WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2023

Funding Opportunity Announcement No. R23AS00005



Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project

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<u>1. Technical Proposal and Evaluation Criteria</u></u>

1.1 Executive Summary

Date: Applicant Name: Applicant City, County, State: Applicant Category: Project Title: 09 June 2022 Western Municipal Water District Riverside, Riverside County, California Category A (Local authority with water delivery authority) Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project

Western Municipal Water District ("Western"), located in Riverside County in Southern California, partnering with Rubidoux Community Services District and Riverside Highland Water Company, will construct one new well, construct three small-scale water treatment facilities, and construct associated pipelines to treat impaired groundwater for potable, urban water use (the Project). With the last water year (20-21) being the second driest year on record and January-March 2022 being the driest three-month period for California, Southern California is seeing drastic water restrictions on imported supplies. While agencies turn to increase their local supplies, the project partners are experiencing water quality concerns related to drought's impact in the region. The Project will increase local potable water supply by 4,286 acre-feet of water per year. This will reduce the demand on the drought-stressed imported water supplies from the Bay-Area Delta in Northern California and the Colorado River, while also increasing regional drought resiliency. The Project addresses long term goals of increasing water reliability and local supplies, as established in Western's Drought Contingency Plan (DCP), and will be adopted in July 2022. The DCP was developed with assistance from a WaterSMART Drought Contingency Planning grant.

Construction bidding will commence upon the completion of the prior design phase, expected to be in March 2023, with construction occurring between August 2023 and March 2026. The Project is anticipated to be completed within 36 months. The Project will not be located within a federal facility.

1.2 Project Location

The Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project is comprised of three projects, construction of one new well with treatment and two small-scale treatment facilities on existing wells. All projects are located within Western's wholesale service area, located in Western Riverside County in Southern California, approximately 60 miles West of Los Angeles, California. Project 1: Riverside Highland Water Company's ("RHWC") small-scale water treatment groundwater project is located at their Well RN#6 located in Grand Terrace, California (34.02895, -117.32319). This project is located in the adjudicated Riverside groundwater basin. Project 2: Rubidoux Community Services District ("RCSD") new well, Well 25 and associated treatment is located in Rubidoux, California (33.998485, -117.405023). This project is located in the adjudicated Riverside groundwater basin. Project 3: Western's well treatment project is located in Murrieta, California (33.548238, -117.214533). This project is located in the adjudicated Murrieta-Temecula groundwater basin. Attachment 4 is a pdf map of the project location.

1.3 Technical Project Description

Over the past 5 years, due to drought-related contaminant issues in the local groundwater supply, three retail agencies in Western's wholesale service area, Riverside Highland Water Company (RHWC), Rubidoux Community Services District (RCSD), and Western's Murrieta Service Area (Western), have had

to turn off some of their local groundwater wells and turn to imported water. The proposed project will construct one new well, three small-scale water treatment facilities, and associated pipelines to treat impaired groundwater for potable, urban water use, increasing local potable water supply by 4,286 acrefeet of water per year. Contaminants to be treated include nitrates, Per- and Polyfluoroalkyl Substances (PFAS), 1,2,3 Trichloropropane (TCP), iron manganese, and arsenic.

Project 1: RHWC involves construction of well treatment on their well RN#6 to treat for nitrates and produce 1,300 acre-feet per year. Well treatment will be built on RHWC's existing Well RN#6's property. Well RN#6 produces 1,800 gallons per minute with a nitrate (NO3) level of 11 mg/l exceeding the current State drinking water standard (Maximum Contaminate Level) and therefore is currently not operational. The existing RHWC Well RN#6 is a 250 hp vertical turbine pump with electric motor. The well is designed for 1,800 gallons per minute (gpm) at 450' TDH. Due to Nitrate contaminate levels, Well RN#6 is currently offline. Treatment is needed to allow RN#6 to operate, the proposed project will result in additional production of potable treated water of 1,300 acre-feet per year (AFY). A feasibility analysis has been conducted and evaluated several nitrate removal systems including Calgon Ion Exchange System, Tonka Water High Efficiency Ion Exchange System and Wes-Tech Microvi Biological Treatment Systems. The feasibility analysis recommended the Tonka Ion Exchange System based on evaluating the costs and footprint needed for the system. The project is now in design. Feasibility and design are outside the scope of this project. The technical work will include construction of: 1. Pre-Filtration System 2. Ion Exchange System. The Pre-Filtration system will include two (2) 5-micron cartridge filter housings for suspended solids removal as a pre-filter treatment. The ion exchange vessels contain a nitrate select anionic resin that selectively reacts to a waste stream solution to remove Nitrates. The Tonka Ion Exchange System is designed to treat a portion of the well water flow to a low nitrate level and then blend with the remaining well water flow to produce a blended flow stream meeting the MCL limitations for drinking water. Typical system layout for the Tonka Ion Exchange is included in RHWC's Technical Memo for preliminary design, included in Attachment 8.

<u>Project 2: RCSD</u> involves construction of a new well (Well 25) and well treatment to treat for Per- and Polyfluoroalkyl Substances (PFAS) and 1,2,3 Trichloropropane (TCP) removal. This new well will produce 1,500 AFY. Well 25 will be constructed on District owned property. The project is in Design. Feasibility and design are outside the scope of this project. The proposed scope includes drilling of a well and outfitting with a pump and 200 HP motor. The well will be drilled approximately 150 feet in depth and will pump directly to RCSD's pressure zone 1066'. The scope will also build treatment onsite for the well. The design of the treatment system and water quality results at Well 25 will determine if granular activated carbon or ion exchange (resin media) filtration will be implemented.

<u>Project 3: Western</u> involves construction of well treatment for two of Western's wells (New Clay and North) to treat for Iron Manganese. Western will pipe the water produced from the two wells to a Western owned property for small-scale treatment prior to entering Western's distribution system. New Clay Well is designed for 450 gpm, at a total depth of 940 ft, a 16-inch casing, and a 75 HP pump motor and North Well is designed for 750 gpm, at a total depth of 724 ft, a 16-inch casing, and a 125 HP pump motor. These wells are currently shut off due to water quality issues. Treatment is needed to allow New Clay well and North well to operate, the proposed project will result in additional production of potable treated water of 1,486 acre-feet per year (AFY). Feasibility and design are outside the scope of this project. The proposed scope includes building a green sand filtration treatment system on Western's property in Murrieta and approximately 2 miles of piping from the wells to the property. The preliminary design of the green sand treatment will be completed in June 2022. Green sand filters use a specially formulated filter media made

from a naturally mined form of glauconite greensand. The greensand filter media has a special coating of manganese oxide, which oxidizes iron, manganese and iron in the water upon contact with the filter media. Greensand treatment also treats arsenic (<u>Arsenic Removal from Water Using Manganese Greensand</u> (<u>usbr.gov</u>)).

1.4 Performance Measures

The proposed project will enable Western to increase reliability of two groundwater basins to improve local water supply, security and provide drought resiliency. The specific anticipated benefits and their related methods for measuring performance are detailed in the following Table 1.

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Benefit Type	Description	Method of Performance Measurement
Water Supply	Total water supply of 4,268 AFY	Water volumes will be metered at the well.
Water Quality	Project 1- RHWC: Improve effluent water quality by removing/reducing nitrates from 11 MCL to 6 MCL. Project 2- RCSD: Improve effluent water quality by removing/reducing PFOD, PFAS and 1,2,3-TCP from 7.9-15 ng/l, 14-20 ng/l, and 0.04-0.047 ppb to non-detect, respectively. Project 3- Western: Improve effluent water quality by removing/reducing iron manganese from 0.036 ppm to 0.02 ppm, respectively.	Quality of treatment system effluent will be regularly tested to ensure contaminant removal effectiveness and achievement of water quality criteria based on State notification levels.
Supply Reliability/ Drought Resiliency	By treating local groundwater, Western can provide a new source of groundwater supply, which was previously unavailable, to help increase reliability of the groundwater basins as a source of local potable water and increase drought resiliency and conjunctive use within Western's service area.	Groundwater production and groundwater wells is metered at the production wells and will be recorded and analyzed for long- term performance.

Table 1. Benefits and Related Performance Measures

1.5 Evaluation Criteria

1.5.1 Project Benefits

How will the project build long-term resilience to drought? How many years will the project continue to provide benefits?

Western Municipal Water District (Western) was formed in 1954 and provides water supply, wastewater treatment and disposal, and water resource management to nearly one million people in a service area covering roughly 527-square miles. As a member agency of the Metropolitan Water District of Southern California (Metropolitan), Western provides wholesale water to the region within its service area (Attachment 4). Western also directly serves water to approximately 25,000 retail customers portions of the cities of Riverside and Murrieta. Western's service area currently receives its potable water supply from three sources: imported water through Metropolitan, adjudicated groundwater from the San Bernardino Basin Area, Riverside Basin, and the Temecula-Murrieta Basin, and desalted groundwater from the unadjudicated Riverside-Arlington subbasin and the Chino Basin. Metropolitan imports water to Southern California from the Colorado River and runoff from the western slopes of the northern Sierra Nevada Mountains, an area with unprecedented impacted by drought.

