

APPLICATION

**WaterSMART**

**Drought Resiliency Projects for FY 2022**

**Santa Ana River Enhanced Recharge Phase 1B**



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## List of Acronyms

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AF	Acre-feet
AFY	Acre-feet per year
BDR	Basis of Design Report
BTAC	Basin Technical Advisory Committee
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	cubic feet per second
Conservation District	San Bernardino Valley Water Conservation District
DWR	Department of Water Resources
EIR	Environmental Impact Report
ESA	Endangered Species Act
HCP	Habitat Conservation Plan
IRUWMP	Integrated Regional Urban Water Management Plan
IRWM Plan	Integrated Regional Water Management Plan
Metropolitan	Metropolitan Water District of Southern California
MHI	Median Household Income
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
OWOW	One Water One Watershed
Reclamation	Bureau of Reclamation
SARER	Santa Ana River Enhanced Recharge
SAWPA	Santa Ana Watershed Project Authority
SBB	San Bernardino Basin Area
SWP	State Water Project
SWRCB	State Water Resources Control Board
USFWS	US Fish and Wildlife Service
Valley District	San Bernardino Valley Water Municipal Water District
Wash Plan HCP	Upper Santa Ana River Wash Habitat Conservation Plan
Western	Western Municipal Water District

# Technical Proposal and Evaluation Criteria

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## 1.1 Executive Summary

**Date:** October 4, 2021  
**Applicant:** San Bernardino Valley Municipal Water District  
**Applicant City, County, State:** San Bernardino, San Bernardino County, California  
**Project Name:** Santa Ana River Enhanced Recharge Phase 1B

San Bernardino Valley Municipal Water District (Valley District) is seeking to implement the Santa Ana River Enhanced Recharge Project Phase 1B (SARER Phase 1B or Project), in western San Bernardino County, California. Valley District is a public water agency and a Category A applicant. SARER Phase 1B consists of improving existing facilities and constructing new facilities which will increase the amount of storm water from the Santa Ana River that can be captured and recharged. SARER Phase 1B Project facilities will be located immediately downstream of Seven Oaks Dam, in the City of Highland and integrate with the Phase 1A Project facilities previously constructed. When complete, Phase 1B improvements will accommodate the diversion of up to 500 cubic feet per second (cfs) and the recharge of an average of 15,412 acre-feet per year (AFY) and up to a maximum of 80,000 acre-feet (AF) in a single wet year. Specific activities involve modifying an existing intake structure to add a trash rack, making improvements to an area disturbed as part of the construction of Seven Oaks Dam, modifying an existing canal to accommodate increased flow, and constructing 337.4 acres of new recharge basins. The SARER Phase 1B Project is the result of regional collaboration and has been developed in concert with state agencies such as Department of Water Resources (DWR) and Department of Fish and Wildlife. The storm water captured by this project and recharged into the San Bernardino Basin (SBB) will benefit the approximately 400,000 persons that overlie and benefit from the groundwater source (DWR Basin dashboard <https://gis.water.ca.gov/app/bp-dashboard/final/>) as well as the approximately 326,400 persons in the City of Riverside that utilize SBB water. The project importance is highlighted by the current regional drought conditions. Valley District is a California State Water Project (SWP) contractor. In addition to storm water, SWP water has traditionally been used to recharge the SBB, but that system provided only a 5% allocation in 2021. According to the US Drought Monitor, the San Ana River Watershed, the San Bernardino area, and City of Riverside are in “Severe Drought” and “Extreme Drought.” The SARER Phase 1B will enhance storm water capture and recharge on an average of 15,412 AFY, resulting in 10,807 AFY additional water supply and thereby substantially increasing the drought resiliency of this important groundwater source.

The proposed project will be completed within approximately 2.5 years of award of the grant, with construction anticipated to take 20 months, beginning July 2022, and to be completed by March 2024.

The proposed project is not located on a Federal facility.

## 1.2 Project Location

SARER Phase 1B will take place downstream of Seven Oaks Dam in the City of Highland in the County of San Bernardino, California. The project latitude is 34°05'58.00" N and project longitude is 117°07'05.31" W. Figure 1 provides a detail of the project facilities as well as the general location. The primary existing feature shown in Figure 1 is the Seven Oaks Dam borrow pit. Material from the excavation site was used to build the dam. The dark blue labels denote Phase 1A facilities which are complete and the light blue labels denote the improvements proposed as part of Phase 1B. The Phase 1B project boundary is denoted in purple and labelled "ERP1B Project Boundary."

## 1.3 Technical Project Description

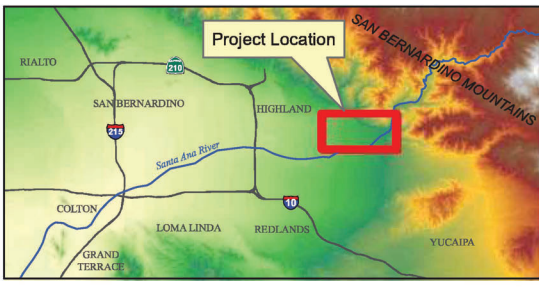
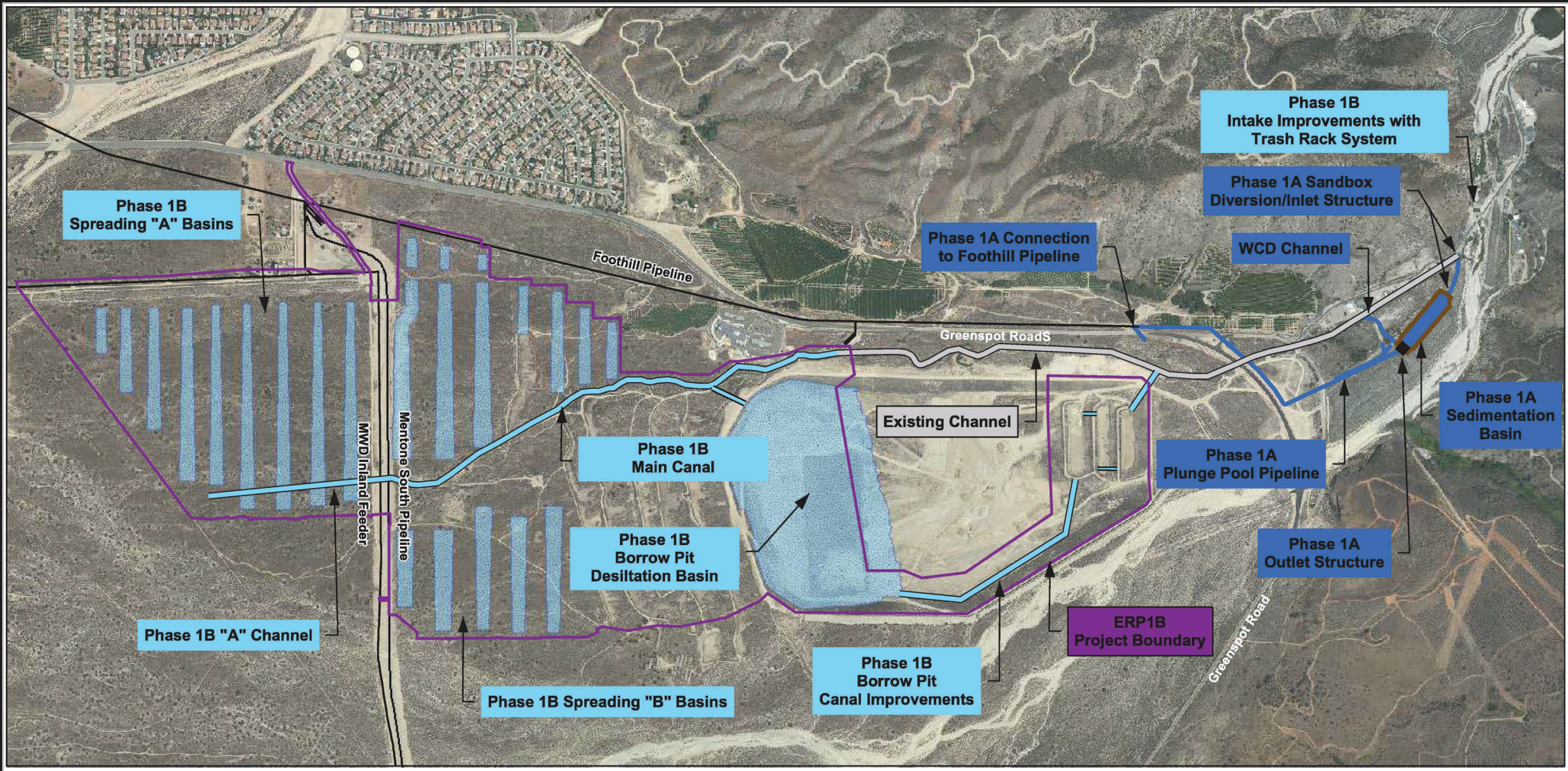
The SBB was adjudicated in gross by the Western-San Bernardino Judgment (Western Judgment) in 1969. The SBB has a surface area of approximately 141 square miles and lies between the San Andreas and San Jacinto faults. The basin is bordered on the northwest by the San Gabriel Mountains and Cucamonga fault zone; on the northeast by the San Bernardino Mountains and San Andreas fault zone; on the east by the Banning fault and Crafton Hills; and on the south by a low, east-facing escarpment of the San Jacinto fault and the San Timoteo Badlands. Alluvial fans extend from the base of the mountains and hills that surround the valley and coalesce to form a broad, sloping alluvial plain in the central part of the valley. The Western Judgment calculated the natural safe yield of the SBB to be 232,100 AFY for all extractions, including surface water diversions and groundwater pumping. The Western Judgement allocates 64,862 AFY of the safe yield to entities in Riverside County (including the City of Riverside, Riverside Highland Water Company, Meeks & Daley Water Company, and Regents of the University of California), represented by Western Municipal Water District of Riverside County (Western). Agencies within San Bernardino County, represented by Valley District, received an allocation of 167,238 AFY, which equates to 72.05 percent of the safe yield. San Bernardino agencies are allowed to extract more than 167,238 AFY from the SBB, as long as they import and recharge a like amount of supplemental water into the SBB. The Western-San Bernardino Watermaster provides an annual accounting of both extractions and a comparison to the safe yield. The Judgment requires the San Bernardino entities to provide replenishment water whenever the cumulative extractions exceed the cumulative safe yield.

The SARER Phase1B is the culmination of more than two decades worth of work to improve drought resiliency through recharge of the SBB. Description of completed tasks is being provided to give the reviewer an understanding of project feasibility and readiness to proceed. A description of outstanding tasks is provided to give the reviewer an understanding of the work to be accomplished as part of grant funding.

### 1.3.1 Completed Tasks

#### Drought Planning

Though pumping has *decreased* since 1998, the tracking of groundwater levels indicates a general decline. This directly correlates to similar declines in precipitation and this is complicated by a decrease in deliveries of imported water (Upper Santa Ana River Watershed 2020 Integrated Regional Urban Water Management Plan, June 2021).



# Santa Ana River Enhanced Recharge Phase 1B Project



erial Photography ate: uly, 2015  
Source: SBVMWD



Figure 1

In June 2002, Valley District partnering with Western, began to explore supplemental water supply alternatives. This culminated in the 2004 the *Environmental Impact Report Santa Ana River Water Rights Applications for Supplemental Water Supply*. Multiple alternatives were considered and the recommended project was diversion of storm water on the Santa Ana River downstream of Seven Oaks Dam. The EIR can be accessed here:

[https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/hearings/santa\\_ana\\_river/docs/deir.pdf](https://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/santa_ana_river/docs/deir.pdf)

Drought planning was further refined in the 2007 *The Integrated Regional Water Management Plan* (IRWM Plan). This report was generated under the guidance of the Upper Santa Ana Water Resources Association, consisting of 13 water management agencies. The overarching goals of the IRWM Plan were to: (1) establish a long-term water management plan for the Upper Santa Ana communities of interest, (2) improve water supply reliability and optimize use of local and imported water resources, and (3) protect water quality from degradation.

