

Figure 1: Pure Water Southern California Program

Figure 1 shows the project area, groundwater basins, and other components associated with the PWSC.



Scope of Grant Services

The scope of work to be funded by the grant includes completion of a Feasibility Study that meets the requirements of Reclamation's Directive and Standard WTR TRMR-128; and the preliminary design of initial reaches of the backbone conveyance pipelines and a sidestream centrate treatment system at the JWPCP.

Feasibility Study

The PWSC has an approved Title XVI Feasibility Study that meets the requirements of Reclamation's Feasibility Study Directive and Standard WTR 11-01. This request for funding is to help complete a new Feasibility Study that meets Reclamations Directive and Standard WTR TRMR-128 for Large Scale Water Recycling (LSWR) projects. The funding will be used for the additional requirements of WTR TRMR-128 including: (1) a description of alternatives; (2) an economic analysis; and (3) an Independent Peer Review.

Description of Alternatives. A description of viable alternatives is needed. These alternatives will include baseline conditions, alternative plans to clearly identify and evaluate the trade-offs among stakeholders and resources, and a comparison of the impacts of climate change.

Economic Analysis. The economic analysis will include a description of existing conditions and provide projections of what the future would be with and without the PWSC. The analysis will emphasize the benefits and of the PWSC in meeting future water demands in an efficient and economical manner.

Independent Peer Review. The PWSC’s independent peer review will be described, including QAQC analyses and technical review information.

Preliminary Design

The Preliminary Design work is the beginning of the design phase for the PWSC (**Figure 2**). This proposed Project work includes the preliminary design for the two initial reaches of the conveyance pipeline and modifications to the JWPCP to manage nitrogen in the purified water and in the discharges to the ocean.

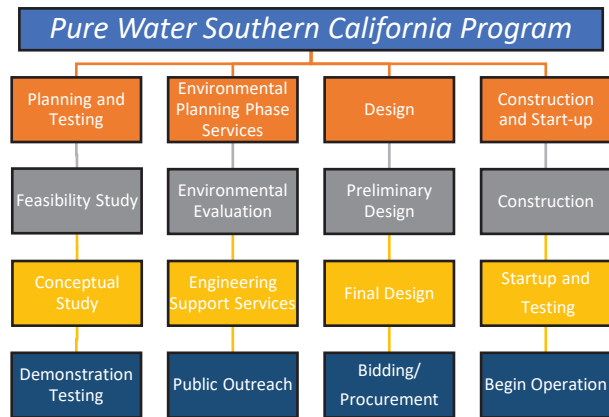
Pipeline Reaches 1 and 2.

In December 2022, Metropolitan’s Board authorized staff to begin work on the PWSC, including the design of the initial conveyance pipeline segments through the cities of Carson, Long Beach, and Lakewood. The Reach 1 alignment is approximately six miles long starting at the AWP and extending northeast to the Carson city boundary. The Reach 2 is approximately eight miles long, continuing eastward and northward through the cities of Long Beach and Lakewood.

Planned preliminary design activities generally include: (1) evaluations and analyses; (2) engineering investigations; (3) preliminary design drawings; and (4) a Preliminary Design Report.

Sidestream Centrate Treatment. Nitrogen management is a key factor to protect public health and the environment; and to ensure a safe, reliable supply of recycled water for beneficial reuse. To meet the potable reuse standards, nitrogen management facilities are needed at the JWPCP. One approach to nitrogen management facilities is to remove nitrogen from the wastewater centrate. A sidestream centrate treatment process known as deammonification could remove ammonia and nitrogen from the centrate. It would lower the amount of nitrogen being recycled back into the JWPCP, reduce the chemical addition requirements for the AWP, and reduce the nitrogen load discharged to the ocean. Preliminary design for the Sidestream Centrate System includes: (1) a feasibility evaluation and establish design and operational parameters; (2) site investigations and utility engineering; (3) background drawings and a facility model; and (4) a Preliminary Design Report.

Figure 2: Preliminary Design Services



D. Evaluation Criterion

Evaluation Criteria 1: Project Planning and Analysis

Subcriterion No.1a-Water Recycling Needs and Opportunities (15 Points)

1. Describe the problems and needs in the project area.

Drought conditions in the Southwest have led to a dramatic reduction in Colorado River runoff while variable weather in Northern California and stressed ecosystems have resulted in unprecedented low imports from the SWP. In Southern California, drought has caused less

stormwater to recharge groundwater basins, reducing local water supplies. Threats to Metropolitan's water supply include:

- Risk of regional shortages, especially in the SWP dependent areas, SWP reservoirs, and in the CR system due to climate change, regulatory issues, and policy changes;
- Potential loss of groundwater production capabilities due to declining water; and
- Inability to meet local supply targets.

The PWSC is more important than ever as the region struggles with how to adapt to a hotter, drier future. In August 2022, California Governor Gavin Newsom released a report detailing how rising temperatures greater weather extremes throughout the state, will result in the loss of 10 percent of the state's water supplies in just 20 years. His California Water Supply Strategy to combat climate change calls for increasing recycling statewide to 0.8 million acre-feet (MAF) by 2030 and to 1.8 MAF by 2040. While the Strategy does not specify a specific goal for Metropolitan, meeting this target simply cannot happen without proactive efforts to accelerate recycling by Metropolitan and its member agencies. The PWSC increases water recycling by 155,000 AFY, which represents one of the most significant proposals in California to help meet this target.

2. Describe the current and projected water supplies and demands in the project area; include a discussion on supply and demand imbalances. Additional consideration will be given to proposals that explain how the problems and needs in the area may be impacted by climate change, and/or if supply and demand projections will include climate change information.

Total Retail Demand in Metropolitan Service Area

With a service area spanning 5,200 square miles in six counties, the current annual total retail demand within Metropolitan's service area is 2.9 million AFY and projected to range from 3.4 to 4.8 million AFY by 2045. The total retail demand includes municipal and industrial demand, agricultural demand, seawater barrier demand, and replenishment demand.

Local Supplies

Local supplies are an integral part of Metropolitan's service area and critical to many member agencies. Local supplies can include groundwater production, surface water, recycled water, seawater desalination, and Los Angeles Aqueduct supplies. Local supplies total about 2 million AFY and are projected to range from 2.1 to 2.7 million AFY by 2045, largely driven by increases in recycled water use throughout the service area.

Demand on Metropolitan

Demand on Metropolitan equals Metropolitan's total retail demand minus total local supplies. Demand on the SWP and the CR supplies is expected to range from 1.3 to 2.1 million AFY by 2045. At a production rate and delivery rate of approximately 155,000 AFY, the PWSC will provide 3.2 to 4.6 percent of the total retail demand within the service area through 2045.

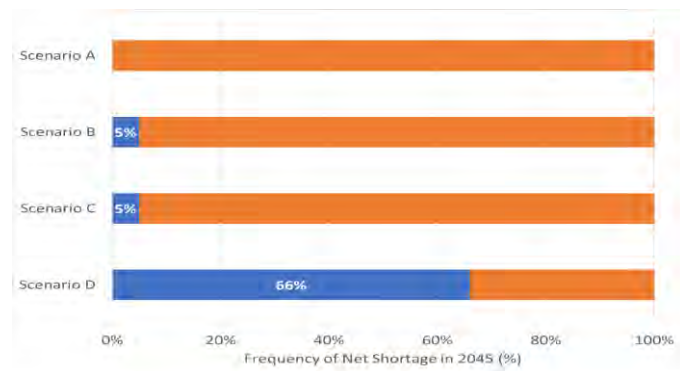
Supply and Demand Imbalance

Regional Needs Assessment. Metropolitan's 2020 IRP Regional Needs Assessment identified supply and demand imbalances facing Southern California's water supply reliability through successive qualitative and quantitative analysis steps. It provided a high-level evaluation of the types of resource development that would improve water supply reliability in four scenarios,

which are characterized by different assumptions related to imported supply stability, population and economic growth, climate change, and water demands on Metropolitan. The assumptions for the impacts of climate change were an integral part of this evaluation. Assumptions for scenarios A through D ranged from (A) no climate change impacts; (B) climate change is manageable; (C) climate change impacts affect imported supplies more drastically than local supplies; and (D) severe climate change impacts to both imported and local supplies.

Figure 3 shows the frequency of a net shortage in forecast year 2045. A net shortage occurs anytime that demands exceed supplies. As shown in this figure, a net shortage may occur up to 66 percent of the time in Scenario D, which assumes extreme climate change, higher demand from population and economic growth, underperforming new local supplies, and losses of imported supplies. Under Scenario D, the region needs up to 650 thousand acre-feet (TAF) of additional supply annually to prevent the shortage conditions. If new supplies are not developed, the likelihood of future net shortages increases.

Figure 3: Frequency of Net Shortage by 2045



Loss of groundwater production capability. More than 1/3 of Metropolitan’s regional demand is met by groundwater pumped from local groundwater basins, with current groundwater production at about 1.1 million AFY. Maintaining groundwater storage levels within the basin’s operating range is key to sustaining groundwater supplies and preventing loss of groundwater pumping capability. By 2040, with climate change, the percentage of groundwater basins below the critical level could exceed 17 percent. About 700,000 people currently live in a basin that is below the critical level. By 2040, more than 5 million people (or about 25 percent of the entire population of Metropolitan’s service area) could be relying on a groundwater basin that is below critical levels. PWSC will help to meet the replenishment needs of the groundwater basins.

Need for additional local supply development. The average local supply production constitutes about 42 percent of the water supply. Local supply forecasts in 2045 range from 2.1 MAF to 2.7 MAF. Metropolitan would need to develop an additional 0.1 MAF to 0.6 MAF of new supply to meet these forecasts. If additional supplies are not developed, it is anticipated that the deficit would result in increased imported water demands on Metropolitan’s member agencies.

3. Describe how the planning activities will investigate potential uses and markets for reclaimed or desalinated water (e.g., environmental restoration, fish and wildlife, groundwater recharge, municipal, domestic, industrial, agricultural, power generation, and recreation).