Water quality is poor in the region, therefore there has been investments in desalting facilities. Those basins without desalters are experiencing water quality issues, such as high levels of PFAS, 1,2,3 TCP, and iron manganese and arsenic contaminants, specifically in the Riverside and Temecula-Murrieta groundwater basins. Water quality has become so poor that several agencies' wells have had to be turned off until treatment could be installed. Turning off the wells has led to a need for imported water interties and more demand on Metropolitan's imported water system, leading to actions opposite of the California Department of Water Resource's policy to reduce reliance on the Bay-Area Delta.

The proposed project will increase 4,268 AFY of new local groundwater supply to the western Riverside County region. Project 1 and 2 will have a useful life of at least 30 years, Project 3 has a useful life of at least 20 years. By investing in the expansion of its groundwater pumping capacity and conjunctive use programs, the project partners are able to diversify its water portfolio and mitigate the ongoing drought conditions faced by the region, providing long-term resilience to drought.

Will the project make additional water supplies available? If so, what is the estimated quantity of additional supply the project will provide and how was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years.

The Project will make an annual average of 4,286 AFY or 42,860 AFY over the next 10 years of local groundwater supplies available. The beneficial use of this water is longer than 10 years, but due to the prompt requirements of this application, future water has been averaged over the next 10 years. Project 1-RHWC Well RN#6 will produce approximately 1,300 AFY. This was calculated through an Operations Plan (provided in Attachment 8, pg. 3). RN#6 has not been operational due to exceeding nitrate limits. Project 2-RCSD Well 25 will produce approximately 1,500 AFY. This is based on 65% runtime of the well's flow rate of 1,500 gpm. Project 3- Western's Murrieta well treatment will produce 1,486 AFY. This is based on historical usage. New Clay well annual average from 2018-202 was 386 AFY. North Well's annual average is 1,100 AFY. These wells have been shut off due to water quality issues.

What percentage of the total water supply does the additional water supply represent? How was this estimate calculated?

The total water supply this project will bring is 38.1%. Based on 2020 Urban Water Management Plans, Table 2 shows the total 2020 water supply by agency. Western's Murrieta service area is isolated from the rest of Western's retail service area, so its water supply just represents that area. An increase in local supplies of 38.1% will reduce the AFY demand on current imported water and offset future imported water needs by the same amount.

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Project	2020 Total Water	Project Supply (AFY)	% of Water Supply
	Demand (AFY)		
1. RHWC	4,246	1,300	30.6%
2. RCSD	4,770	1,500	31.4%
3. Western	2,233	1,486	66.5%
Total	11,249	4,286	38.1%

Table 2. Water Supply

Provide a qualitative description of the degree/significance of the benefits associated with the additional water supplies.

The treated water supplies will directly benefit the communities in Rubidoux, Riverside, Grand Terrace, and Murrieta, California. Based on 2020 Urban Water Management Plans, the 2020 population of these service areas that would directly receive the water is a total of 73,258 and shown in Table 3. Approximately 64% of those directly receiving the water are considered a disadvantaged community through the California Department of Water Resources Disadvantage Community Map, which defines disadvantaged community as census groups with a median household income below 80% of the state average (Attachment 5). These communities will benefit from a local, high-quality water source that is cost effective and drought resilient. The volatility of the imported water supply (and that of all Southern California) is at an all-time high, and the need for local, high-quality water for potable use is paramount. This project will provide a less costly source than that of the currently available to the region. The locally sourced water will provide a less costly source than that of the current imported and recycled water, reducing the overall cost of the water supply, which translates to more sustainable supplies and rates for customers.

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Project	Population (UWMP 2020)	% of DWR Disadvantaged
		Community (income)
1. RHWC	20,755	50%
2. RCSD	36,827	90%
3. Western	15,676	25%
Total	73,258	64.8%

Table 3. Population

Will the project improve the management of water supplies? How will the project increase efficiency or operational flexibility?

Construction of the three projects, the one proposed new well and 3 small-scale well treatment facilities, will increase water management efficiency by allowing the region to distribute water to their residents using the local supplies versus imported water. Supply shortages have forced each agency to try to find water elsewhere. RHWC has three water wells with nitrate levels above the State of California Maximum Contaminate Level of 10 parts per million. These three wells had to be shut down and they had a total production of over 6 million gallons per day, enough water to supply RHWC's maximum daily demand. Well RN#6 was shut down in 2017. In three of last four years, RHWC's has had to purchase water from another water agency to supplement their current supply. By treating this local supply, RHWC is able to rely on their local groundwater and through operational flexibility they are able to be more resilient in their water service. In addition, Well RN#6 provides better management by making more available water to the region through its participation in conjunctive use and offsetting imported supply needs.

RCSD has PFAS, 1,2,3 TCP in their water and high total dissolved salts (TDS). In 2022, RCSD brought an agreement to Metropolitan's board for a request to build an interconnection to get access to imported water supply. Due to the restrictions on State water project (SWP), this interconnection request was approved for a one-year term due to concerns over the imported water supply. A one-year agreement is not long enough to justify the expense to build the physical intertie. RCSD has no access to other water sources and needs a new well (well 25) and treatment to provide better management. Increasing the number of wells for RCSD will also increase operational flexibility and resiliency in their supplies. Additional water management benefits include RCSD's participation in conjunctive use projects. RCSD's wastewater also has been found to contain high TDS, exceeding their wastewater treatment plant influent levels. The recycled water from

this treatment plant is discharged into the Santa Ana River and used downstream. By providing better water quality to their water source, RCSD is able to better treat the wastewater and help alleviate water quality concerns for downstream users. This allows for better management of the local water supply.

In 2021, Western had to shut down New Clay and North Well (100% of local groundwater supplies) due to iron manganese. Until these wells come back online, Western's Murrieta customers are now entirely imported water supply dependent. There is only one connection to the imported supply, making a single-point of failure for the service area. The water production of these wells will provide a reliable local source and reduce dependency on expensive imported water when most needed.

What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated? Provide this quantity in acre-feet per year as the average annual benefit over ten years.

The proposed project will allow and average of 42,860 AF over 10 years to be better managed as a result of this project. Currently, there is no water being produced from the 3 existing wells (Project 2 and 3: RHWC and Western) due to water quality and other water sources have been required to offset that loss. In addition, a new well will bring more water into the service area. Therefore, the total project water supply will be better managed as a result. The project will also eliminate the imported water need by the same amount. By receiving this water from the project, additional water of 4,286 AFY is made available for regional conjunctive use. RHWC's additional water can provide conjunctive use water to Western's Riverside Retail and to Riverside Public Utilities. RCSD's additional water can provide conjunctive use to Jurupa Community Services District and to Western's Riverside Retail (through in-lieu exchange). Western's additional Murrieta local supply will reduce Metropolitan water.

What percentage of the total water supply does the water better managed represent? How was this estimate calculated?

The total water supplies this project will better manage is 38.1% (Table 2).

Provide a qualitative description of the degree/significance of anticipated water management benefits. Good groundwater management post project will provide a buffer against drought and climate change and contribute to reliable water supplies regardless of weather patterns. The significance of locally available reliable water supplies that buffer our community against drought are numerous. To name a few, the benefits include increased groundwater storage, increased groundwater quality for the community, conjunctive use opportunities, and less dependence on more expensive imported water supplies. This project will not only benefit each agency, but it will also benefit the region by reducing the demand for imported water and the energy used for its pumping, treatment, and delivery.

Will the project make new information available to water managers? If so, what is that information and how will it improve water management?

Yes, the project will make new and valuable information available to water managers. Collecting information about the groundwater will include water supply quality and quantity data. This includes, but not be limited to: groundwater elevation data; groundwater extraction data; total water use; change in groundwater storage; and sustainable yield that will provide valuable information for the management of the available water supply. This data is provided to watermaster and basin management agencies.

Wells There is one new well being built in this proposal. RCSD's well, Well 25 will build a new well. Additional well details can be found in Table 4.