Building upon work performed as part of the 2007 IRWM Plan, agencies in the San Bernardino Valley evaluated activities to further drought planning and water supply resiliency, including additional conjunctive use in the SBB. The culmination of the study was the *Santa Ana River Groundwater Recharge Optimization Study Final Report* described below). Report is available here: [https://www.sbvwd.org/projects/SAR\\_OptimizationFinal\\_2009.pdf](https://www.sbvwd.org/projects/SAR_OptimizationFinal_2009.pdf)

In 2013, local agencies participated in *Climate Change Analysis for the Santa Ana River Watershed*. This Basin Study by Reclamation that found there is a growing risk of drought and adaptations were needed, including building a diverse water supply portfolio. Study is available here: <https://www.usbr.gov/lc/socal/basinstudies/OWOWReferences/FinalReport/TM%201%20Climate%20Change.pdf>.

In 2020, eighteen local and regional agencies undertook update of the IRWM Plan as part of the 2020 *Integrated Regional Urban Water Management Plan* (2020 IRUWMP). The update incorporated new information describing the Region, updated goals and objectives, re-evaluated strategies, and developed a process for implementation of the strategies of the IRWM Plan. A specific task of the 2020 IRWM Plan update was evaluation of climate change. Review of climate change impacts to the region identified the potential for higher temperatures, extended periods of higher temperatures, loss of the alpine and subalpine forest area, more severe but less frequent storms, and decreased snowpack. Vulnerabilities associated with these impacts include additional imported water supply uncertainty, additional potential challenges to capturing water during more intense storms, water quality impacts due to more frequent and intense wildfires, degraded water quality and aquatic habitat impacts due to higher temperatures, flood system impacts due to more intense storms, and increased irrigation demand due to higher temperatures. The 2020 IRUWMP evaluated multiple different hydrologic scenarios associated with climate change, including a single dry year, single wet year, 5-year drought, and 30-year drought. A specific goal of the 2020 IRUWMP was to create groundwater infrastructure that could serve to balance flood management with stormwater recharge. In the various hydrologic scenarios evaluated, the SARER Phase1B was determined to be a necessary water supply project. The 2020 IRUWMP is available here: <https://www.sbvwd.com/reports/reports/-folder-1120>

An outcome of the integrated planning process was the creation of the Basin Technical Advisory Committee (BTAC). The BTAC is made up of water agency staff and other stakeholders. Each year the BTAC prepares a Regional Water Management Plan. In this plan the groundwater elevations are tracked, change in basin storage is estimated, and recharge targets are set for the upcoming year. The regular and ongoing work of the BTAC means the region has an adaptive management approach to resources management. There is a regular and iterative process of collecting information and data regarding the conditions within the Region, ongoing and frequent evaluation of data to determine how different strategies and projects are performing.

The BTAC continues to recommend implementation of the SARER Phase 1B project as a necessary step to store water in wet years to respond to climate change and drought conditions. This is summarized in the recent 2021 Regional Water Management Plan, available here: <https://www.sbvmd.com/home/showpublisheddocument/8872/637430242102830000>

## Feasibility

As part of the *Environmental Impact Report Santa Ana River Water Rights Applications for Supplemental Water Supply* an analysis of past and anticipated hydrology was performed. The analysis considered future hydrologic conditions and other natural events, as well as four other parameters that influence the amount of storm water available for conjunctive use:

1. Diversions by senior water rights claimants;
2. Diversions by the San Bernardino Valley Water Conservation District (Conservation District);
3. Releases from Seven Oaks Dam to accommodate habitat restoration as called for in the permits issued by the US Fish and Wildlife Service (USFWS); and
4. Operation of Seven Oaks Dam for both flood control and seasonal water conservation storage.

In all, 16 different simulations were possible through the different combinations of these four basic parameters. The simulations assumed a repeat of hydrologic conditions Water Year 1961/62 to Water Year 1999/2000 (a 39-year period). Simulations confirmed the feasibility of diverting on average 15,412 AFY. A portion of the stormwater captured for recharge would have infiltrated into the SBB without the project, so the resulting water supply is estimated to be an additional 10,807 AFY on average. The EIR and the detailed modelling can be found here: [www.waterboards.ca.gov/waterrights/water\\_issues/programs/hearings/santa\\_ana\\_river/docs/deir.pdf](http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/santa_ana_river/docs/deir.pdf)

Next, the Conservation District and Valley District completed the *Santa Ana River Groundwater Recharge Optimization Study Final Report* in June 2009. This evaluated the ability of existing facilities to meet the recharge objective of 500 cfs, recommended and provided conceptual designs for improvements to meet 500 cfs if needed, and provided recommendations on the operation and maintenance activities needed to maximize recharge capacity. Report included field testing and analysis of diversion, conveyance, and percolation facilities.

In 2011, Valley District, the Conservation District, Western, and the City of Riverside completed the *Basis of Design Report Enhanced Recharge Facilities for Santa Ana River Water Diverted by Valley District and Western Under Rights Permit*. The Basis of Design Report (BDR) established

the basic project design requirements to meet the project objective to recharge up to 500 cfs. The drawings included with the BDR provided a general layout of facilities and major discipline requirements. The BDR provided an opportunity for Valley District, Conservation District, other stakeholders, and regulatory agencies to provide input prior to Final Design.

## **Agreements**

In 2012 the Conservation District, Valley District, and Western developed an agreement to allow collaborative use of each other's facilities and skills in order to effectively recharge stormwater as available from Seven Oaks Dam consistent with Water Rights 21264 and 21265. The Agreement lays out the construction, operation, and maintenance obligations of all parties. The agreement is available at this link: <https://www.sbvwd.org/docman-projects/enhanced-recharge/4603-enhanced-recharge-project-agreement>

## **90% Design**

In May 2020, Valley District completed the 90% Plans for the SARER Phase 1B project.

## **Environmental Review – CEQA and NEPA**

Review and assessment of environmental impacts in compliance with the California Environmental Quality Act (CEQA) for the entire Santa Ana River Enhanced Recharge project has been conducted as a part of the *Environmental Impact Report EIR Santa Ana River Water Rights Applications for Supplemental Water Supply*, which was completed in October 2004. The EIR provides CEQA compliance at a programmatic level for the SARER Phase 1B Project. In July 2012, Valley District approved Addendum 1 to the *Final Environmental Impact Report Santa Ana River Water Right Application for Supplemental Water Supply* to provide project-specific analysis and to confirm that the environmental impacts anticipated from the facilities were consistent with the 2004 EIR. In February 2016, Valley District approved Addendum 2 to the *Final Environmental Impact Report Santa Ana River Water Right Application for Supplemental Water Supply* to evaluate changes proposed to the SARER Phase 1B facilities.

Eleven regional agencies collaborated as a Task Force for the Conservation District's *Upper Santa Ana Wash Habitat Conservation Plan* (Wash Plan HCP) which included consulting with stakeholders such as USFWS and California Department of Fish and Wildlife (CDFW) for an integrated approach to mitigate construction and maintenance activities to species that may occur within the Wash area which includes the recharge basins of SARER Phase 1B. The activities include water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement. The Wash Plan is a vital document that provides the analysis of project related effects to impacts to sensitive species and their habitats. The Wash Plan HCP provides the incidental take permits for the SARER Phase 1B project. The Wash Plan HCP and associated Environmental Impact Statement/ Supplemental EIR were adopted by the USFWS on May 20, 2021.

## **Permitting Completed**

Many permitting tasks have been completed:

- Valley District, SARER Phase 1B Grant Applicant, and Western previously received water right permits 21264 and 21265 from the State Water Resources Control Board (SWRCB) which authorizes the diversion of up to 1,250 cfs and up to 198,317 AF in a single year from the Santa Ana River (SWRCB Decision No. 1649).
- USFWS Endangered Species Act Consultation. This was part of the Wash Plan HCP.
- National Historic Preservation Act Section 106 Compliance was conducted in coordination with USFWS as part of the Wash Plan HCP and associated Environmental Impact Statement/Supplemental EIR.

## **Phase 1A Facilities**

The SARER Phase 1B Project represents the second phase of facilities to divert and use water captured under these permits. The first phase of facilities was constructed as part of Phase 1A and these facilities were completed in May 2019.

### **1.3.2 Outstanding Project Tasks**

#### **Task 1: Project Management, Administration and Reporting**

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

#### **Task 2. Final Design**

90% design was completed in May 2020. Final design will be completed by December 2021.

#### **Task 3: Environmental Documentation - NEPA**

It is understood that all projects being considered for award funding will require compliance with the National Environmental Policy Act (NEPA) before any ground-disturbing activity may begin. NEPA review has already been completed by the USFWS as part of the Wash Plan HCP and associated Environmental Impact Statement/ Supplemental EIR. This task includes coordination with Reclamation to complete NEPA review.

#### **Task 4: Outstanding Permitting**

This task includes acquisition of necessary permits for the project, which will be acquired prior to the start of construction by the selected contractor and Valley District. As described above many permits have already been acquired but the following permits are in progress:

- DWR Encroachment Permit for crossing of Mentone South Pipeline also known as the East Branch Extension).

- SWRCB National Pollutant Discharge Elimination System (NPDES) Construction General Permit for storm water.
- California Department of Fish and Game Code Section 1602 Lakebed and Streambed Alteration Agreement for Phase 1B-3 Main Canal
- Regional Water Quality Control board, Santa Ana Region Clean Water Act Section 401 for Phase 1B-3 – Main Canal.
- Metropolitan Water District Encroachment Permit for crossing of that agency's Inland Feeder pipeline.

## **Task 5: Construction**

Upon completion of final design, Valley District will conduct a competitive bidding process for selection of the construction contractor, in accordance with standard procedures and Public Contract Code. The selected contractor will perform construction according to final design plans and specifications.

The Phase 1B Project has 4 major elements including: 1B-1 modifications to an intake structure (adding trash removal), 1B-2 borrow pit modifications for desilting, 1B-3 main canal to convey storm water to the 1B-4 main recharge basins, each of which are described below.

### *Phase 1B-1 Intake Improvements with Trash Rack System*

The Phase 1B-1 intake structure modifications include trash removal facilities that will facilitate removal of trash including floating materials such as plastics, bags, containers, paper and other debris. Design includes a galvanized steel bar screen with mechanical cleaning which will be approximately 40 feet wide and approximately 5 feet high. The trash removal system would be in a new concrete structure, which would be constructed in front of the existing concrete deck to support the trash removal equipment. The mechanical cleaning equipment will include a boom, brush/rake, hydraulic power unit, and a control panel.

### *Phase 1B-2 Borrow Pit Modifications for Desilting and Recharge*

The Phase 1B-2 borrow pit modifications include allowing flows from the existing Valley District main canal to enter the Borrow Pit area that terminates in the large desiltation basin which allows for fine silts and coarser grained silts to settle because of lower velocities.

### *Phase 1B-3 Main Canal*

The Phase 1B-3 main canal includes improvements to 2,950 feet of the existing earthen canal beginning at the Santa Ana Low Turnout to accommodate an increased flow rate from 300 cfs to 500 cfs (increase of 200 cfs). In addition, approximately 6,200 feet of new earthen canal will be constructed from the Pond 13 Diversion Structure to the new recharge basins. The new canal will be designed to accommodate a flow rate of 500 cfs.