Industrial Demands

The LSWR Feasibility Study will evaluate the demands for PWSC purified water by industrial customers in the vicinity of the JWPCP. Industrial customers could include the Sanitation Districts (JWPCP), refineries, and the Port of Long Beach.

Groundwater Recharge Demands

The LSWR Feasibility Study will evaluate the demands on PWSC for groundwater recharge in four regional groundwater basins: Central, West Coast, Main San Gabriel, and Orange County that are used by Metropolitan member agencies for potable water and require replenishment.

Municipal and Domestic Potable Water Demands

The LSWR Feasibility Study will evaluate the DPR water demands, through raw water augmentation (RWA) at Metropolitan’s Weymouth and Diemer WTPs. The purified water would be blended with raw water (10 – 25 percent recycled water: surface water) from the SWP and/or the CR. The blended water would undergo additional treatment before entry into Metropolitan’s treated drinking water distribution system.

Other Demands

Because of the high quality and cost of purified recycled water projects like PWSC, this water is not typically used directly to meet environmental restoration, fish and wildlife, power generation or recreation demands. Use of this water can, however, replace other sources of water such as imported water, that can be used to meet these demands and will be further evaluated.

4. Describe the source water that will be considered for the project, including location, capacities, existing flows, treatment processes, and quantities of impaired water available to meet the new reclaimed, recycled, or desalinated water demands.

The source water for the PWSC is the Sanitation Districts’ JWPCP facility. The JWPCP provides both primary and secondary treatment for approximately 260 mgd of wastewater and has a total permitted capacity of 400 mgd. The JWPCP is located at 24501 S. Figueroa St., Carson, CA 90745, as shown in **Figure 4**. A high purity oxygen activated sludge biological secondary treatment system (HPOAS) is used to clean the primary effluent before it is clarified, disinfected, and discharged through an outfall to the Pacific Ocean. The PWSC would advance treat up to approximately 180 mgd of the JWPCP’s effluent.

Figure 4: Location Map of Joint Water Pollution Control Plant



Solids collected in primary and secondary wastewater treatment are processed in anaerobic digestion tanks where bacteria break down organic material. The digested solids are then dried and the centrate returned to the JWPCP. The methane gas produced from the solid’s treatment is used to produce power allowing the JWPCP to produce most of its electricity onsite. The sidestream centrate treatment process would lower the amount of nitrogen being recycled back into the JWPCP, reducing the chemical addition requirements for the AWP, and reducing the nitrogen load discharged to the ocean. The PWSC also significantly reduces effluent discharge from the JWPCP to the ocean.

Subcriterion No.1b-Evaluation of Project Alternatives (15 Points)

1. Describe the objectives that all alternatives will be designed to meet. What other water supply alternatives and project alternatives will be investigated?

Program Objectives

Project alternatives will be evaluated based on the following objectives: (1) provide a new local source of reliable, cost-effective, high-quality, and climate-change resilient water to meet water supply demands in the region; (2) contribute to the water supply of local groundwater basins to increase groundwater aquifer and storage to sustainable levels; (3) diversify Metropolitan's water supply portfolio and increase operational flexibility; (4) reduce reliance on imported water; and (5) maximize reuse and expand environmental benefits from reduced ocean discharges.

Alternatives to Pure Water Southern California

Local Water Supply Source Alternatives. The local supply alternatives to the PWSC include stormwater development and seawater desalination/brackish groundwater development.

Stormwater. A median of about 500,000 acre-feet per year of stormwater currently flows to the ocean in Metropolitan's service area, about 85 percent of which occurs in Los Angeles and Orange Counties. This alternative will evaluate the potential to achieve 155,000 acre-feet per year of stormwater capture, recharge, and reuse in Los Angeles and Orange Counties.

Seawater Desalination. Seawater desalination is an untapped resource for development in Southern California. About 20 percent of the groundwater produced in Metropolitan's service area requires some form of treatment as much of it is brackish groundwater. This alternative will be investigated by evaluating the potential to achieve 155,000 acre-feet per of seawater desalination or brackish groundwater development in lieu of PWSC.

Reuse Strategy Alternatives. The Reuse Strategy Alternatives evaluation includes local agency development of recycled water projects. Metropolitan established the Local Resources Program (LRP) in 1982 to provide incentives for local agencies to develop recycled water projects that offset potable demand. This alternative requires local agencies to develop the recycled water projects rather than rely on Metropolitan. Although LRPs are beneficial, several, smaller reuse projects are typically less efficient, cost more per gallon, and often costs aren't shared between agencies. It is also unlikely that these smaller reuse projects would be able to provide the regional benefits for multiple groundwater basins like the PWSC.

2. Describe how the planning activities will develop project alternatives (water supply sources, reuse strategies, or treatment technologies) that have been or will be investigated.

The planning activities analyzed as part of the LSWR Feasibility Study will identify and develop alternatives based upon the following process:

1. Identify local supply and reuse alternatives and prepare descriptions
2. Evaluate the water supply potential of the alternative and assess fatal flaws
3. Develop costs for each alternative and compare to PWSC
4. Rank alternatives compared to PWSC and perform independent peer review and finalize the LSWR Feasibility Study

3. Provide a general description of the selected project, including project features, benefits, anticipated costs, and analyses conducted.

Description and Features of Pure Water Southern California

The PWSC consists of the following major components: (1) modifications to the JWPCP; (2) nitrogen management processes; (3) a new advanced water treatment plant; (4) backbone conveyance pipelines; (5) recharge facilities; (6) direct potable reuse treatment; and (7) ancillary facilities. A PWSC description along with specific features is provided above in Section C, Project Description.

Benefits of Pure Water Southern California Program

Metropolitan’s purpose and focus has always been to provide regional benefits for all the District’s member agencies. A White Paper (MWD 2020) prepared by Metropolitan summarized the many benefits as follows: (1) increases regional storage and reduces the probability of shortage; (2) improves operational flexibility to Metropolitan’s conveyance and distribution systems; (3) provides supplies during a major earthquake emergency; and (4) benefits water supply by implementing DPR.

Responses to the criteria and questions in this application highlight many of other benefits described below for Evaluation Criteria 2 through 5.

Anticipated Costs

In 2018, Metropolitan completed a Conceptual Planning Studies Report (MWD 2019) where a Class 4 Opinion of Probable Construction Cost (OPCC) was prepared for alternative scenarios for PWSC phasing. The proposed PWSC capital cost was estimated to be \$3.4 billion in 2018 dollars. Since the completion of this report, there have been updates to the PWSC as well as higher inflation and supply chain issues. To account for the burden of these additional costs, a projected PWSC cost of approximately \$5 billion can be assumed. The PWSC cost will be re-evaluated as part of the both the Environmental Planning effort as well as for the LSWR Feasibility Study that will be completed to meet Reclamation’s requirements for future LSWR construction funding.

Analyses Conducted

Metropolitan has prepared and completed the following analyses shown in **Table 1** since 2010. These reports and studies are available on Metropolitan’s PWSC website: [MWD | Pure Water Southern California \(mwdh2o.com\)](http://mwdh2o.com). The Sanitation Districts also prepared a *Technical Analysis of Biological and Advanced Water Treatment Processes at the Joint Water Pollution Control Plant* in 2021 to investigate and evaluate alternative nitrogen treatment processes to be implemented in the PWSC to manage nitrogen concentrations efficiently and cost-effectively.

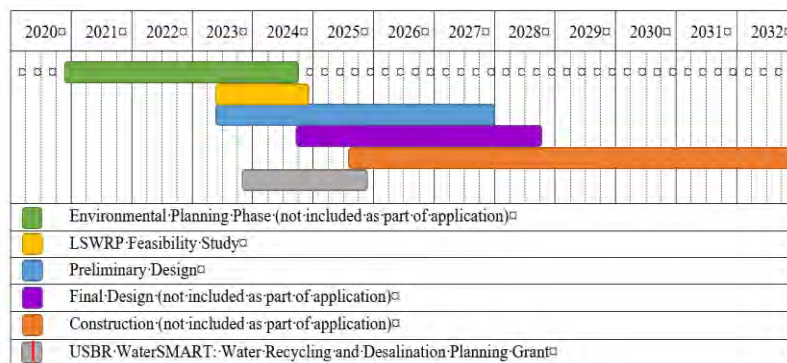
Table 1: List of Analyses Conducted

No.	Title	Year
1	Pilot Study of Advanced Water Treatment Processes	2012
2	RRWP Feasibility Study	2015
3	Conceptual Planning Study Report	2019
4	White Paper No. 1 – Program Implementation and Delivery	2019
5	White Paper No. 2 – Planning, Financial Considerations, and Agreements	2020
6	Backbone Conveyance Feasibility Level Design Report	2020
7	Economic Impact Study	2021

4. Include a preliminary schedule showing major tasks, milestones, and dates for the planning, design, and construction activities related to the project.

Preliminary Program Schedule

Figure 5 shows the overall program schedule for planning, design, and construction activities for the PWSC.



Task and Milestone Schedule

The planned use for the grant funds is to complete a LSWR Feasibility Study and preliminary designs for initial conveyance reaches and the sidestream

centrate treatment system. **Table 2** below shows major tasks and milestones that will be completed within the two-year grant period. Note that preliminary design for the initial conveyance will start prior to grant funding.

Table 2: Major Tasks and Milestones During the Grant Period

LSWR Feasibility Study				
1	Project alternatives analysis	November 2023	May 2024	6
2	Economic analysis	March 2024	September 2024	6
3	Project selection	May 2024	August 2024	3
4	Feasibility Study Report	August 2024	February 2025	6
Preliminary Design Initial Conveyance Reaches				
1	Evaluation and analyses	April 2023	December 2023	8
2	Engineering investigations	April 2023	December 2023	8
3	Preliminary design drawings	November 2023	March 2025	16
4	Preliminary Design Report	November 2023	March 2025	16
Preliminary Design of Sidestream Centrate Treatment System				
1	Feasibility/design parameters	November 2023	March 2024	4
2	Site investigations/utilities	March 2024	November 2024	8
3	Preliminary design drawings	November 2024	July 2025	8
4	Preliminary Design Report	November 2024	May 2025	6

Evaluation Criteria 2: Stretching Water Supplies (20 points)

1. Describe the potential for the project to reduce, postpone, or eliminate the development of new or expanded non-recycled water supplies.

