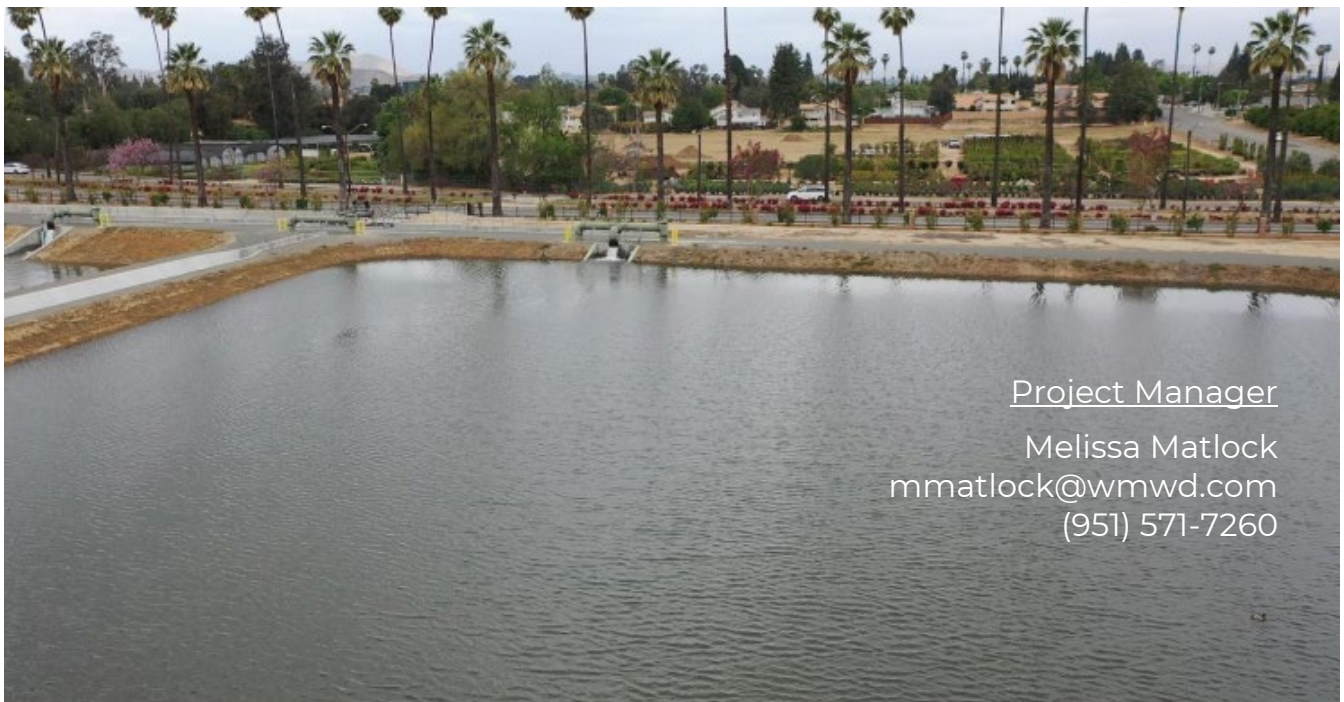




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# RECHARGING RECYCLED WATER AND GROUNDWATER DESALTER EXPANSION FEASIBILITY STUDY

Application to Water Recycling and  
Desalination Planning Funding Opportunity  
NOFO NO. R23AS00076



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## TECHNICAL PROPOSAL AND EVALUATION CRITERIA

### EXECUTIVE SUMMARY

<b>Date:</b>	February 27, 2023
<b>Applicant Name:</b>	Western Municipal Water District
<b>Applicant City, County, State:</b>	Riverside, Riverside County, California
<b>Project Title:</b>	Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study (Project)

Western Municipal Water District (Western Water), located in Southern California, will conduct a holistic water reuse study to increase local groundwater supplies and enhance water supply reliability to address the region's concern with drought. The feasibility study will encompass various aspects in the reuse cycle, including exploring potential recycled water supplies, conveyance, and facilities to recharge the groundwater aquifer, expansion of a local groundwater desalter to pump the recharged water for treatment and potable supplies. Awarded funds will be used to support consultant work conducting the required groundwater modeling, water quality testing, Title 22 engineering reporting, and development of a final water recycling and desalination feasibility study meeting the requirements of United States Bureau of Reclamation Title XVI Water Reclamation and Reuse Program Feasibility Study Review Process (WTR 11-01). Water recycling and desalination are essential tools for stretching the limited water supplies in the Western United States. The benefits of this Project are to develop and supplement urban and irrigation water supplies through water reuse—thereby improving efficiency, providing flexibility during water shortages, diversifying the water supply, and optimizing water resource management. This project will provide Western Water's growing community with new sources of clean water which enhances water management reliability and resiliency.

The Project will take approximately 24 months to be completed, with an estimated completion date of October 31, 2025, (start date assumption of October 31, 2023).

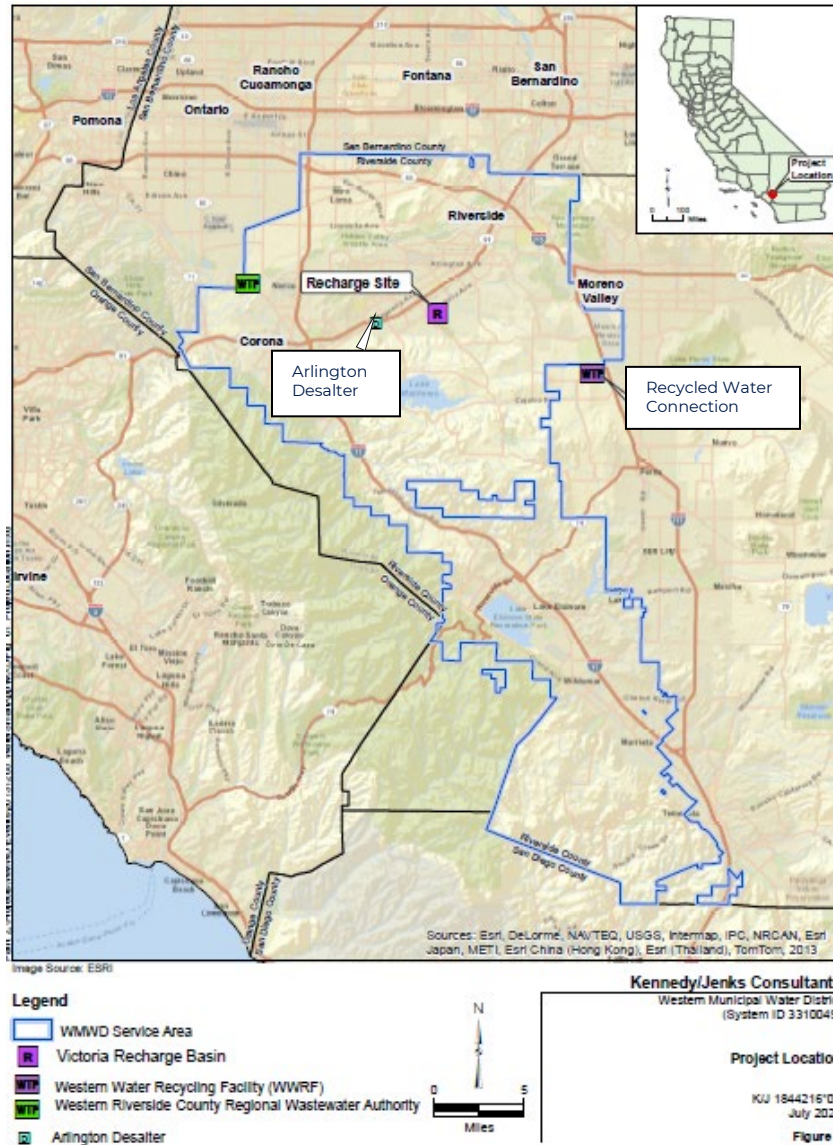
The proposed planning efforts do not involve a Federal facility or Federal land.

### PROJECT LOCATION

Western Water is located in Riverside County, California, approximately 100 miles North of San Diego, approximately 75 miles east of the Pacific Ocean, and approximately 180 miles west of the Arizona border. The Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project (Project) will be developed for activities in the Riverside-Arlington Groundwater Subbasin. Figure 1 is a map of the geographic project location.



Figure 1: Project Location



## TECHNICAL PROJECT DESCRIPTION

The Recycled Water and Groundwater Desalter Expansion Feasibility Study Project (Project) is seeking funding from **Funding Group I**. Western Municipal Water District (Western Water) is eligible to receive an award under Funding Group I because Western Water meets the eligibility criteria by being a water district located in California and can meet the non-federal cost share requirement of 50 percent or more of total project costs.





## **Goals**

The long-term goals of this project are to 1) Groundwater Sustainability - meet environmental requirements to take currently available recycled water supplies and recharging it into the Riverside-Arlington Basin at the Victoria Recharge Basin; 2) Increasing Local Supplies - review of projects that can increase the amount of recycled water being recharged into the Riverside-Arlington groundwater basin; and 3) Create a Drought-Proof Supply - expanding existing desalter through consideration of groundwater basin health, production, end-user needs, and water quality and treatment needs.

The objectives for the proposed activities are to develop a feasibility study that meets the requirements of the United States Bureau of Reclamation's WTR 11-01. Western Water is planning to pursue one feasibility study that includes:

- Feasibility for Increasing Recycled Water Supplies to Victoria Recharge Basin
- Title 22 Engineering Report and environmental requirements for recharging current recycled water supplies coming from the Western Water Recycling Facility (WWRF- labeled "Recycled Water Connection" on Figure 1)
- Feasibility for Arlington Desalter Expansion and Required Upgrades
- Feasibility and Water Quality Analysis for Constituents of Emerging Concern (CECs), such as Per- and Polyfluoroalkyl Substances (PFAS, etc.)
- Preparation of preliminary project cost estimates and schedules for possible future implementation

## **Approach**

### **Task 1: Project Management**

Following finalization of the financial assistance agreement, project management will be provided by appropriate Western Water staff to ensure successful project implementation. Activities will include administrative project oversight, securing contracts, managing consultants, and conducting progress meetings to ensure appropriate progress and completion within budget and on schedule. Upon receipt of the grant award and for the duration of the grant agreement, grant administration will also be performed including activities to execute the grant agreement, ensure compliance with grant requirements, prepare and submit regular invoice and progress report materials, and regular coordination with the grant manager, as necessary. A grant administration consultant will be considered for assisting with this task. (24 months)

Deliverables:

- Grant agreement
- Progress Reports and Invoices
- Closeout Report

### **Task 2: Contract Bidding**

Western Water will conduct a competitive bidding process for selection of the Project consultant, in accordance with standard procedures and Public Contract Code. One consultant will be selected for the entire scope of the project. (3 months)



Deliverables:

- Bid Documents
- Contract

### **Task 3: Studies and Modeling**

The selected Consultant will conduct all modeling, water quality testing, and other required studies to develop the Feasibility Study and Title 22 Engineering Report. The selected Consultant will incorporate existing modeling findings for the project basin. All data, methodology, factual inputs, models, analyses, technical information, reports, conclusions, valuation products, or other scientific assessments in any medium or form, including textual, numerical, graphic, cartographic, narrative, or audiovisual, resulting from a financial assistance agreement, is available for use and independent verification by the Department of Interior. (18 months)

Deliverables:

- Technical Memos will be incorporated into the final Feasibility Plan

### **Task 4: Environmental and Permitting**

The selected Consultant will collect data and gather documentation to provide initial environmental and cultural resources considerations to be included in the feasibility plan. The selected Consultant will assist Western Water with a Title 22 Engineering Report. The engineering report will have permitting components and is the main document that will demonstrate Western Water's ability to produce, and recharge recycled water. The engineering report requires approval from the State Water Resources Control Board. (24 months)

