APPLICATION

WaterSMART:

Water Recycling and Desalination Planning

Notice of Funding Opportunity No. R23AS00076

Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study



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List of Acronyms

AF	Acre-feet
AFY	Acre-feet per year
AWT	Advanced Water Treatment
BTAC	Basin Technical Advisory Committee
CEQA	California Environmental Quality Act
DWR	California Department of Water Resources
EIN	Employer Identification Number
EVWD	East Valley Water District
GDE	Groundwater-Dependent Ecosystems
GMZ	Groundwater Management Zone
HCP	Habitat Conservation Plan
IRUWMP	Integrated Regional Urban Water Management Plan
IRWMP	Integrated Regional Water Management Plan
MBR	Membrane BioReactor
MG	million gallons
MGD	million gallons per day
MHI	Median Household Income

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MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NOFO	Notice of Funding Opportunity
O&M	Operation & Maintenance
OWOW	One Water One Watershed
Reclamation	United States Bureau of Reclamation
ROWD	Report of Waste Discharge
RWQCB	Regional Water Quality Control Board
SAM	System for Award Management
SBBA	San Bernardino Basin Area
SBMWD	San Bernardino Municipal Water Department
SBVMWD	San Bernardino Valley Municipal Water District (Valley District)
SBWRP	San Bernardino Water Reclamation Plant
SMP	Salinity Management Plan
SNRC	Sterling Natural Resource Center
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
USBR	United States Bureau of Reclamation
UV	Ultraviolet
UWMP	Urban Water Management Plan
Valley District	San Bernardino Valley Municipal Water District
WRP	Water Reclamation Plant
WWTF	Wastewater Treatment Facility

Section 1: Technical Proposal and Evaluation Criteria

1.1 Executive Summary

Date: February 28, 2023

Applicant Name: San Bernardino Valley Municipal Water District (Valley District)

Applicant City, County, State: San Bernardino, San Bernardino County, California

Project Title: Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study

San Bernardino Valley Municipal Water District (Valley District), in partnership with local water agencies in the San Bernardino County area, is proposing a new Title XVI feasibility study for a regional, multi-agency indirect potable reuse project for treating recycled water that could support up to 25,000 acre-feet per year (AFY) of new, local, drought-resilient supplies. The project would enable Valley District and regional project partners, East Valley Water District (EVWD), the City of Redlands, and the City of San Bernardino Municipal Water Department (SBMWD), together known as the Bunker Hill Basin Regional Recycled Water Coalition (Coalition) to capture recycled water from regional wastewater flows, purify it at a new water recycling facility, and recharge the purified water into the Bunker Hill-B Groundwater Management Zone (GMZ) of the Bunker Hill Subbasin, which in turn is part of the larger San Bernardino Basin Area (SBBA; Basin No. 8-002.06). The augmented supplies would enhance local water supply reliability for a region heavily dependent on imported water.

The Feasibility Study will encompass the service area of Valley District, which includes the service area of the other Coalition agencies and covers more than 353 square miles with a population of approximately 714,000 persons. The Feasibility Study will: (1) describe the study/benefit area; (2) evaluate the water resource management problems and needs of the region including a water supply and demand analysis; (3) evaluate different water recycling treatment technologies and brine management options; (4) identify and develop potential water recycling opportunities; (5) provide an alternatives analysis for potential projects; (6) evaluate regulatory, permitting, and environmental impacts; (6) evaluate legal and institutional requirements; (7) recommend a recycled water project; and (8) provide a financial capability and economic analysis of a selected project and (9) research further needs. The outcome will be the development of a new water recycling feasibility study that meets the objective of this Notice of Funding Opportunity (NOFO), the requirements of Reclamation Manual WTR 11-01 under the Title XVI Program or equivalent, completes conceptual design, and identifies the necessary environmental compliance activities for a future construction project.

The work of the Feasibility Study is anticipated to last 21 months and will be complete by December 31, 2024.

The project is in the early planning stages. The project is not anticipated to be located on a federal facility or involve federal land.

1.2 Project Location

The project area is the approximately 353 square miles that comprise the service area of Valley District, the regional water wholesaler serving the eastern two-thirds of the San Bernardino Valley, Crafton Hills, and a portion of Yucaipa. The service area includes the cities and communities of San Bernardino, Colton, Loma Linda, Redlands, Rialto, Bloomington, Highland, East Highland, Mentone, and Grand Terrace. This project area is located in western San Bernardino County and northern Riverside County, approximately 60 miles east of Los Angeles. The agency partners in this regional project include the City of Redlands, City of San Bernardino, and East Valley Water District, all located within Valley District's boundaries (see Figure 1 – Project Location Map in Appendix A.) The Feasibility Study will evaluate potential specific locations for a regional recycled water facility.

1.3 Technical Project Description

1.3.1 Applicant Category

Valley District is seeking funding from Funding Group I.

1.3.2 Applicant Eligibility

Valley District is a water district within the state of California and therefore is an eligible applicant.

1.3.3 Goals

The goal of the Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study is to identify ways to improve current and future water supply reliability for western San Bernardino County through the use of recycled water for recharging the Bunker Hill Basin in light of supply challenges, including climate change. The desired outcomes of the proposed recycled water feasibility study are to:

- Work as a region to identify an acceptable recycled water desalter project for groundwater recharge into the Bunker Hill Basin

- Identify alternative salinity management strategies that include a benefit analysis in the Bunker Hill-B GMZ

- Provide a conceptual engineering design and alternatives analysis of a regional recycled water desalter, including intake, discharge, treatment technologies, and conveyance facilities

- Provide the basis for understanding project costs so that participants in the Bunker Hill Basin Regional Recycled Water Coalition can arrange project cost share and financing

1.3.4 Approach

As part of the Proposed Project, the Coalition – comprised of Valley District, EVWD, SBMWD, and the City of Redlands have drafted a Memorandum of Understanding (MOU) for the Mitigation of Total Dissolved Solids (TDS) Loading in the Bunker Hill-B Management Zone and Cost Share Agreement (see Appendix B) for the preparation of a Feasibility Study, with the goal of working collaboratively to develop a regional study that supports increasing the use of recycled water for groundwater replenishment, while also managing groundwater quality to provide the maximum benefits to customers of the Coalition, all of which are retailers in Valley District's wholesale service area. The Coalition will provide the staff expertise, data, and guidance to complete the recycled water feasibility study.

Proposed Activities

The Feasibility Study for the Bunker Hill Basin Regional Recycled Water Coalition will be in compliance with USBR's Reclamation Manual, Directives and Standards (WTR 11-01). The planning process shall include the following tasks.

Pre-Selection Tasks

Release Request for Proposals, Consultant Selection

Valley District will request proposals from a consultant to prepare the Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study. Upon review of the proposals by the Coalition, Valley District will enter into a contract with the selected consultant. These activities will occur prior to notification of selection or date of award; therefore, this work will not be included in the schedule or budget. Work included in the budget and proposal as grant eligible activities will not commence prior to notification of selection.

Post-Selection Tasks

Task 1: Kickoff and Data Collection

Work will commence with a kickoff meeting for the Feasibility Study. The Coalition's "Facilitator" consultant will coordinate meeting time, location, and agenda. Work will include preparing a short presentation on the strategy for project delivery, data requests, and other relevant items.

Work will include reviewing materials associated with the project, including the final Bunker Hill Basin Regional Recycled Water Coalition MOU, Cost Share Agreement,

Cumulative Antidegradation Analysis, Sterling Natural Resources Center Engineering Report and Report of Waste Discharge (ROWD), San Bernardino Water Reclamation Plant ROWD, Redlands Water Reclamation Plant ROWD, and other documents as provided.

The Regional Working Group will be asked to; (1) provide local cost share for the feasibility study; (2) provide data to the consultant selected to prepare the Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study; (3) identify ranking criteria/priorities for comparing water recycling options; (4) critically review chapters of the Feasibility Study; (5) coordinate with land use and permitting jurisdictions where facilities may be located; and (6) provide input as requested by Reclamation on the Feasibility Study.

Task 2: Alternative Salt Mitigation Strategies
Work will include identifying alternative salt mitigation strategies for consideration by the Coalition, including construction of a regional recycled water advanced water treatment (AWT) facility, expansion of surface water recharge, creation of regional pretreatment program, and others. This will include development of planning-level concepts for each alternative, including potential location, sizing, infrastructure, and cost estimates. The water supply and water quality benefits from implementation of each alternative will be articulated.

Work will include completing a benefit/cost analysis for the salt mitigation alternatives and the development of a comprehensive list of evaluation criteria and associated numerical scoring rubric. They will evaluate and score the various alternatives to determine the preferred alternative moving forward.

Task 3: Draft Feasibility Study
The selected consultant will identify and analyze alternative salt mitigation strategies which will be described in the draft Feasibility Study. The Feasibility Study shall also include the following components:

Task 3.1 Introduction will include identification of Valley District as the project sponsor and description/definition of study area showing recycled water systems.

Task 3.2 Statement of Problems and Needs will describe key water resource management problems and needs for which the project will solve. It will have a description of current and projected water supplies, including water rights, and potential sources of additional water other than the project. The statement will describe current and projected water demands, including imbalances and water quality concerns for the current and projected water supply.

Task 3.3 Water Reuse Opportunities will identify the sources of water available for reclamation. It will describe and categorize all uses of the water and identify associated water quality and treatment requirements, the current water market

available, and discuss considerations on implementation and methods for water reclamation. The section will identify all jurisdictional water and wastewater agencies in the service area, describe sources of water to be reclaimed and the location of source, describe any current water reclamation in the study area and the projected wastewater and disposal options, and summarize current water reclamation technology in use.