Non-Recycled Water Supplies

The PWSC will reduce and postpone development of new or expanded non-recycled water supplies by replacing the existing groundwater replenishment supply source (imported water) with purified water. The PWSC will also reduce or delay development of new or expanded non-

recycled water supplies by replacing the existing imported water sources from the SWP and the CR that serve Metropolitan's Weymouth and Diemer WTPs with advanced purified water. The PWSC could reduce imported water deliveries by up to 155,000 acre-feet per year reducing the need for new or expanded non-recycled water facilities to supply this amount.

Imported Water Supplies

Metropolitan leverages non-recycled water supplies such as imported water supplies by storing available water for use when it is scarce. Imported supplies historically provide water for the region's storage portfolio and reliable imported supplies maximize regional investments in Metropolitan's storage capabilities. The 155,000 AFY produced by the PWSC will enable additional SWP and CR water use to be optimized between delivery and storage.

Local Supplies

Local supply forecasts in 2045 range from 2.1 to 2.7 MAF. If additional supplies are not developed, it is anticipated that the deficit would result in increased imported water demands on Metropolitan's member agencies. The PWSC affords Metropolitan the opportunity to fill that shortfall with up to 155,000 AFY of a new, local source of water for Metropolitan's own wholesale service and postpone implementation of additional local agency facilities.

- 2. Describe the potential for the project to alleviate pressure on existing water supplies and/or facilities. Please describe the existing water supplies, identify the supplies and/or facilities that will be impacted and explain how they will be impacted by the Project, including quantifications where applicable.***

Imported Water

In recent years, Metropolitan has experienced strain on both the SWP and the Colorado River. The past 3 years have been the driest on record for the SWP and the Colorado River system has been in drought for the past 23 years. The interconnected nature of Metropolitan's systems means that Metropolitan can address constraints in one area of the system for the benefit of the entire system. The integration of its water resources and system flexibility is fundamental to Metropolitan's wholesale water service. However, in recent years, Metropolitan's system has been stretched to its limit as extreme events continue.

The PWSC helps to alleviate that strain on Metropolitan's system and on both sources of imported water. On average, Metropolitan receives about 20 percent of its supply from the Colorado River, through the Colorado River Aqueduct (CRA). Approximately 60 mgd, or about 40% of the total PWSC yield, can help reduce California's reliance on the CRA. The PWSC will also reduce Southern California's reliance on the SWP, which on average supplies about 30 percent of Metropolitan's water supply. Approximately 90 mgd, or 60% of the PWSC yield, could benefit the SWP system, replacing up to 12 percent of the total SWP supply. Full implementation of the PWSC would free up to 155,000 AFY of capacity in the existing SWP and CRA aqueducts and provide Metropolitan the opportunity and flexibility to capture additional imported water through transfers, exchanges, or other agreements. In addition, Metropolitan would also have the flexibility for capturing more excess water available during wet years.

Groundwater

More than 72 percent of the groundwater basins in the service area are in decline. Without continued replenishment, groundwater storage is expected to continue to decline due to increased demand and limitations on other sources for natural and incidental recharge. For the basins to

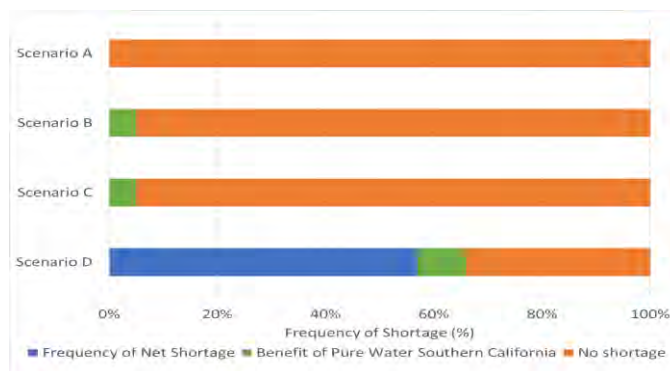
continue providing benefits for regional reliability, they require reliable water deliveries for recharge. The PWSC will help to meet that need by providing a stable year-to-year delivery of up to 93,000 AFY year of a new supply for groundwater replenishment to improve the supply reliability for the region.

3. Describe the potential for the project to make water available to address a specific concern. Explain the specific concern and its severity. Also explain the role of the project being investigated in addressing that concern and the extent to which the project will address it.

Water Supply Shortages

Per Scenario D from the Regional Needs Assessment study highlighted above, the PWSC will reduce the frequency of net shortages by about 10 percent as shown by the green bar in **Figure 6**.

Figure 6: Benefit of Pure Water to Frequency of Net Shortage in 2045



Water Supply Reliability

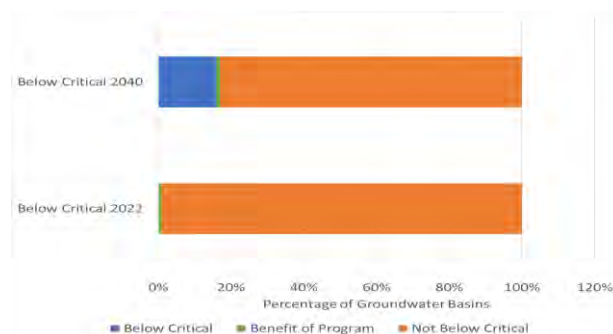
The PWSC would also deliver water to Metropolitan’s Weymouth and/or Diemer WTPs via raw water augmentation for DPR. This DPR approach would directly serve many member agencies as treated water from Weymouth and Diemer is delivered to most of Los Angeles and Orange Counties. As an increased source within Metropolitan’s distribution system, other imported sources can be made available for use in the rest of Metropolitan’s service areas and for additional storage.

Groundwater Depletion

The PWSC will help support groundwater aquifers in Los Angeles and Orange counties by sustaining groundwater levels, maintaining groundwater as a major local source of potable water, and reducing the pressure on Metropolitan’s service due to declining groundwater production. With the PWSC, imported supplies from the SWP and CRA that would have gone toward meeting local agency groundwater recharge demands would instead be available to meet other state/regional and environmental demands or go into Metropolitan storage programs.

As shown in **Figure 7**, the PWSC would fill the gap and reduce the risk of the groundwater basins reaching critical levels by providing a drought-resilient supply to recharge the four groundwater basins. The PWSC would also reduce the number of people impacted by declining water levels by as much as 2 million people

Figure 7: Benefit of Pure Water to Groundwater



Water Quality Issues

Water quality is a key issue for many of the groundwater basins that are being served by the PWSC. Key constituents of concern

include total dissolved solids (TDS), nitrate, sulfate, and chloride. Since PWSC will include advanced treatment, the treated water will be of better quality than existing groundwater.

Natural Disasters

PWSC would benefit the Metropolitan service area in the event of a catastrophic earthquake by increasing the opportunities to ensure that supplies are maintained within the region. The extent of damage from this type of event could potentially cause protracted outages of the facilities halting the flow of imported water for several months or longer. The region would need to rely entirely on local supplies such as PWSC, surface storage, and groundwater production while repairs are being made to the aqueducts. **Figure 8**, the PWSC facilities do not cross the San Andreas fault, so purified water from the PWSC could be available to keep water flowing in the Weymouth and Diemer WTPs even if imported supplies were cut off by an earthquake event. This would allow Metropolitan to continue to meet member agency demands.

Figure 8: Location of Pure Water Relative to the San Andreas Fault



Heightened Competition for Water Supplies

There are potential conflicts with other sources of water, especially in spreading basins where multiple sources of water are spread for infiltration. Metropolitan plans to work collaboratively with member agencies, groundwater managers, and other essential stakeholders to develop preliminary terms and conditions that would be mutually acceptable should PWSC proceed. Adding 155,000 AF from the PWSC reduces competition for water supplies by decreasing the imported water component for groundwater replenishment.

Availability of Alternative Supplies

Alternative supplies such as stormwater and imported water are highly dependent upon hydrologic conditions. The PWSC is a drought-resilient supply that can continue to provide reliable supplies even during drought conditions. Additional discussion of alternative supplies is provided under Criterion 3.

Increasing Cost of Water Supplies

The cost of all water supplies is going up throughout the country and California. Building the PWSC now will help avoid costly increases in the future due to inflation, current supply chain issues, and reduce purchasing of expensive supplies during shortages.

- 4. Describe the potential for the project to help create additional flexibility to address drought. Will water made available by the project being investigated continue to be available during periods of drought? To what extent is the water made available by the project being investigated more drought resistant than alternative water supply options? Explain.***

The PWSC will help create additional flexibility to address drought because purified water from the PWSC is available during periods of drought and emergency situations. Adding the PWSC as

an additional water source benefits Metropolitan's overall system flexibility by increasing the options available to meet demands throughout the service area. Full implementation of the PWSC would free up 155,000 AF of capacity in the SWP and CRA conveyance systems. Compared to alternative supplies such as stormwater or imported water, the PWSC is more drought-resilient because it is not dependent upon rainfall runoff, nor is it at risk from changes in climate or hydrology. The new purified water supply is separate from the hydrologic cycle – therefore, the PWSC can deliver under all weather conditions and produce water supplies outside of critical habitat areas that could be adversely affected by climate change. Protections against drought and climate change introduce a water security benefit not available with other sources.

Evaluation Criteria 3: Environment and Water Quality (20 points)

1. Describe the potential for the project to improve the quality of surface water or groundwater

Surface Water Quality Improvements

Purified water delivery to the Weymouth and Diemer WTPs for RWA potable reuse would improve the quality of treated water deliveries throughout Los Angeles and Orange Counties due to the lower TDS concentrations. Stricter nitrogen limits for future phases with higher DPR blend ratios will have even lower nitrogen concentrations in the purified water.