Deliverables:

- Title 22 Engineering Report

### **Task 5: Feasibility Plan Development**

To ensure that this water recycling, recharge, and desalination feasibility study report complies with Pub. L. 102-575, as amended, other Federal laws, and to otherwise allow Reclamation to assess the feasibility of the proposed project, the following information will be included. Additional information will be incorporated to meet WRT 11-01 requirements. (24 months)

1. Introductory Information.
  - a. identification of the non-Federal project sponsor(s); a description of the study area and an area/project map; and a definition of the study area in terms of both the site-specific project area where the reclaimed water supply will be needed and developed, and any reclaimed water distribution systems.
2. Statement of Problems and Needs. Describe key water resource management problems and needs for which the selected project will provide a solution. All projections shall be reasonable and applicable for a minimum of 20 years.
  - a. Description of the problem and need; a description of current and projected water supplies, including water rights, and potential sources of additional water; a description of current and projected water demands, including a description of the



- current and projected water supply and demand imbalances; and a description of any water quality concerns.
3. Water Reclamation, Recycling or Desalination Opportunities. Address the opportunities for recycling and desalination in the study area and identify the sources of water that could be reclaimed or desalinated.
    - a. Description of end-users and future uses; a description of the water market and future water market; a description of considerations and barriers to project implementation; jurisdictional rights; sources and facilities; treatment processes; existing infrastructure and current recycling and desalination uses; and future wastewater inflows.
  4. Description of Alternatives.
    - a. Non-federal funding condition; objectives for alternatives; proposed project with project and lifetime costs; cost comparison of projects with the level of detail as illustrated in RM D&S, Cost Estimating (FAC 09-01); economic analysis; water quality and treatment requirements; alternative treatment options; water supply alternatives; benefits to municipal and industrial use; and qualitative documentation of benefits.
  5. Selection of the Proposed Water Reclamation, Recycling or Desalination Project.
    - a. Project justification; and affirmative statement analysis regarding benefit to supplies and federal supply facilities.
  6. Environmental Consideration and Potential Effects. The review of a water reclamation, recycling or desalination feasibility study report does not require National Environmental Policy Act (NEPA) compliance. The Department of the Interior categorical exclusion 1.11 “Activities which are educational, informational, advisory, or consultative to other agencies, public and private entities, visitors, individuals or the general public” applies to Reclamation’s consultative review, and preparation of the water reclamation, recycling or desalination feasibility study reports.
    - a. Information to allow Reclamation to assess the potential measures and costs that will be necessary to comply with NEPA, and any other applicable Federal law; impacts to endangered species, public health, natural resources; environmental effects and risks; studies for status of compliance measures; water supply and water quality impact; public involvement; and effects on historical properties.
  7. Legal and Institutional Requirements. The water reclamation, recycling or desalination feasibility study shall identify any legal or institutional requirements, or barriers to implementing the proposed project.
    - a. Water rights analysis; any legal and institutional requirements; need for agreements; permitting procedures required; impact analysis of unresolved issues; current and projected wastewater discharge requirements, and brine disposal impacts;
  8. Financial Capability of Sponsor.
    - a. Proposed schedule for project implementation; willingness of the non-Federal project sponsor to pay for its share of capital costs and the full operation, maintenance, and replacement costs; funding plan; and all Federal and Non-Federal sources of funding and restrictions.
  9. Research Needs.



- a. Project includes basic research needs; proven technologies and conventional system components, and further description on additional research needs.

Deliverables:

- Reclamation Approved, WRT 11-01 compliant, feasibility study

## EVALUATION CRITERIA

### *Evaluation Criteria 1 – Project Planning and Analysis*

Subcriterion No.1a- Water Recycling Needs and Opportunities

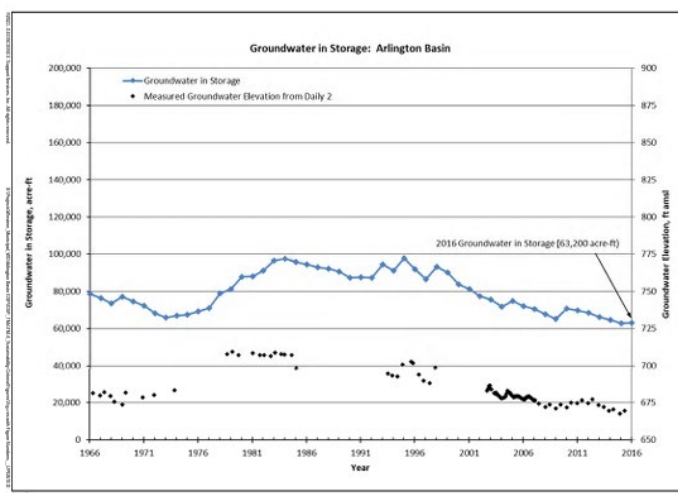
1. Describe the problems and needs in the project area.

The Riverside-Arlington Basin (Basin) provides a critical source of local groundwater. However, recent drought conditions and increasing demands have impacted groundwater levels and storage volumes thereby making this source of water increasingly less reliable. Losing the reliability of this local groundwater supply creates water supply challenges and reduces Western Water’s resiliency to drought.

To utilize Arlington Basin groundwater, Western Water operates the Arlington Desalter, a reverse-osmosis groundwater treatment facility that began operation in 1990. The Arlington Desalter serves two purposes, providing a local source of potable water and decreasing subsurface outflow of low-quality groundwater to the Temescal Basin.

Over the last 25 years, as seen in Figure 2, groundwater in storage in the Arlington Basin has declined by nearly 40 percent. These impacts have severely reduced the reliability of the Arlington Basin and created challenges for groundwater production from the Basin. For example, three of the five production wells are undergoing deepening of the bowls (i.e., the location where water is withdrawn in the well) to be able to pump more groundwater at the diminishing levels. As such, Western Water has been seeking additional options for increasing the availability and reliability of Basin water supplies in an effort to improve local water security and drought resiliency.

**Figure 2: Declining Arlington Basin Storage Volume**





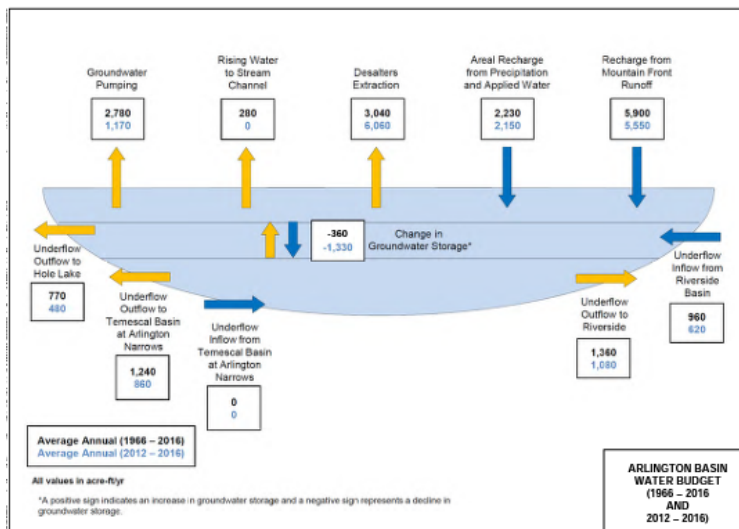
As identified in Western Water's 2022 Groundwater Sustainability Plan, more treated water cannot be produced without recharge.

- Describe the current and projected water supplies and demands in the project area; include a discussion on supply and demand imbalances.

The Arlington Basin, located within the northern portion of Western Water’s wholesale service area, provides a critical local source of groundwater, making up approximately 69 percent of Western Water’s local supply and 7 percent of Western Water’s total supply. Western Water provides Arlington Basin water to the City of Norco and the City of Corona. The Arlington Basin groundwater makes up over 60 percent of the City of Norco supplies and a smaller portion of the City of Corona’s supplies. Western also can provide surplus groundwater supply from the Arlington Desalter to Western Water’s retail service area within the City of Riverside and greater Riverside County Area. Surplus groundwater supply could also be transported via an existing regional distribution system to Elsinore Valley Water District and Temescal Valley Water District.

The historical water budget for Arlington basin was calculated in Western Water's Groundwater Sustainability Plan from 1966–2016. Historically, groundwater pumping made up 5,820 acre-feet per year (af/yr) of the total discharge from the groundwater basin. Underflow outflow to Temescal Basin makes up an average of 1,240 af/yr. The current water use for Arlington Basin was evaluated for the period from 2012 through 2016. Average groundwater pumping from all sources was 7,230 af/yr. The Arlington Desalter pumps an average of 6,060 af/yr during that same period. Average Desalter usage is 50 percent larger than the historical average. This increase in local groundwater production is largely due to historic drought conditions from 2012 to 2016. The demand imbalances, outflows/inflows are described in the Groundwater Sustainability Plan and is shown in Figure 3.

**Figure 3: Arlington Basin Demand Imbalances**



Future demands from this water source was calculated in the [Groundwater Sustainability Plan](#) based on long-term water supply planning by basin stakeholders. Section 0-6 in that document provides a discussion of potential Projects and Management Actions to achieve and maintain long-term stability of groundwater levels and water quality in the Arlington Basin. Proposed recharge activities at Victoria Recharge Basin were evaluated to support continued operation within the current sustainable yield of the groundwater basin and/or increase the sustainable yield through the addition of new water supplies. Initial modeling indicates that artificial recharge at Victoria Basin could provide the additional amount of groundwater necessary to make up the increase in demand. This study would allow us to determine how and where to take immediate action to address these needs.

3. Describe how the planning activities will investigate potential uses and markets for reclaimed or desalinated water.

The planning activities will investigate recycled water use in groundwater recharge. Then the Project will explore the feasibility of expanding the current Arlington Desalter system to increase local supplies. The current uses for the Arlington Desalter are for municipal, domestic, and industrial customers. Due to investments into regional connectivity, the Arlington Desalter system can provide local groundwater to 6 retail agencies ranging from the City of Jurupa to the City of Riverside and to Lake Elsinore. There is a market already for this desalinated water, so the feasibility study will review the needed recycled water for recharge to keep the basin sustainable, permitting requirements, and infrastructure required to maximize the groundwater supply.

4. Describe the source water that will be considered for the project, including location, capacities, existing flows, treatment processes.

The Project will analyze several source water options for recharge and its impact on groundwater quality and needed treatment for the proposed expansion. One source for water recharge will be available in the next three years. The Western Water Recycling Facility (WWRF), owned and operated by Western Water, receives the majority of its wastewater flow from the March Air Reserve Base (MARB) where over multiple decades, per- and polyfluoroalkyl substances (PFAS) have been routinely used in a wide array of applications. In recent years, there has been increasing evidence of substantial PFAS contamination from MARB with elevated concentrations detected in the wastewater system. Preliminary analyses performed in August 2019 have found PFAS concentrations in WWRF effluent to be exponentially higher than other wastewater treatment systems in the Santa Ana River watershed. See Figure 4.