Task 3.4 Description of Alternatives will describe the range of alternatives considered, including no-project conditions. It will state the specific objectives all alternatives are designed to address. The consultant will prepare a discussion of the benefits of planning in a regional forum, including economies of scale, sharing limited resources, building upon past successful planning efforts and to create a decision-making process to allocate limited resources.

Description of the proposed project alternatives including cost estimate, annual operation, maintenance, replacement cost estimate and life cycle costs. Estimated costs to be presented in terms of dollars per million gallons (MG), and/or dollars per acre-foot of capacity, to facilitate comparison of alternatives. Description of any necessary waste-stream discharge treatment and disposal requirements and description of one or more alternative technologies.

Task 3.4.1 Economic Analysis will analyze the proposed project relative to other water supply alternatives that could be implemented by the Coalition in lieu of water reuse. It will describe conditions that exist in the area and provide future projections with and without the project, provide a cost comparison of alternatives, describe other water supply alternatives with appraisal level cost estimates. Both quantifiable (water supply, reduced water cost) and non-quantifiable (reduced imported water demands, system reliability, reduced diversions from natural water courses, reduced demands on federal infrastructure) benefits will be described.

Task 3.4.2 Selection of Proposed Project will include justification of why the proposed project is the selected alternative. It will include an analysis of the reduction, postponement, or elimination of development of new or expanded water supplies; reduction or elimination of the use of existing diversions from natural watercourses, or withdrawals from aquifers; reduction of demand on existing Federal water supply facilities; and reduction, postponement, or elimination of new or expanded wastewater facilities.

Task 3.4.3 Environmental Consideration and Potential Effects will include sufficient information to assess the compliance with National Environmental Protection Act (NEPA), California Environmental Quality Act (CEQA, Endangered Species Act, and Clean Water Act. The consultant shall identify the institutional requirements needed to implement the recommended desalination program, including land access agreements, any water rights issues, any Indian Trust

responsibilities, and interagency agreements needed. Permitting requirements for operation (Regional Water Quality Control Board, State Division of Drinking Water) and construction (State Coastal Commission, California Department of Fish and Wildlife, local agency encroachment permits) and their anticipated timeline will be included. This section will also discuss public involvement and potential effects the project will have on environmental resources, and include mitigation measures as appropriate.

Task 3.4.4 Legal and Institutional Requirements will identify any legal or institutional requirements or barriers and perform an analysis of any water rights issues. It will discuss the need for multi-jurisdictional or interagency agreements, any planned coordination activities, permitting procedures, and any unresolved issues associated with implementation. It will identify current and projected wastewater discharge requirements and describe rights to wastewater discharges.

Task 3.4.5 Financial Capability of Sponsor will demonstrate financial capability of the Coalition prior to construction and create a proposed schedule for project implementation. It will describe the willingness of the Coalition to pay for its share of capital costs and the full operation, maintenance, and replacement costs and the funding plan including analysis project's construction, operation, maintenance, and replacement costs. It will include a description of all Federal and non-Federal sources of funding and any restrictions on such sources.

Task 3.4.6 Research Needs will describe any research needs and objectives to be accomplished for the water reclamation project, the basis for Reclamation participation, identify parties who will administer and conduct research, and identify the research timeframe.

Task 4: Final Feasibility Study

Work will include review and incorporation of Coalition comments on the draft Feasibility Study. The Consultant will prepare and circulate a final Feasibility Study for submittal to Reclamation that meets USBR's Reclamation Manual, Directives and Standards (WTR 11-01).

Task 5: Study Progress/Management

Prepare for and attend monthly progress meetings with the Coalition. The Coalition's facilitator will coordinate meeting time, location, and agenda. This task assumes nine (9) in-person meetings and ten (10) video calls over the course of the planning process. All meetings will be 60-90 minutes. This will include preparation of a short presentation on progress, along with necessary materials to engage and invite feedback on discussion items.

Task 6: Coalition Governance
Prepare a Partnership Agreement that outlines the decision-making process among the Coalition agencies, articulate guiding principles for their work products, and describe how consultants will be managed including how new partners are added.

Task 7: Outreach and Engagement
The Facilitator will develop an Outreach and Engagement Plan to guide communications throughout project development. The Plan will describe how the Coalition will engage with the individual partner agency boards, and the Regional Water Quality Control Board (RWQCB), as well as other water agencies and interested parties within the Bunker Hill-B GMZ.

Work will include development of project materials (including, but not limited to, graphics, charts, and written text) and talking points for use during communications with external parties. At key milestones, draft PowerPoint slides can be created to be used by the partner agencies to communicate Coalition and project benefits, concepts, and costs. This will include attendance of up to four (4) Ad Hoc Regional Recycled Water Committee meetings and up to six (6) meetings with the RWQCB and/or other stakeholders to communicate information and receive feedback about the project concept.

Task 8: Quality Assurance Review of Study
Work will include preparation of a request for proposals for development of a Feasibility Study (to be completed by December 2024) on the regional recycled water project. The Facilitator will support the Coalition during development of the Feasibility Study with scheduling for progress check ins, presentation materials, and review and feedback on deliverables produced by the selected consultant. The review will consolidate partner comments, as needed, and identify areas of non-alignment to discuss on progress calls.

Task 9: Cost Share Strategy
This task includes development of a cost share strategy for the recommended project identified from the Feasibility Study. This includes update and use of the salt loading analysis to identify potential cost share based on salt loading to the basin. The Consultant will develop a funding and financing plan and evaluate funding programs relevant to water reuse which will be actively tracked so that the funding and financing plan outlines the best potential path forward to offset project costs.

1.4 Responses to Evaluation Criteria

1.4.1 Criterion 1. Project Planning and Analysis

Subcriterion No.1a-Water Recycling Needs and Opportunities

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

Valley District is a regional wholesale agency providing potable water to western San Bernardino County, including 15 retail agencies with a population of approximately 714,000. Valley District is responsible for the long-range water supply management and storage management of most of the groundwater basins within its boundaries. Valley District is also a State Water Contractor of the California Department of Water Resources (DWR). Valley District relies on imported water supplies from DWR's State Water Project (SWP) in Northern California to supplement its drinking water supplies and recharge local groundwater basins.

Like most of Southern California, Valley District is facing variability in water supplies given its dependency on imported water. Imported water supplies have experienced significant drought impacts from over-allocated and limited water supplies during dry weather years. This has resulted in curtailed deliveries and reductions in availability of these supplies into the future. SWP water supplies, which make up the majority of imported water supplies to Valley District, have reached critically low levels with allocations to Valley District as low as 5% of normal for two consecutive years in 2021 and 2022. These water supply conditions have highlighted the importance of increased drought resilience and the need for local water supply reliability.

Valley District's primary alternative supply to imported water is local groundwater. Groundwater supplies are limited by adjudications to protect the basin's hydrologic safe yield and during multi-year drought conditions, groundwater supplies also become increasingly impacted. Local groundwater basins experience higher demands, while receiving less natural and artificial recharge. In normal hydrologic years, Valley District is able to recharge local groundwater basins using SWP water, however, due to the increased frequency of extreme droughts, imported water is becoming less reliable as a method of long-term groundwater replenishment. Valley District has identified the critical need for local infrastructure that can facilitate recharging local recycled water supplies for the future water needs of the region.

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

Valley District serves San Bernardino and Riverside Counties, including 15 retail agencies consisting of cities and other urban water suppliers. In 2015, Valley District served a population of approximately 698,0000. Today, that number is estimated at 714,000. By 2045, Valley District's population is anticipated to increase by nearly 24% over a 30-year period, to a total population of around 870,000 (IRUWMP, 2021).

As documented in Table 1, the project area is still a growing region within California. Table 1 illustrates the anticipated growth in average year water demands from year 2025 to year 2045 due to population growth. The total projected water demands in

the region are expected to increase by approximately 41,000 AFY between 2025 and 2045. These projections include a 15% reliability factor that accounts for population growth, per capita water use, climate change impacts, and regional hydrology. Valley District commissioned a RAND Corporation study (Miro, 2022) to evaluate the demand forecasts using key drivers and several climate change factors, including changes in water demand per degree increase in temperature. A climate factor that represents the percent increase in annual water demand for each degree increase in temperature was incorporated into the Upper Santa Ana River Watershed Integrated Urban Water Management Plan (IRUWMP) water demand model and projections in Table 1.

To meet these demands, Valley District plans on a mix of imported water, stormwater, surface water, native groundwater from storage, and recycled water (including advanced treated recycled water) (see Table 2). The 15% Climate Reliability Factor was incorporated into the supply projections to account for plausible uncertainties in supply projections. Identified as a strategy in the IRUWMP, the development of recycled water is planned as a part of the regional water portfolio.

Table 1. Demand Projections in Project Area

	2025	2030	2035	2040	2045
Regional Demand (AFY)	332,053	342,420	353,212	363,023	373,374

Source: Upper Santa Ana River Watershed 2020 Integrated Regional Urban Water Management Plan, 2021.