### *Phase 1B-4 Spreading Basins*

The SARER Phase 1B-4 Spreading Basins are 337.4 acres which is approximately 34 percent of the 476 acres of area available for spreading east and west of the Mentone South Pipeline and Metropolitan Inland Feeder. These additional 337.4 acres are divided into 24 basins which are separated by embankments and connected by pipelines to allow for flexibility in operations. The 24 basins are expected to provide approximately 330 cfs of new recharge capacity with the remaining approximately 170 cfs of flow to be recharged in existing facilities. The facilities will also include an internal delivery canal with diversion structures and inter-basin transfer pipelines.

#### **1.4 Project Deliverables**

Project Deliverables will include:

- Final design documents
- CEQA/NEPA documentation
- Permits
- Semi-Annual Progress Reports
- Final Completion Report

#### **1.5 Performance Measures**

The Phase 1B allows conjunctive use of local stormwater to benefit groundwater. The measurement of water diversion, recharge, and groundwater storage is not a new practice for Valley District and the processes are already in place as are the measurement tools (SCADA and Index Wells). Project benefit will be measured as follows:

**Table 1 Benefits and Related Performance Measures**

<b>Benefit Type</b>	<b>Description</b>	<b>Method of Performance Measurement</b>
Increased capture of local supplies	When complete, Phase 1B improvements will accommodate the diversion of up to 500 cfs and the recharge of an average of 15,412 AFY and up to a maximum of 80,000 AF in a single wet year.	Valley District will measure performance by providing a direct measurement of volumetric flow rate of water at selected diversion boxes as well as water levels in the recharge ponds using SCADA system controls. The instantaneous flow rate (cfs), daily volume, monthly volume, and annual volume will be tracked.
Improved Groundwater levels, increased water in groundwater storage	The project will elevate groundwater levels in the SBB, increase storage in the SBB	On an annual basis, as part of the Regional Water Management Plan, the BTAC will evaluate groundwater levels at the Santa Ana River Spreading Basins Index Well.

## 1.6 Evaluation Criteria

### 1.6.1 Evaluation Criterion A – Project Benefits

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

The SBB is already used as a buffer for drought. The basin is adjudicated, and conjunctive use is a defined and managed activity in the Basin. As indicated by the local retailers' drought contingency plans, as supplies in other groundwater basins suffer from drought and as imported water becomes scarce, the primary action is to switch to SBB water. Therefore, any additional recharge to the SBB benefits water supplies during a drought. As documented in Section 1.3.1 Completed Tasks/Feasibility, studies have been completed to demonstrate that project facilities will accommodate the diversion of up to 500 cfs and the recharge of an average of 15,412 AFY, up to a maximum of 80,000 AF in a single wet year. A portion of the stormwater captured for recharge would have infiltrated into the SBB without the project, so the resulting water supply is estimated to be an additional 10,807 AFY on average. The project helps water infrastructure systems adapt to climate change by addressing the future uncertainty of water supply through increasing local groundwater supplies for drought protection. The beneficial use of local storm water improves regional water self-reliance by increasing water in aquifer storage as a regional drought-resistant supply. This dry year supply is particularly valuable because imported water from the SWP can be severely curtailed during dry years; in recent dry years SWP supplies were 5% of the contract amount. Facilities used for conjunctive use are pipelines, canals, and recharge basins and the project is expected to provide benefits for at least 75 years.

- *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?*

As documented in Section 1.3.1 Completed Tasks/Feasibility, studies have been completed to demonstrate that project facilities will accommodate the diversion of up to 500 cfs and the recharge of an average of 15,412 AFY, with resulting water supply estimated to be an additional 10,807 AFY. The average yearly benefit was calculated using a 39-year hydrologic base period that included both wet and dry periods.

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

Extractions from the SBB are carefully tracked as part of the applicable adjudication and reported in the Western-San Bernardino Watermaster Annual Reports. Per the adjudication (known as the Western Judgment) the calculated natural safe yield of the SBBA is 232,100 AFY for all extractions, including surface water diversions and groundwater pumping. The Western Judgement does allow for additional conjunctive use as proposed by the project. Additional recharge as proposed in Phase 1B would represent approximately 4.6% additional supply (10,807 AFY additional supply ÷ 232,100 existing safe yield).

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

By making this new supply available and recharging the SBB, this Project helps improve the long-term reliability of the Basin, but also contributes to improved water supply reliability on a regional basis. By increasing recharge to the SBB, the Basin will continue to serve as a reliable local source of potable water and a continued supply source for the approximately 726,400 persons that benefit from the groundwater source.

- *Will the project improve the management of water supplies?*

The project will turn nuisance storm water to beneficial recharge water.

- *If so, how will the project increase efficiency or operational flexibility?*

The project will take up to 500 cfs of water that would have otherwise been pushed through the flood control system and instead releases it in a manner and to facilities that allow recharge.

- *What is the estimated quantity of water that will be better managed as a result of this project? How was this estimate calculated?*

As documented in Section 1.3.1 Completed Tasks/Feasibility, studies have been completed to demonstrate that project facilities will accommodate the diversion of up to 500 cfs and the resulting in an average increase of supply of 10,807 AFY.

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

Extractions from the SBB are carefully tracked as part of the applicable adjudication and reported in the Western-San Bernardino Watermaster Annual Reports. Per the adjudication (known as the Western Judgment) the calculated natural safe yield of the SBB is 232,100 AFY for all extractions, including surface water diversions and groundwater pumping. The Western Judgement does allow for additional conjunctive use as proposed by the project. Additional recharge as proposed in SARER Phase 1B would represent approximately 4.6% additional supply (10,807 AFY new supply ÷ 232,100 existing safe yield), which is considered to represent the amount of water supply better managed.

- *Provide a brief qualitative description of the degree/significance of anticipated water management benefits.*

SARER Phase 1B is one of the first projects to be implemented in accordance with the Wash Plan HCP. The Wash Plan HCP is the culmination of two decades of coordination among partners to develop an integrated approach to permit and mitigate construction and maintenance activities within the Santa Ana Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement. Project implementation will demonstrate the feasibility of this integrated planning approach. Partners in the plan include:

- |                               |   |
|-------------------------------|---|
| • Conservation District       | • California Department of Fish and Game          |
| • Valley District             | • South Coast Air Quality Management District     |
| • Metropolitan Water District | • California Regional Water Quality Control Board |
| • City of Highland            | • California Department of Water Resources        |

- City of Redlands
- County of San Bernardino
- Bureau of Land Management
- USFWS
- Army Corps of Engineers
- California Department of Conservation Office of Mines
- Robertson's Ready Mix
- Cemex

○ *Will the project make new information available to water managers?*

The information collected from this project will be utilized by Valley District and its stakeholders on regional stormwater capture, recharge, and percolation studies. The information collected from this Project will be utilized in water resource planning documents and as inputs to on-going groundwater modeling to refine data on the potential for stormwater capture (e.g. water available in a wet year, rate and duration of stormflows), change in groundwater levels, and resulting water supply. As described below, data will be used to understand how recharge operations can be used to benefit alluvial fan-dependent species.

• *Will the project have benefits to fish, wildlife, or the environment?*

The SARER Phase 1B project is part a piece of the implementation of the Wash Plan HCP. Implementation of the Wash Plan HCP will create and enhance 218 acres of habitat for San Bernardino kangaroo rat and Santa Ana river woollystar (USFWS 2020). Storm water diversion is a covered activity in the Wash Plan HCP. The modified and new facilities of SARER Phase 1B have been designed to not only avoid adverse impacts to sensitive species (e.g. the San Bernardino kangaroo rat) but also enhance currently degraded habitat areas. These habitat areas are adjacent to the recharge basins and were specifically targeted to benefit to alluvial fan-dependent species. The habitat enhancement designs are based primarily on habitat modeling developed by Dr. Debra Shier of the San Diego Zoo Institute for Conservation Biology, specifically for Valley District and this project. During construction of the basins, the habitat areas will also be restored based on specific habitat variables necessary to support sensitive species. This project will take a natural community restoration approach that will enhance and manage habitat long-term for species native to the Santa Ana River alluvial fan.

**Additional project components listed on Pages 34 to 35 in the Funding Opportunity Announcement are not applicable to the proposed Project.**

### **1.6.2 Evaluation Criterion B – Sustainability and Supplemental Benefits**

This section is to describe how the project meets the priorities of E.O. 14008 and E.O. 13985 and for having tribal benefits and adding ecological value by increasing resiliency to climate change and drought and other sustainability benefits.

• *Climate Change. Does the proposed project contribute to climate change resiliency?*

The project helps water infrastructure systems adapt to climate change by addressing the future uncertainty of water supply through increasing local groundwater supplies for drought protection. The project reduces flood risk associated with climate change due to anticipated changes in rain patterns and intensity by providing additional storm water diversion and storage. The project also reduces downstream runoff rate and volume, and the project facilities not only avoid adverse impacts to sensitive species such as the San Bernardino kangaroo rat but also enhance currently degraded habitat near the recharge areas to benefit alluvial fan species.

- *Disadvantaged or Underserved Communities: Will the proposed project serve or benefit a disadvantaged or historically underserved community?*

The service area of Valley District, the area that will receive the drought benefit from the project, qualifies as a disadvantaged community as defined by Section 1015 of the Cooperative Watershed Act (defined as a community with an annual median household income [MHI] that is less than 100 percent of the statewide annual median household income for the state). According to the US Census Bureau, 2019 American Community Survey 5-Year Estimate the median California MHI is \$75,235. Based on 2019 American Community Survey 5-year estimate the MHI of San Bernardino County is \$63,362. Specific urban areas within San Bernardino County served by Valley District include:

City/Urban Area	MHI	City/Urban Area	MHI
City of San Bernardino	\$70,188	City of Redlands	\$72,410
City of Colton	\$53,838	City of Rialto	\$70,188
City of Loma Linda	\$55,607	City of Yucaipa	\$69,104
City of Highland	\$64,868	Mentone (Census Designated Place)	\$68,650
City of Grand Terrace	\$71,788		

*All data from 2019 American Community Survey 5-Year Estimate. Data for City of Bloomington is not available.*

Entities in Riverside County, including the City of Riverside also qualify as a disadvantaged community. According to the US Census Bureau, 2019 American Community Survey 5-Year Estimate, the MHI in the City of Riverside is \$73,260.

- *Tribal Benefits. Does the proposed project contribute to climate change resiliency?*

The San Manuel Band of Mission Indians reservation overlies the SBB. The Tribe does not operate their own water system, but does receive SBB groundwater through East Valley Water District, a retail water agency within Valley District's service area that uses SBB water.

- *Ecological Value: Does the project seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit to wildlife, fisheries, or habitats? Do these benefits support an endangered or threatened species?*

The SARER Phase1B project is part a piece of the implementation of the Wash Plan HCP. Implementation of the Wash Plan HCP will create and enhance 218 acres of habitat for San Bernardino kangaroo rat and Santa Ana river woollystar (USFWS 2020). Protection of habitat connectivity, especially along ecological gradients such as elevational gradients and along natural hydrologic features, provides the opportunity for species to shift their range and area of occupied habitat in response to climate change.

- *Other Benefits. Will the project address water sustainability in other ways not described above? Will the project assist states and water users comply with interstate compacts/ Will the project benefit multiple sectors and/or users? Will the project benefit a larger initiative to address sustainability of water supplies?*

As described earlier, the SARER Phase 1B is one of the first projects to be implemented in accordance with the Wash Plan HCP. The Wash Plan HCP is the culmination of two decades of

coordination among partners to develop an integrated approach to permit and mitigate construction and maintenance activities within the Santa Ana Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement. Project implementation will demonstrate the feasibility of this integrated planning approach.