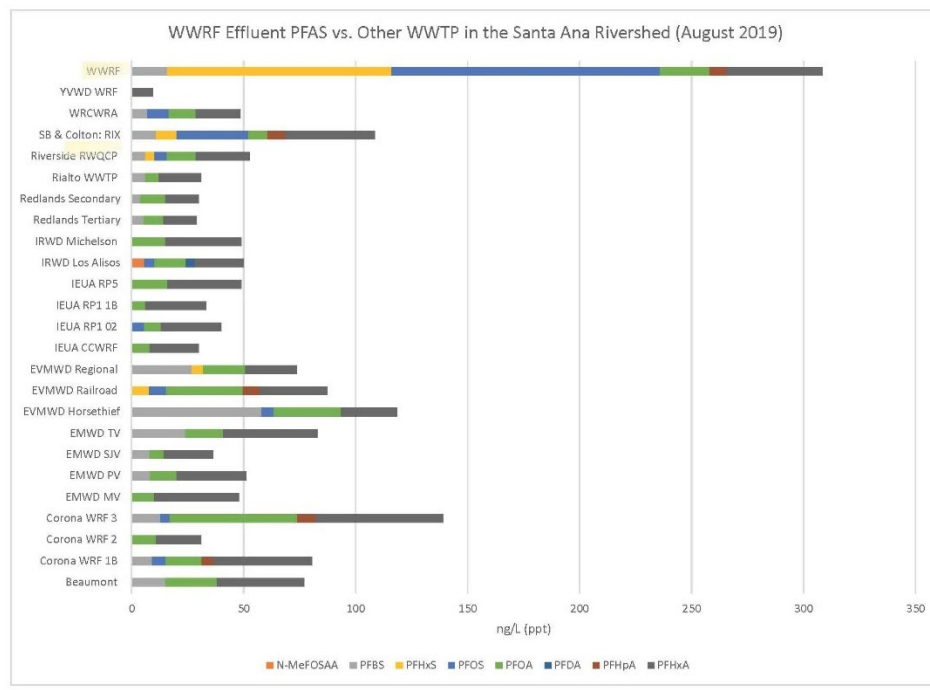
The recycled water produced at the WWRF is currently used for irrigation at the Golf Course and Riverside National Cemetery, and at residential and institutional facilities. The demand for recycled water is less than what is produced, so the recycled water gets transported to another wastewater treatment facility called Western Riverside County Regional Wastewater Authority (WRCWRA), is treated again, and then released to the Santa Ana River. Western Water wants to enable beneficial use of surplus recycled water to augment local groundwater supplies in the Arlington Basin. In order to take the recycled water and recharge it into the Victoria Basin, a facility located in the Arlington Basin, treatment is needed on the effluent at WWRF to treat for PFAS. The treatment project is currently in design and is outside the scope of this project. Western Water's Groundwater Sustainability Plan calculates additional groundwater recharge from WWRF at 340-1,280 afy. The Proposed Work under this plan will conduct the required environmental and modeling to develop



the Title 22 Engineering Report for recharging the WWRF recycled water and other sources after PFAS treatment is built.

The feasibility study will also evaluate adding additional sources of recharge water such as recycled water from the City of Riverside’s wastewater treatment plant or other opportunities and required infrastructure to bring recycled water to the Victoria Recharge Basin. The feasibility study will also create scenarios for increased recharge and the increased available new water to extract through the existing Arlington Desalter system and review expansion scenarios and storage needs for the Arlington Desalter system to maximize the groundwater supplies, while keeping the basin sustainable.

**Figure 4: WWRF Effluent PFAS Concentration Comparison**



**Subcriterion No.1b- Evaluation of Project Alternatives**

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

The Planning study will develop and evaluate project alternatives listed below and as outlined In Task 5. Task 5 listed above details the Alternatives analysis that will be conducted and included in the feasibility study, which includes a "Statement of the specific objectives all alternatives, including the water reclamation, recycling or desalination project, are designed to address." The alternatives included will be based on the study’s findings, but may include:

- Operate the Arlington Basin groundwater resources within sustainable yield
- Cost per Acre-Foot of the project is equal to or less than the cost of imported water supplies



- Maximize production of local groundwater supplies
- Maintain groundwater levels above the minimum threshold criteria calculated in the Groundwater Sustainability Plan
- Operate the Arlington Basin at a steady rate, maximizing local storage
- No change or improved quality of water in groundwater basin

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 will review local recycled water availability from the other facilities such as the City of Riverside wastewater treatment plant and required infrastructure (piping, pump stations, and treatment needs) to move the identified local water to the Victoria Recharge Basin. The planning activities will also review the expansion of the Arlington Desalter system, through location of new wells, desalter train increases, and treatment technology needs. The Arlington Desalter currently uses reverse osmosis in its treatment. Granular Activated Carbon (GAC) treatment and the results from the WWRF PFAS design effort will also be investigated. The activity will also review brine line disposal projects and alternatives.

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

Task 5, described above, details the components to be included in the feasibility plan. Under the Alternatives section, an analysis will be completed for the proposed water recycling and desalination project including detailed project cost estimate; annual operation, maintenance, and replacement cost estimate; and life cycle costs. These costs shall be provided with sufficient detail to permit a more in-depth evaluation of the project, including non-construction costs. In this regard, the cost estimates shall clearly identify expenditures for major structures and facilities, as well as other types of construction and non-construction expenses and shall be based on calculated quantities and unit prices. The economic analysis included in the feasibility study report shall describe the conditions that exist in the area and provide projections of the future with, and without, the project. Emphasis in the analysis must be given to the contributions that the plan could make toward alleviation of economic problems and the meeting of future water demand. A cost comparison of alternatives that would satisfy the same demand as the proposed water recycling and desalination project will be developed. Alternatives used for comparison must be likely and realistic, and developed with the same standards with respect to interest rates and period of analysis. Additionally, the description of other water supply alternatives considered to accomplish the objectives, including benefits to be gained by each alternative, total project cost, life cycle cost, and corresponding cost of the project water produced expressed in dollars per MG, and/or dollars per acre-foot. An appraisal level cost estimates, or better, will be performed for these alternatives. Since this water recycling and desalination project will provide water supplies for municipal and industrial use, the benefits of the project can be measured in terms of the cost of the alternative most likely to be implemented in the absence of the project. Qualitative benefits will also be reviewed and included in the feasibility plan.

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

As described in Task 5, under Financial Capability of Sponsor, the feasibility study will provide a proposed schedule for implementation, with major tasks, milestones, and dates for planning, design,



and construction activities, as well as the willingness of Western Water to pay for the identified project costs.

### *Evaluation Criteria 2 – Stretching Water Supplies*

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

The proposed Project will enable the use of already available recycled water to recharge the Arlington Basin to help maintain groundwater levels and improve long-term reliability of this local groundwater source. Improving and expanding local supplies is critical for maintaining a diverse water supply portfolio and creating drought resiliency. Currently, Western has 78,852 afy in available supplies to meet its retail and wholesale water demands. Over 65,000 afy, or 82.4% of this supply is imported water from the State Water Project and the Colorado River, supplies heavily impacted by drought resulting from climate change.

Through Western Water's Drought Contingency Plan (DCP), adopted in 2022 and funded in part through the Bureau of Reclamation's Drought Contingency Planning grant, considerations of climate change impacts to water resources or drought was included ([www.wmwd.com/uwmp](http://www.wmwd.com/uwmp)). A vulnerability assessment was conducted through the development of the DCP (chapter 4). The vulnerability assessment performed aimed to improve the understanding of climate change impacts on future water demand in Western Water's wholesale service area and the sources of Western Water's supplies during normal and drought periods. The analysis identified that with future growth and without new local supplies being developed, an increase in imported water would be required. With concerns over declining groundwater levels, without recharging recycled water, the reliability of the local groundwater supply will decrease requiring more imported water to offset the loss of local supplies. This project will take nonbeneficially used recycled water and recharge it into the local groundwater basin, allowing for more local supplies to be produced, while maintaining the sustainability of the groundwater basin.

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.

The largest source of water for Western Water is imported water from Metropolitan Water District of Southern California (Metropolitan), which makes up approximately 60 percent of Western Water's total supply. Of those supplies, about three quarters come from the State Water Project whose source is the Bay-Delta. The rest come from the Colorado River. The Delta is the largest wetland ecosystem on the Pacific Coast of the United States and provides habitat to highly diverse plant and animal life. Increasing local water supplies and reducing reliance on imported water through the implementation of this project will in turn reduce demands and impacts on the Delta's ecosystem.

The WWRF has a capacity to treat up to 3 mgd of wastewater to tertiary level, and flows have been in the range of 1.2 to 1.5 mgd. A portion of the existing supplies are utilized for irrigation and the remainder, 0.88 mgd are available for groundwater recharge. As effluent into WWRF reaches





capacity of 3 mgd, this could represent an additional supply of recycled water supply available for recharge. Once the Title 22 effort (Task 4) of the proposed project is completed, the recharge of the WWRF recycled water creates a new usable water supply available to augment local potable water supplies, offsetting imported water from the Colorado River and State Water Project. Any additional recharged water and expansion of the desalter system will alleviate pressure on the imported water system.

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.

Without the proposed project, and projects like it, Western Water and its retail and wholesale customers will experience growing challenges in fully meeting demands and maintaining sustainable groundwater levels, especially under drought conditions when imported water is less available. The majority of Western Water's supplies comes from imported water purchased from Metropolitan Water District of Southern California. Those imported supplies are generally made up of about one quarter Colorado River Aqueduct supplies and about three quarters the State Water Project (SWP) supplies, from the Sacramento-San Joaquin Delta. Both of those sources experienced significant impacts during the recent multi-year drought resulting in curtailed deliveries and **water supply shortages**. This in turn increased the need for local water supplies. Without access to local supply, Western Water will either need more imported water or will have supply shortages, impacting **water supply reliability**. Groundwater is the primary local source of Western Water's water supply, but those resources are also becoming increasingly stressed by drought. Over the last several years, the Arlington Basin has seen major **groundwater depletion** because of growing demands on groundwater resources under drought conditions (see Figure 2). **Water quality** is poor in the region, therefore there has been investments in desalting facilities. The Riverside-Arlington Basin has high nitrates and total dissolved solids (TDS) and the recycled water in the region has high levels of PFAS and other contaminants of emerging concern (CECs)

With earthquakes and wildfires being a hazard in California, water conveyance infrastructures are at high-risk of damage. With most of the Western's water travelling a long distance, over thousands of miles, the probability of an earthquake or damaging wildfire increases because we are not just looking at the probability of those events occurring in Riverside County, but throughout the state. Without this project, imported water supply will need to increase. If the Project maintains and increases local groundwater supply, the **risk of natural disasters**, such as earthquakes and wildfire, become more locally centered, therefore system reliability increases, and hazard risk reduces.

The benefits of this additional water supply are substantial for the following reasons. By making new supply available, recharging the Arlington Basin, and expanding the desalter, this Project helps improve the long-term reliability of the Basin, as described by the Groundwater Sustainability Plan, and contributes to improved water supply reliability on a regional basis. By increasing recharge to the Arlington Basin, the Basin will continue to serve as a reliable local source of potable water and a continued supply source for Western which supplies water to 900,000 people across an area of 527 square miles. The Basin groundwater makes up the majority of Western's local water supply, at 69 percent, and makes up over half of the City of Norco supplies. In addition, as noted above, improving local supplies is critical for maintaining a diverse water supply portfolio which helps



mitigate drought impacts and water shortages. The project's contribution to improving long-term reliability of the Basin is critical to local water supply reliability and drought resilience across Western's service area. The proposed project will propose projects that address water quality concerns in both recycled water and local groundwater to allow for high quality drinking water to be produced.

Potential supply shortages under drought conditions could result in substantial economic burdens to customers due to each agency's need to secure and pay **higher costs** for additional supplies. Since groundwater levels and sustainability of the basin are concerns that are monitored, without recharge, supplemental water from imported sources like Metropolitan, which can cost 40-50% more than local water, would be needed. Higher water supply costs have been, and in the future will be, passed on to the agency's customers if local supply development does not occur, including the disadvantaged communities in the region. Therefore, increasing the availability of local groundwater would also contribute to reducing the economic burdens of water customers during droughts.