FOA Questions	Project Well Details
Project	New Well #25 - RCSD
Estimated Capacity	1500 gpm and its based-on design specs
Estimated Water	1,500 AFY, based on 65% of design capacity
Extracted	
Physical Well	Depth = 170 feet
Descriptions	Diameter = 16-inch
	Casing description = 0.25" thickness; 95-slot louvers perforations
Groundwater	Project is allowed due to adjudicated Basin governed Judgment/Watermaster
Governance	(Western-San Bernardino Watermaster Annual Reports Western Municipal
	Water District, CA (wmwd.com)
Supply Use	Primary supply to help offset wells lost due to poor water quality during a drought
	and for conjunctive use.
Groundwater Basin	Riverside South; A large alluvial fill basin that is bounded by major faults and
	topographic barriers. Recharge to the basin occurs by the underflow from basins
	to the north, contributions from the Santa Ana River, and from percolation of
	surface water runoff from the surrounding uplands.
Adverse Impact in	Provisions in Judgement/Watermaster Indicate no Adverse Affects (Attachment 9
Basin?	Letter from Watermaster)
Basin Well Location	Figure 1
Aquifer Overdraft	No overdraft occurring in Basin. No land subsidence issues documented for the
	region.
Groundwater	Through compliance with the Judgment, all well water extracted from the basin is
Monitoring	reported to the watermaster annually via a well recordation process. Well
	production and groundwater levels for each well are reported.
Mitigation	For overdraft, the Judgment describes the replenishment obligation and the
	watermaster is legally bound to observe those requirements.
Active Recharge	Yes, judgment details recharge requirements
Program	

Table 4. Additional Project Information for Well 25



Figure 1. Riverside Basin Active Wells (Watermaster Report, Volume 4) and Historic Annual Well Production for RCSD

Figure 1 shows the various production and non-production wells located in the Riverside Basin. In 2021, RCSD had 9 wells operational in their service area. Figure 1 shows the annual production by well from 2011 to 2021. The annual average production for RCSD is 7,138 AFY. Compared to the average, 2021 pumped 1,974 AFY less due to water quality effects on the groundwater. This proposed project will provide an additional 1,500 AFY. This new well project would not negatively impact the basin as the new well project would bring RCSD back up to its average pumping capacity. Well 25 is located close to RCSD's Well 2. Well 25 would be located outside of the draw down radius of Well 2 and vice versa. It is anticipated Well 25 would be located approximately 400 feet from Well 2. It is anticipated the wells will not impede performance of the other. The close location is designed to not impact Well 2's production but does enable RCSD to leverage existing piping and treatment facilities already in place for Well 2. All of RCSD's nearby wells are approximately 170 feet in depth and pump to the 1066' Pressure Zone. TDH is around 400 feet. Approximate production rates are Well 2 - Q=900 gpm; Well 8 - Q = 1500 gpm; Well 1A - Q = 1500 gpm; Well 18 - Q = 1500 gpm; Well 4 - Q = 1100 gpm; Well 6 - Q = 2200 gpm.

1.5.2 Drought Planning and Preparedness

Provide a link to the applicable drought plan, and only attach relevant sections of the plan that are referenced in the application, as an appendix to your application.

To increase water supply reliability and proactively address the region's concern with drought, in 2021 Western embarked on the preparation of a regional Drought Contingency Plan (DCP), funded in part by the United States Bureau of Reclamation (Reclamation). The DCP will be adopted by Western's Board of Directors on July 20, 2022. The DCP document (draft and then final once adopted) can be found at www.wmwd.com/uwmp.

Explain how the applicable plan addresses drought.

Western's regional DCP addresses drought's impact on water supplies to ensure water supplies are available to meet current and future demands, and to manage and mitigate water shortage conditions.

These elements include supply and demand analysis, climate change vulnerability, and water shortage response actions. Western's DCP includes input and participation by multiple stakeholders. The DCP also considers climate change impacts to drought conditions and identify potential drought mitigation and response actions to build resilience to drought as exacerbated by climate change.

Does the drought plan contain drought focused elements including a system for drought monitoring, sector vulnerability assessments related to drought, prioritized mitigation actions, and response actions that correlate to different stages of drought?

The DCP was developed with technical and financial assistance through Reclamation's Drought Contingency Planning Program. The elements of Western's adopted DCP align with Reclamation's Drought Response Program Framework. The DCP is organized into 7 chapters: Chapter 1: Introduction - this section describes the elements of the DCP, outreach and engagement performed during the development of the DCP, and regional drought goals and guiding principles used to develop the DCP. Chapter 2: Background - this section briefly describes the regional water suppliers, along with key water resource supplies and regional water demand to provide a critical foundation for the DCP. Chapter 3: Regional Drought Monitoring Framework (DMF) - the regional DMF establishes a process for monitoring near- and long-term water availability and developing a framework for predicting the probability of future droughts or confirming an existing drought. Chapter 4: Vulnerability Assessment - the vulnerability assessment aims to improve the understanding of climate change impacts on future water demand in Western's wholesale service area and the sources of Western's water supplies during normal and drought periods. Chapter 5: Mitigation Actions - this section describes projects or programs that can be implemented ahead of a drought to lessen the future impacts of drought. Chapter 6: Response Actions - this section describes nearterm actions to address the demand side of the water balance in periods where water supply cannot meet demand. Chapter 7: Operational and Administrative Framework - the operational and administrative framework identifies who is responsible for implementing each element of the DCP and the process and schedule for monitoring, evaluating, and updating the DCP.

Explain whether the drought plan was developed with input from multiple stakeholders. Was the drought plan developed through a collaborative process?

Western 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 Figure 4 in Section 3.3 of this application. All retail water agencies in Western's service area are represented on the Drought Task Force. Both RHWC and RCSD are members of Western's Drought Task Force. 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 (www.wmwd.com/uwmp).

Does the drought plan include consideration of climate change impacts to water resources or drought? Yes, Western's DCP includes considerations of climate change impacts to water resources or drought. 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's wholesale service area and the sources of Western's water supplies during normal and drought periods. Describe how your proposed drought resiliency project is supported by an existing drought plan. All of the proposed projects are listed in Western's DCP in the Mitigations Chapter (starting pg 107). During one of Western'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'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.

Does the drought plan identify the proposed project as a potential mitigation or response action? Yes, all projects are listed in Western's DCP as a mitigation action (starting pg 107).

Does the proposed project implement a goal or need identified in the drought plan?

Within the framework of a DCP, the mitigation actions 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 meets the needs identified in the DCP.

How is the proposed project prioritized in the drought plan?

All projects in the DCP are evaluated based on evaluation criteria (Table 5-1, pg 70). The project meets the following criteria:

- Enhance Regional Water Supply Reliability and Resiliency = Meets 3 or more of the regional benefits
- Prioritize Social Equity = Benefits DAC and promotes environmental justice
- Regional Benefits = Regional Action
- Timing/Schedule = Short-term action (1-3 years)

1.5.3 Sustainability and Supplemental Benefits

1. Climate Change

In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?

The largest source of water for Western 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. Without this project, imported water supply will need to increase. If the Project maintains and increases local groundwater supply, the risk of earthquakes and wildfire become more locally centered, therefore system reliability increases and hazard risk reduces.

Does the proposed project include green or sustainable infrastructure to improve community climate resilience such as, but not limited to, reducing the urban heat island effect, lowering building energy demands, or reducing the energy needed to manage water?

Reduced demands on the Delta mean reduced diversions from that sensitive ecosystem, thereby helping to contribute to increased instream flows, enhanced ecosystem protection and improved water quality. Increasing local supplies also enhance Western's overall water supply reliability to continue meeting service area demands with available water resources. 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 4,268 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 13,811,248 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.

Does this infrastructure complement other green solutions being implemented throughout the region or watershed?

The proposed project would increase the amount of local supplies and increase the reliability of the local supplies. This increase in the local supply would offset the imported water supply. The conserved imported water would essentially remain at its source, in the Bay-Delta, to help maintain instream flows and improve ecosystem health. Improved stream flows also contribute to improving water quality conditions in the Bay-Delta by reducing concentrations of pollutants and helping to maintain optimal water temperatures. This is a green solution of the proposed project. Western's 2020 Urban Water Management Plan (www.wmwd.com/uwmp) describes approaches to reduce water from the Bay-Delta, so the proposed Project's green solution does align with the region's green solution to keep Delta water at the source.

Will the proposed project establish and use a renewable energy source? No, the proposed project will not establish and use a renewable energy source.

Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution? The proposed project seeks to mitigate water pollution through the treatment of PFAS, 1,2,3 TCP, nitrates, iron manganese and low levels of arsenic. 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. TCP is exclusively a man-made chlorinated hydrocarbon, typically found at industrial or hazardous waste sites. EPA has classified TCP as "likely to be carcinogenic to humans." Short-term exposure may cause eye and throat

irritation; long-term exposure has led to liver and kidney damage and reduced body weight in animal studies. The principle sources of nitrate contamination in water are fertilizers, animal waste and septic tanks. The water supplies most vulnerable to nitrate contamination are in agricultural areas and in well waters having a close or hydraulic relationship to septic tanks. Nitrate in drinking water can be responsible for a temporary blood disorder in infants called methemoglobinemia (blue baby syndrome). Iron or manganese bacteria is a common problem when there are elevated levels of iron or manganese in water. These bacteria lead to discolored water, a strange odor and taste, stained ceramic fixtures such as tubs, sinks and toilets, discolored clothes, towels and dishes, and reduced water pressure. Arsenic occurs naturally as a trace component in many rocks and sediments. Whether the arsenic is released from these geologic sources into groundwater depends on the chemical form of the arsenic, the geochemical conditions in the aquifer, and the biogeochemical processes that occur. Arsenic also can be released into groundwater as a result of human activities, such as mining, and from its various uses in industry, in animal feed, as a wood preservative, and as a pesticide. In drinking-water supplies, arsenic poses a problem because it is toxic at low levels and is a known carcinogen.

Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?

Carbon sequestering is not part of the proposed project. As described above, the proposed project will reduce greenhouse gas emissions through the water-energy nexus and the energy savings expected from increasing local supplies.

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?

The proposed Projects will be required to operate their wells under the adjudicated Watermaster. This includes reporting well production and well depths annually. Each agency is subject to the conservation and management requirements under the Watermaster. The Watermaster protects the groundwater supplies and its associated uses. In addition, there is a regional conjunctive use program that the proposed Project will support.

Does the proposed project contribute to climate change resiliency in other ways not described above? All climate change resiliency benefits have been discussed above.

2. Disadvantaged or Underserved Communities

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

This project will provide clean, safe, affordable local groundwater supply to a disadvantaged community. By treating the local groundwater will remove dangerous contaminants from the local water. Without the Project, more expensive imported water, which is also unreliable in a drought, will create an additional economic hardship for the local disadvantage community. 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. 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 CalEnvironScreen and DWR's DAC

map have been provided in Attachment 5. As shown in Table 3, approximately 64% 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 60 or higher on both pollution burden and population characteristics (CalEnvironScreen). Attachment 5 goes into more detail on what characteristics are impacting the CalEnviroScreen Score. The project's benefit area ranks high (over 50%) on Poverty, Education, Housing Burden, Ozone, Diesel particulate matter, traffic, and drinking water contaminates.

3. Tribal Benefits

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 through water quality improvements, new water supplies, or economic growth opportunities? Please describe these benefits.

The Project will not directly benefit any tribes. However, freeing up water from the SWP and Colorado Aqueduct by using local supplies through the proposed project will indirectly allow Reclamation facilities to better meet their responsibilities to tribes.

Does the proposed project support Reclamation's tribal trust responsibilities or a Reclamation activity with a Tribe? Please describe these benefits.

The Project does not support Reclamation's tribal trust responsibilities or Reclamation's activity with a Tribe.

4. Environmental Benefits

Does the project seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit to wildlife, fisheries, or habitats?

The Project will improve the reliability of groundwater for drinking water purposes and maximize the use of local water resources. As such, this Project 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. In addition, RCSD discharges their wastewater effluent into the Santa Ana River. With PFAS in the groundwater, RCSD is also having trouble with the contaminant levels of their wastewater. With decreased precipitation and surface flows anticipated due to climate change and long-term drought, the recycled water from RCSD is a vital component of the Santa Ana River. By improving water quality and providing water for wildlife habitat areas, RCSD is able to use the water for their community and then discharge the treated wastewater into the Santa Ana River, thus improving the ecological climate of the Santa Ana River.

Do these benefits support an endangered or threatened species? What are the types and quantities of environmental benefits provided, such as the types of species and the numbers benefited, acreage of habitat improved, restored, or protected, or the amount of additional stream flow added? How were these benefits calculated?

Reducing the amount of water Western 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. In addition, RCSD's Project, around 528 AFY will benefit endangered and threated species in the Santa Ana River, specifically the Santa Ana Sucker, listed as federally threatened in 2000, Santa Ana Speckled Dace, state-listed Species of Special Concern, Arroyo Chub, state-listed Species of Special Concern, and the Santa Ana River Woollystar. 528 AFY is calculated based on a conservative 40% indoor use calculation and an 88% return to sewer estimate (1500 AFY*.40*.88= 528 AFY).

Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status? Although assisting the habitat of endangered/threatened species, the project is not likely to improve the species status. However, with climate change threat on species status, the proposed project could defer the worsening of the species.

5. Other Benefits

Will the project assist States and water users in complying with interstate compacts? The proposed project provides a region-wide benefit for water sustainability. It does not involve interstate compacts.

Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?

All customer sectors will benefit directly from the proposed project. Local groundwater is more reliable and less expensive than imported water supply. Businesses and communities will benefit from a more resilient water supply, less expensive water rates, and provide water to persons or communities that lose or are threatened with the loss of contamination of water supplies.

Will the project benefit a larger initiative to address sustainability of water supplies? Yes, the project benefits a larger regional initiative of Drought Contingency planning, reducing reliance on the Delta, and a conjunctive use effort that all address sustainability of local water supplies.

1.5.4 Severity of Actual or Potential Drought Impacts to be addressed by the Project

What are the ongoing or potential drought impacts to specific sectors in the project area if no action is taken (e.g., impacts to agriculture, environment, hydropower, recreation and tourism, forestry), and how severe are those impacts?

Water Supply Shortage. Without the proposed project, and projects like it, Western and its retail and wholesale customers will experience growing challenges in fully meeting demands and maintaining safe water quality, especially under drought conditions when imported water is less available. The majority (about 60%) of Western's supplies comes from imported water purchased from Metropolitan. 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. Western Riverside County continues to experience dry weather following the third driest year on

record in 2021. With the driest January and February on record, this dry 2022 year needs water use efficiency and conservation more than ever. Coupled with current drought conditions and a 5% SWP allocation, the most recent California Executive Order from Governor Newsom, N-7-22, calls on local water suppliers to shift to "Level 2" of their individual Water Shortage Contingency Plans, which involves taking preparatory actions for water shortage levels of up to 20 percent. This in turn increased the need for local water supplies. Without treatment to local supply, Western's service area will either need more imported water or will have supply shortages. Groundwater is the primary local source of Western's water supply, but those resources are also becoming increasingly stressed by drought. Over the last several years, the project partners have experienced water quality concerns over their groundwater that has caused Western, RHWC, and RCSD to shut down some of their local groundwater production.

Increased Risk of Wildfires. Southern California in December 2017 experienced the largest wildfire in the region (Thomas Fire) and the second largest wildfire ever recorded in the history of California (largest is the Mendocino Complex Fire in 2018) and has recorded significant wildfires each decade since the mid-20th century. The record-setting drought conditions have dried out much of the terrain in all of Riverside County. In extended drought conditions, fire behavior can become more extreme because vegetation that has been dried burn quicker.

Economic Impacts. Potential supply shortages under drought conditions could result in substantial economic burdens to Western, RHWC, and RCSD's customers due to each agency's need to secure and pay higher costs for additional supplies. Since local supplies have been shut down due to water quality concerns, each agency has needed to get supplemental water from imported sources like Metropolitan, which can cost 40-50% more than local water. For Project 1, RHWC cost to purchase additional water is about 100% higher than their local supply. For Project 2, their cost of local supply costs approximately \$600/AF compared to Metropolitan's \$1143/AF. For Project 3, the local supplies cost approximately \$300/AF compared to the imported connection cost of \$1,450/AF. Higher water supply costs have been, and in the future will be, passed on to the agency's customers if treatment 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. In addition, wildfires also pose economic threats to urban residents, like those in the Project Area. An average of 500 homes are destroyed throughout the state each year. A disastrous consequence of water scarcity is the reduced ability to contain and suppress fires, which could intensify the already-extreme fire risk.

Environmental Impacts. Drought conditions can impact fish and wildlife viability, reduce quality and quantity of habitat and reduce resiliency to disease or other changes in the environment. This project will contribute to improved environmental conditions, in part because the poor-quality groundwater gets released into the Santa Ana River as wastewater effluent. In addition, the Santa Ana River is home to threatened species identified earlier. It is anticipated that improved groundwater quality entering the distribution system would contribute to improved surface water conditions. As such, the project could contribute to locally improved environmental conditions, especially during droughts when surface waters are most impacted.

Industry Impacts. Drought conditions can increase competition over supplies and require necessary, sometimes drastic, water reduction measures in order to stretch available supplies. For example, through 2016, most agencies in Riverside County had to reach as much as 25 to 35% water use reductions. In 2022, the Governor's order N-7-22 asked all agencies to reduce by 20%. In addition, the State Water Resources Control Board will be asking for the statewide restrictions on irrigation for non-functional turf. Parts of Metropolitan, currently SWP dependent, are asked to only water 1 day a week. Restrictions on irrigation practices can impact agriculture and nursery industries, as well as limit, the green space for disadvantaged communities. By improving water supply reliability and drought resiliency, the project

partners can reduce the likelihood of water-related conflicts and the need for implementing strict water use reduction measures.