Groundwater Quality Improvements

The PWSC's purified water will be low in TDS, which improves the water quality in areas with impacted water supplies due to the high salinity of imported water sources. Because, the purified water will have a TDS of less than 100 mg/L, PWSC will improve water quality within the groundwater basins. Specifically, the PWSC will improve concentrations of TDS, nitrate, sulfate, and chloride concentrations. The PWSC will also help with any blending and maintaining the long-term salt balance for the groundwater basins served by the PWSC.

2. Describe the potential for the project to improve effluent quality beyond levels necessary to meet State or Federal discharge requirements.

The JWPCP currently discharges about 260 mgd to the ocean via an outfall system. The PWSC would reduce the volume and loading of effluent discharged to the ocean and better enable the JWPCP to meet future, more stringent regulatory requirements. The Sanitation Districts have performed scientific testing to ensure that the anticipated discharges after the PWSC construction will meet all regulatory requirements and would not degrade the ocean water quality. In addition, the centrate sidestream treatment has the potential to reduce nutrient discharges to the ocean, thus improving the JWPCP's effluent quality. The JWPCP's current treatment processes were not designed to reduce ammonia or total nitrogen.

The PWSC will employ either a nitrification-denitrification (NdN) or nitrification-only (N-only) biological treatment system. These process systems will have the required pathogens reduction capabilities to comply with all other water quality standards and objectives in applicable operation permits, basin plans, salt and nutrient management plans (SNMPs), and other applicable regulations and policies to protect water quality and the beneficial uses of surface water and groundwater. The nitrogen management systems reduce the total nitrogen concentration in the effluent resulting in a reduction of the nitrogen loading to the ocean.

3. Describe the potential for the project to improve flow conditions in a natural stream channel.

The PWSC will improve flow conditions in various natural stream channels. Approximately the northern two-thirds of the proposed PWSC's backbone pipeline alignment parallels the San Gabriel River where over the years, the river has been heavily modified for flood control purposes. The human impact on the river diminishes or significantly constrains the river's ability to serve as a natural stream channel for fish and wildlife; however, the PWSC could potentially improve flow conditions in the San Gabriel River by raising groundwater levels, which many riparian areas and wildlife rely on. Additionally, limited flows may be periodically diverted to the Sanitation Districts' Bixby Marshland near the JWPCP to maintain the marshland habitat and ecosystem. Metropolitan will also address conditions to manage runoff from the AWP facilities.

Because Metropolitan's existing infrastructure connects the watersheds of the Colorado River and the SWP, large-scale recycling in Southern California can also return benefits to both watersheds. The PWSC reduces dependence on the SWP by up to 155,000 AFY, increasing the sustainability of the Delta and increasing flows to improve the health of the ecosystem. Together with partners in the Lower Colorado River Basin, Metropolitan can help increase available flows in the Colorado River by increasing water recycling in Southern California.

4. Describe the potential for the project to restore or enhance habitat for non-listed fish and wildlife species.

The PWSC will primarily be constructed within existing road right of ways, utility easements, disturbed areas, and other upland areas that lack native habitat value or marine resources. Biological resources within and adjacent to the backbone pipeline are generally contained within the Whittier Narrows Recreation Area, Santa Fe Dam Recreation Area, and portions of San Gabriel River, which contain areas of suitable habitat for wildlife. Although PWSC facilities will be located to avoid sensitive areas as much as possible, there may still be some limited impacts to these areas. The temporary construction areas would be restored to pre-construction conditions and areas of marginal or poor habitat could be improved by restoring these areas with appropriate native vegetation and habitat, thereby increasing the quality and quantity of suitable habitat for wildlife. Restoring areas with native vegetation could also reduce the spread of invasive species. Additional studies to further avoid, restore, or enhance native vegetation and habitat will be evaluated in the LSWR Feasibility Study.

The Delta provides habitat for many species of fish and wildlife. A decrease in water imported through the SWP could help to alleviate pressures on the Delta ecosystem. Similarly, the Lower Colorado River supports numerous species of wildlife, and by decreasing the reliance on imported water supplies, the PWSC could increase the quality and quantity of water in the Colorado River thereby supporting the health of the watershed.

5. Describe the potential for the project to provide water or habitat for federally listed threatened or endangered species.

The PWSC is a powerful tool to help reduce the impact of continuing drought conditions by providing a local and reliable source of water. Four state and/or federally listed animal species, including candidate species, were documented during biological surveys, including: the monarch butterfly, coastal California gnatcatcher, least Bell's vireo, and willow flycatcher. Thirteen other special status animal species were detected. Although the PWSC is significant in size, permanent

impacts on regulated streambeds and native habitats will be minimal. Additional evaluation will be included in the LSWR Feasibility Study. Potential impacts would be addressed as discussed above by avoiding and/or restoring these areas with appropriate native vegetation and habitats for resident species. Reducing dependence upon the SWP and the CR would help increase the sustainability of both watersheds and potentially help to increase water flows to improve the health of the ecosystems. Moreover, large-scale recycling in Southern California can also return benefits to local watersheds and improve habitat for sensitive species as noted above.

Evaluation Criteria 4: Department of the Interior Priorities (15 points)

Climate Change

1. Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.

Reduced Climate Pollution.

The PWSC is included in Metropolitan's Climate Action Plan (CAP). The CAP includes an inventory of Metropolitan's historic and current greenhouse gas (GHG) emissions, as well as a comprehensive forecast of future projected emissions. The data is then used to identify a feasible GHG reduction target and GHG reduction measures that Metropolitan can implement to achieve its goal. The adopted CAP serves as a long-term planning document that will guide policy and planning decisions on operations, water resources, capital investments, and conservation and resource programs. It allows Metropolitan to streamline the environmental review process and mitigate GHG impacts for future capital projects like the PWSC. Energy efficiency and use of green power is encouraged resulting in lower GHGs and air quality improvements. Additional efforts to reduce climate change impacts will also be addressed in the LSWR Feasibility Study.

Increased Resilience to the Impacts of Climate Change.

The PWSC will provide a climate change and drought-resilient supply for replenishing regional groundwater basins to help meet demands on Metropolitan and maintain the long-term basin health and reliability. Since recycled water is sourced from wastewater from homes and businesses in the area, it is not dependent on the climate or rainfall runoff. Therefore, the PWSC is independent of changes to the climate and provides increased resilience to Southern California's potable water supply. With the incorporation of DPR, the area is even more resilient to climate change because of the additional flexibility and reliability provided by recycled water for the population that currently receives potable water from only surface water sources.

Protection of Public Health

Recycled water has been proven to protect public health by many successful recycled water programs, such as Orange County Water District's Groundwater Replenishment System (GWRS) project. Every major study has shown that recycled water is safe for use by and in the community. Projects like the PWSC are governed by a strict set of regulations by the State Division of Drinking Water and are continually monitored to prove that they meet their operating requirements and are providing safe water to the public.

Conservation of Public Lands, Water, Oceans and Biodiversity

The PWSC will produce and deliver 150 mgd or up to 155,000 AFY of purified water. Every drop of water recycled produced for local use reduces wastewater effluent discharges the Pacific Ocean, lowers imported water demands, and conserves natural resources in the California Delta

and the Colorado River. Reduced surface water diversions increase biodiversity and more water in the local aquifers helps restore watersheds where the groundwater levels have declined.

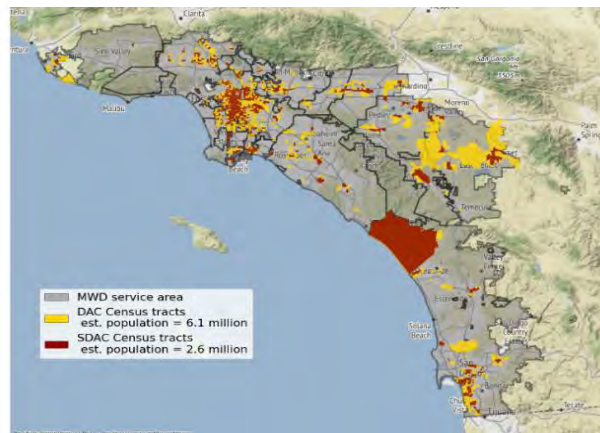
2. Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?

The PWSC strengthens the region's water supply sustainability. Climate change forecasts prepared for the Regional Needs Assessment include both gradual and extreme climate change scenarios. By 2040, the percentage of groundwater basins below the critical level could exceed 17 percent with more than 5 million people relying on an impacted basin for their water supply. The PWSC reduces the risk of the groundwater basins reaching critical levels by providing a drought-resilient supply to replenish the groundwater basins. The PWSC reduces the number of people impacted by declining water levels by as much as 2 million people.

Disadvantages and Underserved Communities

1. Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.

Much of the area shown in **Figure 9** that will receive blended purified water from Metropolitan's Weymouth and Diemer WTPs are disadvantaged or historically underserved community (DAC). Of the 19 million people that live within Metropolitan's service area, about 6 million people are living in a DAC.



Improved Potable Water Quality

Many DAC areas are concentrated in areas where the primary source of water supply is groundwater, especially in the Central and West Coast groundwater basins. Potable reuse projects such as the PWSC produce water low in TDS, which will improve groundwater water quality in areas with impacted water supplies due to the high salinity of some replenishment sources as detailed in a previous section above, including lower TDS, nitrate, sulfate, and chloride concentrations; and help with the long-term salt balance for the groundwater basins protecting the public water supply and health.

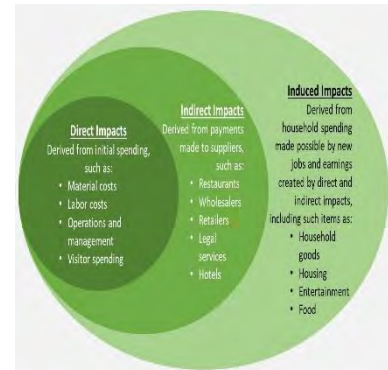
Improvement to Water Sustainability

Many DAC communities are heavily reliant on groundwater supplies. The PWSC will help support groundwater aquifers in Los Angeles and Orange counties by sustaining groundwater levels, maintaining groundwater as a major local source of potable water, and reducing the pressure on Metropolitan's service due to declining groundwater production. The PWSC can provide stable year-to-year deliveries of a new supply for groundwater replenishment to improve the supply reliability conditions for the region by reducing demand on imported water.