### *Evaluation Criteria 3 – Environment and Water Quality*

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

Part of the objectives of the Project and evaluation of Alternatives is to improve, or at least not change, the quality of the groundwater after the recycled water has been recharged. Projects that improve the quality of the groundwater will be reviewed and that benefit will be included in the analysis. Expanding the desalter will also improve groundwater quality by removing salt and other contaminants from the brackish water.

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

The feasibility study will provide criteria required for discharge and water quality levels of the recycled water before it's discharged. This will allow for identification of new technologies and treatment to improve water quality levels beyond State and Federal discharge limits.

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

Reducing the amount of water Western Water takes from the Delta allows water to stay in this vital ecosystem, where many of the aquatic species are endangered or threatened. This would improve flow conditions. Additionally, due to declining levels on the Colorado River and a call from the Bureau of Reclamation to reduce water consumption by 2-4 million acre-feet, reducing imported supplies directly helps flow conditions for that river system.

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

The Project will improve the reliability of groundwater for drinking water purposes and maximize the use of local water resources. As such, the Project once built will help Western avoid increased reliance on imported water supplies, which are primarily sourced from the Sacramento-San Joaquin Delta. By reducing the need for additional diversions from the Delta, the Project could indirectly contribute to improved conditions for fish and wildlife of that ecosystem, including the federally



endangered Delta Smelt. High water demands combined with changing environmental conditions are increasing stresses on the Delta ecosystem and threatening the wildlife and ecological functions associated with it.

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

Reducing the amount of water Western Water takes from the Delta allows water to stay in this vital ecosystem, where many of the aquatic species are endangered or threatened, including the federally endangered Delta Smelt, which is endemic to the upper Sacramento-San Joaquin Estuary that mainly inhabit the freshwater-saltwater mixing zone. With more freshwater being diverted to the State Water Project, the mixing zone becomes more brackish and further endangers the Delta Smelt, which causes a ripple effect on the ecosystem. Since the implementation of this project will reduce the amount of water exported from Northern California stream systems, there will be a positive benefit for the Sacramento–San Joaquin River Delta including the Delta Smelt and its critical habitat. With the 2017 wet year, the American Shad and the Striped Bass population increased, where the previous dry years had a negative impact on population. It is no question that extra fresh water in the Delta had a positive impact on the fish populations. Thus, the less water taken from the Delta during the wet and dry years is beneficial to the habitat and the species that inhabit the Delta.

#### *Evaluation Criteria 4 – Department of Interior Priorities*

1. Climate Change

The largest source of water for Western Water is imported water from Metropolitan Water District of Southern California, which makes up approximately 60 percent of Western’s total supply. Of those supplies, about three quarters come from the State Water Project whose source is the Bay-Delta. The rest come from the Colorado River. The Delta is the largest wetland ecosystem on the Pacific Coast of the United States and provides habitat to highly diverse plant and animal life. Increasing local water supplies and reducing reliance on imported water through the implementation of this project will in turn reduce demands and impacts on the Delta’s ecosystem.

With earthquakes and wildfires being a hazard in California, water conveyance infrastructures are at high-risk of damage. With a majority of Western’s water travelling a long distance, over thousands of miles, the probability of an earthquake or damaging wildfire increases because we are not just looking at the probability of those events occurring in Riverside County, but throughout the state. The odds of a natural hazard add together as one move over the distance. By being able to increase local groundwater supply, you could decrease your imported supply. Therefore, the risk of earthquakes and wildfire become more locally centered, therefore system reliability increases and hazard risk reduces.

In addition, due to the water-energy nexus, reduced imported water will also result in reduced energy requirements and related emissions associated with source production, conveyance, and treatment requirements. Assuming the project will result in 985 afy less water diverted from the Delta and transported via the SWP to Western’s distribution system, the project’s infrastructure would result in annual energy savings of approximately 3,190,696 kWh. This is based on a study by the California Energy Commission (CEC 2005) that estimates that SWP East Branch water energy intensity is 3,236 kWh/AF.



Another benefit, the proposed Project would recharge more water in Victoria Recharge Basin than what would be recharged through natural rainfall events. This would mean that more water will be in the basins, thus reducing the urban heat island effect during more months of the year.

The proposed project could help mitigate water pollution. The WWRf receives most of its wastewater flow from the MARB where there has been application of PFAS, and where these chemicals have been found in the wastewater system. PFASs are man-made chemicals, which because of their incredibly unique water, oil, and flame-resistant properties, have been used in the past and currently used in many industrial processes and consumer products. They are persistent in the environment, are exceptionally mobile, and bioaccumulate, and therefore are a major human health and environmental concern. Apart from being potential carcinogens, these compounds are also linked to other human health issues, such as liver damage, kidney damage, increased cholesterol levels, pregnancy-induced hypertension, certain types of cancer and increased risk of thyroid disease, increased risk of decreased fertility, increased risk of asthma diagnosis, and decreased response to vaccines. Animal studies have also found that PFAS can cause damage to the liver and immune system. With PFAS in the water, in streambeds and other water sources, entire animal populations could be affected, especially those already exacerbated by climate change and drought. While there is no current State and Federal regulatory limits enforced for such chemicals yet, PFAS is an emerging contaminant of concern and a sensitive public relations/ awareness issue. Western Water has a project (outside the scope of this application) currently underway to treat PFAS out of the WWRf recycled water, allowing for better water quality to be recharged into the basin. The study will also analyze other recycled water sources and present any treatment requirements to ensure good quality water is being recharged into the basin.

## 2. Disadvantaged or Underserved Communities

This project will stabilize groundwater levels and allow for more clean, safe, affordable local groundwater supply to be provided to disadvantaged communities. Without the Project, more expensive imported water, which is also unreliable in a drought, will create an additional economic hardship for the local disadvantage communities. To address the cumulative effects of both pollution burden and socioeconomic stressors, and to identify which communities might need particular policy, investment, or programmatic interventions, the Office of Environmental Health Hazard Assessment (OEHHA) developed and now maintains and updates the CalEnviroScreen tool on behalf of CalEPA. The DWR DAC mapping tool is an interactive map that allows users to overlay the following US Census geographies as separate data layers: Census Place, Census Tract, and Census Block Group. Only those census geographies that meet the DAC definition are shown on the map [i.e., only those with an annual median household income (MHI) that is less than 80 percent of the Statewide annual MHI (PRC Section 75005(g))]. Maps and Census Tract Analysis of the region of CalEnviroScreen and DWR's DAC map have been provided in Attachment 3. Approximately 40% of the population that would directly be receiving the local groundwater is considered below 80% of the household median income (DWR DAC Map). Approximately 90% of the project area has a score 50 or higher on both pollution burden and population characteristics (CalEnviroScreen). Attachment 3 goes into more detail on what characteristics are impacting the CalEnviroScreen Score. The project's benefit area ranks high (over 50%) on Poverty, Education, PM



2.5, Diesel particulate matter, traffic, Lead in housing, Groundwater threats, impaired water, and drinking water contaminates.

### 3. Tribal Benefits

Sherman Indian High School (SIHS), located in Riverside in the Riverside- Arlington Basin, is an off-reservation boarding high school for Native Americans. This high school is a groundwater pumper in the Arlington Basin. Through the proposed Project, recycled water will be treated with GAC and recharged in the Arlington Basin. This will increase water levels in the Basin and create more reliability for their existing wells. If the basin isn't recharged or stabilized, the tribal high school may need to offset their supply with a more expensive, imported supply, which would make the tribal community less resilient to climate change or drought impacts.

#### *Evaluation Criteria 5 – Watershed Perspective*

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

The proposed project is included in three regional planning documents: 1) Groundwater Sustainability Plan; 2) Drought Contingency Plan; and 3) Urban Water Management Plan.

Western Water believes in good basin management and made the decision to develop a Groundwater Sustainability Plan (GSP) that met the requirements of the Sustainable Groundwater Management Act (SGMA). The GSP considers scientific data and local knowledge of the basin and describes basin conditions, including the geology of the basin and groundwater levels within it. The Plan also establishes sustainability goals for the basin and outlines steps and potential management actions to ensure sustainability. The GSP can be found here ([Arlington Basin Groundwater Sustainability Plan | Western Municipal Water District, CA \(wmwd.com\)](https://www.wmwd.com/groundwater-sustainability-plan)). This project is listed in the GSP as recharge was identified as a required component of groundwater sustainability in the Riverside-Arlington basin. Therefore, this project recharging high-quality water to increase and stabilize groundwater levels directly implements the needs of the GSP.

To increase water supply reliability and proactively address the region's concern with drought, Western Water embarked on the preparation of a regional Drought Contingency Plan (DCP), funded in part by the United States Bureau of Reclamation (Reclamation). The DCP was adopted by Western Water's Board of Directors on July 20, 2022. The DCP document can be found at [www.wmwd.com/uwmp](http://www.wmwd.com/uwmp). Within the framework of a DCP, the project is listed as a mitigation action, which are generally developed in response to vulnerabilities identified through a Vulnerability Assessment. The vulnerability assessment found decreases in groundwater supplies due to water quality, increases in outdoor usage due to increases in evapotranspiration, thus there will be an increase in dependence on imported water if mitigation actions are not implemented. The proposed project will provide groundwater supplies that are resilient to drought and water quality concerns and will help increase water reliability in the region by decreasing the need for imported water supplies. Thus, the proposed project conducts feasibility on projects listed in the DCP.

Western Water's 2020 Urban Water Management Plan (UWMP), adopted in 2021, considers drought's impacts water supply and demand on a 25-year planning horizon. Western's UWMP is a highly important water resources planning document which analyzes water supply reliability. The





analysis considers climate change and multi-year droughts to make projections on available future water supplies and potential future projects needed to improve supply reliability. The use of recycled water for recharge was identified a regional opportunity.

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

The proposed resiliency project meets the goals of the Groundwater Sustainability Plan and the Drought Contingency Plan. Recharge will be a required component of groundwater sustainability in the Arlington basin. Therefore, this project recharging high-quality water to increase and stabilize groundwater levels directly meets the goals of the GSP. One goal of the DCP is to utilize and maximize local water supply efforts. One of the types of feedback from the DCP stakeholder sessions was to get credit for all the past local efforts focused on recharge. This proposed Project does both. The proposed project will provide groundwater supplies that are resilient to drought and water quality concerns and will help increase water reliability in the region by decreasing the need for imported water supplies.

The improved management of water supplies that this Project plans for is significant for Western Water's overall water supply reliability and drought resiliency. Maintaining and enhancing a broad water supply portfolio is critical for addressing water supply challenges, including long-term drought, and in particular for a service area that meets the needs of 900,000 people. Effective water resource management depends on optimizing available resources and utilizing multiple sources. This Project achieves that goal by conducting a feasibility analysis on available recycled water to recharge into the Riverside-Arlington Basin for conjunctive use. Maintaining the reliability of this local groundwater source with available supplies is a critical management strategy to improve long-term reliability and water security in the region.

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

The proposed project stemmed from several collaborative planning partnerships to address water-related issues in the region.

For development of the GSP, Western Water recruited basin stakeholders to participate in three workshops that informed the development of the GSP, sustainability goals, sustainable management criteria, and project analyses.