Public Health Impacts. The extended drought conditions in the region make long-term water supply planning critical. Western, RHWC, and RCSD's production wells, when operational, provide an additional high-quality drinking water resource. There is a public health concern associated with the water pollution of PFAS, 1,2,3 TCP, nitrates, and iron manganese. Without proper treatment, these production wells that discharge directly to the water-distribution system cannot be used. The inability to use these wells reduces the number of available production wells to use in conjunction with treated imported water and reduces operational flexibility. The ability to use the entire well network provides additional system capacity to help to offset a decrease in available imported supplies should that occur in the future due to disruption or extended drought. The proposed project will address immediate impacts on human health and safety, by providing and improving availability of water and will provide water to persons or communities that lose or are threatened with the loss or contamination of water supplies.

Describe recent, existing, or potential drought conditions in the project area. Is the project in an area that is currently suffering from drought or which Describe any projected increases to the severity or duration of drought in the project area resulting from changes to water supply availability and climate change. Former President Obama issued a Memorandum and Action Plan to communicate impacts of drought. The national Memorandum specifically names California water basins suffering from, or at-risk for drought. A 2015 study that analyzed multiple levels of atmospheric pressure concluded that climate change worsened California's dry season by up to 20%. Experts predict climate change is expected to increase the frequency, intensity, and duration of droughts. Scientists are comparing Southern California's current drought conditions to similar mega-droughts in the region that occurred 1,000 years ago. Severe water shortages caused major societal disturbances, including human mortality. They warn that drought conditions will be as or more severe than the mega-droughts of the past and cannot be ignored. Among the climate change impacts projected for the region are droughts of higher frequency, longer duration and greater intensity. These conditions are in part due to projected increase in average temperatures and decrease in average precipitation. These findings are discussed in Reclamation's 2013 Climate Change Analysis for the Santa Ana River Watershed (Attachment 10). and in Western's DCP climate change vulnerability assessment which is also summarized in Western's 2020 UWMP. While the drought that began around 2011 was among the most intense and long-lasting in the recent past, based on historic occurrences (Figure 2) and climate change projections, these conditions are highly likely to impact the project area again in the near future, with increasing frequency and more extreme changes. In 2021 and 2022, snowpack runoff was less than expected due to the dry soils. Runoff went into the vegetation instead of into the rivers and conveyance systems. This makes intentional recharge a mitigation approach that is resilient to how climate change impacts the water cycle. Western's service area and the project site are located within western Riverside County, which has experienced some of the most severe and prolonged drought conditions, both, statewide and nationwide. Starting in 2011 through the end of 2019, the County experienced abnormally dry conditions due to extreme drought with the majority of the County experiencing at least severe drought for most of that period. The western portion of the County experienced the most prolonged drought and generally most severe conditions during that timeframe. In 2021, drought came back to the area (Figure 2). During this timeframe, SWP deliveries were substantially reduced, reaching lowest levels of 5% of allocations in 2014. While deliveries reached 75% again in 2019, the final 2021 allocation was back down to 5%.

Due to water quality concerns, local supplies have been impacted in Western, RHWC, and RCSD (Figure 3 and 1). RHWC's well was shut down after the last drought due to nitrates level averaging 11 MCL, over the maximum contaminant level. RCSD's local production went from a long-term average of 7138 AFY to an

average of 5080 AFY since 2018. Production was reduced due to PFAS contaminants. Due to iron manganese, Western's wells were shut down in October 2021, the same month Riverside County was added into a statewide declared drought emergency. RHWC and Western's project areas have access to additional water supply. Western's Murrieta service area has access to Metropolitan imported water supply. RHWC has access to emergency water from City of San Bernardino, Colton, and Rialto. RCSD does not have access to another water source. RCSD was in the process to build an interconnection to imported water supply, but Metropolitan's Board of Directors only approved a one-year term for the agreement. This term does not justify the cost for the construction of the physical intertie. Drought resiliency for the Project Area can best be provided by becoming less reliant upon imported water. By treating groundwater and increasing its groundwater pumping capacity, the proposed Project will accomplish exactly that: allow the Project Area to be less reliant on import water. Without the Project, Western's service area will continue to contribute to the demands on the limited and crucial supply of imported water that has already been severely compromised by drought in California, from which much of the region has not yet fully recovered.









1.5.5 Project Implementation

Describe the implementation plan of the proposed project.

The Project will consist of two stages: bidding and construction. Design for the Project is currently in progress and outside the scope of this Project. Design for Project 1 and 3 is anticipated to be complete by prior to March 2023. Design for Project 2 will begin May 2024. Based on the Notice of Funding Announcement, award notification is anticipated to be in fall 2022 with an agreement signed before March 31, 2023, with anticipated project completion date of March 31, 2026. Assuming a start date of April 1, 2023, the Project is anticipated to be completed by March 2026. Each agency's individual schedule is provided in Attachment 6. The project will involve the construction of one well (drilling and equipping) and the installation of three, small-scale well treatment facilities, an ion exchange, GAC/Ion exchange, and green sand filtration.

Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

The overall Project schedule is provided in Table 5.

Table 5. Project Schedule

	Task	Start Date	End Date
1	Project Management	March 2023	March 2026
2	CEQA / NEPA Environmental	August 2022	December 2023
3	Bidding	March 2023	August 2024
4	Construction	March 2023	March 2026

Describe any permits that will be required, along with the process for obtaining such permits. RCSD will need to get State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) permit. The application gets started before the well is drilled and the application is completed after the well is installed. All projects are located on each agency's property, so there is minimal permitting required. Western would also need the following: a DDW Permit Amendment, SWRCB Stormwater Construction General Permit Coverage, and a Southern California Air Quality Management District (SCAQMD) Permit -Stationary Emergency Generator.

Identify and describe any engineering or design work performed specifically in support of the proposed project.

Engineering and design work will be completed prior to the start of this Project and is outside the scope of this request for funds.

Describe any new policies or administrative actions required to implement the project If awarded the funding opportunity, the three agencies' Board of Directors will sign a cost-sharing agreement.

1.5.6 Nexus to Reclamation

Does the applicant have a water service, repayment, or O&M contract with Reclamation? As a Metropolitan Water District of Southern California member agency, Western receives water from Reclamation's Colorado River Project. The Project is neither on Reclamation lands nor does it involve Reclamation facilities. The Project will not contribute water to a basin where a Reclamation project is located. Western's application for a WaterSMART Water and Energy Efficiency Grant for fiscal year 2020 was accepted for a project upgrading customers to "smart" meters and adding radio towers for collection of the meter reads. Western's application for a WaterSMART Small-Scale Water Efficiency Grant for fiscal year 2021 was accepted for a project upgrading Western's SCADA system.

If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?

This is not a Reclamation contract. However, approximately 60 percent of Western's imported water purchased from Metropolitan comes from the Colorado River via the Colorado River Aqueduct and from the State Water Project from the Sacramento-San Joaquin Delta.

Will the proposed work benefit a Reclamation project area or activity?

The proposed project will be implemented within Western's service area, in and around western Riverside County. This region is within Reclamation's Lower Colorado Region and is served by Reclamation's Boulder Canyon Project. The proposed project is not located on Reclamation project lands. The proposed project will reduce imported demands for water in southern California. This in turn will reduce demands for both Colorado River Water (Reclamation's Boulder Canyon Project) and Sacramento-San Joaquin Delta water (Reclamation's Central Valley Project) and help to implement drought resiliency measures in the region.

Is the applicant a Tribe? The applicant is not a Tribe.

2. Project Budget

2.1 Funding Plan and Letters of Commitment

Table 6 shows the funding distribution by project. There is \$5,473,620 of non-federal cost share for this project.

Project 1 – RHWC provided a Letter of Commitment for their agency's project (Attachment 2). Their nonfederal cost share is available July 1, 2022 and is obtained through their three-year rate increase that started on February 2020. There are no prior designated commitments or constraints on use of the funding for the proposed well treatment facilities.

Project 2 – RCSD provided a Letter of Commitment for their agency's project (Attachment 3). Their nonfederal cost share is currently available and is being stored in RCSD's Water Fund Reserves. These reserves have been generated and will continue to be augmented with ongoing collection of water capacity fees, and from revenues generated by water rates. There are no prior designated commitments or constraints on use of the funding for the proposed well and treatment facilities.

Project 3 – Western's Board of Directors signed a Resolution for Western's portion of the Project (Attachment 1). The non-federal share of Project costs will come from Western's Capital Improvement Facilities Plan (CIFP) funds. The non-federal cost share is available July 1, 2022.

Table 6.	Total Project Costs	by Sub-project		
Project	Total Project	Total Grant	Total Non Federal Share	% Non Federal
Project 1- RHWC	\$3,058,620	\$1,529,310	\$1,529,310	50%
Project 2- RCSD	\$2,915,000	\$1,457,500	\$1,457,500	50%
Project 3- Western	\$4,500,000	\$2,013,190	\$2,486,810	55.2%
Total	\$10,473,620	\$5,000,000	\$5,473,620	52.2%

The budget proposal does not include design or other project costs that will be incurred prior to Project award.