### 1.6.3 Evaluation Criterion C – Drought Planning and Preparedness

- *Attach a copy of the applicable drought plan as an appendix to your application.*

See Section 1.3.1/Drought Planning for an explanation of the sequence of the extensive drought planning performed. Excerpts of the most relevant plans are included in Appendix A:

1. Climate Change Analysis for the Santa Ana River Watershed, 2013: This analysis indicates the growing risk of drought and needed adaptations, including building a diverse water supply portfolio.
2. 2020 Integrated Regional Urban Water Management Plan. The plan identified climate change and drought vulnerabilities, water shortage contingency plans, adaption strategies, and specific projects to address climate mitigation and adaption.

- *Explain how the applicable plan addresses drought.*

See responses below.

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

The Climate Change Analysis for the Santa Ana River Watershed was prepared as part of the Santa Ana Watershed Basin Study, which was a collaborative effort by the Santa Ana Watershed Project Authority (SAWPA) and the Bureau of Reclamation. SAWPA member agencies included Valley District, Western, Orange County Water District, Inland Empire Utilities Agency, and Eastern Municipal Water District. Building upon this analysis, in 2020, eighteen local and regional agencies undertook update of the IRWM Plan. The update incorporated new information describing the Region, updated goals and objectives, re-evaluated strategies, and developed a process for implementation of the strategies of the IRWM Plan. This effort, the 2020 IRUWMP, included specific evaluation of climate change, local vulnerabilities, and identification of adaptation measures.

- *Does the drought plan include consideration of climate change impacts to water resources or drought?*

The Climate Change Analysis for the Santa Ana River Watershed highlights potential implications of the changing climate, including prolonged drought conditions, for the Santa Ana River Watershed, within which the SBB is located. The study concludes that under projected future climate conditions, which include an increase in average temperature and decrease in average precipitation, targeted groundwater management actions are necessary to help address groundwater level declines which are projected over this century.

The 2020 IRUWMP is a regional water resources planning document which analyzes water supply reliability. The analysis takes into account climate change and multi-year droughts to

make projections on available future water supplies and potential future projects needed to improve supply reliability. Review of climate change impacts to the region identified the potential for higher temperatures, extended periods of higher temperatures, loss of the alpine and subalpine forest area, more severe but less frequent storms, and decreased snowpack. Vulnerabilities associated with these impacts include additional imported water supply uncertainty, additional potential challenges to capturing water during more intense storms, water quality impacts due to more frequent and intense wildfires, degraded water quality and aquatic habitat impacts due to higher temperatures, flood system impacts due to more intense storms, and increased irrigation demand due to higher temperatures.

- *Describe how your proposed drought resiliency project is supported by an existing drought plan.*
  - *Does the drought plan identify the proposed project as a potential mitigation or response action? Does the proposed project implement a goal or need identified in the drought plan? Describe how the proposed project is prioritized in the referenced drought plan?*

The Climate Change Analysis for the Santa Ana River Watershed concludes that under projected future climate conditions, which include an increase in average temperature and decrease in average precipitation, targeted groundwater management actions are necessary to help address significant groundwater level declines which are projected over the 21st century. The study further states that, among the necessary management actions to protect groundwater resources, “recharge will be required in order to maintain current groundwater levels” (page 2).

Strategies specified in the 2020 IRWUMP to mitigate against climate changes and improve supply reliability include “Increase Utilization of Local Supplies by 20,000 AFY”, “Complete Necessary Agreements to Use Flood Control Retention/Detention Basins for Recharge”, “Implement 20 Acres of Integrated Flood Projects that also Provide Multiple Benefits”, “Preserve or Improve Habitat by Conserving or Restoring 150 Acres of Riparian, Wetland and Permanent Water Areas by Implementing Projects in the Wash HCP and River HCP”, and “Implement Local Supply and Flood Control Projects to Help Offset the Impacts of Climate Change”(see page 6-17) . The SARER Phase 1B was identified as a specific project that met these objectives and was unanimously selected as a needed water supply project to be implemented by the eighteen agencies that participated in the 2020 IRUWMP.

#### **1.6.4 Evaluation Criterion D – 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, and how severe are those impacts?*

Without the proposed project, and projects like it, Valley District and its retail customers will experience growing challenges in fully meeting demands and maintaining sustainable groundwater levels, especially under drought conditions when imported water is less available. Figure 2 below illustrates the concern with continuous declines in SBB storage. The SBB was last “full” in 1983 at 101% and is gradually declined to 85% at the end of 2020. The estimated decline in storage has averaged 22,487 acre-feet each year since 1983 (San Bernardino Valley Municipal Water District, 2021a). This decline in storage is likely to accelerate if SWP water for replenishment continues to be less than normal.

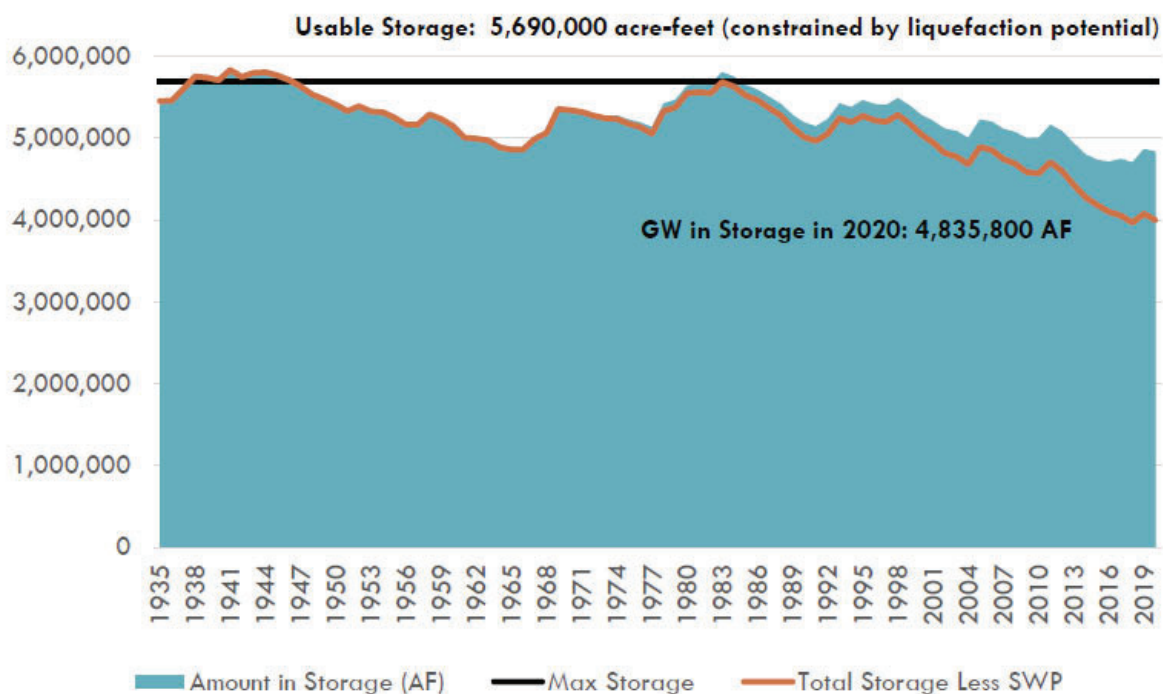
The proposed project is particularly important for expanding Valley District’s water supply portfolio to reduce dependence on curtailed imported water supplies and increase reliability of local water supplies during droughts. Under conditions of curtailed imported supplies and declining storage, Valley District and retail agencies would enact mandatory water use reductions to stretch groundwater supply. Without the project, it could be expected that the stage of action would reach more restrictive levels sooner, whereas increasing local water supplies with the project would help mitigate unavailability of imported water to reduce severity of water shortage contingency actions to be implemented.

With continued drought impacts to the industrial and urban sectors are anticipated.

Industrial – The region supplies water for various types of industries, including food & beverage, steel processing, and other beneficial industries. These industries rely on the water supply to operate and provide services, which helps maintain economic growth in the region.

Urban use – The service area currently has over 726,400 people that depend on these water supplies for food, families, business, etc. As further drought impacts continue, decreased water quality and supply availability may result in supply interruptions for customers.

**Figure 2. Storage in SBB 1935 to 2019**



- *Whether there are public health concerns or social concerns associated with current or potential drought conditions.*

The primary concern to be addressed with the project is drinking water availability and reliability, which is a public health issue. By increasing its local supply reliability and expanding its water supply portfolio, Valley District can mitigate source-specific shortages, particularly of

imported water supplies, and improve its ability to continue to reliably meet customer water needs. Of particular concern are the disadvantaged communities in the Valley District service area that are largely dependent on SBB groundwater (cities of Colton, Loma Linda, Highland and San Bernardino). As groundwater levels drop, some wells in these communities may go dry and these communities will expend more energy and cost extracting the groundwater.

The Center for Disease Control and Prevention's (CDC's) Social Vulnerability Index uses 15 U.S. census variables at tract level (including poverty, lack of vehicle access, and crowded housing) to help local officials identify communities that may need support in preparing for or recovering from hazards, like drought. San Bernardino County's score is 0.90 and Riverside County's score is 0.79, which puts these areas in highest vulnerability category.

- *Whether there are ongoing or potential environmental impacts.*

It is known that drought stresses species and inhibits species restoration. As part of the work for the Wash Plan HCP, streamflow and habitat conditions for endangered and threatened species and the Santa Ana Sucker (federally-listed as threatened) have been monitored. From 2006 to present the Santa Ana Sucker Conservation Team (a group of local water districts lead by the Santa Ana River Project Authority) has conducted an annual, atlas based survey of 18 miles of Santa Ana River habitat. Ongoing studies note that suitable river habitat for the fish declines during drought, caused by decreased streamflow and increased temperatures.

The modified and new facilities of SARER Phase 1B have been designed to avoid adverse impacts to sensitive species while enhancing currently degraded habitat areas. These habitat areas are adjacent to the SARER Phase 1B facilities and were specifically targeted to benefit to alluvial fan-dependent species such as the San Bernardino kangaroo rat, the Santa Ana River woollystar, and Slender-horned spineflower (all federally listed as Endangered). During construction of the basins of Phase 1B, the habitat areas will be restored based on variables necessary to support these species. A natural community restoration approach will be taken that will enhance and manage the habitat long-term and make these habitats more climate resilient.

- *Whether there are local or economic losses associated with current drought conditions that are ongoing, occurred in the past, or could occur in the future.*

At the current time, Valley District is not operating under a drought declaration and has not asked or required retail water agencies to curtail water use. As planned, in this time of drought Valley District will utilize the SBB to make up limited availability of other sources, and this highlights the need to maintain the SBB.

As discussed earlier, in 2021 the SWP is expected to deliver only about 5% of allocation, about 5,130 AF for Valley District. Based on the orders received, it is estimated that up to 20,625 AF of imported water is needed for 2021 (San Bernardino Valley Municipal Water District 2021b). Valley District and water retailers are working to use water conservation and groundwater sources to make up for the lack of imported supplies. Valley District has allocated \$600,000 in funding to refurbish unused or underused wells to pump groundwater to offset SWP water.

Should drought conditions persist, there is potential for future curtailments that could result in substantial economic and operational burdens to Valley District's retail agencies. It may be

necessary for several water retail agencies in Valley District service area that operate surface water treatment plants to transition to groundwater supplies due to the availability of surface water runoff and imported water availability. Due to the lack of surface water runoff or imported water, retail agencies transitioning to groundwater supplies would eliminate the hydroelectric generation facilities at these treatment plants. In collaboration with acquiring additional supplies such as the SARER Phase 1B, local water agencies could be required to curtail water use resulting in impacts to the industrial, and urban sectors.