For development of the DCP and UWMP, Western Water recruited, convened, and engaged a Drought Task Force comprised of 29 organizations represented by knowledgeable community leaders who can offer diverse, informed perspectives to support effective drought contingency planning. The members of the Drought Task Force organized by stakeholder segment group are presented in the DCP and UWMP. All retail water agencies in Western's service area are represented on the Drought Task Force, including the agencies that can receive water from this project. The Drought Task Force participated in 5 interactive activities/meetings that aided in the collaborative development of the DCP. Specifically, the Drought Task Force informed the guiding principles and regional goals of the DCP, the development of the drought monitoring framework, feedback on the developed vulnerability assessment, each agency response actions from their WSCPs, and submitting



mitigation projects. Meeting summaries and recordings are posted on Western’s webpage. The proposed Project is listed in Western Water’s DCP in the Mitigations Chapter (starting pg 107). During one of Western Water’s Drought Task Force interactive activities, Task Force members participated in a drought mitigation survey where all members had an opportunity to submit projects that would help their agency mitigate drought. In Western Water’s DCP, mitigation projects were categorized into 5 categories. The proposed projects align with the supply/treatment category, which focuses on creation of access to additional water supplies that leverages existing water supply sources, creates new sources of supply, and/or improves treatment capacity in existing plants to treat new, more challenging local water supplies. Projects were also evaluated by regional benefits. There are two large DCP regional benefits with 7 more specific benefits described in the DCP (pg. 67). The proposed projects align with increasing local supplies, enhancing water supply reliability, enhancing operational flexibility, decreasing reliance on imported water supplies, benefiting disadvantaged communities, and promoting environmental justice.

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

As part of the Drought Monitoring Framework established by the DCP, the Drought Task Force will continue to meet and will be included in the planning process of this Project. The Project stemmed from a Reclamation funded activity, the DCP, and therefore moving forward with the project is a great example of interagency partnership. Western Water will outreach this project and Reclamation’s support to the public via Town Hall discussions, Press Releases, FAQ sheets, and Social Media posts.

## PROJECT BUDGET

### FUNDING PLAN

The estimated total cost for the Project is \$400,000. Western commits to providing up to \$200,000 in non-federal match funds in support of the activities identified in this proposal. It is expected that this amount will be satisfied by Western’s Operating Budget funded through water supply charges, property taxes, and fees on the wholesale delivery system. Funding from entities other than Reclamation will not be requested. The budget proposal does not include design or other project costs that will be incurred prior to Project award.

### BUDGET PROPOSAL

**Table 1.-Summary of Non-Federal and Federal funding sources**

Funding Sources	Amount
<b>Non-Federal entities</b>	
1. Western Municipal Water District	\$200,000
<b>Non-Federal subtotal</b>	\$200,000
<b>REQUESTED Reclamation funding</b>	<b>\$200,000</b>



**Table 2.-Total project cost table**

Source	Amount
Costs to be reimbursed with the requested Federal Funding	\$200,000
Costs to be paid by the applicant	\$200,000
Value of third-party contributions	\$0
<b>TOTAL project cost</b>	<b>\$400,000</b>

**BUDGET NARRATIVE**

**Table 3.-Section B Budget Categories table**

Budget Item	Computation	Quantity Type	Cost
	\$/Unit      Quantity		
<b>6a. Personnel</b>			
N/A			
Subtotal			N/A
<b>6b. Fringe Benefits</b>			
N/A			
Subtotal			N/A
<b>6c. Travel</b>			
N/A			
Subtotal			N/A
<b>6d. Equipment</b>			
N/A			
Subtotal			N/A
<b>6e. Supplies</b>			
N/A			
Subtotal			N/A
<b>6f. Contractual</b>			
Feasibility Planning Contract	Based on historical estimates		\$392,000
Subtotal			\$392,000
<b>6g. Construction</b>			
N/A			
Subtotal			N/A
<b>6h. Other Direct Costs</b>			
Environmental and Cultural Compliance Costs	2% Estimate		\$8,000
Subtotal			
<b>Total Direct Costs</b>			<b>\$400,000</b>

<b>Indirect Costs</b>	
N/A	N/A
<b>TOTAL ESTIMATED PROJECT COSTS</b>	<b>\$400,000</b>

*Salaries and Wages*

Most of the project work will be conducted by specialized contractors. For this reason, Western Water will not be seeking reimbursement for staff time spent on the project.

*Fringe Benefits*

Fringe benefits are not included in the overall project budget.

*Travel*

No reimbursement or match for staff travel is being sought. It is not anticipated that there will be travel required by the consultant/contractor. However, if there is, those costs would be captured within the “contractual” budget category with any consultant/contractor cost estimates. These costs would be marked as ineligible, following the guidance from the Notice of Funding Opportunity.

*Equipment*

Any equipment will be provided by the selected vendor.

*Supplies*

All materials and supplies will be purchased by the selected vendor.

*Contractual*

The estimated contractual work is based on Western’s historical experiences doing similar-natured feasibility studies. One contractor will be selected through Western’s procurement procedures.

Western staff have no concerns that there will be large changes to the budget and believes that if awarded, any changes will not result in the Project costs paid by Western becoming less than 50%.

*Construction*

No construction work is part of the Project.

*Environmental and Cultural Resources Compliance*

“Environmental compliance costs” refer to costs incurred by Reclamation or the recipient in complying with environmental and cultural regulations applicable to this grant, including costs associated with any required documentation of environmental compliance and cultural analyses, permits, or approvals. A 2% estimate from total project costs was used to calculate potential environmental compliance costs.

*Other Expenses*

No other expenses are included in the budget.

*Indirect Costs*

No indirect costs are included in the budget.



## **LETTERS OF COMMITMENT**

No letters of commitment are required for this application. Western Water's Board of Directors have agreed to the cost-match obligations of the submitted proposal.

## **REQUIRED PERMITS OR APPROVALS**

One deliverable from this project is a completed Title 22 Engineering Report. No additional permits are required for the development of the feasibility study. The feasibility study will investigate the permits related to the construction and operation of the proposed projects within the study.

## **OFFICIAL RESOLUTION**

An official resolution authorizing Western Water's Board of Directors to submit this grant application, commit to the financial and legal obligations, and negotiate and execute the grant agreement is provided in Attachment 1. The resolution was adopted by the Board of Directors on February 15, 2023.

## **LETTERS OF SUPPORT**

Letter of Supports from 39<sup>th</sup> District Congressman Mark Takano, the City of Norco, the City of Corona, Jurupa Community Services District, and the Santa Ana River Watershed Project Authority are included in Attachment 2.

## **OVERLAP OR DUPLICATION OF EFFORT**

There is no overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel. The proposal submitted for consideration under this program does not in any way duplicate any proposal or project that has been or will be submitted for funding consideration to any other potential funding source—whether it be Federal or non-Federal.

## **UNIFORM AUDIT REPORTING STATEMENT**

Western Water was not required to submit a Single Audit report for Fiscal Year 2020-2021. Western Water is required to complete a Single Audit report for Fiscal Year 2021-2022. The audit is due by March 31, 2023 and will be made available.

## **CONFLICT OF INTEREST DISCLOSURE STATEMENT**

At the time of submission, no actual or potential conflict of interests exists.





RESOLUTION 3269

A RESOLUTION OF THE BOARD OF DIRECTORS OF WESTERN MUNICIPAL WATER DISTRICT OF RIVERSIDE COUNTY AUTHORIZING THE DISTRICT'S APPLICATION FOR AND APPROVING NEGOTIATION AND EXECUTION OF A COOPERATIVE AGREEMENT WITH THE UNITED STATES BUREAU OF RECLAMATION FOR FEDERAL FUNDING UNDER WATERSMART: WATER RECYCLING AND DESALINATION PLANNING PROGRAM

WHEREAS, the Western Municipal Water District of Riverside County (Western) is a municipal water district established pursuant to Section 71000 et seq. of the California Water Code; and

WHEREAS, Western's imported water supply is facing a growing list of challenges associated with prolonged drought on the Colorado River, Delta instability, climate change, aging infrastructure, and growing population; and

WHEREAS, the United States Bureau Department of the Interior, Bureau of Reclamation (USBR) under the WaterSMART: Water Recycling and Desalination Planning Grant Program will make funding available to qualifying applicants; and

WHEREAS, Western's Board of Directors has identified a project that exemplifies the objectives of the WaterSMART program in its Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project (the Project); and

WHEREAS, all applicants wishing to obtain state and federal funding are required to provide a resolution designating Authorized Agents to act on behalf of the applicant to receive these funds from the USBR; and

WHEREAS, Western desires to designate the General Manager and his designee as Authorized Agents for this purpose; and

WHEREAS, Western agrees to the administration and cost requirements of the WaterSMART grant criteria.

NOW, THEREFORE BE IT RESOLVED BY the Board of Directors that:

1) Western is hereby authorized to receive, if awarded, the WaterSMART funding and will make a good faith effort to enter into an agreement with the USBR for the receipt and administration of said grant funds and agree to abide by the federal award terms and conditions as set forth in the Articles of Agreement; and

2) The General Manager Craig Miller, or his designee, is hereby authorized to take any and all action which may be necessary for the completion and execution of the Project agreement and to take any and all other action which may be necessary for the receipt and administration of the grant funding in accordance with the requirements of the USBR; and


3) Western is capable of providing the amount of funding and/or in-kind contributions specified in the grant application funding plan; and

4) This resolution officially becomes a component part of Western's grant application that will be submitted to the USBR before February 28, 2023; and

5) This resolution shall be effective as of the date of adoption; and


6) The Recitals set forth above are incorporated herein and made an operative part of this resolution.

ADOPTED, this 15th day of February, 2023.

  
\_\_\_\_\_  
MIKE GARDNER  
President

February 15, 2023

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of Resolution 3269 adopted by the Board of Directors of Western Municipal Water District of Riverside County at its regular meeting held February 15, 2023.

  
\_\_\_\_\_  
FAUZIA RIZVI  
Secretary-Treasurer

MARK TAKANO

39<sup>TH</sup> DISTRICT, CALIFORNIA

COMMITTEE ON VETERANS' AFFAIRS  
RANKING MEMBER

COMMITTEE ON EDUCATION & LABOR



DC OFFICE

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DISTRICT OFFICE

3403 10<sup>TH</sup> ST., SUITE 610  
RIVERSIDE, CA 92501  
(951) 222-0203  
FAX: (951) 222-0217

Congress of the United States  
House of Representatives  
Washington, DC 20515

February 23, 2023

The Honorable Camille Touton, Commissioner  
Bureau of Reclamation  
1849 C St. NW  
Washington, D.C. 20240

**Re: Support for Western Municipal Water District's Bureau of Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application**

Dear Commissioner Touton,

I'm writing to you today in support of Western Municipal Water District's (Western Water) application to the *Water SMART: Water Recycling and Desalination Planning Funding Opportunity* to implement the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project (Project).

Western is planning to produce one holistic feasibility study that includes determining the feasibility for increased recycled water supplies to Western's recharge basins and the expansion of desalters, including water quality analysis for CECs (PFAS) and preparation of cost estimates and implementation schedules.

Water recycling and desalination are essential tools used by Western Water for stretching the limited water supplies in their service area. Benefits of this Project will be to develop and supplement urban and irrigation water supplies through water reuse—thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply away from imported sources. These types of projects can provide growing communities with new sources of clean water which increases water management flexibility and overall, when implemented, will make Western Water's service area's water supply more reliable.

Western Water's Project is planning for a full circle feasibility study, one that taps into recycled water for recharge and then expands its desalter capacity to extract and treat the recharged water. Expanding the Arlington Desalter will develop and supplement municipal and irrigation water supplies through the treatment of brackish water, thereby increasing the region's local supply, providing flexibility during water shortages, and diversifying the water supply portfolio. Western Water's Project supports the priorities identified in Presidential Executive Order (E.O.) 14008: Tackling the Climate Crisis at Home and Abroad and align with other priorities, such as those identified in E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.