2.2 Budget Proposal

Table 7 Total Project Cost Summary

Source	Amount
Costs to be reimbursed with the requested Federal funding	\$5,000,000
Costs to be paid by the applicant	\$2,486,810
Value of the third-party contributions	\$2,986,810
Total Project Cost	\$10,473,620

Table 8 Non-Federal and Federal Funding Sources Summary

Funding Sources	Amount
Non-Federal Entities	
1. Riverside Highland Water Company	\$1,529,310
2. Rubidoux Community Services District	\$1,457,500
3. Western Municipal Water District	\$2,486,810
Non-Federal Subtotal	\$5,473,620
Requested Reclamation Funding	\$5,000,000

Table 9. Budget Proposal

Budget Item Description	Comp	outation	Quantity Type	Total Coat			
Budget item Description	\$/Unit	Quantity	Quantity Type	TOTALOSI			
Salaries and Wages							
Not Applicable							
Fringe Benefits							
Not Applicable							
Travel							
Not Applicable							
Equipment							
Not Applicable							
Supplies and Materials							
Not Applicable							
Contractual/Construction							
Project 1- RHWC Contractor	Engineer's E	Estimate		\$3,058,620			
Project 2- RCSD Contractor	Recent Proje	ect with Similar	Scope	\$2,915,000			
Project 3- Western Contractor	Engineer's E	stimate		\$4,500,000			
Other							
Not Applicable							
Tot	\$10,473,620						
Indirect Costs							
Not Applicable							
Total Estimated Project Costs \$							

2.3 Budget Narrative

Salaries, Wages, and Fringe Benefits

Project implementation will primarily be conducted by specialized contractors whose costs are further detailed below. The participating agencies will not seek reimbursement for staff time spent on the Project, such as project management activities, as it is considered to fall under normal staff activity. Fringe Benefits are not included in the overall project budget.

Travel

Each agency does anticipate visiting their project sites periodically during construction. Travel the project sites are considered a part of normal staff activity and no reimbursement of match for staff travel is being sought. It is not known whether consultant costs for travel may be required. These costs are accounted for under contractual costs.

Equipment

The purchase of the treatment systems and any related equipment and piping needs will be included in the construction contract and related costs are accounted for under the contractual cost estimate.

Materials, and Supplies

No materials or supplies are anticipated to be purchased for this Project.

Contractual

Contractual/Construction work to be performed for this Project includes the drilling and equipping of one well, the purchase and installation of the three small-scale well treatment facilities (Ion exchange, GAC/Ion Exchange, and Green Sand), associated pipeline, and construction management. Contractual work will include site preparation and concrete work.

All estimates are considered fair and reasonable.

Third-Party In-Kind Contributions

Each agency will be responsible for overseeing construction of their project and providing their cost-share contributions.

Environmental and Regulatory Compliance Costs

Environmental and Regulatory Costs are considered outside the scope of the Project.

Other Expenses

No other expenses are anticipated that are not captured under the above categories.

Indirect Costs

No other expenses are anticipated that are not captured under the above categories.

3. Other Application Elements

3.1 Environmental and Cultural Resources Compliance

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

The Project is not expected to impact the surrounding environment other than dust and noise during construction. The selected contractors will be required to follow City ordinances to reduced impact on the community. For the well drilling and construction, wellhead sound attenuation will be considered in the scope of the construction (Project 2).

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

There are no known species listed as Federal threatened or endangered species in the Project area.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

There are no wetlands or surface waters inside the Project boundaries.

When was the water delivery system constructed?

Western's Murrieta Service area was formed in 1963. Western merged with Murrieta's water utility agency in 2005 and Western began serving the 6.5 square mile area of western Murrieta. RHWC is a mutual water company formed in 1898 for irrigation purposes. Gradually, transferred to a domestic system with most of the construction in the past 60 years. RCSD was formed in 1952 as California's first special community services district. The District provides water, sewer, trash, fire protection, weed abatement, and street light services for a 7.5 square mile area in western Riverside County and now fully within the City of Jurupa Valley since its incorporation July 1, 2011. RCSD serves a population of approximately 35,000 through 6,700 meters. Governance of RCSD is through five elected at large board members who serve four-year terms. RHWD and RCSD are retail agencies within Western's District.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

The proposed Project will not result in any modifications of individual features of an irrigation system such as headgates, canals, or flumes.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

There are no buildings, structures, or features in the proposed Project area that are listed or eligible for listing on the National Register of Historic Places.

Are there any known archeological sites in the proposed project area?

There are no know archeological sites in the proposed Project area.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

The proposed project will have a highly positive effect on all residents of Western Riverside County including low income, disadvantaged and minority populations. The project will produce a new source of safe drinking water locally, decrease dependence on water imported from the State Water Project (SWP) and Colorado Aqueduct, and replace lost groundwater production.

Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

No, the Project will not have any impacts on sacred sites or tribal lands.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

The proposed Project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species.

3.2 Required Permits or Approvals

All work will be completed in accordance with the appropriate Cities building requirements and the California Department of Water Resources (DWR). In addition, the following permits could be required and would be provided for each project. These permits could include:

- City specific Building Permit
- California Division of Drinking Water (DDW) permit
- Domestic Water Supply Permit Amendment
- California Dept. Of Public Health (CDPH) and County of Riverside Department of Public
- State of California Regional Water Quality Control Board
- State Water Resources Control Board (SWRCB)
 - o Stormwater Construction General Permit Coverage
- Southern California Air Quality Management District (SCAQMD) Permit Stationary Emergency Generator.

3.3 Relevant Sections of Existing Drought Contingency Plan

To increase water supply reliability and proactively address the region's concern with drought, in 2021 Western embarked on the preparation of a regional Drought Contingency Plan (DCP), funded in part by the United States Bureau of Reclamation (Reclamation). The DCP will be adopted by Western's Board of

Directors on July 20, 2022. The DCP document (draft and then final once adopted) can be found at www.wmwd.com/uwmp.

The DCP was developed with technical and financial assistance through Reclamation's Drought Contingency Planning Program. The elements of Western's adopted DCP align with Reclamation's Drought Response Program Framework.

Western implemented a tiered engagement plan that included local, regional, state and national participation, including the general public and Western's own Board of Directors. Western 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 Figure 4. All retail water agencies in Western's service area are represented on the Drought Task Force. Both RHWC and RCSD are members of Western's Drought Task Force.

Figure 4. Drought Task Force Member Organizations

DROUGHT TASK FORCE MEMBER ORGANIZATIONS

ENVIRONMENTAL AND

CONSERVATION GROUP Inland Empire Resource Altman Plans District March Air Reserve Base CONSERVATION GROUPS RETAIL: CUSTOMER STAKEHOLDER

RESEARCH

Water Resources Institute

LOCAL GOVERNMENT

City of Murrieta District

TRIBAL REPRESENTATIVES Pechanga Tribal Government

Inland Empire Waterkeeper Vons/Kroger Riverside-Corona Resource Woodcrest MAC Conservation District Woodcrest MAC/Riverside County Santa Ana Watershed Project
 ENVIRONMENT AND SOCIAL JUSTICE
 WATER AGENCY: REGIONAL

 Center for Community Action and Environmental Justice
 Eastern Municipal Water District Metropolitan Water District of Southern California

 REGIONAL GOVERNMENT (6%)
 San Bernardino Valley Municipal Water District

 Riverside County Flood Control and Water Conservation
 Box Springs Mutor
 Box Springs Mutual Water Company Riverside County Flood Control and Water Conservation District Western Riverside Council of Governments RESEARCH Box Springs Mutual Water Comp City of Corona City of Norco Elsinore Valley Municipal Water District Jurupa Community Services District University of California, Riverside Rancho California Water District Water Resources Institute Riverside Highland Water Company Riverside Public Utilities Rubidoux Community Services

Temescal Valley Water District

Western formed a Drought Task Force that includes diverse perspectives to inform development of the UWMP and the DCP that will be completed in 2022

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.

In November 2021, the Drought Task Force was sent a survey that asked each organization to respond to the following question:

What projects or programs does your organization have in development that would potentially mitigate drought impacts in the future?