Table 2. Supply Projections in Project Area

	2025	2030	2035	2040	2045
Surface Water	24,865	24,865	24,865	24,865	24,865
Stormwater	23,390	24,333	31,348	40,811	40,811
Groundwater	297,298	300,053	301,865	303,586	305,493
Recycled Water	27,978	36,831	40,478	43,902	45,094
SWP Water (Direct Deliveries & Storage)	86,267	87,663	87,841	106,096	106,346

Total Supply with 15% Reliability Factor Reduction	**381,851**	**393,783**	**406,194**	**417,477**	**429,380**

Source: Upper Santa Ana River Watershed 2020 Integrated Regional Urban Water Management Plan, 2021.

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

The planning activities as part of the Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study will evaluate opportunities for advanced treatment and use of reclaimed water in the service areas of the Coalition partners. The Feasibility Study will evaluate and describe the potential uses of reclaimed water, including the associated water quality standards for viable and potential use and associated treatment requirements. The study will identify any existing and potential users, along with expected use and peak use, by conducting a market assessment evaluation to determine the best possible use of reclaimed water.

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

The Feasibility Study will evaluate potential options for source water of the project, including the locations, capacities, existing flows, treatment process, and quantities of impaired water available to meet new recycled water demands or for groundwater replenishment. It is anticipated that the source water may come from wastewater flows from the City of San Bernardino, City of Redlands, and EVWD. The source water may be facilitated through the following facilities and associated infrastructure:

1) EVWD Sterling Natural Resource Center (SNRC) is a new recycled water facility located in Highland, California that will have the capacity of treating up to 8 million gallons per day (MGD) of wastewater flows from EVWD's service area. The facility includes a treatment process using fine screening, an equalization basin, a Membrane BioReactor (MBR) system, and ultraviolet (UV) disinfection to treat wastewater to Title 22 recycled water standards.
2) SBMWD is developing the Tertiary Treatment System, which will produce recycled water from the San Bernardino Water Reclamation Plant (WRP) from wastewater flows from the City of San Bernardino. Currently, the San Bernardino WRP has a capacity of 33 MGD, which will be upgraded with an addition of up to 5 MGD of tertiary filtration/disinfection facilities to provide a source of Title 22 recycled water.
3) The City of Redlands Wastewater Treatment Facility (WWTF), which has a current secondary capacity of 16.2 MGD, will undergo a Phase 2 expansion

to increase recycled water availability from the existing tertiary capacity of 6 MGD to a total of 9.1 MGD.

Table 3 shows the current wastewater treatment plants and sources of wastewater that may be considered.

Table 3. Potential Sources of Wastewater

Facility	Location	Source of Flows	Capacity (MGD)	Current Effluent Use
SBMWD WRP	City of San Bernardino, CA	SBMWD, EVWD, Loma Linda	33	Recycled water for infiltration and extraction. Future groundwater recharge
Redlands WWTF	Redlands, CA	Redlands	16.2	Non-potable reuse for irrigation and industrial (3,302 AF) and onsite pond discharge (3,254 AF)
EVWD SNRC	Highland, CA	EVWD	8	Groundwater recharge

Subcriterion No.1b-Evaluation of Project Alternatives

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

Task 1 of the proposed study includes development of ranked weighted criteria by the Coalition so that alternatives can be compared and contrasted, and a recommended project be developed. Work in Task 2 and workshops/meetings in Tasks 5, 6, and 7 with the Coalition will establish the objectives by which all alternatives will be judged. Criteria are likely to include project yield, capital cost per unit yield, operational cost per unit yield, permitting complexity, and timeline to implement.

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

There are several factors that go into development of feasible recycled water alternatives. The Bunker Hill Basin Regional Recycled Water Coalition will undertake the following steps. First, the study will look at the Study Area and water supplies and water supply needs. The study will evaluate how much recycled water supply may be available and estimate demands for recycled water from both direct customers and groundwater replenishment. The study will evaluate means to store and indirectly reuse recycled water in a local groundwater basin, along with a range

of other salinity management options that will be necessary to support expanded recycled water use in Bunker Hill-B. After these steps are completed, the study will consider potable reuse options including brine disposal options.

As described in Task 3, potable reuse and brine disposal options will be paired to develop up potable reuse alternatives. The planning activities will develop project alternatives based on recycled water availability, likely end users, groundwater storage potential, salinity offset, and brine disposal potential. Alternatives will be compared against the "No Project", the likely course of action should federal funding not be received.

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

The proposed Feasibility Study will provide an alternatives analysis and will include the selection of a regional water recycling project, including a justification of how the selected project meets Reclamation requirements, the Coalitions' objectives, the needs and demands of the region, the cost-effectiveness of the project, and other criteria developed by the Coalition.

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

The proposed project is related to planning only activities. Below is a preliminary schedule for development of the Feasibility Study.

Preliminary Schedule

Below is the project implementation schedule by task.

	Task	Begin Date	Estimated Duration	Estimated End Date
1	Kickoff and Data Collection	June 2023	1 month	July 2023
2	Alternative Salt Mitigation Strategies	June 2023	9 months	April 2024
3	Draft Feasibility Study	June 2023	16 months	September 2024
4	Final Feasibility Study	October 2024	2 months	November 2024
5	Study Progress/Management	July 2023	18 months	December 2024
6	Coalition Governance	June 2023	19 months	December 2024
7	Outreach and Engagement	June 2023	19 months	December 2024
8	QA Review of Study	June 2023	19 months	December 2024
9	Cost Share Strategy	May 2024	8 months	December 2024

1.4.2 Criterion 2. Stretching Water Supplies

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

The project will evaluate the potential to develop new recycled water supplies, in lieu of the acquisition of additional imported supplies (if available, which is unlikely) or expansion of other non-recycled water supplies.

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

The agencies in the project area are all heavily dependent on imported water supplies, as shown in Table 2. The water agencies have already taken extraordinary steps to ensure availability of local supplies, including construction of recycled water systems, groundwater recharge facilities, and groundwater desalters. Concurrently, local agencies have taken proactive steps to reduce water demand through the use of water budget rates and extensive rebate programs targeting both indoor and outdoor water use of residential customers.

The current water supplies available in the planning area, particularly imported water, are likely to be further limited due to climate change. As described in the IRUWMP, climate change is anticipated to impact imported supplies in the future by extended drought periods that reduce deliveries, along with increased storm variability which limits surface water capture due to flooding concerns. There is not a clear way to further develop or expand imported supplies, which currently comprise approximately 20% of the regional water supply portfolio. However, there is still the potential for putting local wastewater flows to beneficial use. This wastewater is currently being generated in the service area, but its use is limited due to a lack of infrastructure to treat the recycled water to acceptable standards for indirect potable reuse. Development of a regional recycled water facility that can support 25,000 AFY in recycled water replenishment will comprise an estimated 7% of the region's water supply portfolio and improve resilience within the regional groundwater management system.

3. Describe the potential for the project to make water available to address a specific concern.

The immediate goal of the Coalition is to identify a regional recycled water project that will leverage 25,000 AFY of new recycled water supply for recharge to the Bunker Hill-B GMZ, which will address concerns about maintaining adequate groundwater production during dry and critically-dry years. With appropriate

interconnections and additional inland pipelines, existing facilities could be used as regional facilities for brine disposal, a necessary step in undertaking advanced recycled water production. With advanced recycled water, more uses are possible, including groundwater recharge in salt sensitive basins, irrigation of salt sensitive crops, reservoir augmentation, and direct potable reuse.

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

The project has the potential to implement the Recycled Water Policy created by the California State Water Resources Control Board (SWRCB) to encourage local and regional water agencies to strive for reliable, local, drought-proof water through an emphasis on water recycling, water conservation, and maintenance of supply infrastructure.

The project meets SWRCB goals by creating the potential for up to 25,000 AFY of local, drought-proof, reliable recycled water for groundwater replenishment into the Bunker Hill Basin. This new source of supply will be flexible and allow for the water agencies within Bunker Hill Basin to meet basic human health and safety demands during drought. The replenished supplies will improve conjunctive use of the groundwater subbasin and increase storage for dry and critically-dry years. This new recycled water supply is more resilient than other imported supplies because it will continue to be available through wastewater flows even during drought.

1.4.3 Criterion 3. Environment and Water Quality

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

The Coalition is working to support the increased use of recycled water for groundwater replenishment, while also managing groundwater quality to provide the maximum benefit to the groundwater basin. The Coalition is currently working on their respective recycled water discharge projects and have been working to establish and implement salt mitigation commitments including regional groundwater quality monitoring, brine line discharge for high-TDS industries, optimized chemical use at wastewater treatment/reclamation facilities, a regional recycled water facility, and enhanced upstream recharge of low-TDS water. The agencies, as part of the project, are working collaboratively toward mitigation of salt loading that will occur as a result of recycled water operations within the Bunker Hill-B GMZ. Through a preliminary Antidegradation Analysis, the Coalition estimates that with the implementation of a regional recycled water project, cumulative TDS loading from the four regional partners will not exceed total allowable assimilative capacity within

the model timeframe, which will help maintain ambient TDS levels in the Bunker Hill Basin.

In addition, wastewater that goes through advanced water treatment processes (reverse osmosis) and is recharged to the Bunker Hill Basin has additional regional benefits by contributing to removal of multiple water quality constituents that may be of concern.

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

The Feasibility Study will lay the groundwork for: (1) the use of advanced treated water, (2) for a better understanding of the local groundwater basin, and (3) for regional brine disposal. All three actions will benefit local groundwater quality.