I represent the communities in Congress that are served by Western Water's local desalter water and that would benefit from the project that will come out of the feasibility planning work proposed, and I am proud to support Western Water's WaterSMART application for the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project.

Sincerely,

A handwritten signature in blue ink that reads "Mark Takano".

Mark Takano

Member of Congress

TAKANO.HOUSE.GOV

PRINTED ON RECYCLED PAPER





February 14, 2023

Attn: Craig Miller, General Manager  
Western Municipal Water District  
14205 Meridian Parkway  
Riverside, CA 92518

**Re: Support for Western Municipal Water District's Bureau of Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application**

Dear Mr. Miller:

To facilitate project development under the Title XVI Program, the Desalination Construction Program, and the Large-Scale Water Recycling Program, the Bureau of Reclamation has funding available through the WaterSMART: Water Recycling and Desalination Planning funding opportunity for water recycling and desalination planning and pre-construction activities. Western Municipal Water District (Western Water) is applying to the WaterSMART program to implement the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project (Project).

Western is planning to pursue one feasibility study that includes:

- Feasibility for Increasing Recycled Water Supplies to Victoria Recharge Basin
- Feasibility for Arlington Desalter Expansion and Required Upgrades
- Feasibility and Water Quality Analysis for CECs (PFAS, etc.)
- Preparation of preliminary project cost estimates and schedules for possible future implementation

Water recycling and desalination are essential tools for stretching the limited water supplies in the Western United States. Benefits of this Project is to develop and supplement urban and irrigation water supplies through water reuse—thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply. These types of projects provide growing communities with new sources of clean water which increases water management flexibility and overall when implemented will make Western Water's service area's water supply more reliable.

Western Water's Project is planning for a full circle feasibility study, one that taps into recycled water for recharge and then expands its desalter capacity to extract and treat the recharged water. Expanding the Arlington Desalter will develop and supplement municipal and irrigation water supplies through the treatment of brackish water, thereby increasing the region's local supply, providing flexibility during water shortages, and diversifying the water supply portfolio. Western Water's Project supports the priorities identified in Presidential Executive Order (E.O.) 14008: Tackling the Climate Crisis at Home and Abroad and align with other priorities, such as those identified in E.O. 13985: Advancing Racial Equity

**CITY COUNCIL**

ROBIN GRUNDMEYER  
Mayor

TED HOFFMAN  
Mayor Pro Tem

KATHERINE ALEMAN  
Council Member

KEVIN BASH  
Council Member

GREG NEWTON  
Council Member

and Support for Underserved Communities Through the Federal Government.

In Norco, we are extremely interested in seeing the further development of recycled water infrastructure in our region. As a partner with Western, we have previously developed a pump station that we hope to use to supply recycled water in Norco once further infrastructure can be completed. Similar projects in our area, such as this project proposed by Western, help build critical mass and show the business case for these types of projects for other agencies, such as the City of Norco.

The City of Norco is a recipient of Western Water's local desalter water and would benefit from the project that will come out of the feasibility planning work proposed. The City of Norco is proud to support Western's Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application for the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project.

Sincerely,



Lori Sassoon  
City Manager





City of Corona  
Utilities Department  
"Protecting Public Health"

Office: 951.736.2234  
Fax: 951.735.3786

755 Public Safety Way  
Corona, CA 92878

February 14, 2023

Attn: Craig Miller, General Manager  
Western Municipal Water District  
14205 Meridian Parkway  
Riverside, CA 92518

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Western is planning to pursue one feasibility study that includes:

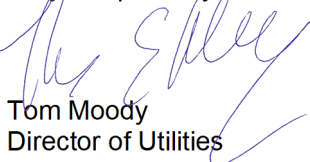
- Feasibility for Increasing Recycled Water Supplies to Victoria Recharge Basin
- Feasibility for Arlington Desalter Expansion and Required Upgrades
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- Preparation of preliminary project cost estimates and schedules for possible future implementation

Water recycling and desalination are essential tools for stretching the limited water supplies in the Western United States. Benefits of this Project is to develop and supplement urban and irrigation water supplies through water reuse—thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply. These types of projects provide growing communities with new sources of clean water which increases water management flexibility and overall when implemented will make Western Water's service area's water supply more reliable.

Western Water's Project is planning for a full circle feasibility study, one that taps into recycled water for recharge and then expands its desalter capacity to extract and treat the recharged water. Expanding the Arlington Desalter will develop and supplement municipal and irrigation water supplies through the treatment of brackish water, thereby increasing the region's local supply, providing flexibility during water shortages, and diversifying the water supply portfolio. Western Water's Project supports the priorities identified in Presidential Executive Order (E.O.) 14008: Tackling the Climate Crisis at Home and Abroad and align with other priorities, such as those identified in E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.

The City of Corona is a recipient of Western Water's local desalter water and would benefit from the project that will come out of the feasibility planning work proposed. The City of Corona is proud to support Western's Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application for the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project.

Very Respectfully,



Tom Moody  
Director of Utilities

**Board of Directors**

Lupe R. Nava, President  
Bart Moreno, Vice President  
Betty Folsom, Director  
Anthony Herda, Director  
Kenneth J. McLaughlin, Director



February 15, 2023

Craig Miller, General Manager  
Western Municipal Water District  
14205 Meridian Parkway  
Riverside, CA 92518

**Re: Support for Western Municipal Water District's Bureau of Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application**

Dear Mr. Miller,

On behalf of the Jurupa Community Services District (JCSD), I write in support of Western Municipal Water District's (Western Water) Bureau of Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application. JCSD is a public agency providing services to over 130,000 people within the cities of Eastvale and Jurupa Valley. Established in 1956, our community services include water, wastewater, streetlights, graffiti abatement, and parks and recreation services.

To facilitate project development under the Title XVI Program, the Desalination Construction Program, and the Large-Scale Water Recycling Program, The Bureau of Reclamation has funding available through the WaterSMART: Water Recycling and Desalination Planning funding opportunity for water recycling and desalination planning and pre-construction activities. Western Water is applying to the WaterSMART program to implement the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project (Project).

Western is planning to pursue one feasibility study that includes:

- Feasibility for Increasing Recycled Water Supplies to Victoria Recharge Basin
- Feasibility for Arlington Desalter Expansion and Required Upgrades
- Feasibility and Water Quality Analysis for CECs (PFAS, etc.)
- Preparation of preliminary project cost estimates and schedules for possible future implementation

Water recycling and desalination are essential tools for stretching the limited water supplies in the Western United States. The benefits of this Project are to develop and supplement urban and irrigation water supplies through water reuse—thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply. These types of projects offer growing communities new sources of clean water, which

increases water management flexibility and, when implemented, will make Western Water's service area's water supply more reliable.

Western Water's Project is planning for a full circle feasibility study, one that taps into recycled water for recharge and then expands its desalter capacity to extract and treat the recharged water. Expanding the Arlington Desalter will develop and supplement municipal and irrigation water supplies through the treatment of brackish water, thereby increasing the region's local supply, providing flexibility during water shortages, and diversifying the water supply portfolio. Western Water's Project supports the priorities identified in Presidential Executive Order (E.O.) 14008: Tackling the Climate Crisis at Home and Abroad and align with other priorities, such as those identified in E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.

As USBR is aware, JCSD is pursuing a similar recycled water project known as the Joint IEUA-JCSD Recycled Water Intertie Project. Upon completion, JCSD's project will provide 3,160 acre-feet per year (AFY) of new recycled water to offset current potable water demands. Western Water and JCSD's projects are critical to reducing imported water supplies, which benefit the imported water infrastructure managed by other regional agencies.

JCSD is a strong collaborative partner with Western Water in securing water supplies for the region. As a result, JCSD is proud to support Western's Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application for the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project

Thank you for considering JCSD's support of Western Water's application. If you need any additional information, please contact Arman Tarzi, JCSD's Community Affairs Supervisor, at ATarzi@JCSD.us.

Sincerely,



**Chris Berch, P.E.**  
**General Manager**



# Santa Ana Watershed Project Authority

OVER 50 YEARS OF INNOVATION, VISION, AND WATERSHED LEADERSHIP

February 21, 2023

Attn: Craig Miller, General Manager  
Western Municipal Water District  
14205 Meridian Parkway  
Riverside, CA 92518

## **Re: Support for Western Municipal Water District's Bureau of Reclamation's WaterSMART: Water Recycling and Desalination Planning Grant Application**

Dear Mr. Miller,

The Santa Ana Watershed Project Authority (SAWPA) is writing to support the Western Municipal Water District (Western Water) in pursuing the Bureau of Reclamation funding available through the WaterSMART: Water Recycling and Desalination Planning Grant Application for the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project (Project).

The Bureau of Reclamation has funding available through the WaterSMART: Water Recycling and Desalination Planning funding opportunity for water recycling and desalination planning and pre-construction activities that could facilitate project development under the Title XVI Program, the Desalination Construction Program, and the Large-Scale Water Recycling Program. Western Water is applying to the WaterSMART program to implement the Project.

Western Water is planning to pursue one feasibility study that includes:

- Feasibility for Increasing Recycled Water Supplies to Victoria Recharge Basin
- Feasibility for Arlington Desalter Expansion and Required Upgrades
- Feasibility and Water Quality Analysis for CECs (PFAS, etc.)
- Preparation of preliminary project cost estimates and schedules for possible future implementation

Water recycling and desalination are essential tools for stretching the limited water supplies in the Western United States. Benefits of this Project are to develop and supplement urban and irrigation water supplies through water reuse, thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply. These types of projects provide growing communities with new sources of clean water, which increases water management flexibility and, when implemented, will increase the reliability of Western Water's service area's water supply.

Western Water's Project is planning a full-circle feasibility study that taps into recycled water for recharge and then expands its desalter capacity to extract and treat the recharged water. The Arlington Desalter expansion will develop and supplement municipal and irrigation water supplies through brackish water treatment. Ultimately the Arlington Desalter expansion will increase the region's local water supply by providing flexibility during water shortages and diversifying the water supply portfolio. Western

Marco Tule  
Chair  
Inland Empire  
Utilities Agency

Bruce Whitaker  
Vice Chair  
Orange County  
Water District

Mike Gardner  
Secretary-Treasurer  
Western Municipal  
Water District

June D. Hayes  
Commissioner  
San Bernardino Valley  
Municipal Water District

David J. Slawson  
Commissioner  
Eastern Municipal  
Water District

Jeffrey J. Mosher  
General Manager

Letter to Mr. Miller

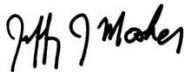
02/21/2023

Page 2

Water's Project supports the priorities identified in Presidential Executive Order (E.O.) 14008: Tackling the Climate Crisis at Home and Abroad, and aligns with other priorities, such as those identified in E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government.

SAWPA has established itself as a leader in addressing the decreased groundwater levels and water quality issues through our Santa Ana River Watershed Basin Study and One Water One Watershed (OWOW) Plan. The proposed Project supports the OWOW objective of innovative supply alternatives. A goal of the recently adopted OWOW Plan Update 2018, the region's Integrated Regional Water Management (IRWM) Plan, is to achieve resilient water resources through innovation and optimization and to ensure high-quality water for all people and the environment. This planning study is directly in line with the OWOW Plan. SAWPA proudly supports Western Water in their pursuit of the WaterSMART: Water Recycling and Desalination Planning Grant Application for the Recharging Recycled Water and Groundwater Desalter Expansion Feasibility Study Project.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff J Mosher".