Economic Growth Opportunities

The PWSC implementation will provide a positive and widespread economic impact throughout Southern California, having direct, indirect, and induced economic impacts as shown in **Figure 10**. Based on an Economic Impact Study prepared by the Los Angeles Economic Development Council, the planned expenditure of more than \$4 billion (2018 dollars) to develop the PWSC will result in a total economic output of \$8.7 billion, accompanied by 47,100 total development-related jobs – 24,100 of which will be directly involved in the construction. Approximately 23,000 jobs would be supported by indirect or induced effects of the construction expenditures. The PWSC will also have a recurring positive impact on the regional economy once construction is completed. In total, the ongoing operational and maintenance costs will result in an employment impact of 1,040 jobs in the region with labor income of \$88.0 million.

**Figure 10:
Economic Benefits**



Other Local Opportunities

Other local opportunities include Metropolitan’s Project Labor Agreement (PLA), which ensures that the PWSC’s construction projects are completed with a highly trained workforce with opportunities for small businesses. The PWSC will also have many ancillary facilities, designed to have dual uses, such as meeting rooms, public tours, and a learning center. Metropolitan is exploring incorporating apprenticeship programs and operator training.

2. Please describe in detail how the community is disadvantaged based on a combination of variables.

DAC were determined using the California Department of Water Resources’ (DWR) “DACs – Census” dataset, which defines a DAC as having a median household income (MHI) that is less than 80 percent of the Statewide annual MHI. Because Pure Water benefits the entire Metropolitan service area and all 19 million people that live within it, Pure Water also benefits DAC within the entire service area. In addition to the economic growth opportunities, many DAC areas are heavily reliant on groundwater supplies, especially in areas served by the PWSC.

3. If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.

The PWSC service area includes about 6 million people considered as DAC by the California Department of Water Resources. Additionally, initial mapping with EJScreen and CalEnviroScreen mapping tools identify a significant portion of the PWSC area within DAC areas. Further evaluation will be included in the new LSWR Feasibility Study to enhance DAC participation and reduce potential impacts.

Tribal Benefits

1. Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for an Indian Tribe?

The PWSC directly serves the Gabrieleño and Fernandeño Tataviam tribal communities and will improve water reliability within their tribal territories; Their tribal members will benefit by gaining access to jobs and training programs created through PWSC implementation. PWSC benefits are also achieved beyond Southern California and would support tribes along the Colorado River and in Northern Sierras. Once implemented, the PWSC reduces Metropolitan's demands on imported supplies and makes additional water available for tribes in these regions.

2. Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?

The PWSC will provide a new climate-resilient supply of water for tribal communities in Southern California that rely on drinking water supplies provided by Metropolitan and its member agencies. Project construction and operation would create nearly 50,000 jobs in Southern California and provide tribal members with opportunities for training, jobs, and economic growth. In addition, the PWSC would benefit tribes along the Colorado River and Northern Sierras since use of purified recycled water in Southern California would reduce dependence on imported supplies. Tribes would receive additional water resources from their watersheds that could result in improved drinking water, an enhanced natural environment and economic growth through activities such as tourism and agriculture.

Evaluation Criteria 5: Watershed Perspective and Stakeholder Involvement (15 points)

1. Will the proposed project implement a regional or state water plan or an integrated resource management plan? Explain.

The PWSC is part of Metropolitan's Regional Needs Assessment. Since 1996, Metropolitan looked 25 years ahead to assess the needs of Southern California and adapt to ever-evolving challenges. It addresses uncertainties with how climate change, natural disasters, regulatory requirements, population, and economy will impact the region's water supply and demands and how to adapt and plan to secure our future.

Metropolitan is required to prepare an Urban Water Management Plan (UWMP) by the Urban Water Management Planning Act (Act) of the state of California. In its 2020 UWMP, Metropolitan noted that it was exploring the potential development of a regional recycled water program in partnership with the Sanitation Districts. This project will purify and reuse water for the groundwater augmentation and potable reuse in Southern California.

2. Will the proposed project help meet the water supply needs of a large geographic area, region, or watershed? Explain.

The PWSC will help meet the water supply needs of Metropolitan's service area which covers most of the Southern California coastal plain from the city of Oxnard in the north to approximately 200 miles to the Mexican border on the south. The total area served is approximately 5,200 square miles and includes portions of six counties. Although only 14 percent of the land area of the six Southern California counties is within Metropolitan's

service area, it has nearly 85 percent of the populations of those counties. If the Southern Nevada Water Authority (SNWA) and the Arizona Department of Water Resources/Central Arizona Project agencies (Arizona Parties) become partners in the PWSC, the benefits will be multi-state and enhance both the California Central Valley and Colorado River watersheds.

3. Will the proposed project promote collaborative partnerships to address water-related issues? Explain. Describe stakeholder involvement in the project planning process.

Metropolitan welcomes the possibility of partnering with other agencies to ensure the success of the PWSC. Metropolitan is also collaborating with Partnering Agencies that have committed to providing financial contributions as well as agencies that have an interest in the PWSC and could purchase the purified water, are contributing in-kind labor and materials, or providing other services as needed (Figure 11).



Los Angeles County Sanitation Districts. Metropolitan and the Sanitation Districts have been in partnership since 2010. The Sanitation Districts are integral to the program’s success and recognize that operation of the PWSC would assist in meeting their recycled water goals and address potential future ocean discharge requirements. The Sanitation Districts will use agency resources for matching funds for this work.

State of California – State Water Resources Control Board. To address the State’s urgent water supply needs, the Governor of California signed AB 179 in September 2022 to include allocation of funds for water recycling projects. \$80 million was allocated to Metropolitan to support the PWSC. Metropolitan has been authorized to use these state funds to initiate the PWSC’s design activities, which include the preliminary design for the first two reaches of the backbone conveyance pipeline. Part of the State funds will be used as Metropolitan’s local matching funds.

Agency Reuse Collaborative

Two major recycled programs are planned in Los Angeles County including the PWSC and Los Angeles’ Operation NEXT. A working group called the Agency Reuse Collaborative has been set up to coordinate their planning and implementation. These agencies meet regularly to discuss how to increase the resilience of the region’s water supply; create benefits and add value to existing and planned infrastructure; support affordability goals; reduce wastewater discharges; lower the carbon footprint, and benefit DACs.

4. Will the proposed project include public outreach and opportunities for the public to learn about the project? Explain.

Metropolitan is implementing an extensive outreach program to gain public support of PWSC. At the center of the outreach effort is the PWSC Demonstration Plant, which features educational exhibits, an interactive learning center, and a robust tour program that attracts visitors of all ages. It provides an opportunity to learn about the PWPC, hosting more than 250 tours to nearly 10,000 people. Attendees have included students, business groups, environmental leaders and state and federal officials including California Governor Gavin Newsom, Congresswoman

Grace Napolitano, and USBR Commissioner Camille Touton. In addition, a dynamic website, social media activities, presentations, special events, booths at community events, and press coverage garner engagement in the PWSC. To date, these outreach strategies have reached millions of people in Southern California and beyond. Outreach efforts have also extended to CEQA scoping meetings, participation in community events, and coordination with stakeholders.

E. Budget Proposal

Planned use for the grant funds include the following: (1) completion of a LSWR Feasibility Study for review and approval by Reclamation; (2) initiation of a feasibility, planning, and evaluation of DPR treatment technologies for the PWSC; and (3) planning and preparation of preliminary design of treatment of the side stream effluent from JWPCP. A summary of non-federal and federal funding sources is provided in **Table 3** below. Additionally, **Table 4** identifies costs that will be contributed by non-Federal cost share by the applicant, third-party in-kind contributions, and those that will be covered using the funding request from Reclamation.

Table 3: Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	
Metropolitan Water District or State Water Resources Control Board (SWRCB) Grant	\$ 12,000,000
Sanitation Districts	\$ 3,000,000
Non-Federal Subtotal	\$ 15,000,000
Requested Reclamation funding	\$ 5,000,000

Table 4: Total Project Cost Table

Source	Amount
Cost to be reimbursed with the requested Federal funding	\$ 5,000,000
Costs to be paid by the applicant	\$ 12,000,000
Value of third-party contributions	\$ 3,000,000
Total project cost	\$ 20,000,000

A breakdown of budgets for the LSWR Feasibility Study, the preliminary design for the initial reaches of the conveyance system, and the preliminary design of side stream effluent treatment is provided in **Table 5**. The breakdown between Metropolitan labor and consultant budgets is also shown. Note that these budgets will change based on the final consultant contracts which continue to be negotiated during this phase of the work.

Table 5: Total LSWR Feasibility Study and Preliminary Breakdown

Description	Labor	Consultants	Materials	Construction	Total
Feasibility Study	\$ 850,000	\$1,100,000	\$ 50,000	\$ 0	\$ 2,000,000
Preliminary Design	7,650,000	9,900,000	450,000	0	18,000,000
Final Design	0	0	0	0	0
Construction	0	0	0	0	0
Program Manager	0	0	0	0	0
Total	\$8,500,000	\$11,000,000	\$ 500,000	\$ 0	\$20,000,000

Refer to Budget Form SF424A for additional details of the breakdown of the costs that will be expended by the October 31, 2025, end of the Grant period.

F. Budget Narrative

The total application (project) budget of \$20 million is proposed to be spent by October 31, 2025, the end date for the Grant. The budget includes a \$5 million request from Reclamation and \$15 million as local match from Metropolitan and the Sanitation Districts. Of the \$20 million project cost, approximately \$2 million is for Development of the Feasibility Study, \$12 million for preliminary design of initial reaches, and \$4 million for preliminary design of centrate sidestream treatment as described in SF-424A. The table provides an approximate breakdown of the Preliminary Design costs that will be expended by the October 31, 2025, end of the Grant period based on the projected cost of the Preliminary Design Services in **Table 6** below.