- *Whether there are other drought-related impacts not identified above.*

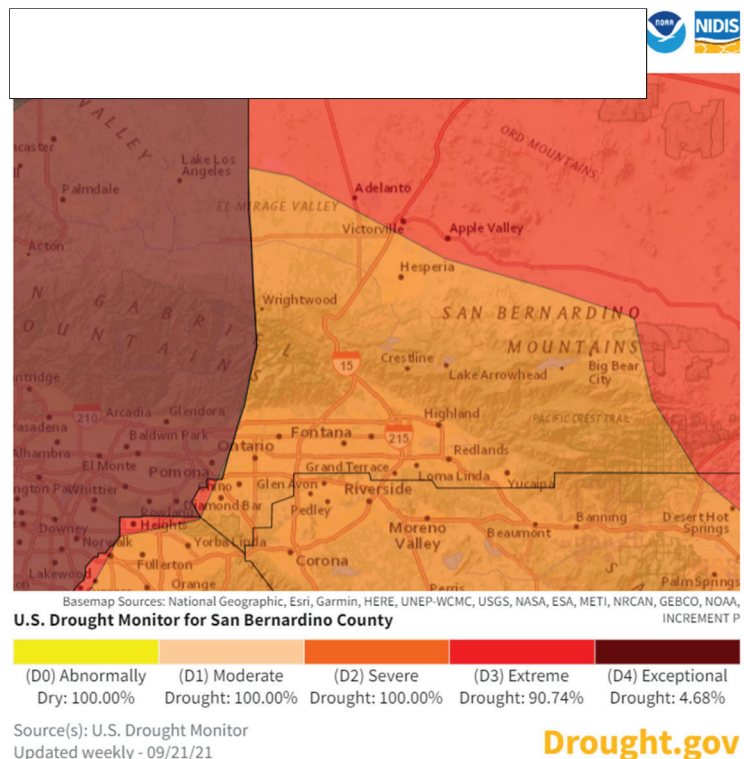
The likely drought impacts are described above.

- *Describe existing or potential drought conditions in the project area*

See responses below.

- *Is the project in an area that is currently suffering from drought or which has recently suffered from drought?*

Western San Bernardino County, western Riverside County, the Valley District service area, the SBB, and the project site are located within western San Bernardino County, which has experienced some of the most severe and prolonged drought conditions, both, statewide and nationwide. Starting in 2011 through mid-2021, the counties experienced abnormally dry to extreme drought conditions, with the majority of the two county area experiencing at least severe drought for most of that period. As shown in Figure 3, as of September 2021 the project area is in “Severe Drought”.



The NOAA Climate Prediction Center estimates that drought will persist in San Bernardino and Riverside Counties at least through the end of 2021.

- *Describe any projected increases to the severity or duration of drought in the project area resulting from climate change.*

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 the 2013 Climate Change Analysis performed as part of the Basin Study and the 2020 IRUWMP.

### 1.6.5 Evaluation Criterion E – Project Implementation

- *Describe the implementation plan of the proposed project.*

A detailed description of activities by task and expected deliverables is included in Section 1.3.2. The schedule for project implementation with duration and milestones is shown below.

**Table 2 Proposed Project Schedule**

<b>Task/Activity Name</b>	<b>Start</b>	<b>Finish</b>
Grant Award Notification (Assumed Date)	February 2022	February 2022
<b>Task 1. Project Management, Admin &amp; Reporting</b>	February 2022	June 2024
<b>Task 2. Design</b>	January 2021	December 2021
Feasibility Study	Complete	
Preliminary Design	Complete	
Final Design	December 2020	December 2021
<b>Task 3. Environmental Documentation</b>		
CEQA Documentation	Complete	
NEPA Documentation	March 2022	May 2022
<b>Task 4. Permitting</b>	April 2021	June 2022
<ul style="list-style-type: none"> <li>• Water Rights Permits 21264 and 21265</li> <li>• Endangered Species Act Consultation</li> <li>• National Historic Preservation Act Consultation</li> </ul>	Complete	
<ul style="list-style-type: none"> <li>• DWR Encroachment Permit</li> <li>• NPDES Construction General Permit</li> <li>• Lakebed and Streambed Alteration agreement</li> <li>• Metropolitan Encroachment Permit</li> </ul>	May 2021	June 2022
<b>Task 5. Construction</b>		
Construction Contracting and Bidding	January 2022	April 2022
Construction	July 2022	March 2024

Upon notice of grant award, Valley District will proceed with construction and provide Reclamation with environmental documentation needed for Reclamation to complete its NEPA review. Those activities, along with permitting are anticipated to be completed within about 6 months of award. Construction bids will be solicited upon completion of final design, and construction is anticipated to be completed within 20 months, by early 2024. Project management will occur for the duration of the project and will be completed upon final grant agreement closeout.

- *Describe any permits that will be required, along with the process for obtaining such permits.*

Outstanding permits include:

- DWR Encroachment Permit
- Lakebed and Streambed Alteration Agreement
- NPDES Construction General Permit
- Metropolitan Encroachment Permit

Following completion of 90% design and completion of the Endangered Species Act consultation, Valley District staff put in the necessary permit applications. All permits will be acquired prior to the start of construction.

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

As described in Section 1.3.1 project feasibility was established in:

- *Environmental Impact Report Santa Ana River Water Rights Applications for Supplemental Water Supply.* This examined future hydrologic conditions and the amount of storm water available for conjunctive use.
- *Santa Ana River Groundwater Recharge Optimization Study Final Report* evaluated the ability of existing facilities to meet recharge objective of 500 cfs, recommended and provided conceptual designs for improvements to meet the objective of 500 cfs.
- *The Basis of Design Report Enhanced Recharge Facilities for Santa Ana River Water Diverted by Valley District and Western Under Rights Permit.* The BDR established the basic project design requirements for the facilities required to meet the project objective to recharge up to 500 cfs. The drawings included with the BDR provided a general layout of facilities and major discipline requirements.
- 90% design was completed in May 2020.
- *Describe any new policies or administrative actions required to implement the project.*

Implementation of the proposed project would not require any new policies or administrative actions. The project is part of Valley District's overarching effort to manage and improve groundwater conditions. The project is consistent with the groundwater adjudication and is consistent with local agreements.

#### **1.6.6 Evaluation Criterion E – Nexus to Reclamation**

- *Does the applicant have a water service, repayment, or O&M contract with Reclamation? If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means? Will the proposed work benefit a Reclamation project area or activity? Is the applicant a Tribe?*

The applicant does not have a water service, repayment, or O&M contract with Reclamation. The applicant, Valley District, does not receive Reclamation water. The applicant is not a Tribe. However, the project will benefit a Reclamation project area. Per the adjudication of the SBB (the Western Judgment), 64,862 AFY of the SBB safe yield is allocated to entities in Riverside County, including retail agencies of Western Municipal Water District, including the City of Riverside, Riverside Highland Water Company, Meeks & Daley Water Company, and Regents of the University of California. The Riverside County agencies may not exceed their allocation unless they participate in additional recharge. By participating in additional recharge, such as the proposed project, these entities may extract more than the 64,862 AFY. The Riverside County agencies also purchase imported water Metropolitan Water District of Southern California, of which approximately 25 percent comes from the Colorado River via the Colorado River Aqueduct as part of Reclamation's Boulder Canyon Project.

## 2.0 Project Budget

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### 2.1 Funding Plan and Letters of Commitment

- *Describe how the non-Federal share of project costs will be obtained. Please identify the sources of the non-Federal cost share contribution for the project, including:*

Valley District is requesting the maximum grant request of \$2,000,000 for the Construction/Implementation category. Valley District has general reserve funds available to provide a local match of \$31,115,646; combined, the grant and match will cover the total estimated project costs of \$33,115,646.

No cash funds or in-kind costs have been requested from a third-party funding source. There are no other outstanding funding requests.

- *Identify whether the budget proposal includes any project costs that have been or may be incurred prior to award.*

The budget proposal does not include any project costs that have been or are anticipated to be incurred prior to award. The budget proposal in this application is to cover construction, which will occur after award.

### 2.2 Budget Proposal

The following tables (Table 3 and 4) summarize total costs and funding sources for the proposed Project. The total cost of the proposed Project is \$33,115,646. Funding sources for the project include funding from Valley District and requested funding from Reclamation. No other Federal funding has been requested or received for the proposed project.

**Table 3. Total Project Cost Table**

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$2,000,000
Costs to be paid by the applicant	\$31,115,646
Value of third-party contributions	\$0
<b>TOTAL PROJECT COST</b>	<b>\$33,115,646</b>

**Table 4. Summary of Non-Federal and Federal Funding Sources**

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. San Bernardino Valley Municipal Water District	\$31,115,646
2. n/a	\$0
3. n/a	\$0
<b>Non-Federal Subtotal</b>	<b>\$31,115,646</b>
<b>REQUESTED RECLAMATION FUNDING</b>	<b>\$2,000,000</b>

The budget proposal consists of costs associated with implementation of the proposed Project which fall under the Contractual/Implementation and Other categories. The budget proposal is provided in Table 5 and is described in more detail in the following Budget Narrative.

**Table 5. Budget Proposal**

Budget Item Description	Computation		Quantity Type	Total Cost
	\$/Unit	Quantity		
Salaries and Wages (a)				
Not Applicable				\$0
Fringe Benefits				
Not Applicable	-	-	-	\$0
Travel				
Not Applicable	-	-	-	\$0
Equipment				
Not Applicable	-	-		\$0
Supplies and Materials				
Not Applicable	-	-		\$0
Contractual/Implementation				
Design	Pre-award and Not Included			\$0
Construction Management During Construction	Bid from Contractor			\$1,450,646
Geotechnical Inspection Services	Bid from Contractor			\$160,000
1B-1 Intake Structure and Trash Rack System	Engineers Opinion of Probable Cost			\$5,013,655
1B-2 Borrow Pit Modifications				\$1,499,032
1B-3 Main Canal				\$3,610,845
1B-4 Recharge Basins				\$21,381,468
Other – Environmental and Regulatory Compliance				
CEQA/NEPA	Pre-award and Not Included			\$0
Permitting	Pre-award and Not Included			\$0
TOTAL DIRECT COSTS				\$33,115,646
Indirect Costs				
Not Applicable				
TOTAL ESTIMATED PROJECT COSTS				\$33,115,646

## 2.3 Budget Narrative

### *Salaries, Wages, and Fringe Benefits*

Project implementation will primarily be conducted by specialized contractors whose costs are further detailed below. Valley District 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*

Valley District anticipates visiting the project site periodically during construction, but travel to Valley District facilities is a part of normal staff activity and no reimbursement or match for staff travel is being sought. It is not known at this time whether consultant costs for travel will be required. If so, they would be included under contractual costs.

#### *Equipment*

The purchase of related equipment 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 construction management during construction, installation of a trash rack on the intake structure, modifications to the Seven Oaks Dam borrow pit, modifications to a conveyance canal, and construction of recharge basins. All procurements with an anticipated aggregate value that exceeds the Simplified Acquisition Threshold (currently \$10,000) will use a competitive procurement method.

All estimates are considered fair and reasonable.

#### *Third-Party In-Kind Contributions*

No work proposed for this Project will be accomplished by third-party contributions.

#### *Environmental and Regulatory Compliance Costs*

CEQA and NEPA costs were previously incurred and are not included in project costs.

#### *Other Expenses*

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

#### *Indirect Costs*

No indirect costs are included in the proposed budget.