For the purposes of this regional DCP, the respondents were asked to categorize their responses into one of the following four categories:

- 1. Supply/treatment: 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
- 2. Interties: Construction of new physical connections between agencies that would allow transfer of water supply between and among Drought Task Force members
- 3. Storage: Expansion of water storage capacity
- 4. Operations and Management: Changes in water management practices that do not require new or modified infrastructure
- 5. Other: Other projects or programs

The survey asked each organization to include as many key identifiers as possible for each mitigation action, including, but not limited to, the following:

- Project stage (planning, design, construction)
- Identification of regional partners
- Implementation timeline/schedule (short-, mid-, and long-term action)
- Estimated costs (capital and operation and maintenance [O&M])
- Estimated annual water savings or estimation of the supplemental supplies created as a result of implementation

The survey also asked each organization to assess whether the mitigation action has the potential to provide any of the following regional benefits:

- 1. Enhancing Regional Water Supply Reliability and Resiliency
- 1.1 Increasing local supplies
- 1.2 Promoting water conservation
- 1.3 Enhancing water supply reliability
- 1.4 Enhancing operational flexibility
- 1.5 Decreasing reliance on imported water supplies
- 2. Prioritizing Social Equity
- 2.1 Benefiting disadvantaged communities (DAC)
- 2.2 Promoting environmental justice

The survey responses were discussed with the Drought Task Force during Workshop 4 on December 16, 2021, which also provided the opportunity to solicit input from other organizations that were unable to respond by survey. Additional mitigation actions were identified from agency responses to a Metropolitan climate change survey conducted in early 2022. Though unrelated to the scope of this DCP, the Metropolitan survey served a similar purpose of identifying regional projects to address water supply reliability and resiliency. From the survey responses, workshop input, and information from the Metropolitan

climate change survey, a total of 65 projects, programs, and strategies were identified for the DCP (Figure 5). A summary of these mitigation actions and their key identifiers are provided in Figure 6.



Figure 5. DCP Mitigation Actions

				Potential Benefits Evaluation										
Project Number	Agency	Type of Mitigation Action	Project Name	Increase Local Supply	Water Conservation	Water Supply Reliability	Operational Flexibility	Decrease Reliance on Imported Supplies	Benefit DACs	Environmental Justice	Regional Water Supply Reliability and Resiliency	Prioritizing Social Equity	Regional Benefits	Timing/ Schedule
13	WMWD	Supply/ Treatment	Murrieta Wellhead Treatment	x	x	x	x	x	x		Meets 3 or more of the regional benefits	Benefits DAC or promotes environmental justice	Single agency action	Short-term action
54	RHWC	Supply/ Treatment	Well RN #6 Nitrate Removal	х		x	х	x	x		Meets 3 or more of the regional benefits	Benefits DAC or promotes environmental justice	Single agency action	Short-term action
64	RCSD	Supply/ Treatment	RCSD New Well and Treatment	х	x	x	х	x	x	Х	Meets 3 or more of the regional benefits	Benefits DAC and promotes environmental justice	Action involves multiple adjacent agencies	Short-term action

Figure 6. Identification of Potential Mitigation Actions and Their Key Identifiers

3.4 Letters of Support

Letters of Partnership from the following agencies are included in Attachment 2 and 3:

- Riverside Highland Water Company
- Rubidoux Community Services District

Letter of Support from the following agency is included in Attachment 7.

• Santa Ana Watershed Project Authority (SAWPA)

3.5 Official Resolution

An official resolution authorizing Western'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 May 18, 2022.

3.6 Overlap or Duplication of Efforts Statement

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 is partially duplicative of any proposal or project that has been or will be submitted for funding consideration to any other potential funding source. Project 1- RHWC's project was submitted to

California's Prop 1 Round 2 Integrated Regional Watershed Management (IRWMP) project application. The application was submitted prior to March 25, 2022. This is a non-federal grant funding opportunity, and the grant request was for 50% of the total construction project cost. If both grants were to be awarded, the total grant amount would equal the total project costs, there will be no duplicative costs. The Prop 1 IRWMP project selection is estimated to occur in Fall 2022.

3.7 Conflict of Interest Disclosure

There is no actual or potential conflict of interest at the time of submission.

3.8 Uniform Audit Reporting Statement

Western did not have to submit a Single Audit Report for Fiscal Year 2020-2021. RHWC did not have to submit a Single Audit Report for Fiscal Year 2020-2021. RCSD did not have to submit a Single Audit Report for Fiscal Year 2020-2021.

3.9 Certification of Lobbying

This application requests more than \$100,000 in Federal funds, therefore the Authorized Official's signature on the appropriate SF-424, Application for Federal Assistance form also represents the entity's certification of the statements in 43 CFR Part 18, Appendix A.

RESOLUTION 3217

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 DROUGHT RESILIENCY 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 western Riverside County region has been experiencing water quality issues in the local groundwater supply; and

WHEREAS, through the development of Western's Drought Contingency Plan, several well treatment projects were identified by various agencies; and

WHEREAS, the United States Bureau of Reclamation (USBR) under the WaterSMART Drought Resiliency (WaterSMART) Program will make funding available to qualifying applicants; and

WHEREAS, Western's Board of Directors, in partnership with Rubidoux Community Services District and Riverside Highland Water Company, has identified a project that exemplifies the objectives of the WaterSMART program in its Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project (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, Rubidoux Community Services District and Riverside Highland Water Company agree to let Western be the lead applicant on the grant application; and

WHEREAS, Western, in partnership with Rubidoux Community Services District and Riverside Highland Water Company, agree to the administration and cost requirements of the 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;

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;

3) This resolution officially becomes a component part of Western's grant application that will be submitted to the USBR before June 15, 2022;

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

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

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

ADOPTED, this 18th day of May, 2022.

Junto

_BRENDA DENNSTED President

May 18, 2022

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of Resolution 3217 adopted by the Board of Directors of Western Municipal Water District of Riverside County at its regular meeting held May 18, 2022.

MIKE GARDNER Secretary-Treasurer



12374 Michigan Street • Grand Terrace, CA 92313-5602 • (909) 825-4128 • FAX (909) 825-1715

Dear Mr. Miller,

Western Municipal Water District (Western) is applying to the United States Bureau of Reclamation (USBR)'s WaterSMART (Sustain and Manage America's Resources for Tomorrow) Drought Resiliency Program. This Funding Opportunity supports Drought Resiliency Projects that have been prioritized through planning efforts led by the applicant. These projects are generally in the final design stage. USBR will provide funding for projects that can increase water management flexibility- making the region's water supply more resilient.

Western, on behalf of Riverside Highland Water Company, is applying to the Drought Resiliency Program to implement a joint project, the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project (Project).

Riverside Highland Water Company's portion of the project is the purchase and installation of a Tonka Ion Exchange Unit for nitrate removal for a water well with a nitrate level above the State of California Maximum Contaminate Level. The project will consist of the ion exchange unit, a prefabricated metal building to house the unit, and the piping to deliver the water from the well to the unit and back to our distribution system.

Riverside Highland Water Company's portion of the project is estimated at \$3,058,620 (total project cost). If the grant application is awarded, Riverside Highland Water Company will receive \$1,529,310 in grant funds for the construction of the project described above.

The Riverside Highland Water Company understands that, if awarded, the grant is reimbursable. Riverside Highland Water Company commits to paying for their total project costs and Riverside Highland Water Company's funding commitment match is \$1,529,310. The funding commitment is available on July 1, 2022. Riverside Highland Water Company implemented a three-year rate increase commencing in February of 2020 to pay for the treatment facility.

Riverside Highland Water Company is looking to start this project as soon as possible and has already had an engineer perform a feasibility study. Riverside Highland Water Company increased the water rates two and a half years ago to raise the money for our portion of the cost share.

Riverside Highland Water Company's cost-share contributions meet the applicable administrative and cost principles criteria established in 2 Code of Federal Regulations (CFR) Part 200, available at <u>www.ccfr.gov</u>.

Riverside Highland Water Company is acting in partnership with Western Municipal Water District and agree to the submittal and content of the proposal. Riverside Highland Water Company agrees to Western submitting the proposal on behalf of our agency.

As Western's partner on this project, we, Riverside Highland Water Company can attest to the benefits and drought resiliency this project will bring to the region. We are proud to support Western's WaterSMART grant application for the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project.

Very Respectfully,

Don Hough Riverside Highland Water Company

Rubidoux Community Services District



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

Re: Letter of Commitment and Partnership for Western Municipal Water District's Bureau of Reclamation WaterSMART: Drought Resiliency Project Application for the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project.

Dear Mr. Miller,

Western Municipal Water District (Western) is applying to the United States Bureau of Reclamation (USBR)'s WaterSMART (Sustain and Manage America's Resources for Tomorrow) Drought Resiliency Program. This Funding Opportunity supports Drought Resiliency Projects that have been prioritized through planning efforts led by the applicant. These projects are generally in the final design stage. USBR will provide funding for projects that can increase water management flexibility making the region's water supply more resilient.

Western, on behalf of Rubidoux Community Services District (Rubidoux) is applying to the Drought Resiliency Program to implement a joint project, the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project (Project).

As part of this overall Project, Rubidoux proposes the installation of a new potable water well with treatment processes. The well and treatment processes is anticipated to produce 1,500 acre-feet/year of new potable water for delivery to Rubidoux's customers. This new facility will be built on property owned by Rubidoux and leverage use of piping and treatment equipment at this location for an existing potable well.