Advanced treated water is typically low in the constituents of concern in local groundwater such as TDS, nutrients, arsenic, fluoride, iron, and manganese. Groundwater recharge with advanced treated water will augment the GMZ with a higher quality water than the ambient groundwater. Importantly, the brine line developed for use of advanced treated water creates the possibility of future groundwater treatment projects (e.g., desalters) that require brine disposal. The brine line would facilitate desalters for removal of TDS as well as other potential constituents of concern.

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

The Feasibility Study and future selected project has the potential to indirectly improve flow conditions in the Santa Ana River, a natural stream channel. Increases in groundwater levels due to expanded groundwater replenishment may result in increased stream channel flows within interconnected surface waters. Additional research is necessary to fully understand the correlation between Santa Ana River flows and higher groundwater levels in the area.

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

The Feasibility Study will evaluate the opportunity to recharge recycled water into the Bunker Hill-B GMZ, which has the potential to increase groundwater levels. According to the Upper Santa Ana River Habitat Conservation Plan (HCP), increasing groundwater levels can help support groundwater-dependent ecosystems (GDEs) within the groundwater basin.

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

The Feasibility Study and resulting project has the potential to indirectly provide water or habitat for the Santa Ana Sucker, a federally listed threatened species found in the Upper Santa Ana River Watershed, and other federally listed threatened or endangered species.

1.4.4 Criterion 4. Department of Interior Priorities

Without repeating benefits already described in previous criteria, describe in detail how the proposed project supports a priority(ies) below.

1. Climate Change:

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

As part of the One Water One Watershed Plan (SAWPA, 2018), a Climate Risk and Response Assessment was performed. This assessment generally covers the project benefit area of this application. This assessment found the following likely climate change vulnerabilities:

- Insufficient local water supply
- Increased dependence on a less reliable imported supply
- Inability to meet demand during droughts
- Increased poor water quality
- Increased water treatment needs

Adding advanced treated recycled water to the regional supply portfolio will combat these climate change impacts by bolstering local supplies. Adding advanced treated recycled water will allow local agencies to continue use of significant recycled water and groundwater infrastructure already in place. A recycled water project will allow for the water agencies within the Bunker Hill Basin area to meet basic human health and safety demands in the face of drought and other supply limitations due to climate change. The replenished supplies will improve conjunctive use of the groundwater subbasin and increase storage for dry and critically dry years. This new recycled water supply is more resilient than other water supplies because it will continue to be available through wastewater flows even during drought.

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

Yes. The proposed project strengthens water supply sustainability by potentially making up to 25,000 AFY of otherwise discharged recycled water available for replenishment of local groundwater basins. A local water supply derived from wastewater will help alleviate water shortages due to drought, groundwater depletion, and climate variability.

2. Disadvantaged or Underserved Communities:

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

The project could provide benefits to disadvantaged communities within Valley District's service area (see Appendix A) by implementing the planning work necessary to develop a project that will 1) increase local groundwater supplies for drought protection, and 2) protect groundwater basin water quality, and 3) help infrastructure systems adapt to climate change by addressing the future uncertainty of local water supplies.

- *Please describe in detail how the community is disadvantaged based on a combination of variables*

The service area of Valley District, the area that will receive the benefit from the project, has disadvantaged communities 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 80% 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. 80% of the California median MHI is $60,188. Based on 2019 American Community Survey 5-year estimate, the MHI of San Bernardino County is $63,362 which is just slightly above the DAC threshold. 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	City of Grand Terrace $71,788
Mentone (Census Designated Place) $68,650	

**Disadvantaged Community by California Income Definition (DWR)*
All data from 2019 American Community Survey 5-Year Estimate. Data for City of Bloomington is not available.

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

As documented in the data above, the population that will benefit from water supply, as well as the population in the immediate vicinity of the Project qualify as a disadvantaged community. Hence, the proposed project provides benefits to an underserved community. Severely disadvantaged communities are characterized as 60% of the state MHI and disadavantaged communities are 80% of the state MHI. See Appendix A.

2. Tribal Benefits

- *Does the proposed project directly service and/or benefit a Tribe? Will the project improve water management for an Indian tribe?*

The San Manuel Band of Mission Indians (Yuhaaviatam) reservation overlies the Santa Ana River Watershed. The Tribe does not operate their own water system but does receive groundwater through the East Valley Water District, a partner agency of the Coalition.

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

The proposed project does not directly support Reclamation's Tribal trust responsibilities.

1.4.5 Criterion 5. Watershed Perspective and Stakeholder Involvement

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

Yes. The project implements these regional, state, and integrated plans:

- Upper Santa Ana River Integrated Regional Urban Water Management Plan (Valley District, 2021)
- Santa Ana River Watershed One Water One Watershed (OWOW) Plan Update (SAWPA, 2018)

<u>Upper Santa Ana River Integrated Regional Urban Water Management Plan (IRUWMP)</u>

The Region has a history of working together to support the development and implementation of projects and has continuously worked to develop planning documents that support collaboration. The IRUWMP was developed as the first of its kind to integrate with many other regional and local planning efforts, including the IRWMP, for planning consistency across the region. The Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study supports the water management strategies identified in the IRUWMP for delivering long-term water security in the region. The strategies in the IRUWMP were identified by a stakeholder group, known as the Basin Technical Advisory Committee (BTAC). The BTAC is the regional water management group responsible for developing and implementing the plan and consists of experts from multiple regional water agencies, state, and federal stakeholders that work collaboratively to plan for integrated management of the region's water resources. The strategies developed by the BTAC are also aligned with the California Water Plan. The project would implement the following California Water Plan strategies in the IRUWMP:

- Continue Basin Management in Local Groundwater Basins

- Identify and Implement Projects that Increase Recharge
- Increase Outreach and Engagement
- Increase Recycled Water Use
- Manage Salt and Salinity
- Operate Existing Facilities to Increase Recharge

One Water One Watershed Plan Update

The OWOW Plan is the Integrated Regional Water Management Plan (IRWMP) for the Santa Ana River Watershed. The plan was written by and for stakeholders in the Santa Ana River Watershed, including Valley District, EVWD, the City of Redlands, and the City of San Bernardino. The project supports the goals of the OWOW Plan by using coordination, cooperation, and integration of different water agencies to pool resources and manage water at the basin scale. By collaborating on a feasibility study for a water recycling that meets the needs of the region, and which could result in groundwater recharge and improved water quality for the Bunker Hill-B Management Zone, the Coalition can implement a water management approach that is both strategic and cost effective.

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

Yes. Valley District imports water from Northern California while investing in a variety of local storage, supply, and conservation initiatives. These investments are needed but must be complemented by expansion of local supplies in order to meet the demands of a growing large geographic region. The Feasibility Study will identify a local project that will make use of local recycled water produced by the Coalition in order to provide a new, sustainable local water supply for groundwater replenishment.

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

Yes. In 2016, Valley District, EVWD, the City of San Bernardino, and later the City of Redlands, began working together to discuss the potential for a recycled water project or facility that could potentially expand use of recycled water within the SBBA. The agencies have been working together since that time on a collaborative suit of recycled water system improvements and expansions. The agencies established the Regional Recycled Water Ad Hoc Committee in 2016, which brings together elected officials from all of the agencies to discuss the potential regional partnerships and projects.

The following is a summary of the facilities being developed by the Coalition partners:

- Valley District has taken the lead on developing regional recycled water facilities, including a recycled water conveyance system and recharge facility known as the Weaver Basins. The Weaver Basins were developed to allow recycled water to be conveyed from EVWD and SBMWD facilities for groundwater replenishment in the Weaver Basins.
- EVWD began construction on the Sterling Natural Resource Center (8 MGD Phase 1; 2 MGD Phase 2), a new water reclamation facility that will treat wastewater from EVWD's service area and recharge it as recycled water to Valley District's Weaver Basins into the Bunker Hill-B GMZ.
- Simultaneously, San Bernardino began developing a Tertiary Treatment System, which will provide recycled water from the San Bernardino WRP with the intent of beneficial use of the recycled water for on-site use and irrigation (1.2 MGD for in-plant use) and conveyance in the future to the Weaver Basins (3.8 MGD Phase 1; 4 MGD Phase 2).
- The City of Redlands has existing Waste Discharge Requirements for treatment and discharge of recycled water from the Redlands WWTF into the Bunker Hill-B GMZ (6 MGD Phase 1; 3.1 MGD Phase 2).
- New recycled water advanced treatment facility is being contemplated by the Coalition partners to ensure that recycled water replenishment is maximized and groundwater quality is protected.

While working on multiple avenues to increase groundwater recharge into the Bunker Hill-B GMZ, the parties continued working cooperatively and formed the Coalition to: 1) to create a mechanism for augmentation of local groundwater supplies using recycled water in the Bunker Hill-B GMZ and 2) to work together to develop a collaborative regional plan that results in salt mitigation commitments for compliance with the RWQCB's Recycled Water Policy.

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

Yes. Task 7 includes the development of an Outreach and Engagement Plan which will guide how the Coalition will engage with individual partner agency boards, and the RWQCB, as well as other water agencies and interested parties within the GMZ.

Throughout the development of the Feasibility Study, Valley District and the Coalition will host meetings and will provide informational materials to stakeholders to communicate information and receive feedback about the project concept.

Section 2: Project Budget

2.1 Funding Plan

2.1.1 Non-Federal Share of Project Costs

The non-Federal share will be provided by Valley District and project partners (see Table 4).

2.1.2 Third Party Contributions

Funding will be provided by third party contributions (see Table 4). Commitment letters from two parties are included in Appendix B and others will be made available after the Cost Share Agreement is adopted by each agency, by March 22, 2023.