### 3.0 Environmental and Cultural Resources Compliance

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- *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 proposed Project consists of the following 4 main components:

- *Phase 1B-1 Intake Improvements with Trash Rack System.* The Phase 1B-1 Intake Structure modifications includes trash removal facilities that will facilitate removal of trash including floating materials such as plastics, bags, containers, paper and other debris. design includes a galvanized steel bar screen with mechanical cleaning. The steel bar screen will be approximately 40 feet wide and approximately 5 feet high. The trash removal system would be in a new concrete structure, which would be constructed in front of the existing concrete deck to support the trash removal equipment. The mechanical cleaning equipment will include a boom, brush/rake, hydraulic power unit, and a control panel. The raked debris will be collected in a bin for disposal offsite. This will impact approximately 0.2 acre of an existing site used for water facilities.
- *Phase 1B-2 Borrow Pit Modifications for Desilting and Recharge.* The Phase 1B-2 Borrow Pit Modifications include allowing flows from the existing Valley District main canal to enter the Borrow Pit area in a serpentine fashion that terminates in the large desiltation basin in the Borrow Pit area which allow for fine silts and coarser grained silts to settle because of lower velocities. The borrow pit modifications will affect 3.26 acres of an already heavily disturbed site.
- *Phase 1B-3 Main Canal.* The Phase 1B-3 Main Canal includes improvements to 2,950 feet of the existing earthen canal beginning at the Santa Ana Low Turnout to accommodate an increased flow rate. In addition, approximately 6,200 feet of new earthen canal will be constructed.
- *Phase 1B-4 Spreading Basins.* The SARER Phase 1B-4 Spreading Basins are 337.4 acres which is approximately 34 percent of the 476 acres of area available for spreading east and west of the Mentone South Pipeline and MWD Inland Feeder. These additional 337.4 acres are divided in to 24 basins which are separated by embankments and connected by pipelines to allow for flexibility in operations. The 24 basins are expected to provide approximately 330 cfs of new recharge capacity with the remaining approximately 170 cfs of flow to be recharged in existing facilities. The facilities will also include an internal delivery canal with diversion structures and inter-basin transfer pipelines.

Environmental documentation and review of the project anticipate potentially significant impacts to air quality (emissions during construction), the potential for groundwater recharge to mobilize existing groundwater contamination plumes, temporary excessive noise due to construction, and temporary construction related traffic delays. The review identified significant and unavoidable impact to river flow on non-storm days. No feasible mitigation measures were identified that would avoid a significant change in river flow on non-storm days while still allowing a

consistent and reliable diversion for beneficial use by the project. This impact would remain significant and unavoidable under the revised project.

Environmental review also determined that the project could increase nitrate concentrations at some wells to levels that exceed Water Quality Objectives. This impact would be significant. With implementation of mitigation, impacts to nitrate concentration levels would be reduced. However, there could be periods of time when significant impacts remain. Therefore, impacts to nitrate concentration levels in the SBB would be considered significant and unavoidable.

Findings of unavoidable significant adverse biological resource impacts were reached after applying extensive mitigation measures identified in the Santa Ana River Water Right Application for Supplemental Water Supply and Addendums 1 and 2. Recent biological resource surveys indicate that construction of the proposed project will not adversely impact certain sensitive species, including Santa Ana River woolly-star, slender-horned spineflower, and coastal California gnatcatcher. The San Bernardino kangaroo rat (SBKR) was not found to occupy the project sites and was determined to have a low population within the project area. The modified and new facilities considered in this document are not forecast to adversely impact any sensitive species because the modified project areas have not been found to contain any sensitive species. However, there is the potential for sensitive species to occur in the project area. In addition, about 0.03 acre of permanent impact will occur to waters of the US/State. Finally, the project will create about 3.61 acres of waters and create a need to permanently maintain about 2.32 acres of the new waters.

It needs to be noted that the project is a covered action under the Upper Santa Ana River HCP. The modified and new facilities of SARER Phase 1B have been designed to not only avoid adverse impacts to sensitive species (e.g. the San Bernardino kangaroo rat) but also enhance currently degraded habitat areas. These habitat areas are adjacent to the recharge basins and were specifically targeted to benefit alluvial fan-dependent species. The habitat enhancement designs are based primarily on habitat modeling developed by Dr. Debra Shier of the San Diego Zoo Institute for Conservation Biology, specifically for Valley District and this project. During construction of the basins, the habitat areas will also be restored based on specific habitat variables necessary to support sensitive species. This project will take a natural community restoration approach that will enhance and manage habitat long-term for many co-occurring species native to the Santa Ana River alluvial fan.

- *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?*

As part of project environmental review two federally listed plants: Santa Ana River woolly star *Eriastrum densifolium ssp. sanctorum* and slender-horned spineflower (*Dodecahema leptoceras*, spineflower), were determined to be present or have a moderate or high potential for occurrence due to the presence of suitable habitat within the project. Two federally listed wildlife species were identified as having the potential to occur within the project site: Coastal California gnatcatcher *Poliophtila californica californica* and San Bernardino kangaroo rat (*Dipodomys merriami parvus*). Recent biological resource surveys indicate that construction of the proposed project will not adversely impact certain sensitive species, including Santa Ana River woolly-

star, slender-horned spineflower, and coastal California gnatcatcher. The San Bernardino kangaroo rat (SBKR) was not found to occupy the project sites and was determined to have a low population within the project area. However, there is the potential for these species to occur in the project area and mitigation measures will be taken to avoid impacts.

- *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 is expected to be 0.03 acre of permanent impact to waters of the US/State.

- *When was the water delivery system constructed?*

Portions of the water delivery system in this area date back to 1858 but have been extensively remodeled over time and now lack historic significance.

- *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 to an irrigation system.

- *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*

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

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

There are no known or anticipated archeological resources as the site has been extensively developed, graded, and compacted in the past.

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

The project will not have a disproportionately high or adverse effect on low income or minority populations. Benefits of the project would be shared by all Valley District water customers as well as entities in Riverside County, as the Project will improve the overall reliability of water supplies, and particularly those benefitting from groundwater produced at the SBB.

- *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 limit access to or ceremonial use of Indian sacred sites or result in other impacts on 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 Project will be implemented within an already developed and largely disturbed area. Earth-disturbing work would have limited potential to contribute to the introduction, continued existence, or spread of, noxious weeds or non-native invasive species.

## 4.0 Other

---

### 4.1 Required Permits and Approvals

As part of design and CEQA and NEPA compliance activities Valley District identified the permits needed to implement the project. Many permitting tasks have been completed:

- The Valley District, SARER Phase 1B Grant Applicant, and Western Municipal Water District (Western) previously received water right permits 21264 and 21265 from the State Water Resources Control Board (SWRCB) which authorizes the diversion of up to 1,250 cfs and up to 198,317 acre-ft (AF) in a single year from the Santa Ana River SWRCB Decision No. 1649).
- US Fish and Wildlife Service Endangered Species Act Consultation. This was part of the Upper Santa Ana River Wash Plan HCP.
- National Historic Preservation Act Section 106 Compliance was conducted in coordination with US Fish and Wildlife Service as part of the Upper Santa Ana River Wash Plan HCP and associated Environmental Impact Statement/ Supplemental EIR.

There are outstanding permits which will be acquired prior to the start of construction by the selected contractor and Valley District. Following completion of 90% design and completion of the Endangered Species Act consultation, Valley District staff put in applications for the following outstanding permits:

- DWR Encroachment Permit for crossing of Mentone South Pipeline also known as the East Branch Extension).
- SWRCB National Pollutant Discharge Elimination System (NPDES) Construction General Permit for storm water.
- California Department of Fish and Game Code Section 1602 Lakebed and Streambed Alteration Agreement for Phase 1B-3 Main Canal
- Regional Water Quality Control board, Santa Ana Region Clean Water Act Section 401 for Phase 1B-3 – Main Canal.
- Metropolitan Water District Encroachment Permit for crossing of that agency's Inland Feeder pipeline.

All permits are anticipated to be acquired by June 2022.

### 4.2 Existing Drought Contingency Plan

The reviewer is directed to Section 1.3.1/Drought Planning for an explanation of the sequence of the extensive drought planning performed. Excerpts of the following plans are included in Appendix A:

1. Climate Change Analysis for the Santa Ana River Watershed, 2013: This analysis indicates the growing risk of drought and needed adaptations, including building a diverse water supply portfolio.

2. 2020 Integrated Regional Urban Water Management Plan. The plan identified climate change and drought vulnerabilities, identified adaption strategies, and specific projects to address climate mitigation and adaption.

#### 4.3 Letters of Support and Partnership

Letters of support from the following agencies are included in Appendix B:

- San Bernardino Valley Water Conservation District
- San Bernardino Municipal Water Department
- City of Riverside
- Western Municipal Water District

#### 4.4 Official Resolution

A resolution from Valley District'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 Appendix C.

#### 4.5 Unique Entity Identifier and System for Award Management

Valley District is registered in the System for Award Management as evidenced by the screenshot provided below. Valley District's unique Entity ID is MCFHQJTK3WH8. Valley District will maintain an active SAM registration during any period in which the District has an active Federal award or application under consideration by a Federal entity.



## SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

**ALERT!** This entity is only available FOR OFFICIAL USE ONLY.

DUNS Unique Entity ID <b>054797683</b>	SAM Unique Entity ID <b>MCFHQJTK3WH8</b>	CAGE / NCAGE <b>5GYL2</b>
Purpose of Registration <b>Federal Assistance Awards Only</b>	Expiration Date <b>Mar 4, 2022</b>	Registration Status <b>Active</b>
Physical Address <b>380 E Vanderbilt WAY San Bernardino, California 92408-3593 United States</b>	Mailing Address <b>380 E Vanderbilt WAY San Bernardino, California 92408 United States</b>	

## 5.0 References

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Center for Disease Control Social Vulnerability Index (SVI). <https://svi.cdc.gov/map.html>. Accessed September 27, 2021.

National Drought Mitigation Center. 2021. United States Drought Monitor. Available at: <https://droughtmonitor.unl.edu/>

San Bernardino Valley Municipal Water District and Western Municipal Water District. 2004. Environmental Impact Report Santa Ana River Water Rights Applications for Supplemental Water Supply.

San Bernardino Valley Municipal Water District, City of Colton, City of Loma Linda, City of Redlands, City of Rialto, East Valley Water District, Riverside-Highland Water company, San Bernardin Municipal Water Department, South Mesa Water Company, West Valley Water District, and Yucaipa Water District. 2021. 2020 Upper Santa Ana River Watershed 2020 Integrated Regional Urban Water Management Plan. June. <https://www.sbvmd.com/reports/reports/-folder-1120>

San Bernardino Valley Municipal Water District, San Bernardino Valley Water Conservation District, Western Municipal Water District, and the City of Riverside. 2011. Basis of Design Report Enhanced Recharge Facilities for Santa Ana River Water Diverted by Valley District and Western Under Rights Permit.

San Bernardino Valley Municipal Water District. 2021a. Board of Directors' Workshop – Engineering May 11, 2021.

San Bernardino Valley Municipal Water District. 2021b. Change in Groundwater Storage for the San Bernardino, Rialto-Colton and Yucaipa Basins. April.

US Bureau of Reclamation. 2013. Climate Change Analysis for the Santa Ana River Watershed. August

US Fish and Wildlife Service and California Department of Fish and Wildlife. 2020. *Upper Santa Ana Wash Habitat Conservation Plan* (Wash Plan HCP) Environmental Impact Statement/Environmental Impact Report. May.