Street Lights

Rubidoux's portion of the Project is estimated at \$2,915,000 (total project cost). If the grant application is awarded, Rubidoux will receive \$1,457,500; (50%) in grant funds for the construction of the new well and treatment facilities briefly described above.

Rubidoux understands that, if awarded, the grant is reimbursable. Rubidoux commits to paying for their total project costs and their funding commitment match is \$1,457,500. The funding commitment is available now in Rubidoux's Water Fund reserves. These reserves have been generated and will continue to be augmented with ongoing collection of water capacity fees, and from revenues generated by water rates. There are no prior designated commitments or constraints on use of the funding for the proposed well and treatment facilities. Rubidoux's cost-share contributions meet the applicable administrative and cost principles criteria established in 2 Code of Federal Regulations (CFR) Part 200, available at www.ccfr.gov.

Rubidoux is acting in partnership with Western Municipal Water District and agree to the submittal and content of the proposal. Rubidoux agrees to Western submitting the proposal on behalf of our agency. As Western's partner on this Project, we, Rubidoux can attest to the benefits and drought resiliency this Project will bring to the region.

Rubidoux is proud to support Western's WaterSMART grant application for the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project.

Very Respectfully,

M Sim

JEFFREY D. SIMS, P. E. General Manager

Control on and Water Quality Treatment

Securing Your Water Supply



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

Projects 1 and 2



Project 3



Population Characteristics

Projects 1 and 2



Project 3

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Event State Some Some Pk2.5 Disel Particulate Matter Disel Chargen State Totale Releases from Faelities Tatel Releases Some State Tated State	Overall CalEnviroScreen scores are calculated from the scores for two groups of indicators: Pollution Burden and Population Characteristics. This map shows the combined Population Characteristics scores: which is made up of indicators from the Sensitive Populations and Socioescnomic Factors components of the calEnviroScreen model. Population Characteristics represent physiological traits, health status, or community characteristics that can result in increased vulnerability to pollution. To explore this map, scom to a location or type an address in the saeth Suc. Click on a census tract to learn more about the indicator data. All indicator maps can be viewed by clicking on the indicators on the left. A report with detailed description of indicators and methodology and downloadable results are available at the CalEnviroScreen 4.0 website.	CalEnviroScreen 4.0 Indicator Maps	Results Map C Legend C CalEnviroScreen 4.0 Population Characteristics > 00 - 100 > 90 - 100 > 90 - 90 > 90 - 90 > 00 - 100 > 90 - 90 > 00 - 100 > 90 - 90 > 90 - 90 > 90 - 90 > 90 - 100 > 90 - 9
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Figure 1. Population Burden Census Tract Analysis

	RHWC- Census Tract 6065042300	RCSD- Census Tract 6065040204	Western – Census Tract 6065049800
Population Characteristics Percentile:	82	91	53
Asthma:	71	66	40
Low Birth Weight:	68	70	24
Cardiovascular Disease:	74	77	94
Education:	74	96	49
Linguistic Isolation:	64	79	31
Poverty:	73	85	55
Unemployment:	82	88	46
Housing Burden:	66	83	75

Note: Main Service Area Census Tract within Each Agency's Service Area

Pollution Burden

Projects 1 and 2

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Projects 3

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Figure 2. Pollution Burden Census Tract Analysis

Note: Main Service Area Census Tract within Each Agency's Service Area

	RHWC- Census Tract 6065042300	RCSD- Census Tract 6065040204	Western – Census Tract 6065049800
Pollution Burden:	94	91	62
Population:	8827	4160	4621
CalEnviroScreen 4.0 Percentile	94	96	60
Ozone:	98	97	74
PM 2.5:	85	94	38
Diesel PM:	70	97	58
Pesticides:	0	0	47
Toxic Releases:	71	75	13
Traffic:	61	77	94
Drinking Water Contaminants:	87	62	39
Lead in Housing:	54	94	35
Cleanups:	78	41	8
Groundwater Threats:	55	48	0
Hazardous Waste:	85	2	72
Impaired Water:	12	33	72
Solid Waste:	53	38	53

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).

Projects 1 and 2



Projects 3



Project Implementation

Project 1- RHWC

	Task	Start Date	End Date
1	Project Management	March 2023	March 2026
2	CEQA / NEPA Environmental	August 2022	December 2023
3	Bidding	March 2023	August 2024
4	Construction	March 2023	March 2026

Project 2- RCSD

	Task	Start Date	End Date
1	Project Management	March 2023	March 2026
2	CEQA / NEPA Environmental	May 2024	December 2024
3	Bidding	January 2025	March 2025
4	Construction	March 2025	March 2026

Project 3- Western

	Task	Start Date	End Date
1	Project Management	March 2023	March 2026
2	CEQA / NEPA Environmental	March 2023	December 2023
3	Bidding	March 2024	August 2024
4	Construction	August 2024	March 2026

Santa Ana Watershed Project Authority



June 6, 2022

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

Re: Letter of Support for Western Municipal Water District's Bureau of Reclamation WaterSMART: Drought Resiliency Project Application for the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project

Dear Mr. Miller:

The Santa Ana Watershed Project Authority (SAWPA), a public agency that develops and maintains regional plans, programs, and projects protecting the Santa Ana River basin water resources, is writing this letter of support for Western Municipal Water District (Western) application to the United States Bureau of Reclamation (USBR)'s WaterSMART Drought Resiliency Program for Western's the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project (Project).

This Funding Opportunity supports Drought Resiliency Projects that have been prioritized through planning efforts led by the applicant. These projects are generally in the final design stage. USBR will provide funding for projects that can increase water management flexibility- making the region's water supply more resilient. The WaterSMART Drought Response Program supports a proactive approach to drought by providing financial assistance to water managers to develop and update comprehensive drought plans (Drought Contingency Planning) and implement projects that will build long-term resilience to drought (Drought Resiliency Projects). This funding opportunity supports Drought Resiliency Projects that will build long-term resilience to drought and reduce the need for emergency response actions.

Western is applying to the Drought Resiliency Program to implement a joint project with Riverside Highland Water Company and Rubidoux Community Services District. The Project will construct one well, three small-scale water treatment facilities, and associated pipelines to treat impaired groundwater for potable, urban water use. With the last water year (2020-2021) being the second driest year on record and January-March 2022 being the driest threemonth period for California, Southern California is seeing drastic water restrictions on imported supplies. While agencies turn to increase their local supplies, the project partners are meet with water quality concerns related to drought's impact in the region.

The Project will increase local potable water supply by 4,286 acre-feet of water per year. This will reduce the demand on the drought-stressed imported water supplies from the Bay-Area Delta in Northern California and the Colorado River, while also increasing regional drought resiliency. The Project addresses long term goals of increasing water reliability and local supplies, as established in Western's Drought Contingency Plan (DCP), adopted in July 2022. The DCP was developed with assistance from a WaterSMART Drought Contingency Planning grant. SAWPA participated in the DCP plan development as a member of Western's Drought Task Force.

Benefits of this Project are three-fold: 1) Increase local water supply availability; 2) treat water from chemical containments; and 3) increase future resiliency by mitigating the effects of future droughts. The proposed Project

Marco Tule Chair Inland Empire Utilities Agency Bruce Whitaker Vice Chair Orange County Water District Mike Gardner Secretary-Treasurer **Western Municipal** June D. Hayes Commissioner David J. Slawson Commissioner Jeffrey J. Mosher General Manager Craig Miller June 6, 2022 Page 2

accomplishes the goals of the funding opportunity by creating a resilient new source of water that will create reliability in the local groundwater supply.

In 2013, the U.S. Bureau of Reclamation released the Santa Ana River Watershed Basin Study, which addressed water supply and demand projections for the next 50 years and identified potential climate change impacts to Southern California's Santa Ana River Watershed. The report found this watershed has challenges due to climate change and growing populations. Some challenges in this watershed included drought's impact on water quality.

SAWPA oversaw the Santa Ana River Watershed Basin Study and established the One Water One Watershed (OWOW) Plan to overcome the decreasing groundwater levels and water quality issues in the region. The proposed project supports the Santa Ana River Watershed's OWOW objective of Innovative Supply Alternatives. A goal of the recently adopted OWOW Plan Update 2018, the region's Integrated Regional Water Management Plan, is to achieve resilient water resources through innovation and optimization and to ensure high quality water for all people and the environment. The proposed project does this by treating groundwater that will increase this region's resiliency to drought and climate change, all while preventing chemical contamination from entering the local water supply providing high quality water for everyone. For these reasons, the Santa Ana Watershed Project Authority is proud to support Western's WaterSMART grant application for the Building Groundwater Reliability and Resiliency: Regional Well Installation and Water Quality Treatment Project.

Very Respectfully,

Juff J Mades

Jeffrey J. Mosher General Manager