Jeffrey J. Mosher  
General Manager

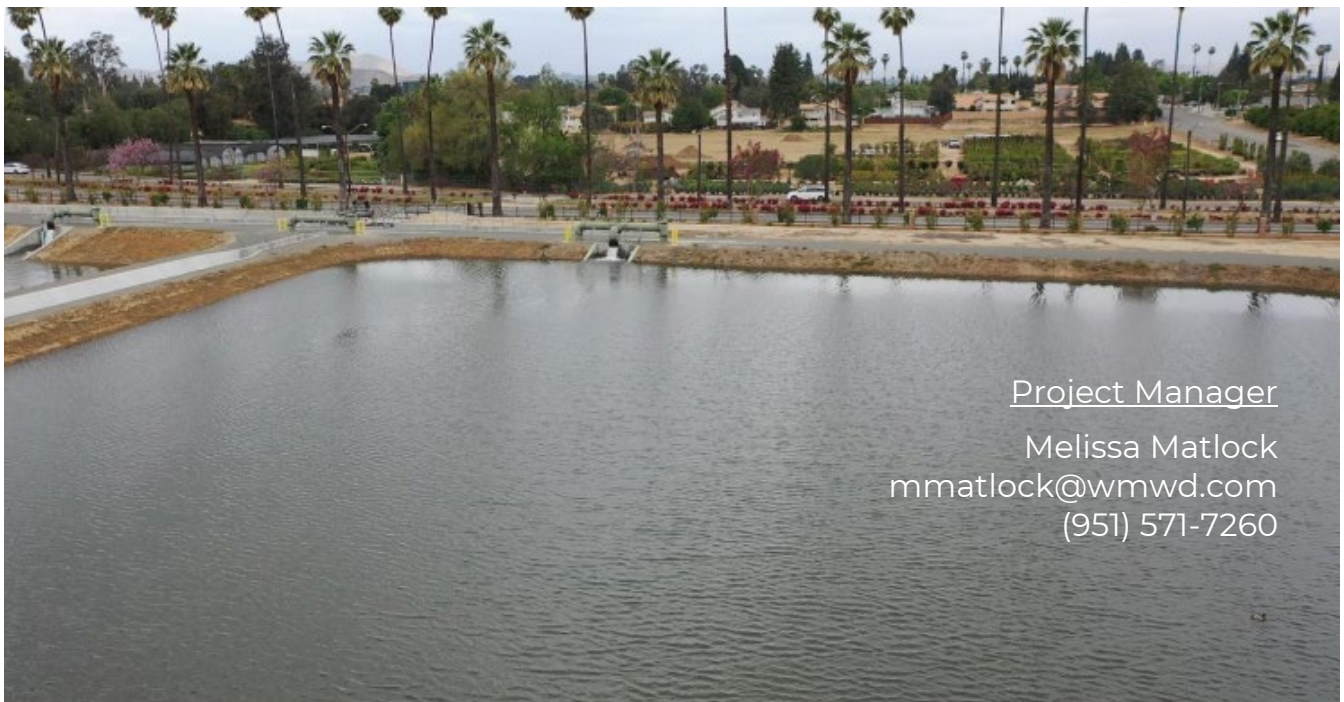




14205 Meridian Parkway  
Riverside, CA 92518  
District Business | 951.571.7100  
Customer Service | 951.571.7104

# RECHARGING RECYCLED WATER AND GROUNDWATER DESALTER EXPANSION FEASIBILITY STUDY

Application to Water Recycling and  
Desalination Planning Funding Opportunity  
NOFO NO. R23AS00076



Project Manager  
Melissa Matlock  
mmatlock@wmwd.com  
(951) 571-7260



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## PROJECT BUDGET

### FUNDING PLAN

The estimated total cost for the Project is \$400,000. Western commits to providing up to \$200,000 in non-federal match funds in support of the activities identified in this proposal. It is expected that this amount will be satisfied by Western's Operating Budget funded through water supply charges, property taxes, and fees on the wholesale delivery system. Funding from entities other than Reclamation will not be requested. The budget proposal does not include design or other project costs that will be incurred prior to Project award.

### BUDGET PROPOSAL

**Table 1.-Summary of Non-Federal and Federal funding sources**

Funding Sources	Amount
<b>Non-Federal entities</b>	
1. Western Municipal Water District	\$200,000
<b>Non-Federal subtotal</b>	\$200,000
<b>REQUESTED Reclamation funding</b>	<b>\$200,000</b>

**Table 2.-Total project cost table**

Source	Amount
Costs to be reimbursed with the requested Federal Funding	\$200,000
Costs to be paid by the applicant	\$200,000
Value of third-party contributions	\$0
<b>TOTAL project cost</b>	<b>\$400,000</b>

### BUDGET NARRATIVE

**Table 3.-Section B Budget Categories table**

Budget Item	Computation		Quantity Type	Cost
	\$/Unit	Quantity		
<b>6a. Personnel</b>				
N/A				
Subtotal				N/A
<b>6b. Fringe Benefits</b>				
N/A				
Subtotal				N/A

<b>6c. Travel</b>		
N/A		
Subtotal		N/A
<b>6d. Equipment</b>		
N/A		
Subtotal		N/A
<b>6e. Supplies</b>		
N/A		
Subtotal		N/A
<b>6f. Contractual</b>		
Feasibility Planning Contract	Based on historical estimates	\$392,000
Subtotal		\$392,000
<b>6g. Construction</b>		
N/A		
Subtotal		N/A
<b>6h. Other Direct Costs</b>		
Environmental and Cultural Compliance Costs	2% Estimate	\$8,000
Subtotal		
<b>Total Direct Costs</b>		<b>\$400,000</b>
<b>Indirect Costs</b>		
N/A		
<b>TOTAL ESTIMATED PROJECT COSTS</b>		<b>\$400,000</b>

*Salaries and Wages*

Most of the project work will be conducted by specialized contractors. For this reason, Western Water will not be seeking reimbursement for staff time spent on the project.

*Fringe Benefits*

Fringe benefits are not included in the overall project budget.

*Travel*

No reimbursement or match for staff travel is being sought. It is not anticipated that there will be travel required by the consultant/contractor. However, if there is, those costs would be captured within the “contractual” budget category with any consultant/contractor cost estimates. These costs would be marked as ineligible, following the guidance from the Notice of Funding Opportunity.

*Equipment*

Any equipment will be provided by the selected vendor.

*Supplies*

All materials and supplies will be purchased by the selected vendor.



### *Contractual*

The estimated contractual work is based on Western's historical experiences doing similar-natured feasibility studies. One contractor will be selected through Western's procurement procedures.

Western staff have no concerns that there will be large changes to the budget and believes that if awarded, any changes will not result in the Project costs paid by Western becoming less than 50%.

### *Construction*

No construction work is part of the Project.

### *Environmental and Cultural Resources Compliance*

"Environmental compliance costs" refer to costs incurred by Reclamation or the recipient in complying with environmental and cultural regulations applicable to this grant, including costs associated with any required documentation of environmental compliance and cultural analyses, permits, or approvals. A 2% estimate from total project costs was used to calculate potential environmental compliance costs.

### *Other Expenses*

No other expenses are included in the budget.

### *Indirect Costs*

No indirect costs are included in the budget.

## **LETTERS OF COMMITMENT**

No letters of commitment are required for this application. Western Water's Board of Directors have agreed to the cost-match obligations of the submitted proposal.



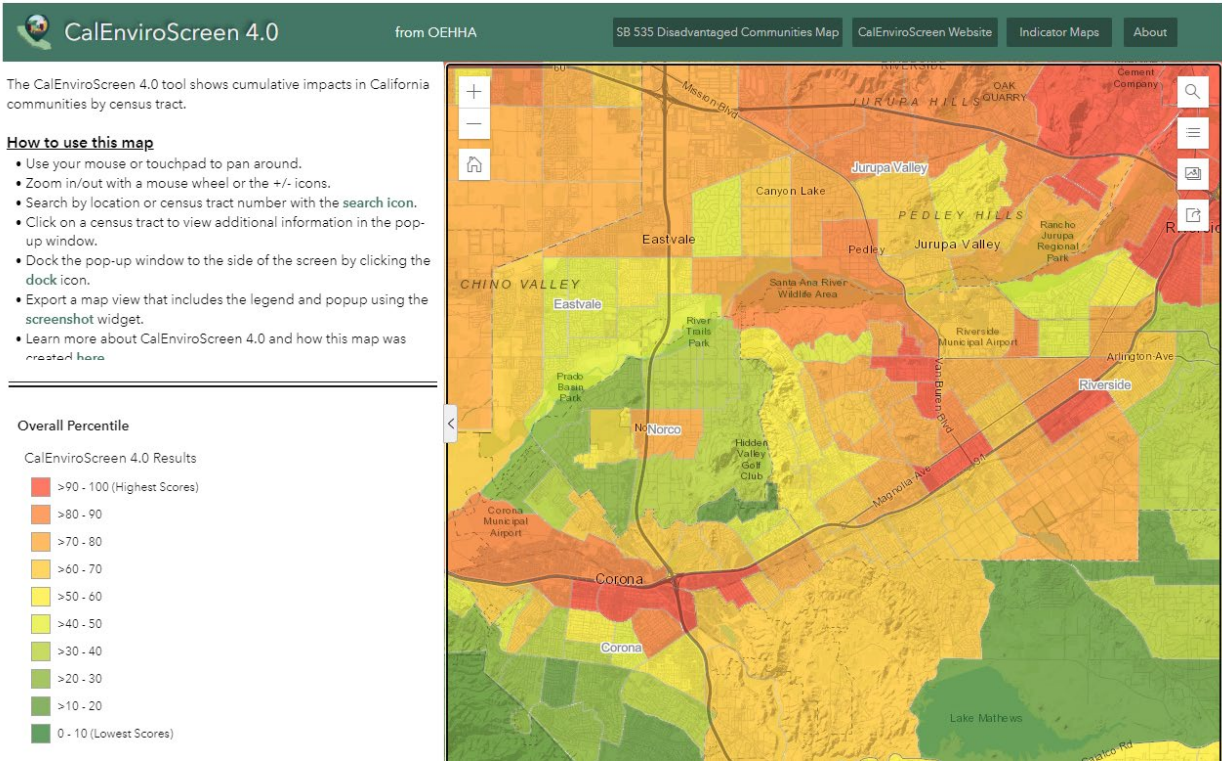


# Disadvantaged Communities

## CalEnviroScreen 4.0

In order to address the cumulative effects of both pollution burden and socioeconomic stressors, and to identify which communities might be in need of particular policy, investment, or programmatic interventions, the Office of Environmental Health Hazard Assessment (OEHHA) developed and now maintains and updates the CalEnviroScreen tool on behalf of CalEPA. Appendix # provides the draft report on the CalEnviroScreen tool. The tool indicates how disadvantaged a community is through a score of 1-100 (CalEnviroScreen 4.0 | OEHHA). The higher the score, the more disadvantaged a community is.