## **APPENDIX A**

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### Drought Plan Documentation

- Climate Change Analysis for the Santa Ana River Watershed, Excerpts
- 2020 Integrated Regional Urban Water Management Plan, Excerpts

## **APPENDIX B**

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### Letters of Support and Partnership

- San Bernardino Valley Water Conservation District
- City of Riverside
- San Bernardino Municipal Water Department
- Western Municipal Water District



## San Bernardino Valley Water Conservation District

Helping Nature Store Our Water

September 29, 2021

Bureau of Reclamation  
Financial Assistance Operations  
Attn: NOFO Team  
PO Box 25007, MS 84-27133  
Denver, CO 80225

**Subject:** Support for the Santa Ana River Enhanced Recharge Phase 1B Project

To Whom It May Concern:

On behalf of the San Bernardino Valley Water Conservation District, we would like to express our strong support for the Santa Ana River Enhanced Recharge Phase 1B (SARER Phase 1B) project, and the application for WaterSMART grant funding. As a party to the Agreement to Develop and Operate the SARER project, the Conservation District is pleased to support Phase 1B of the SARER project as it continues our mission of ensuring recharge of the Bunker Hill Groundwater Basin using local native surface water to the maximum extent practicable. The collaborative nature of the project has allowed the parties to use their respective assets and skills, including the Conservation Districts existing recharge facilities, to improve the reliability of the local water supply. The SARER Phase 1B Project includes, among other things, improvements to the existing facilities and construction of new facilities to capture and recharge stormwater to the San Bernardino Basin Area (SBBA). The project will recharge an average of 15,412-acre feet a year and could, in wet years, recharge as much as 80,000 acre-feet.

### Importance of the San Bernardino Basin Area

The SBBA refers to the groundwater basin and subbasin that underlies the greater San Bernardino area within the Inland Empire Area of Southern California. The SBBA was adjudicated in 1969 through the *Western* Judgment. The *Western* Judgment aims to preserve the safe yield of the SBBA by establishing entitlements to groundwater extractions and by requiring replenishment of the basin when extractions by non-plaintiff parties cause the aggregate safe yield to be exceeded. A Court-appointed Watermaster committee made up of representative members from San Bernardino Valley Municipal Water District (Valley District) and Western Municipal Water District (Western) have rights to use the water based on the

1630 W. Redlands Blvd, Suite A  
Redlands, CA 92373  
Phone: 909.793.2503  
Fax: 909.793.0188  
[www.sbvwd.org](http://www.sbvwd.org) Email: [info@sbvwd.org](mailto:info@sbvwd.org)

#### BOARD OF DIRECTORS

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David E. Raley

Division 3:  
Robert Stewart

Division 4:  
John Longville

Division 5:  
Melody McDonald

#### GENERAL MANAGER

Daniel B. Cozad

adjudication, but are also directly responsible for ensuring that groundwater and surface water resources are effectively managed for the benefit of the region. There is active conjunctive use in the SBBA where water supplies are stored in the basin when available and then used in drier periods.

The Valley District service area covers approximately 352 square miles in southwestern San Bernardino County, serving 14 major retail water purveyors in addition to agricultural and mutual water companies. The service area contains numerous cities and communities in portions of the San Bernardino Valley, the Crafton Hills area, and the Yucaipa Valley and includes the following cities: Colton, Grand Terrace, Highland, Loma Linda, Redlands, Rialto, San Bernardino, and Yucaipa.

Western's service area covers approximately 510 square miles in western Riverside County, serving more than 25,000 retail and 8 wholesale customers. Western serves the cities of Canyon Lake, Corona, Lake Elsinore, Murrieta, Norco, Riverside, Temecula, the communities of Jurupa, Home Gardens, and Rubidoux, and the unincorporated areas of western Riverside County surrounding Lake Mathews.

Valley District augments groundwater supplies by recharging imported water so that local entities can continue to use the SBBA as a water supply source.

In total it is estimated that a population of over 950,000 receives some or all of their water supply from the SBBA.

### **Need for Expanded Water Supply Portfolio to Respond to Drought**

The Valley District and Western service areas rely, to a significant degree, on imported water supplies, whether from the State Water Project (SWP), the Colorado River, or other sources. The SWP is currently the primary water source used by Valley District to recharge the SBBA. Due to factors such as drought, legal and institutional constraints, and environmental concerns, the reliability of imported sources of water continues to decline. At the time when the Phase 1B Project was originally conceived, the California Department of Water Resources (DWR) anticipated long-term future deliveries by the SWP would average only 76 percent of contract amounts; more recent delivery estimates from the SWP are even lower due to reduced precipitation and runoff, further reducing deliveries to Valley District. In 2021 DWR expects the SWP to deliver 5 percent of requested supplies.

***This highlights the need to broaden the regional water supply portfolio, including performing groundwater recharge with stormwater as would occur under the SARER Phase 1B.***

### **Furthers Regional Vision**

For more than 20 years entities along the Santa Ana River have worked towards an approach to balance the competing needs of the various entities surrounding and within the Santa Ana River Wash. The culmination of the collaboration was the Upper Santa Ana Wash Habitat Conservation Plan (Wash Plan) and the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). These planning efforts created an integrated approach to permit and mitigate all construction, maintenance, and operation activities within the Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement.

The SARER Phase 1B is a necessary water supply project identified in the Wash Plan and the related HCP and is protective of the local aquatic species as well as terrestrial species in the Wash. The project would further the conservation and management of 1,659.9 acres of native habitats that support slender-horned spine flower, Santa Ana River woolly-star, cactus wren, California gnatcatcher, and San Bernardino kangaroo rat.

We strongly urge your thoughtful consideration of the SARER Phase 1B Project.

Sincerely,



Daniel Cozad

General Manger

San Bernardino Valley Water Conservation District



City of Riverside, California  
Office of the Mayor  
**PATRICIA LOCK DAWSON**



September 30, 2021

Bureau of Reclamation  
Financial Assistance Operations  
Attn: NOFO Team  
PO Box 25007, MS 84-27133  
Denver, CO 80225

Subject: **Support for the Santa Ana River Enhanced Recharge Phase 1B Project**

To Whom It May Concern:

On behalf of the City of Riverside – Public Utilities Department, we would like to express our strong support for the Santa Ana River Enhanced Recharge Phase 1B (SARER Phase 1B) project, and the application for WaterSMART grant funding. The SARER Phase 1B Project includes, among other things, improvements to existing facilities and construction of new facilities to capture and recharge stormwater to the San Bernardino Basin Area (SBBA). The project will recharge an average of 15,412-acre feet a year and could, in wet years, recharge as much as 80,000 acre-feet.

**Importance of the San Bernardino Basin Area**

The SBBA refers to the groundwater basin and subbasin that underlies the greater San Bernardino area within the Inland Empire Area of Southern California. The SBBA was adjudicated in 1969 through the Western Judgment. The Western Judgment aims to preserve the safe yield of the SBBA by establishing entitlements to groundwater extractions and by requiring replenishment of the basin when extractions by non-plaintiff parties cause the aggregate safe yield to be exceeded. A Court-appointed Watermaster committee made up of representative members from San Bernardino Valley Municipal Water District (Valley District) and Western Municipal Water District (Western) have rights to use the water based on the adjudication, but are also directly responsible for ensuring that groundwater and surface water resources are effectively managed for the benefit of the region. There is active conjunctive use in the SBBA where water supplies are stored in the basin when available and then used in drier periods.

The Valley District service area covers approximately 352 square miles in southwestern San Bernardino County, serving 14 major retail water purveyors in addition to agricultural and mutual water companies. The service area contains numerous cities and communities in portions of the San Bernardino Valley, the Crafton Hills area, and the Yucaipa Valley and includes the following cities: Colton, Grand Terrace, Highland, Loma Linda, Redlands, Rialto, San Bernardino, and Yucaipa.

Western's service area covers approximately 510 square miles in western Riverside County,

serving more than 25,000 retail and 8 wholesale customers. Western serves the cities of Canyon Lake, Corona, Lake Elsinore, Murrieta, Norco, Riverside, Temecula, the communities of Jurupa, Home Gardens, and Rubidoux, and the unincorporated areas of western Riverside County surrounding Lake Mathews.

Valley District augments groundwater supplies by recharging imported water so that local entities can continue to use the SBBA as a water supply source.

In total it is estimated that a population of over 950,000 receives some or all of their water supply from the SBBA.

### **Need for Expanded Water Supply Portfolio to Respond to Drought**

The Valley District and Western service areas rely, to a significant degree, on imported water supplies, whether from the State Water Project (SWP), the Colorado River, or other sources. The SWP is currently the primary water source used by Valley District to recharge the SBBA. Due to factors such as drought, legal and institutional constraints, and environmental concerns, the reliability of imported sources of water continues to decline. At the time when the Phase 1B Project was originally conceived, the California Department of Water Resources (DWR) anticipated long-term future deliveries by the SWP would average only 76 percent of contract amounts; more recent delivery estimates from the SWP are even lower due to reduced precipitation and runoff, further reducing deliveries to Valley District. In 2021 DWR expects the SWP to deliver 5 percent of requested supplies.

*This highlights the need to broaden the regional water supply portfolio, including performing groundwater recharge with stormwater as would occur under the SARER Phase 1B.*

### **Further Regional Vision**

For more than 20 years entities along the Santa Ana River have worked towards an approach to balance the competing needs of the various entities surrounding and within the Santa Ana River Wash. The culmination of the collaboration was the Upper Santa Ana Wash Habitat Conservation Plan (Wash Plan) and the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). These planning efforts created an integrated approach to permit and mitigate all construction, maintenance, and operation activities within the Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement.

The SARER Phase 1B is a necessary water supply project identified in the Wash Plan and the related HCP and is protective of the local aquatic species as well as terrestrial species in the Wash. The project would further the conservation and management of 1,659.9 acres of native habitats that support slender-horned spine flower, Santa Ana River woolly-star, cactus wren, California gnatcatcher, and San Bernardino kangaroo rat.

We strongly urge your thoughtful consideration of the SARER Phase 1B Project.

Sincerely,



Patricia Lock Dawson  
Mayor, City of Riverside

# CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

CITY OF SAN BERNARDINO  
WATER BOARD

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President

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CYNTHIA J. MOUSER  
Director of Finance

*"Trusted, Quality Service since 1905"*

September 28, 2021

Bureau of Reclamation  
Financial Assistance Operations  
Attn: NOFO Team  
PO Box 25007, MS 84-27133  
Denver, CO 80225

RE: Support for the Santa Ana River Enhanced Recharge Phase 1B Project

To Whom It May Concern:

The City of San Bernardino Municipal Water Department (SBWMD) strongly supports the Santa Ana River Enhanced Recharge Phase 1B (SARER Phase 1B) project, and the application for WaterSMART grant funding. As a regional stakeholder in the San Bernardino Basin Area (SBBA) diversification of local water resources and investments toward groundwater recharge are critical for reducing dependence on imported water supplies and building drought resiliency.

The SARER Phase 1B Project includes, among other things, improvements to existing facilities and construction of new facilities to capture and recharge stormwater to the SBBA. The project will recharge an average of 15,412-acre feet a year and could, in wet years, recharge as much as 80,000 acre-feet.

## **Importance of the San Bernardino Basin Area**

The SBBA refers to the groundwater basin and subbasin that underlies the greater San Bernardino area within the Inland Empire Area of Southern California. The SBBA was adjudicated in 1969 through the Western Judgment. The Western Judgment aims to preserve the safe yield of the SBBA by establishing entitlements to groundwater extractions and by requiring replenishment of the basin when extractions by non-plaintiff parties cause the aggregate safe yield to be exceeded. A Court-appointed Watermaster committee made up of representative members from San Bernardino Valley Municipal Water District (Valley District) and Western Municipal Water District (Western) have rights to use the water based on the adjudication, but are also directly responsible for ensuring that groundwater and surface water resources are effectively managed for the benefit of the region. There is active conjunctive use in the SBBA where water supplies are stored in the basin when available and then used in drier periods.