2.1.3 Other Funding Requests

No funding has been requested or received from other Federal partners for the proposed project. There are no other outstanding funding requests. If funding for the project is denied, the project schedule could be delayed.

2.1.4 Request for Pre-Award Costs

Valley District has already completed preliminary planning efforts as part of its work to facilitate collaboration between the Coalition partners, including developing the MOU, the Cost Share Agreement for development of the Feasibility Study, selection of a Coalition Facilitator, and other plans and discussions regarding the proposed project. Some costs will be incurred prior to award, but after notification of selection. These costs are being included as project costs. Tasks 1 – 3 and 5-8 of the Proposed Project budget shown below includes minor costs that will be incurred after notification of selection and prior to award. Valley District will request that these costs be allowed for inclusion

2.2 Budget Proposal

The Project Budget consists of costs associated with the planning and fall within various budget categories, including supplies and materials, contractual/ construction, among others. The budget proposal is provided in Table 5, which reflects all budget categories listed in the NOFO. The budget items included in the table are described in detail below.

Table 4 below summarizes all funding sources (non-Federal and Federal) for the proposed project.

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

Funding Sources	Percent of Project Cost	Funding Amount
Non-Federal Entities		
San Bernardino Valley Municipal Water District	12.5%	$ 62,000
East Valley Water District	12.5%	$ 62,000
City of Redlands	12.5%	$ 62,000
City of San Bernardino Municipal Water Department	12.5%	$ 62,000
Non-Federal Subtotal	**50%**	**$ 248,000**
Requested Reclamation Funding	**50%**	**$ 247,000**
Total Project Cost		**$ 495,000**

The budget proposal includes detailed information on the categories listed below, and clearly identifies all items of cost, including those that will be contributed as a non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from Reclamation, and any requested pre-award costs (Table 5).

Table 5. Budget Proposal

Budget Object Category	Total Cost	Federal Estimated Amount	Non-Federal Estimated Amount
a. Personnel	$0		
b. Fringe Benefits	$0		
c. Travel	$0		
d. Equipment	$0		
e. Supplies	$0		
f. Contractual	$495,000		
g. Construction	$0		
h. Other Direct Costs	$0		
i. Total Direct Costs	**$495,000**		
i. Indirect Charges	$0		
Total Costs	**$495,000**	**$247,000**	**$248,000**
Cost Share Percentage		**50%**	**50%**

2.3 Budget Narrative

2.3.1 Personnel

Valley District staff anticipates performing project management for the Proposed Project, including grant administration and grant reporting. However, the majority of project work will be conducted by specialized contractors. For this reason, Valley District will not be seeking federal grant reimbursement or match for staff time spent on the project.

2.3.2 Fringe Benefits

Fringe benefits are not included in the overall project budget.

2.3.3 Travel

Valley District staff do not anticipate the need to travel as part of the Proposed Project.

2.3.4 Equipment

No special equipment will need to be purchased or rented for implementing the Proposed Project.

2.3.5 Supplies

No materials or supplies will be needed for the Proposed Project.

2.3.6 Contractual

Contractual work to be performed by contractors is described in Section 1.3.4 of this application. Valley District anticipates the use of two separate contractual agreements to complete the work related to the feasibility study, including, approximately $100,000 contract for work completed by a “Facilitator” contractor. This contractor will be used to facilitate work between the Coalition, outreach and engagements, periodic meetings, cost share agreements, Quality Assurance review of the Feasibility Study, and Cost Share Strategy. A separate contract estimated at $350,000 will be given to a chosen contractor (selected prior to notification of selection) that will complete the Feasibility Study. Estimated costs are based on similar work performed by engineering firms for Southern California clients. Valley District is including a maximum 10% contingency, based on the contractual agreements totaling $450,000, which amounts to a total project cost of $495,000 as shown in Table 5.

2.3.7 Construction

No construction work will be needed for the Proposed Project.

2.3.8 Other Direct Costs

Reporting and grant administration will be conducted by Valley District. Valley District will not be seeking reimbursement for staff time related to these efforts. Therefore, no budget is included for this category. No other expenses are anticipated that are not captured under the above categories.

2.3.9 Indirect Costs

No indirect costs are included.

2.3.10 Total Cost

The total cost of the proposed project is $495,000. Funding sources for the project currently include funding from Valley District and Coalition partners as shown in Table 4 and requested funding from Reclamation. Valley District is requesting $247,000 in grant funding from Reclamation to fund the proposed project. This represents almost 50% of the total project costs. No other Federal funding has been requested or received for the proposed project.

2.4 Letters of Funding Commitment

The Coalition is working on multi-agency adoption of an MOU and Cost Share Agreement for the development of the Feasibility Study. The MOU and Cost Share Agreement were presented to the Valley District Board of Directors on February 21, 2023 and are included in draft form in Appendix B. Valley District and SBMWD have

included letters of funding commitment in Appendix B. Valley District expects to receive letters of funding commitment from EVWD and the City of Redlands after the Cost Share Agreement is approved by each governing body. All funding commitment letters are slated for government body adoption and will be submitted to Reclamation by March 22, 2023.

Section 3: Other

3.1 Required Permits or Approvals

No permits will be required to develop the Feasibility Study. Permits required for a potential regional recycled water project will be identified more specifically during the development of the Feasibility Study.

3.2 Official Resolution

A signed official resolution authorizing 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 included in Appendix C.

3.3 Letters of Project Support

Letters of Project Support from the following agencies are included in Appendix D:

- Valley District
- City of Redlands
- City of San Bernardino Municipal Water Department
- East Valley Water District

3.4 Overlap or Duplication of Effort Statement

Valley District attests that there is no overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel. The proposal submitted for consideration under this program is not duplicative of a proposal or project that has been or will be submitted for funding consideration to another potential federal grant funding source. If at any time the project is awarded funds for any federal or non-federal source, Valley District will notify the NOFO point of contact or the Program Coordinator immediately.

3.5 Uniform Audit Reporting Statement

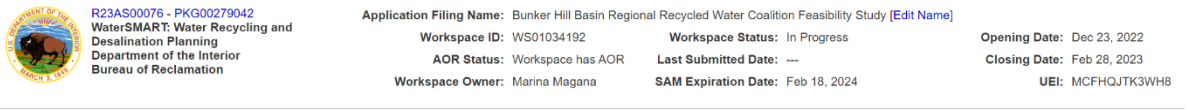
Valley District will be required to submit a Single Audit Report for fiscal year 2022-2023 in accordance with 2 CFR 200 subpart F. Valley District's Employer Identification Number (EIN) is 95-6005196.

3.6 Conflict of Interest Disclosure Statement

There are no actual or potential conflicts of interests at the time of submission.

3.7 Unique Entity Identifier and System for Award Management Registration

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.


R23AS00076 - PKG00279042
WaterSMART: Water Recycling and Desalination Planning
Department of the Interior
Bureau of Reclamation

Application Filing Name: Bunker Hill Basin Regional Recycled Water Coalition Feasibility Study [Edit Name]
Workspace ID: WS01034192 **Workspace Status:** In Progress **Opening Date:** Dec 23, 2022
AOR Status: Workspace has AOR **Last Submitted Date:** --- **Closing Date:** Feb 28, 2023
Workspace Owner: Marina Magana **SAM Expiration Date:** Feb 18, 2024 **UEI:** MCFHQJTK3WH8

Valley District will maintain an active SAM and ASAP registration during any period in which the District has an active Federal award or application under consideration by a Federal entity.

3.8 Disclosure of Lobbying Activities

Valley District has submitted a Disclosure of Lobbying Activities, form SF-LLL.

Section 4: References

City of San Bernardino Municipal Water Department. Clean Water Factory Project Draft Environmental Impact Report. 2016.

East Valley Water District. Recycled Water Feasibility Study, 2014.

East Valley Water District. Sterling Natural Resource Center Title 22 Engineering Report. 2021.

Miro, Michelle. Estimating Future Water Demand for San Bernardino Valley Municipal Water District, 2018.

Miro, Michelle. Identifying and Planning for Vulnerabilities in the San Bernardino Valley Municipal Water District Water Management Plan. 2022.

San Bernardino Valley Municipal Water District. Regional Recycled Water Concept Study Report, 2016.

San Bernardino Valley Municipal Water District. 2023 Regional Water Management Plan, 2023.

San Bernardino Valley Municipal Water District. Strategic Plan, 2022.

San Bernardino Valley Municipal Water District. 2020 Upper Santa Ana River Habitat Conservation Plan, 2021.

San Bernardino Valley Municipal Water District. 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan, 2021.

San Bernardino Valley Water Conservation District. Final Engineering Investigation of the Bunker Hill Basin 2020-2021, 2022.

Santa Ana Watershed Protection Agency. One Water One Watershed Plan. 2018.

United States Bureau of Reclamation. Reclamation Manual Directives and Standards WTR 110-1, 2019.