A description for each budget category is shown in **Table 7** on page 23.

Table 6: Estimated Preliminary Design Phase Budget Expenditures

Object Class Categories		Budget Item Description	Computation \$/Unit	Quantity	Type	Total Cost
6a	Personnel	Program Manager	\$114	3,763	hours	\$430,000
		Project Managers	\$114	7,525	hours	\$860,000
		Task Leads	\$88	9,749	hours	\$860,000
		Staff/Operators	\$63	27,235	hours	\$1,710,000
		Administration/ Project Controls	\$76	5,644	hours	\$430,000
6b	Fringe Benefits	Full-Time Employees	\$4,290,000	0.9816	%	\$4,200,000
6c	Travel					
6d	Equipment					
6e	Supplies	Materials	\$500,000	1	LS	\$500,000
6f	Contractual	Consultants	\$11,000,000	1	LS	\$11,000,000
6g	Construction	Contractor			LS	\$0
6h	Other					
6i	Total Direct Charges (sum of 6a - 6h)					\$20,000,000
6j	Indirect Charges					\$0
6k	TOTALS (sum of 6i - 6j)					\$20,000,000
7	PROGRAM INCOME					
	USBR WaterSMART GRANT (25%)		\$20,000,000	0.25	percent	\$5,000,000
	Total less Grant					\$15,000,000
8c	State Contributions					
8d	Other Sources					
	LACSD Contribution		See text above	1	L.S.	\$3,000,0000
				N.A.	N.A.	\$0
				N.A.	N.A.	\$0
	SUBTOTAL OTHER SOURCES					\$0
8b	Applicant					\$12,000,000

Table 7: Budget Narrative Descriptions

No.	Category	Description
1	Salaries and Wages	The total budget for MWD employee salaries and wages are budgeted at \$8,500,000. Metropolitan’s LSWR Feasibility Study and preliminary design activities will be managed by a PM Team under the direction of the Metropolitan Program Manager
2	Fringe Benefits	Fringe benefits for full-time employees are calculated at 98.16% of salary and include 22.64% for leave-related benefits, 40.00% for retirement, 17.13% for medical benefits and the remaining for non-leave-related benefits.
3	Travel	Minimal travel is required directly by Metropolitan for this Project. Any travel costs would be included in the Materials category.
4	Equipment	Equipment purchases have not been identified at this Project stage.
5	Materials and Supplies	Materials and supplies for the Project have been estimated as shown above based on experience with similar projects. No detailed estimates of materials and supplies has been prepared.
6	Contractual	Staff will conduct engineering and technical support studies when that expertise resides with existing staff; otherwise, RFPs will be prepared and issued to procure consultants to perform the specialized technical studies. No construction is required for this Project.
7	3 rd Party In-Kind Contributions	The Sanitation Districts will contribute approximately \$3,000,000 based on the costs for the preliminary design of the sidestream centrate treatment system.
8	Environmental / Regulatory Compliance Cost	Limited environmental compliance costs are anticipated during the LSWR Feasibility Study and Preliminary Design Phases. These costs would be included in item 6e – Supplies.
9	Other Expenses	Other expenses are not considered to be substantial and would be included in item 6e – Supplies if required.
10	Indirect Costs	No indirect costs are anticipated.
11	Total Costs	The total project budget for this grant is \$20,000,000. Of the total cost, \$5 million would come from federal sources. The remaining amount of \$15 million will be the non-Federal cost share.

Budget Form

An SF-424A, Budget Information – Non-Construction Programs form has been completed as part of this proposal. Staff consulted with Reclamation to confirm the use of the form.

II. Environmental and Cultural Resources Compliance

Metropolitan’s request for federal funding requires Reclamation, as the federal lead agency, to comply with the National Environmental Policy Act (NEPA). Given the funding would be for preliminary design and a feasibility study, the activities would qualify under a categorical exclusion. In addition, Metropolitan’s Environmental Planning Phase includes compliance with CEQA and preparation of an Environmental Impact Report (EIR). The EIR is underway and will

address environmental impacts associated with construction and operation of the program. A CEQA-Plus analysis will also be conducted to comply with federal cross-cutting requirements associated with State Revolving Fund loans. The EIR will allow Metropolitan to consider broad policy alternatives and program-wide mitigation measures early in the Program PWSC’s development. It will also provide greater flexibility to consider programmatic alternatives to avoid, minimize, and develop mitigation measures for identified impacts and to ensure adequate cumulative impact analysis.

Certain aspects of the PWSC may also have impacts to resources within Federal jurisdictions or where Federal funding is provided. In these cases, NEPA requires that Federal agencies assess the environmental effects of a proposed agency action and any reasonable alternatives before deciding on whether and/or how to proceed. To address these requirements, the technical studies will include federal conformance analyses, where appropriate, to address federal regulations (e.g., Clean Air Act, Endangered Species Act, National Historic Preservation Act). In addition to federal conformance analyses in the appropriate technical studies, Metropolitan will also conduct a separate Environmental Justice analysis to support federal agencies with their NEPA compliance requirements.

Surrounding Environment

This environmental planning documentation will be used to identify and develop measures to avoid and mitigate any potential adverse environmental effects of the PWSC. During the preliminary design work described above, ground-disturbing activities are limited to geotechnical investigations and utility potholing, which are permitted under a Categorical Exclusion as the anticipated holes are six inches or less in diameter and they occur in previously disturbed areas. Impacts associated with the boreholes are negligible and temporary and will be located to make sure that there are no adverse effects to sensitive resources. Impacts to the surrounding environment during construction and operation will be analyzed in the EIR. The various impacts and typical mitigation measures are summarized in **Table 8** below.

Table 8: Environmental Impacts and Typical Mitigation Measures

Impact	Typical Mitigation Measures
Earthwork and Grading	<ul style="list-style-type: none"> • Balance earthwork to minimize off-site transport of soil and debris • Incorporate of best management practices (BMP) into project construction
Air Quality	<ul style="list-style-type: none"> • Apply BMPs to avoid and minimize impacts to hydrology and biological resources such as silt fences, dust control, and street sweeping
Water Quality	<ul style="list-style-type: none"> • Prepare a storm water pollution prevention plan (SWPPP) • Implement and maintain the facilities recommended in the SWPPP
Noise	<ul style="list-style-type: none"> • Schedule to avoid potential noise creating work near sensitive biological resources during nesting season • Require proper noise mitigation to construction equipment • Perform noise studies and provide noise mitigation
Habitat	<ul style="list-style-type: none"> • Avoid construction activities where sensitive plant species are located, • Use of trenchless technologies where pipelines cross sensitive habitats • Implement of BMPs to minimize impacts
Traffic	<ul style="list-style-type: none"> • Perform traffic studies and implement BMP traffic control measures • Avoid locating facilities with heavy traffic/high community impacts

Species and Habitat

As indicated above, the only physical environmental impacts during planning and LSWR Feasibility Study are associated with geotechnical and utility investigations would be negligible and temporary. Boreholes and access requirements would be located within areas that would not have direct or indirect effects on listed or otherwise sensitive species. Depending on the sensitivity of the habitat or time of year, a biological monitor would be present to ensure no impacts to sensitive environmental resources. The AWP will be constructed at the Sanitation Districts' JWPCP site, which is highly developed and includes a portion of the former Fletcher Oil Refinery. There are no sensitive species or habitat within the AWP site.

For the conveyance pipelines, desktop analyses for habitat assessment for rare plants and focused wildlife surveys were conducted as part of the environmental planning work. These studies identified sensitive biological resources within and/or adjacent to the pipeline alignment. This information will be used to address environmental impacts during design, construction, and operation of the PWSC. For example, trenchless construction methods, vegetation removal time constraints, and noise/disturbance buffers will be incorporated, as feasible, to avoid or minimize impacts. Biologists will be consulted during project design and biological monitoring would be implemented during future construction.

Additionally, as mentioned in Criterion 2 (Environment and Water Quality), the PWSC would offset or reduce imported water from the SWP and the Colorado River. As more flows remain within the Delta and Colorado River watersheds, the project will increase sustainability and potentially improve the health of those two ecosystems, including Delta and Colorado River areas that have endangered species and sensitive habitat.

Wetlands and Waters

As indicated earlier, planning, and preliminary design activities could include geotechnical and utility boreholes, which would be located to ensure there are no adverse effects to sensitive resources. If boreholes are required in wetlands or waters of the United States, Metropolitan would comply with the terms and conditions required for authorization under Nationwide Permit No. 6. Metropolitan will continue to evaluate potential impacts to wetlands and waters of the United States as part of the construction and operation of the PWSC to avoid or minimize impacts.

Reducing import water from the SWP and the Colorado River would have an overall increased benefit to the Delta and the Colorado River ecosystems as existing habitat would have water present for longer periods throughout the year. As a result, the existing wetlands and marshes in those areas would increase with the PWSC implementation.

Construction of Water Delivery System

The purpose of the PWSC is to plan, design and construct a new water supply and delivery system for the region. The new delivery system will consist of an AWP at the Sanitation Districts' JWPCP in the city of Carson and conveyance pipelines from the AWP approximately 40 miles to the Santa Fe Dam area near the San Gabriel mountains. The PWSC will provide a new source of reliable, climate resilient water. The completed PWSC will be able to convey 150 mgd or up to 155,000 AFY for groundwater augmentation and raw water augmentation.

Irrigation System Modifications

This criterion is not applicable to the planning and preliminary design of this funding request. Because the purified water is a new source of supply, the treatment facilities, pipelines, and pump stations will be new and will not modify any individual features of an existing irrigation system unless they conflict with PWSC facilities. If any treatment plant or pipeline construction impacts an existing irrigation system, the existing systems would be replaced in kind. New non-potable or Title 22 systems water systems suitable for the irrigation of parks, landscape or other non-potable uses may be constructed as part of the PWSC in the area at and around the treatment plant. The extent of these new facilities would be developed as part of the PWSC during the Environmental Planning Phase and Preliminary Design.