### CalEnviroScreen Overall Score



# Population Characteristics

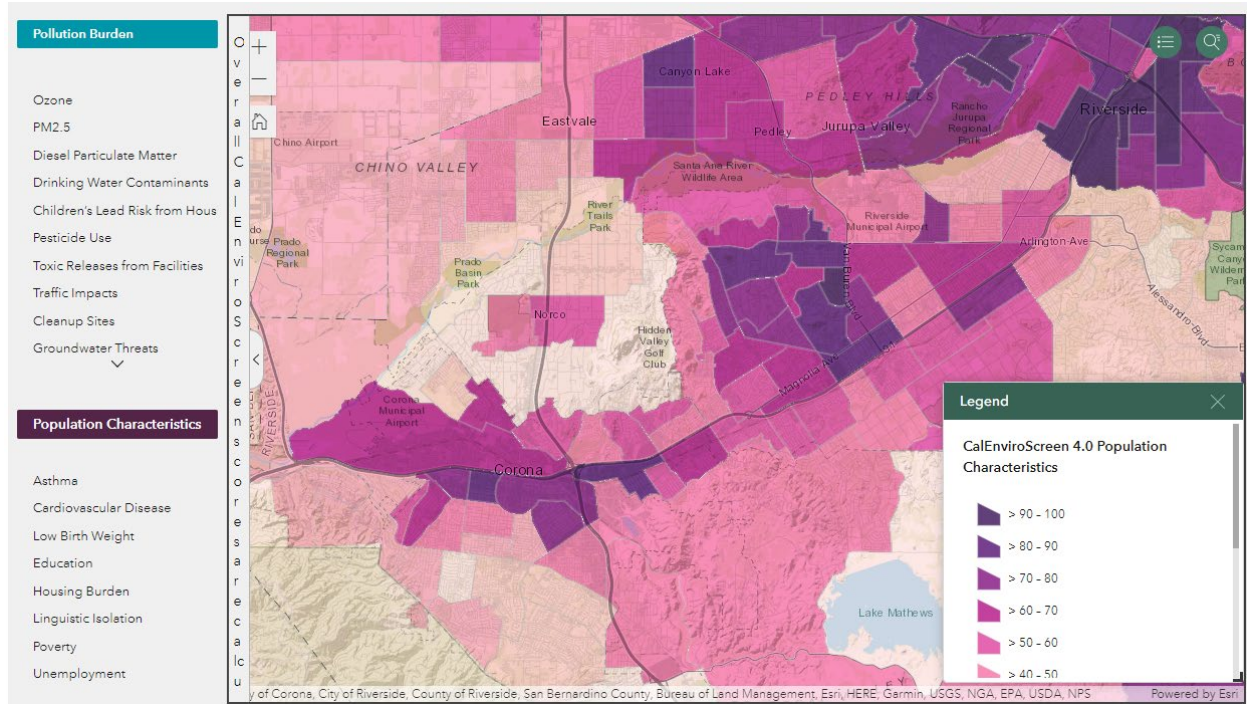


Figure 1. Population Burden Census Tract Analysis

Note: Main Service Area Census Tract within main project beneficiaries

	Victoria Recharge Basin - Census Tract 6065031701	Norco- Census Tract 6065040812	Corona- Census Tract 6065041600
Population Characteristics Percentile:	59	56	70
Asthma:	47	23	41
Low Birth Weight:	36	94	38
Cardiovascular Disease:	40	75	82
Education:	75	50	92
Linguistic Isolation:	69	25	78
Poverty:	85	62	88
Unemployment:	75	N/A	17
Housing Burden:	48	39	86

# Pollution Burden

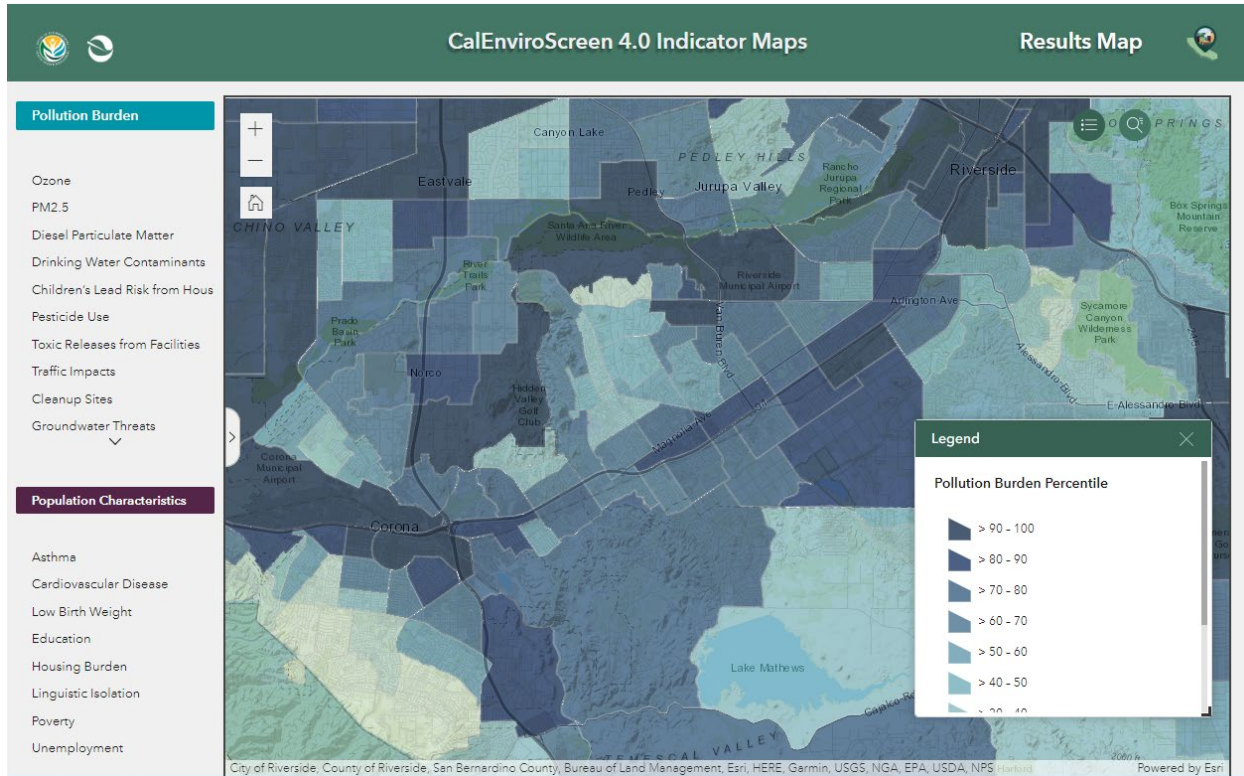


Figure 2. Pollution Burden Census Tract Analysis

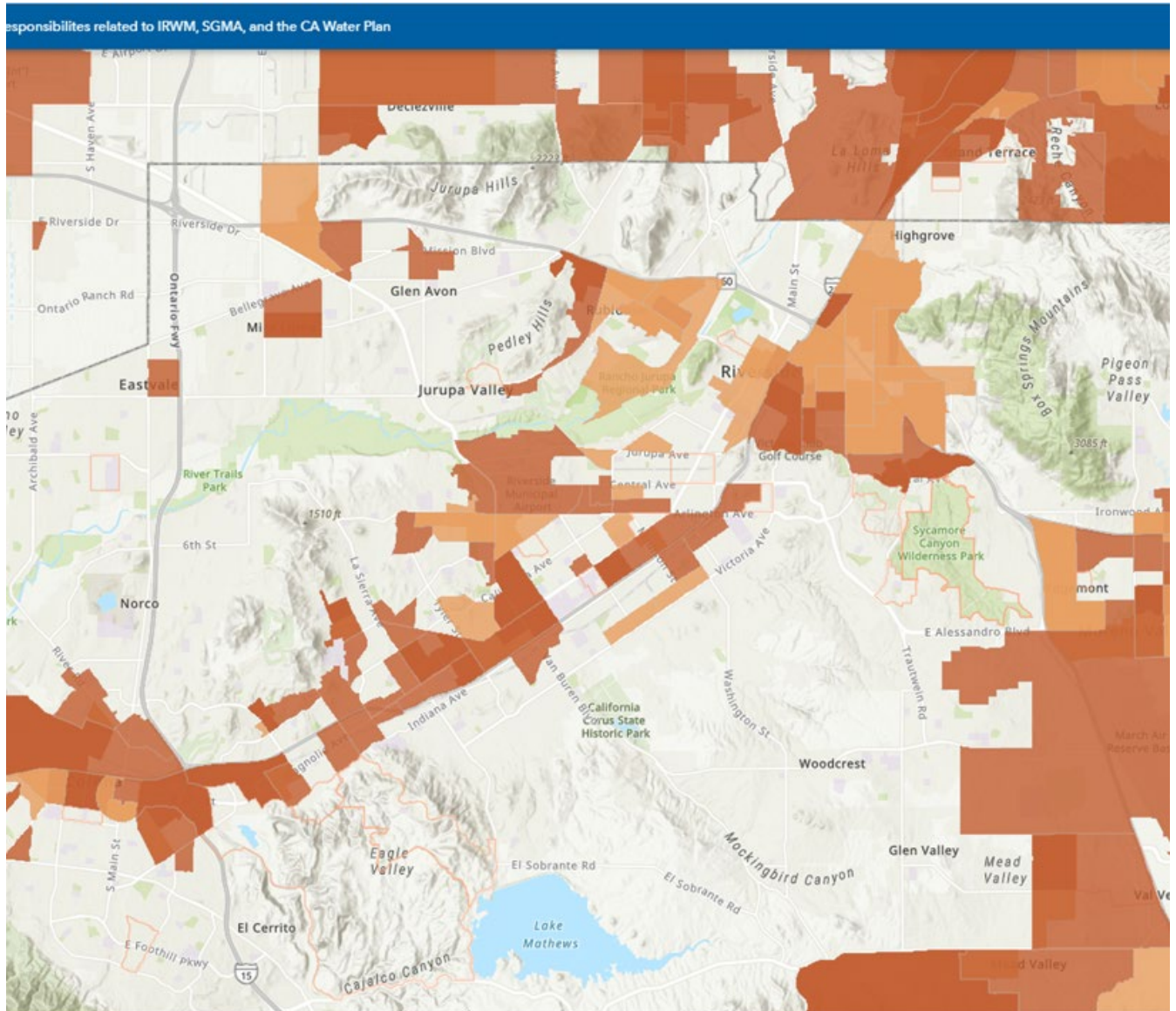
Note: Main Service Area Census Tract within main project beneficiaries

	Victoria Recharge Basin - Census Tract 6065031701	Norco - Census Tract 6065040812	Corona - Census Tract 6065041600
<i>Pollution Burden:</i>	89	82	98
<i>Population:</i>	2403	4059	6511
<i>CalEnviroScreen 4.0 Percentile:</i>	77	71	92
<i>Ozone:</i>			
<i>PM 2.5:</i>	95	85	80
<i>Diesel PM:</i>	89	92	91
<i>Pesticides:</i>	34	64	99
<i>Toxic Releases:</i>	73	56	0
<i>Traffic:</i>	72	67	67
<i>Drinking Water Contaminants:</i>	7	56	94
<i>Lead in Housing:</i>	77	98	74
<i>Cleanups:</i>	70	55	80
<i>Groundwater Threats:</i>	77	44	87
<i>Hazardous Waste:</i>	14	42	50
<i>Impaired Water:</i>	52	4	73
<i>Solid Waste:</i>	12	12	12



## DWR DAC Map

The Department of Water Resources DAC mapping tool is an interactive map that allows users to overlay the following US Census geographies as separate data layers: Census Place, Census Tract, and Census Block Group. Only those census geographies that meet the DAC definition are shown on the map [i.e., only those with an annual median household income (MHI) that is less than 80 percent of the Statewide annual MHI (PRC Section 75005(g))]. In addition, those census geographies with an annual MHI that is less than 60 percent of the Statewide annual MHI are shown as "Severely Disadvantaged Communities" (SDAC).



**Areas Affected by Project:**

Areas within Western Riverside County, including portions of the City of Riverside and unincorporated portions of Riverside County, including areas known as Lake Mathews, Gavilan Hills, Woodcrest, Orangecrest, Mission Grove, Victoria Grove, and Lake Hills.



List of Congressional Districts of:

Applicant: CA-41, CA-42, CA-50

Project: CA-41, CA42