APPENDIX A

Project Maps

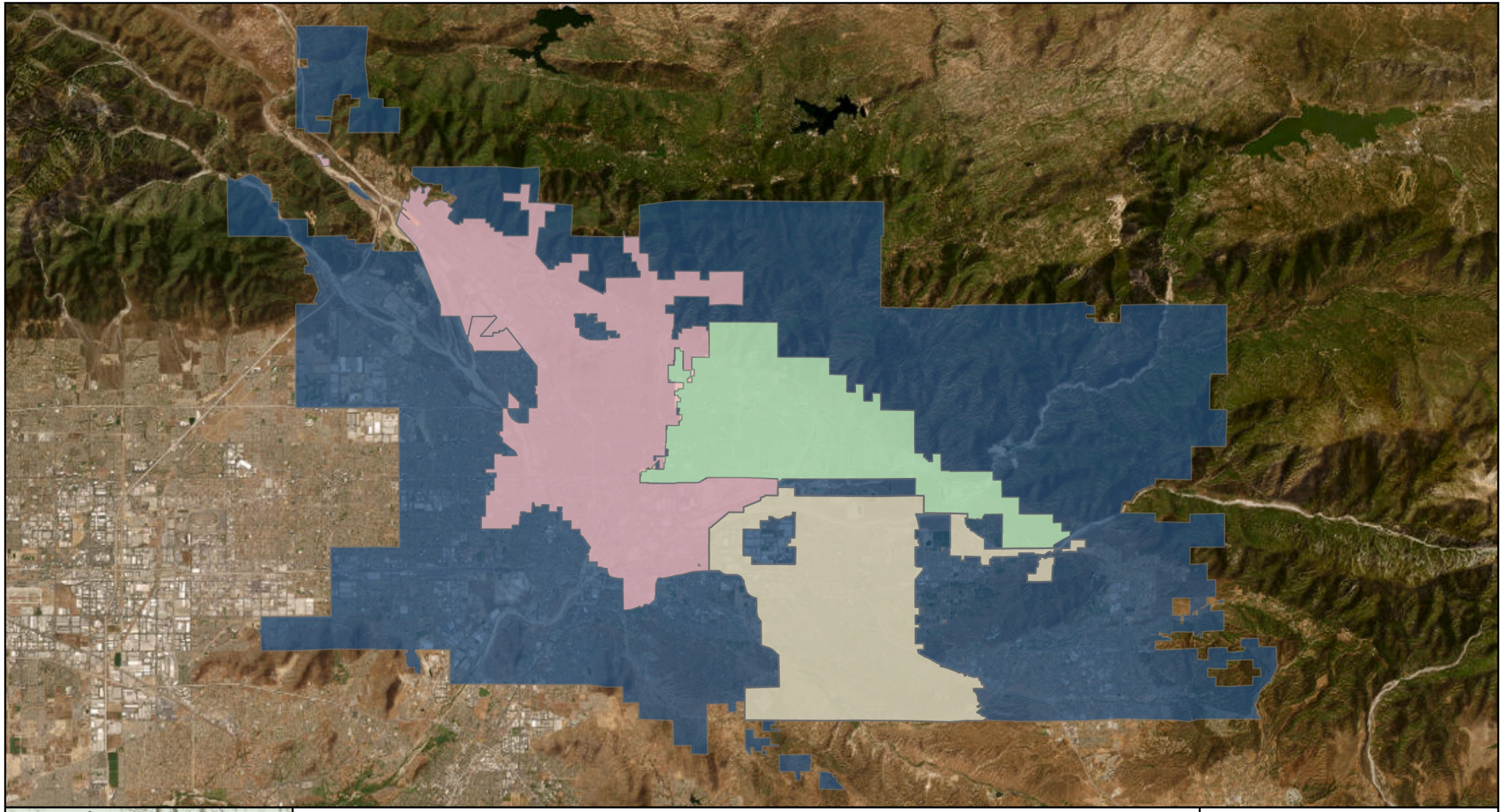


Figure 1 - Project Location Map

WaterSMART Water Recycling and Desalination Planning
Bunker Hill Basin Regional Recycled Water Coalition
Feasibility Study
San Bernardino Valley Municipal Water District

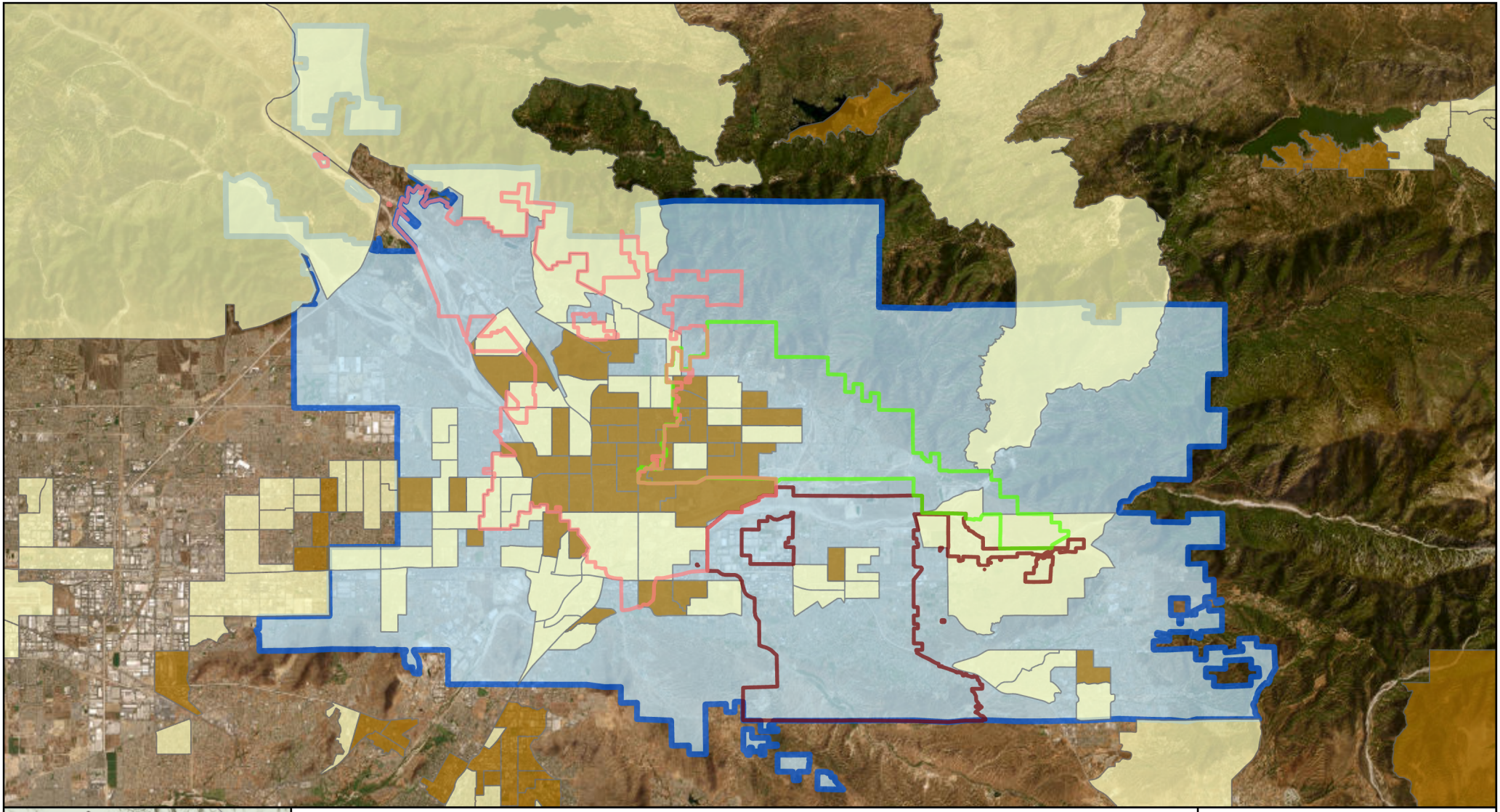


Figure 2 - Disadvantaged Communities

WaterSMART Water Recycling and Desalination Planning
Bunker Hill Basin Regional Recycled Water Coalition
Feasibility Study

Source: DWR, Census.gov ACS 2020

N

0 1.5 3 6 Miles

Legend

- City of Redlands
- SBMWD
- EVWD
- Valley District
- Severely Disadvantaged Communities
- Disadvantaged Communities

APPENDIX B

Letters of Funding Commitment

This appendix does not count towards page limit

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

380 East Vanderbilt Way
San Bernardino, CA 92408
phone: 909.387.9200
fax: 909.387.9247
www.sbvmwd.com

February 23, 2023

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

RE: **Letter of Funding Commitment for the Bunker Hill Basin Regional Recycled Water Feasibility Study**

To Whom It May Concern:

San Bernardino Valley Municipal Water District has been participating with its neighboring recycled water agencies, including East Valley Water District, the City of Redlands, and the City of San Bernardino Municipal Water Department on the future development of the Bunker Hill Basin Regional Recycled Water Feasibility Study. The purpose of the feasibility study is to evaluate the feasibility of building a regional recycled water facility to treat water for groundwater recharge in the Bunker Hill Basin. The feasibility study will 1) identify the sources, flows, facilities, quantities, locations, and capacity of recycled water 2) evaluate treatment technologies for the regional facility and potential yields 3) provide alternative salt mitigation strategies and 4) provide detailed alternatives analysis with a cost-benefit analysis.

If an award is made from the Bureau of Reclamation to Valley District for the Bunker Hill Basin Regional Recycled Water Feasibility Study, cost share will come from the four benefiting agencies, including San Bernardino Valley Municipal Water District. If the study is selected for funding, San Bernardino Valley Municipal Water District anticipates that the cost share to be provided by the four recycled water agencies will be 50% of the total project cost, up to $250,000. Therefore, San Bernardino Valley Municipal Water District anticipates a funding commitment of up to $62,500. San Bernardino Valley Municipal Water District will make these funds available to the applicant, Valley District, by July 1, 2023. We do not anticipate a time constraint on the availability of funds.