National Register of Historic Places

This PWSC will identify and consider measures to avoid, minimize, and mitigate potential adverse effects on cultural resources listed on or eligible for listing in the National Register of Historic Places as part of the Environmental Phase work. As part of PWSC's technical studies, an archaeological and built environment analysis, including pedestrian field surveys and a California Historic Information System record search will be conducted. The record search will identify any eligible or listed historic properties, while the pedestrian field survey will identify any resources with the potential for listing on the National Register of Historic Places and evaluate them for listing. Should National Register-eligible or listed resources be identified, mitigation measures will be developed to minimize impacts to the best extent feasible.

Archeological Sites

This PWSC will identify and consider measures to avoid, minimize, and mitigate potential adverse effects on archaeological resources. As part of PWSC technical studies, an archaeological and built environment analysis, including pedestrian field surveys and a California Historic Information System record search will be conducted. The record search will identify any previously recorded archaeological resources, while the pedestrian field survey will identify archaeological sites with surface visibility. The PWSC will mitigate potential adverse effects on known archeological resources in the areas with PWSC facilities. Additional mitigation measures will be developed for unanticipated archaeological resources discoveries encountered during geotechnical investigations that require ground disturbance and during PWSC construction.

Low Income and Minority Populations

During the LSWR Feasibility Study, planning and design phase, the PWSC will identify low-income and minority populations. This information will be used to assess and address environmental justice concerns and to ensure fair treatment and meaningful involvement of these communities.

Tribal Lands

This criterion is not applicable to the planning and design of this funding request. No federally recognized tribes or tribal lands exist within the PWSC alignment.

Noxious Weeds and Invasive Species

This criterion is not applicable to the planning and design of this funding request. The PWSC will identify and implement measures to avoid introduction, the continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area.

III. Required Permits and Approvals

The following is a partial list of the permits and approvals that are anticipated for the Project. A complete Permit Analysis will be performed as part of the Preliminary Design to prepare a permit list for the Project.

Section 404 of the Clean Water Act & Section 10 of the Rivers and Harbors Act of 1899:

As indicated earlier, geotechnical boreholes may be required and may be located within waters of the U.S. These activities are regulated under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899, which are subject to the U.S. Army Corps of Engineers regulatory authority. Geotechnical investigations are considered survey activities and would be authorized under Nationwide Permit No. 6 provided certain terms and conditions are met.

Section 7 of the Endangered Species Act

As described above, boreholes would be located within areas that would not have direct or indirect effects on listed species. And although Critical Habitat traverses a small portion of the alignment, it is unlikely that the boreholes would be in this critical habitat within waters of the U.S. or federally owned property. If they would, Metropolitan would coordinate with Reclamation to determine the need for a Section 7 consultation with the U.S. Fish and Wildlife Service. Metropolitan would implement measures to avoid, minimize, or otherwise not jeopardize threatened or endangered species.

Section 106 of the National Historic Preservation Act

This PWSC will comply with Section 106 of the National Historic Preservation Act. PWSC cultural resource technical studies include those for archaeological resources, built environment resources, and resources on or eligible for the National Register of Historic Places. These technical studies will be written consistent in a manner to provide evaluation under Section 106 of the National Historic Preservation Act and CEQA. Technical study language consistent with Section 106 will allow for timely submittal by the federal lead agency to the State Historic Preservation Office for review and concurrence.

Title 22 California Code of Regulations

Metropolitan and Sanitation Districts are coordinating with the SWRCB through the Division of Drinking Water (DDW) and the individual Regional Water Quality Control Boards (RWQCBs) for the Los Angeles and Santa Ana regions on the current demonstration project and final approval for the PWSC.

DDW and the RWQCBs regulate groundwater recharge projects under Title 22 California Code of Regulations Division 4, Chapter 3. Groundwater replenishment regulations address the

protection of public health with respect to chemicals, microorganisms, and constituents of emerging concern.

Basin Plan Objectives

In addition to the Title 22 criteria, the PWSC will also target to meet the Los Angeles RWQCB Basin Plan objectives for the Main San Gabriel, West Coast, and Central Basins to have:

- Total Nitrogen < 10 mg/L
- Target boron concentration of 0.5 mg/L

National Pollutant Discharge Elimination System Permit

The JWPCP receives wastewater collected from homes, businesses, and industries, which is treated to produce non-nitrified secondary effluent in compliance with its National Pollutant Discharge Elimination System (NPDES) permit limits and mass emission benchmarks. The RO concentrate from the AWP will be discharged in compliance with the new Sanitation Districts NPDES permit that will include the PWSC flows.

IV. Official Resolution

Metropolitan's Board approval of the resolution is expected on March 13, 2023. Metropolitan will submit an official resolution within 30 days of the application.

V. Letters of Support

Letters of support from our partner agencies and a funding commitment letter from LACSD will be provided within 30 days of the application.

VI. Overlap or Duplication of Effort

Metropolitan is seeking to leverage funding for PWSC from all known federal, state, and local funding sources to help offset the anticipated \$4 - \$5 billion PWSC cost to rate payers. The California Governor signed AB 179 in 2022 that included allocating \$80 million to advance a regional recycled water program. Metropolitan's Board authorized the use these state funds to initiate the PWSC design activities. The proposed LSWR Feasibility Study and identified preliminary design work will be funded by Reclamation with local match provided by LACSD and a portion of awarded state funding.

VII. Uniform Audit and Reporting Statement

Metropolitan was not required to submit a Single Audit report in the most recent fiscal year but will comply if and when necessary.

Budget Proposal

Planned use for the grant funds include the following: (1) completion of a LSWR Feasibility Study for review and approval by Reclamation; (2) initiation of a feasibility, planning, and evaluation of DPR treatment technologies for the PWSC; and (3) planning and preparation of preliminary design of treatment of the side stream effluent from JWPCP. A summary of non-federal and federal funding sources is provided in **Table 1** below. Additionally, **Table 2** identifies costs that will be contributed by non-Federal cost share by the applicant, third-party in-kind contributions, and those that will be covered using the funding request from Reclamation.

Table 1: Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	
Metropolitan Water District or State Water Resources Control Board (SWRCB) Grant	\$ 12,000,000
Sanitation Districts	\$ 3,000,000
Non-Federal Subtotal	\$ 15,000,000
Requested Reclamation funding	\$ 5,000,000

Table 2: Total Project Cost Table

Source	Amount
Cost to be reimbursed with the requested Federal funding	\$ 5,000,000
Costs to be paid by the applicant	\$ 12,000,000
Value of third-party contributions	\$ 3,000,000
Total project cost	\$ 20,000,000

A breakdown of budgets for the LSWR Feasibility Study, the preliminary design for the initial reaches of the conveyance system, and the preliminary design of side stream effluent treatment is provided in **Table 3**. The breakdown between Metropolitan labor and consultant budgets is also shown. Note that these budgets will change based on the final consultant contracts which continue to be negotiated during this phase of the work.

Table 3: Total LSWR Feasibility Study and Preliminary Breakdown

Description	Labor	Consultants	Materials	Construction	Total
Feasibility Study	\$ 850,000	\$1,100,000	\$ 50,000	\$ 0	\$ 2,000,000
Preliminary Design	7,650,000	9,900,000	450,000	0	18,000,000
Final Design	0	0	0	0	0
Construction	0	0	0	0	0
Program Manager	0	0	0	0	0
Total	\$8,500,000	\$11,000,000	\$ 500,000	\$ 0	\$20,000,000

Refer to Budget Form SF424A for additional details of the breakdown of the costs that will be expended by the October 31, 2025, end of the Grant period.

Budget Narrative

The total application (project) budget of \$20 million is proposed to be spent by October 31, 2025, the end date for the Grant. The budget includes a \$5 million request from Reclamation and \$15 million as local match from Metropolitan and the Sanitation Districts. Of the \$20 million project cost, approximately \$2 million is for Development of the Feasibility Study, \$12 million for preliminary design of initial reaches, and \$4 million for preliminary design of centrate sidestream treatment as described in SF-424A. The table provides an approximate breakdown of the Preliminary Design costs that will be expended by the October 31, 2025, end of the Grant period based on the projected cost of the Preliminary Design Services in **Table 4** below.

A description for each budget category is shown in **Table 5** on page 3.

Table 4: Estimated Preliminary Design Phase Budget Expenditures

Object Class Categories		Budget Item Description	Computation \$/Unit	Quantity	Type	Total Cost
6a	Personnel	Program Manager	\$114	3,763	hours	\$430,000
		Project Managers	\$114	7,525	hours	\$860,000
		Task Leads	\$88	9,749	hours	\$860,000
		Staff/Operators	\$63	27,235	hours	\$1,710,000
		Administration/ Project Controls	\$76	5,644	hours	\$430,000
6b	Fringe Benefits	Full-Time Employees	\$4,290,000	0.9816	%	\$4,200,000
6c	Travel					
6d	Equipment					
6e	Supplies	Materials	\$500,000	1	LS	\$500,000
6f	Contractual	Consultants	\$11,000,000	1	LS	\$11,000,000
6g	Construction	Contractor			LS	\$0
6h	Other					
6i	Total Direct Charges (sum of 6a - 6h)					\$20,000,000
6j	Indirect Charges					\$0
6k	TOTALS (sum of 6i - 6j)					\$20,000,000
7	PROGRAM INCOME					
	USBR WaterSMART GRANT (25%)		\$20,000,000	0.25	percent	\$5,000,000
	Total less Grant					\$15,000,000
8c	State Contributions					
8d	Other Sources					
	LACSD Contribution		See text above	1	L.S.	\$3,000,0000
				N.A.	N.A.	\$0
				N.A.	N.A.	\$0
	SUBTOTAL OTHER SOURCES					\$0
8b	Applicant					\$12,000,000