1350 South "E" Street, San Bernardino, California 92408 P.O. Box 710, 92402 Phone: (909) 384-5141

FACSIMILE NUMBERS: Administration: (909) 453-6399 Customer Service: (909) 453-6396 Finance: (909) 453-6383 Engineering: (909) 453-6385  
Corporate Yards: (909) 453-6389 Water Reclamation Plant: (909) 453-6395 Environmental & Regulatory Compliance: (909) 453-6391  
Environmental Control: (909) 453-6394

The Valley District service area covers approximately 352 square miles in southwestern San Bernardino County, serving 14 major retail water purveyors in addition to agricultural and mutual water companies. The service area contains numerous cities and communities in portions of the San Bernardino Valley, the Crafton Hills area, and the Yucaipa Valley and includes the following cities: Colton, Grand Terrace, Highland, Loma Linda, Redlands, Rialto, San Bernardino, and Yucaipa.

Western's service area covers approximately 510 square miles in western Riverside County, serving more than 25,000 retail and 8 wholesale customers. Western serves the cities of Canyon Lake, Corona, Lake Elsinore, Murrieta, Norco, Riverside, Temecula, the communities of Jurupa, Home Gardens, and Rubidoux, and the unincorporated areas of western Riverside County surrounding Lake Mathews.

Valley District augments groundwater supplies by recharging imported water so that local entities can continue to use the SBBA as a water supply source.

In total it is estimated that a population of over 950,000 receives some or all of their water supply from the SBBA.

#### **Need for Expanded Water Supply Portfolio to Respond to Drought**

The Valley District and Western service areas rely, to a significant degree, on imported water supplies, whether from the State Water Project (SWP), the Colorado River, or other sources. The SWP is currently the primary water source used by Valley District to recharge the SBBA. Due to factors such as drought, legal and institutional constraints, and environmental concerns, the reliability of imported sources of water continues to decline. At the time when the Phase 1B Project was originally conceived, the California Department of Water Resources (DWR) anticipated long-term future deliveries by the SWP would average only 76 percent of contract amounts; more recent delivery estimates from the SWP are even lower due to reduced precipitation and runoff, further reducing deliveries to Valley District. In 2021 DWR expects the SWP to deliver 5 percent of requested supplies.

*This highlights the need to broaden the regional water supply portfolio, including performing groundwater recharge with stormwater as would occur under the SARER Phase 1B.*

#### **Further Regional Vision**

For more than 20 years entities along the Santa Ana River have worked towards an approach to balance the competing needs of the various entities surrounding and within the Santa Ana River Wash. The culmination of the collaboration was the Upper Santa Ana Wash Habitat Conservation Plan (Wash Plan) and the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). These planning efforts created an integrated approach to permit and mitigate all construction, maintenance, and operation activities within the Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement.

The SARER Phase 1B is a necessary water supply project identified in the Wash Plan and the related HCP and is protective of the local aquatic species as well as terrestrial species in the Wash. The project would further the conservation and management of 1,659.9 acres of native habitats that support slender-horned spine flower, Santa Ana River woolly-star, cactus wren, California gnatcatcher, and San Bernardino kangaroo rat.

We strongly urge your thoughtful consideration of the SARER Phase 1B Project.

Sincerely,



Miguel J. Guerrero, P.E.

General Manager

City of San Bernardino Municipal Water Department

1350 South "E" Street, San Bernardino, California 92408 P.O. Box 710, 92402 Phone: (909) 384-5141

FACSIMILE NUMBERS: Administration: (909) 453-6399 Customer Service: (909) 453-6396 Finance: (909) 453-6383 Engineering: (909) 453-6385

Corporate Yards: (909) 453-6389 Water Reclamation Plant: (909) 453-6395 Environmental & Regulatory Compliance: (909) 453-6391

Environmental Control: (909) 453-6394

**Craig D. Miller**  
General Manager

**Mike Gardner**  
Division 1

**Gracie Torres**  
Division 2

**Brenda Dennstedt**  
Division 3

**Laura Roughton**  
Division 4

**Fauzia Rizvi**  
Division 5

October 4, 2021

Bureau of Reclamation  
Financial Assistance Operations  
Attn: NOFO Team  
PO Box 25007, MS 84-27133  
Denver, CO 80225

**RE: Support for the Santa Ana River Enhanced Recharge Phase 1B Project**

To Whom It May Concern:

On behalf of Western Municipal Water District (Western), I would like to express our strong support for the Santa Ana River Enhanced Recharge Phase 1B (SARER Phase 1B) project and the application for WaterSMART grant funding.

The SARER Phase 1B Project includes, among other things, improvements to existing facilities and the construction of new facilities to capture and recharge stormwater to the San Bernardino Basin Area (SBBA). The project will recharge an average of 15,412 acre-feet a year and could, in wet years, recharge as much as 80,000 acre-feet. This project is important for Western's wholesale area and will benefit many of our retail agency customers for reasons listed below.

**Importance of the San Bernardino Basin Area**

The SBBA refers to the groundwater basin and subbasin that underlies the greater San Bernardino area within the Inland Empire Area of Southern California. The SBBA was adjudicated in 1969 through the Western Judgment. The Western Judgment aims to preserve the safe yield of the SBBA by establishing entitlements to groundwater extractions and by requiring replenishment of the basin when extractions by non-plaintiff parties cause the aggregate safe yield to be exceeded. A Court-appointed Watermaster committee made up of representative members from both Western and San Bernardino Valley Municipal Water District (Valley District) have the right to use the water based on the adjudication. As part of the adjudication, Western and Valley District are directly responsible for ensuring that groundwater and surface water resources are effectively managed for the region's benefit.

The Valley District service area covers approximately 352 square miles in southwestern San Bernardino County, serving 14 major retail water purveyors in addition to agricultural and mutual water companies. The service area contains numerous cities and communities in portions of the San Bernardino Valley, the Crafton Hills area, and the Yucaipa Valley and includes the following cities: Colton, Grand Terrace, Highland, Loma Linda, Redlands, Rialto, San Bernardino, and Yucaipa.

Western provides water and wastewater services to a region stretching 527-square miles in western Riverside County, California, benefitting a population of nearly one million people. This area includes the cities of Corona, Norco, Murrieta, and Riverside, as well as the water agencies serving Box Springs, Eagle Valley, Lake Elsinore, Temescal Valley, Jurupa Valley, Eastvale, and Temecula.

Valley District augments groundwater supplies by recharging imported water so that local entities can continue to use the SBBA as a water supply source.

In total, it is estimated that **a population of over 950,000 receives some or all of its water supply from the SBBA.**

#### **Need for Expanded Water Supply Portfolio to Respond to Drought**

The Valley District and Western service areas rely, to a significant degree, on imported water supplies, whether from the State Water Project (SWP), the Colorado River, or other sources. The SWP is currently the primary water source used by Valley District to recharge the SBBA. Due to factors such as drought, legal and institutional constraints, and environmental concerns, the reliability of imported sources of water continues to decline. When the Phase 1B Project was originally conceived, the California Department of Water Resources (DWR) anticipated that long-term future deliveries by the SWP would average only 76 percent of contract amounts. Unfortunately, more recent delivery estimates from the SWP are even lower due to reduced precipitation and runoff, further reducing deliveries to Valley District. In 2021 DWR expects the SWP to deliver 5 percent of the requested supplies.

**There is a clear need to broaden the regional water supply portfolio, including performing groundwater recharge with stormwater under the SARER Phase 1B.**

#### **Further Regional Vision**

For more than 20 years, entities along the Santa Ana River have worked towards balancing the competing needs of the various entities surrounding and within the Santa Ana River Wash. The culmination of the collaboration was the Upper Santa Ana Wash Habitat Conservation Plan (Wash Plan) and the Upper Santa Ana River Habitat Conservation Plan (Upper SAR HCP). These planning efforts created an integrated approach to permit and mitigate all construction, maintenance, and operation activities within the Wash area, including water conservation, wells and water infrastructure, aggregate mining, transportation, flood control, agriculture, trails, and habitat enhancement.

The SARER Phase 1B is a necessary water supply project identified in the Wash Plan and the related HCP. It is protective of the local aquatic species as well as terrestrial species in the Wash. The project would further the conservation and management of 1,659.9 acres of native habitats that support slender-horned spine flower, Santa Ana River woolly-star, cactus wren, California gnatcatcher, and San Bernardino kangaroo rat.

Western strongly urges your thoughtful consideration of the SARER Phase 1B Project.

Respectfully,



CRAIG D. MILLER, P.E.  
General Manager

## **APPENDIX C**

---

### Official Resolution

## RESOLUTION No. 1127

### **RESOLUTION OF THE BOARD OF DIRECTORS OF SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT AUTHORIZING VALLEY DISTRICT'S APPLICATION FOR THE BUREAU OF RECLAMATION WaterSMART PROGRAM: DROUGHT RESILIENCY PROJECTS FOR FISCAL YEAR 2022**

WHEREAS, San Bernardino Valley Municipal Water District ("Valley District") is a municipal water district established pursuant to Section 71000 et seq. of the California Water Code; and

WHEREAS, imported water supply in the San Bernardino area is facing a growing list of challenges associated with a prolonged drought, regulatory cutbacks on State Water Project deliveries, Delta instability, climate change, aging infrastructure, and growing population; and,

WHEREAS, the United States Department of the Interior, Bureau of Reclamation, under the WaterSMART: Drought Resiliency Projects for Fiscal Year 2022 will make funding available to qualifying applicants; and

WHEREAS, the Board of Directors of Valley District has identified a project that exemplifies the objectives of the WaterSMART grant in the Enhanced Recharge Project Phase 1B; and

WHEREAS, Valley District agrees to the administration and cost sharing requirements of the WaterSMART Grant criteria;

NOW, THEREFORE, be it resolved by the Board of Directors of Valley District as follows:

Section 1 The Board of Directors has reviewed and supports the grant application to be submitted to the Bureau of Reclamation for the WaterSMART: Drought Resiliency Projects for Fiscal Year 2022 grant in the amount of \$2,000,000.

Section 2 This resolution shall be a component part of Valley District's grant application.

Section 3 Valley District is capable of providing the amount of funding and/or in-kind contributions specified in the grant application funding plan.

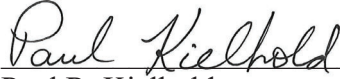
Section 4 Valley District is hereby authorized to receive, if awarded, the WaterSMART: Drought Resiliency Projects for Fiscal Year 2022 funding in the amount of


\$2,000,000 and will make a good faith effort to negotiate and enter into a cooperative agreement with the Bureau of Reclamation for the receipt and administration of said grant funds.

Section 5 The Chief Executive Officer/General Manager, or her designee, is hereby authorized to take any and all actions which may be necessary for the negotiation, completion, and execution of the cooperative agreement and to take any and all other actions which may be necessary for the receipt and administration of the grant funding in accordance with the requirements of the Bureau of Reclamation.

Section 6 This Resolution shall be effective as of the date of adoption.

ADOPTED this 21st day of September, 2021.

  
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Paul R. Kielhold  
President

  
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Heather P. Dyer  
Secretary

**Areas Affected:**

- Western San Bernardino County including the cities of:
  - San Bernardino
  - Colton
  - Loma Linda
  - Highland
  - Grand Terrace
  - Redlands
  - Rialto
  - Yucaipa

And the Census designated place of Mentone

- City of Riverside

**List of Congressional Districts of:**

Applicant: CA-8, CA-31

Project: CA-31, CA-41