San Bernardino Valley Municipal Water District will require that these funds be put towards the Bunker Hill Basin Regional Recycled Water Feasibility Study and because time is of the essence, must be spent by Valley District for the study no later than October 2025. We urge Reclamation's consideration of Valley District's application to undertake the Bunker Hill Basin Regional Recycled Water Feasibility Study. I would be happy to discuss San Bernardino Valley Municipal Water District's funding commitment. Feel free to contact me at (909) 387-9200 or heatherd@sbvmwd.com.

Sincerely,

Heather Dyer, MS, MBA
Chief Executive Officer/General Manager

CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT

"Trusted, Quality Service since 1905"

February 15, 2023

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

Subject: Letter of Funding Commitment for the Bunker Hill Basin Regional Recycled Water Feasibility Study

To Whom It May Concern:

The City of San Bernardino Municipal Water Department (SBMWD), has been participating with its neighboring recycled water agencies , including San Bernardino Valley Municipal Water District (Valley District), East Valley Water District, and City of Redlands on the future development of the Bunker Hill Basin Regional Recycled Water Feasibility Study. The purpose of the feasibility study is to evaluate the feasibility of building a regional recycled water facility to treat local wastewater for groundwater recharge into the Bunker Hill Basin. The feasibility study will 1) identify the sources, flows, facilities, quantities, locations, and capacity of recycled water, 2) evaluate treatment technologies for the regional facility and potential yields, 3) identify alternative salt mitigation strategies for the Basin, and 4) provide a detailed alternatives analysis with a cost-benefit analysis.

If an award is made from the Bureau of Reclamation to Valley District for the Bunker Hill Basin Regional Recycled Water Feasibility Study, local cost share will be evenly split among the four benefiting agencies, including SBMWD. If the study is selected for funding, SBMWD anticipates that the local cost share to be provided by the four partner water agencies will be 50% of the total project cost of up to $495,000, which is up to $248,000. Therefore, SBMWD anticipates a funding commitment of up to $62,000.

SBMWD will make these funds available to the applicant, Valley District, when requested. We do not anticipate a time constraint on the availability of funds.

SBMWD will require that these funds be put towards the Bunker Hill Basin Regional Recycled Water Feasibility Study and because time is of the essence, must be spent by Valley District for the study no later than October 2025.

We urge Reclamation's consideration of Valley District's application to undertake the Bunker Hill Basin Regional Recycled Water Feasibility Study. I would be happy to discuss SBMWD's funding commitment. Feel free to contact me at 909-384-5091 and Miguel.Guerrero@sbmwd.org.

Sincerely,

Miguel J. Guerrero, P.E.
General Manager
City of San Bernardino Municipal Water Department

MEMORANDUM OF UNDERSTANDING FOR THE
MITIGATION OF SALT LOADING IN THE BUNKER HILL-B MANAGEMENT ZONE
BY AND BETWEEN
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, EAST VALLEY WATER DISTRICT,
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT, AND CITY OF REDLANDS

This Memorandum of Understanding (MOU) for the Mitigation of Total Dissolved Solids (TDS, Salt) Loading in the Bunker Hill-B Management Zone is entered into and effective on the 25th day of January, 2023 among the following listed Signatories: San Bernardino Valley Municipal Water District ("Valley District"), East Valley Water District ("EVWD"), City of San Bernardino Municipal Water Department ("San Bernardino"), and City of Redlands ("Redlands"), collectively referred to as the "Parties".

Recitals

A. In 2009, the State Water Resources Control Board adopted a Recycled Water Policy that encourages public agencies to recycle municipal wastewater as it becomes an increasingly valuable source of water for the State. The Recycled Water Policy was amended in 2018 to encourage development of groundwater recharge projects using recycled water.

B. The Recycled Water Policy requires evaluation and management of salt and nutrient loading to groundwater as a result of basin-wide recycled water use for irrigation and/or recharge. Groundwater recharge project proponents are required to participate in applicable salt and nutrient management planning efforts.

C. The Recycled Water Policy also requires Antidegradation Analysis (State Water Resources Control Board Resolution 68-16) for all groundwater recharge projects to determine if assimilative capacity is available for projected salt and nutrient loading. Individual projects are permitted to consume up to 10% of available assimilative capacity in a basin, while multiple projects may consume up to 20% of available assimilative capacity.

D. Valley District is constructing the Regional Recycled Water Facilities which includes a recycled water conveyance system and a groundwater recharge facility known as the Weaver Basins. The conveyance system will allow recycled water to be conveyed from EVWD and San Bernardino facilities to the Weaver Basins.

E. EVWD is constructing Sterling Natural Resource Center, a new water reclamation facility that will recycle wastewater from EVWD's service area and recharge it via Weaver Basins into Bunker Hill-B Groundwater Management Zone.

F. San Bernardino is developing the Tertiary Treatment System, which will produce recycled water from the San Bernardino Water Reclamation Plant (WRP) with the intent of beneficially using in and around WRP for general plant use and irrigation. Valley District's recycled conveyance system will convey recycled water from the WRP and will also convey recycled water produced by EVWD via a future pipe connection to Valley District's conveyance system for recharge via Weaver Basins into Bunker Hill-B Groundwater Management Zone.

G. Redlands has existing Waste Discharge Requirements for treatment and discharge of recycled water from its service area into Bunker Hill-B Groundwater Management Zone. Phase 2 expansion of its Redlands Wastewater Treatment Facility will increase recycled water discharges via Redlands Basins.

H. The Parties believe that through their cooperative work, they can treat and discharge recycled water in a manner that will maximize benefits to the Bunker Hill-B Groundwater Management Zone, the Parties, and their ratepayers.

I. Using recycled water to replenish the Bunker Hill-B Groundwater Management Zone provides a drought tolerant water supply that improves water supply reliability for the Parties and the region and also provides a drought buffer for those agencies in the event of a prolonged drought.

J. The Parties, together with a number of other water agencies, are working together to develop a collaborative regional plan – the Upper Santa Ana River Watershed Salt & Nutrient Management Plan – that supports increasing the use of recycled water for groundwater replenishment and other purposes, while also managing groundwater quality to provide the maximum benefits to the people of the State.

K. The Upper Santa Ana River Watershed Salt & Nutrient Management Plan is a multi-year effort and will not be complete before the Parties – namely EVWD's Sterling Natural Resources Center, and potentially San Bernardino's Tertiary Treatment System and Redlands' Phase 2 expansion of its Redlands Wastewater Treatment Facility – require executed Waste Discharge Requirements for the recycled water discharge projects listed above. This MOU is intended to establish and implement salt mitigation commitments for the Parties, to be reflected in the Upper Santa Ana River Watershed Salt & Nutrient Management Plan. Salt mitigation commitments may include regional groundwater quality monitoring, brine line discharge for high-TDS industries, optimized chemical use at wastewater treatment/reclamation facilities, a regional recycled water desalter, and enhanced upstream recharge of low-TDS water.

L. The Parties wish to establish and agree to a framework for their working collaboratively toward mitigation of salt loading that will occur due to all the Parties' recycled water recharge operations within the Bunker Hill-B Groundwater Management Zone, prior to the implementation of the Upper Santa Ana River Watershed Salt & Nutrient Management Plan.

Agreements

1. The Parties agree that they will work together in good faith to develop and implement a regional approach to salt mitigation in Bunker Hill-B Groundwater Management Zone, prior to the implementation of the Upper Santa Ana River Watershed Salt & Nutrient Management Plan. This may include a regional recycled water desalter and associated brine line, enhanced upstream recharge of low-TDS water, or other regional project constructed via partnership between all Parties that contribute salt loading to the basin.

2. The Parties agree that assignment of responsibility for salt mitigation shall be based on mass loading of salts to the basin by the Parties' recycled water contributions and overall benefit to the basin and its stakeholders, as calculated through a mutually agreeable Antidegradation Analysis or similar effort.

3. The Parties will continue to participate in the development of the Upper Santa Ana River Watershed Salt & Nutrient Management Plan to manage salt and nutrient loading in the broader San Bernardino Basin Area and will support mitigation strategies for Bunker Hill-B Groundwater Management Zone in accordance with the responsibility structure set forth in paragraph 2.

4. The Parties will conduct collaborative reporting and assessment to document the assimilative capacity that is consumed by the Parties' recycled water recharges. Annually, each Party shall provide total discharge volumes and TDS concentrations to a mutually agreeable third party who shall calculate mass loading by each Party and calculate use of available assimilative capacity, both individually and cumulatively.

5. The Parties will collaborate on a Feasibility Study (conceptual design and engineering, alternative salt mitigation strategies, benefits analysis, economic modeling for cost share) for a regional recycled water desalter, to be completed by December 2024. The regional recycled water desalter will be defined in this Feasibility Study to serve as supporting documentation for funding pursuits.

6. The Parties agree to develop and execute a Funding Agreement for cost share of the Feasibility Study in Item 5 by March 2023.

7. Wastewater that goes through advanced water treatment processes (reverse osmosis) and is recharged to the Bunker Hill basin has additional regional benefits by contributing to removal of multiple water quality constituents that may be of concern to the Parties. The Parties shall also consider these regional benefits in the design of the regional recycled water desalter or other salt mitigation strategy.

8. The Parties will collaborate on development of a Salt Mitigation Implementation Plan for Bunker Hill-B Groundwater Management Zone, to be completed and submitted to Santa Ana Regional Water Quality Control Board by June 2025, which defines the selected mitigation strategy, operations, roles and responsibilities, cost share, and schedule.