Table 5: Budget Narrative Descriptions

No.	Category	Description
1	Salaries and Wages	The total budget for MWD employee salaries and wages are budgeted at \$8,500,000. Metropolitan’s LSWR Feasibility Study and preliminary design activities will be managed by a PM Team under the direction of the Metropolitan Program Manager
2	Fringe Benefits	Fringe benefits for full-time employees are calculated at 98.16% of salary and include 22.64% for leave-related benefits, 40.00% for retirement, 17.13% for medical benefits and the remaining for non-leave-related benefits.
3	Travel	Minimal travel is required directly by Metropolitan for this Project. Any travel costs would be included in the Materials category.
4	Equipment	Equipment purchases have not been identified at this Project stage.
5	Materials and Supplies	Materials and supplies for the Project have been estimated as shown above based on experience with similar projects. No detailed estimates of materials and supplies has been prepared.
6	Contractual	Staff will conduct engineering and technical support studies when that expertise resides with existing staff; otherwise, RFPs will be prepared and issued to procure consultants to perform the specialized technical studies. No construction is required for this Project.
7	3 rd Party In-Kind Contributions	The Sanitation Districts will contribute approximately \$3,000,000 based on the costs for the preliminary design of the sidestream centrate treatment system.
8	Environmental / Regulatory Compliance Cost	Limited environmental compliance costs are anticipated during the LSWR Feasibility Study and Preliminary Design Phases. These costs would be included in item 6e – Supplies.
9	Other Expenses	Other expenses are not considered to be substantial and would be included in item 6e – Supplies if required.
10	Indirect Costs	No indirect costs are anticipated.
11	Total Costs	The total project budget for this grant is \$20,000,000. Of the total cost, \$5 million would come from federal sources. The remaining amount of \$15 million will be the non-Federal cost share.

Budget Form

An SF-424A, Budget Information – Non-Construction Programs form has been completed as part of this proposal. Staff consulted with Reclamation to confirm the use of the form.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

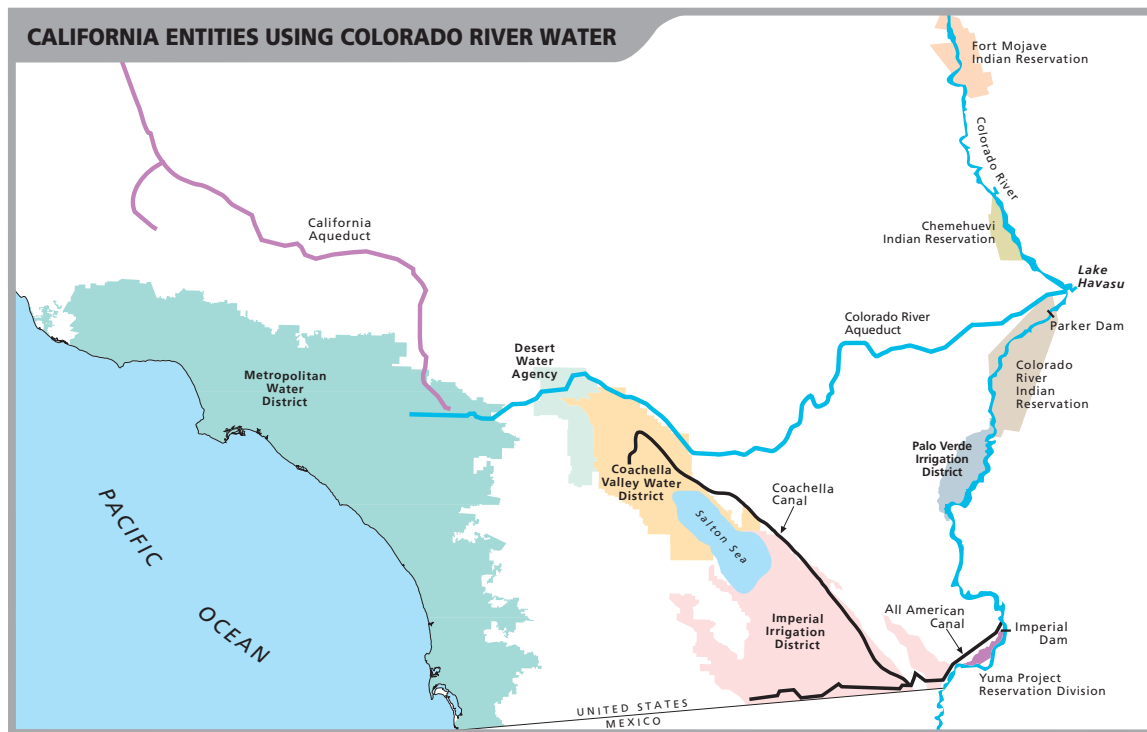


METROPOLITAN'S MEMBER AGENCIES

LEGEND

- Department of Water Resources' California Aqueduct
- Metropolitan's Colorado River Aqueduct
- Water Treatment Plants

Counties of:
 Los Angeles
 Orange
 San Diego
 Riverside
 San Bernardino
 Ventura



Metropolitan's Member Agencies and Communities Served

*The mission of the
Metropolitan Water District
of Southern California
is to provide its service area
with adequate and reliable
supplies of high-quality water to
meet present and future needs
in an environmentally and
economically responsible way.*



**THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA**

Post Office Box 54153
Los Angeles, CA 90054-0153

www.mwdh2o.com
www.bewaterwise.com



1/14 60m

Anaheim
Beverly Hills
Burbank
Calleguas Municipal Water District
Camarillo
Camarillo Heights
Lake Sherwood
Las Posas Valley
Moorpark
Naval Base Ventura County
Newbury Park
Oak Park
Oxnard
Port Hueneme
Santa Rosa Valley
Simi Valley
Somis
Thousand Oaks

Central Basin Municipal Water District
Artesia
Bell
Bellflower
Bell Gardens
Carson
Cerritos
Commerce
Compton
Cudahy
Downey
East Los Angeles
Florence-Graham
Hawaiian Gardens
Huntington Park
La Habra Heights
Lakewood
La Mirada
Lynwood
Maywood
Montebello
Monterey Park
Norwalk
Paramount
Pico Rivera
Santa Fe Springs
Signal Hill
South Gate
South Whittier
Vernon
Walnut Park
West Whittier-Los Nietos
Whittier
Willowbrook

Compton
Eastern Municipal Water District
French Valley
Good Hope
Hemet
Homeland
Juniper Flats
Lakeview
Mead Valley
Menifee
Moreno Valley
Murrieta
Murrieta Hot Springs
Nuevo
North Canyon Lake
Perris
Quail Valley
Romoland
San Jacinto
Sun City
Temecula
Valle Vista
Winchester

Foothill Municipal Water District
Altadena
La Cañada Flintridge
La Crescenta
Montrose

Fullerton
Glendale
Inland Empire Utilities Agency
Chino
Chino Hills
Fontana
Montclair
Ontario
Rancho Cucamonga
Upland

Las Virgenes Municipal Water District
Agoura
Agoura Hills
Calabasas
Chatsworth
Hidden Hills
Lake Manor
Malibu Lake
Monte Nido
Westlake Village
West Hills

Long Beach
Los Angeles
Municipal Water District of Orange County
Aliso Viejo
Brea
Buena Park
Costa Mesa

Coto De Caza
Cypress
Dana Point
Emerald Bay
Fountain Valley
Garden Grove
Huntington Beach
Irvine
Laguna Beach
Laguna Hills
Laguna Niguel
Laguna Woods
La Habra
Lake Forest
Las Flores
La Palma
Los Alamitos
Midway City
Mission Viejo
Newport Beach
Orange
Placentia
Rancho Santa Margarita
Rossmore
San Clemente
San Juan Capistrano
Seal Beach
South West Anaheim
Stanton
Tustin
Tustin Foothills
Villa Park
Westminster
Yorba Linda

Pasadena
San Diego County Water Authority
Alpine
Bonita
Bonsall
Camp Pendleton
Carlsbad
Chula Vista
Del Mar
El Cajon
Encinitas
Escondido
Fallbrook
Jamul
Lakeside
La Mesa
Lemon Grove
Leucadia
Mount Helix
National City
Oceanside
Pauma Valley
Poway

Rainbow
Ramona
Rancho San Diego
Rancho Santa Fe
San Diego
San Marcos
Santee
Solana Beach
Spring Valley
Valley Center
Vista
San Fernando
San Marino
Santa Ana
Santa Monica
Three Valleys Municipal Water District
Azusa
Charter Oak
Claremont
Covina
Covina Hills
Diamond Bar
Glendora
Industry
La Verne
Pomona
Rowland Heights
San Dimas
South San Jose Hills
Walnut
West Covina

Torrance
Upper San Gabriel Valley Municipal Water District

Arcadia
Avocado Heights
Azusa
Baldwin Park
Bassett
Bradbury
Covina
Duarte
El Monte
Glendora
Hacienda Heights
Industry
Irwindale
La Puente
Monrovia
North Whittier
Rosemead
San Gabriel
South El Monte
South Pasadena
South San Gabriel
Spy Glass Hill
Temple City

Valinda
West Covina
West Basin Municipal Water District
Alondra Park
Carson
Culver City
Del Aire
El Camino Village
El Segundo
Gardena
Hawthorne
Hermosa Beach
Howard
Inglewood
Ladera Heights
Lawndale
Lennox
Lomita
Malibu
Manhattan Beach
Marina Del Rey
Palos Verdes Estates
Rancho Palos Verdes
Redondo Beach
Rolling Hills
Rolling Hills Estates
Ross-Sexton
San Pedro
Topanga Canyon
Torrance
View Park
West Athens
West Hollywood
Westmont
Windsor Hills

Western Municipal Water District of Riverside County
Canyon Lake
Corona
Eagle Valley
Eastvale
El Sobrante
Elsinore
Jurupa Valley
Lake Elsinore
Lake Mathews
Lee Lake
March Air Reserve Base
Murrieta
Norco
Perris
Riverside
Rubidoux
Temecula
Temescal Canyon
Woodcrest