9. The Parties will use 285 mg/L ambient TDS concentration as an "action limit" – once 10% of available assimilative capacity (5 mg/L increase over 280 mg/L ambient condition[1]) is used in Bunker Hill-B Groundwater Management Zone, based on the collaborative reporting and assessment completed annually, the Parties shall begin implementation (final design and construction) of the regional desalter. Based on current modeling results, with implementation of a regional desalter, the action limit is expected to be reached in year 2027.

10. The Parties will ensure that the salt mitigation measures are constructed and operational by the time 20% of available assimilative capacity (10 mg/L increase over 280 mg/L ambient condition[2]) is consumed. Based on current modeling results, prior to construction and start-up of the regional desalter, total allowable assimilative capacity is expected to be reached in 2031. Construction of

[1] Santa Ana Watershed Project Authority's 2020 *Recomputation of Ambient Water Quality in Santa Ana River Watershed for the Period 1999-2018*
[2] Ibid.

the regional recycled water desalter or other salt mitigation strategy will be completed by the end of 2031, with operation beginning in January 2032. With implementation of a regional recycled water desalter, cumulative TDS loading from the four regional partners will not exceed total allowable assimilative capacity within the model timeframe (60 years).

11. Should the Upper Santa Ana River Watershed Salt & Nutrient Management Plan analysis and findings be accepted by regulatory agencies in the future, and with consensus of the Regional Water Quality Control Board, the Parties may amend this MOU to revise the "mitigation strategies" in Paragraph 1 and/or "action limits" identified in Paragraphs 9 and 10 in order to be consistent with the Plan.

12. The Parties will collaborate via committee made up of the General Managers of each of the four Parties, or their designees. All decisions shall be made on a unanimous basis.

13. The Parties hereby authorize their respective General Managers or designees to develop administrative and operating rules and procedures that may be needed to implement the terms of this MOU.

14. All notices, requests, demands, or other communications required or permitted under this MOU shall be addressed as follows:

    SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
    Heather Dyer, General Manager
    380 East Vanderbilt Way
    San Bernardino, CA 92408
    heatherd@sbvmwd.com

    EAST VALLEY WATER DISTRICT
    Michael Moore, General Manager/CEO
    31111 Greenspot Road
    Highland, CA 92346
    mmoore@eastvalley.org

    CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
    Miguel Guerrero, General Manager
    PO Box 710
    San Bernardino, CA 92402
    Miguel.Guerrero@sbmwd.org

    CITY OF REDLANDS
    John Harris, Director, Municipal Utilities & Engineering Department
    35 Cajon St Suite 15A
    Redlands, Ca 92374

In witness whereof, the Parties have caused this MOU to become effective by their respective endorsements below:

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

By: _____
Name:
Date:

EAST VALLEY WATER DISTRICT

By: _____
Name:
Date:

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

By: _____
Name:
Date:

CITY OF REDLANDS

By: _____
Name:
Date:

COST SHARE AGREEMENT FOR BUNKER HILL-B MANAGEMENT ZONE FEASIBILITY STUDY

This Cost Sharing Agreement for the preparation of a Feasibility Study related to the Mitigation of Total Dissolved Solids (TDS, Salt) Loading in the Bunker Hill-B Management Zone is entered into and effective on the _____ day of _____ 2023 among the following listed Signatories: San Bernardino Valley Municipal Water District ("Valley District"), East Valley Water District ("EVWD"), City of San Bernardino Municipal Water Department ("San Bernardino"), and City of Redlands ("Redlands"), collectively referred to as the "Parties".

Recitals

WHEREAS, the State Water Resources Control Board's Recycled Water Policy encourages public agencies to recycle municipal wastewater, including in the development of groundwater recharge projects, to enhance the State's existing water supply; and

WHEREAS, the Parties, together with a number of other water agencies, are working together to develop a collaborative regional plan – the Upper Santa Ana River Watershed Salt & Nutrient Management Plan – that increases the use of recycled water for groundwater replenishment and other purposes, while also managing groundwater quality to provide the maximum benefits to the State; and

WHEREAS, the Parties believe that through their cooperative work, they can treat and discharge recycled water in a manner that will maximize benefits to the Bunker Hill-B Groundwater Management Zone, the Parties, and their ratepayers; and

WHEREAS, using recycled water to replenish the Bunker Hill-B Groundwater Management Zone provides a drought tolerant water supply that improves water supply reliability for the Parties and the region and also provides a drought buffer for those agencies in the event of a prolonged drought; and

WHEREAS, the Parties will collaborate on a Feasibility Study (conceptual design and engineering, benefits analysis, economic modeling for cost share) for a regional desalter, to be completed by September 2024; and

WHEREAS, the Parties believe that there is potential to pursue and apply for available and qualifying grants, such as the WaterSMART FY2023 Water Recycling and Desalination Planning Grant Program.

WHEREAS, the Feasibility Study is expected to serve as supporting documentation for future funding pursuits; and

WHEREAS, the Parties wish to establish and agree to a framework for sharing costs associated with the preparation of the Feasibility Study and related facilitation services.

Agreements

NOW, THEREFORE, the Parties agree as follows:

1. Term. This Agreement shall be effective on the date of the last signature to this agreement, and shall remain in effect until December 31, 2024, unless terminated earlier as provided herein. Termination or expiration of this Agreement will not excuse any Party from payment of costs incurred under this Agreement prior to the termination or expiration date.

2. Feasibility Study Steering Committee. The Parties will collaborate via committee made up of the General Managers of each of the four Parties, or their designees ("Steering Committee"), the purpose of which to be shall oversee and direct the selection of a consultant and preparation of the Feasibility Study. To support the work of the committee, the Parties intend to engage a consultant to provide facilitation services. The costs of the Feasibility Study preparation and of the associated facilitation services will be shared equally among the parties. All decisions shall be made on a unanimous basis.

3. Agreement to Share Costs. Each Party will be responsible for 25% of the invoiced costs associated with the development of the Feasibility Study, the associated facilitation services, and grant assistance services. Upon selection of final consultants for this work product, this Agreement will be amended to include as an exhibit the final scope of work and estimated budget for each of those consultant services.

4. Administering Agency: An Administering Agency will be appointed by the members of the Steering Committee by unanimous agreement of each Party's designated representative. The Administering Agency will be responsible for day-to-day oversight of the consultant, invoicing of costs, and providing progress reports to the Steering Committee. Valley District will be the initial Administering Agency.

5. Contracting for Feasibility Study. The Administrating Agency shall, in cooperation with the Steering Committee, prepare a Request for Proposals, identify appropriate consultant(s), and enter into a contract for the preparation of the Feasibility Study.

6. Contracting for Grant Assistance. The Parties agree to pursue qualifying grants to assist with potential funding for planning, design, and future construction of the regional desalter project. The Parties agree to apply any potentially awarded grants towards the costs of the regional desalter project.

7. Invoicing and Payment of Costs. The Administering Agency will submit invoices to each of the Parties for work based on the cost-share percentages specified in Section 3 of this Agreement. Invoices will be provided to the Parties quarterly, and are payable within 30 days of receipt.

8. Amendment. This Agreement may be amended from time to time. No alteration, amendment, or variation of this Agreement shall be valid unless made in writing and signed by all Parties.

9. Notice. All notices, requests, demands, or other communications required or permitted under this Agreement shall be addressed as follows:

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
Heather Dyer, General Manager
380 East Vanderbilt Way
San Bernardino, CA 92408
heatherd@sbvmwd.com

EAST VALLEY WATER DISTRICT
Michael Moore, General Manager/CEO
31111 Greenspot Road
Highland, CA 92346
mmoore@eastvalley.org

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
Miguel Guerrero, General Manager
PO Box 710
San Bernardino, CA 92402
Miguel.Guerrero@sbmwd.org

CITY OF REDLANDS
John Harris, Director, Municipal Utilities & Engineering Department
35 Cajon St Suite 15A
Redlands, Ca 92374

10. Attorneys' Fees. In the event of a civil action to enforce any obligation under this Agreement, the prevailing party shall be entitled to an award of reasonable attorneys' fees and costs (including but not limited to reasonable expert witness fees and costs) incurred in connection with such litigation.

11. Entire Agreement. This instrument constitutes the entire agreement and understanding between the Parties with respect to the subject matters hereof, and supersedes and replaces any prior agreements and understandings, whether oral or written, by and between them with respect to such matters.

12. Arms Length Negotiation. The Parties acknowledge and agree that this Agreement is the product of mutual arms-length negotiations and accordingly, the rule of construction, which provides that the ambiguities in a document shall be construed against the drafter of that document, shall have no application to the interpretation and enforcement of this Agreement.

13. Titles & Captions. Titles and captions are for convenience of reference only and do not define, describe or limit the scope of the intent of the Agreement or any of its terms. Reference to section numbers are to sections in the Agreement unless expressly stated otherwise.

14. No Third Party Beneficiary. Nothing contained in this Agreement shall be deemed or construed by the Parties or by any third person to create the relationship of principal and agent, or partnership or joint venture, or any association between the Parties, and none of the provisions contained in this Agreement or any act of the Parties shall be deemed to create any relationship other than as specified herein, nor shall this Agreement be construed, except as expressly provided herein, to authorize either Party to act as the agent for the other

15. Counterparts. This Memorandum may be executed in any number of counterparts, each of which shall be deemed to be an original instrument, but all of which together shall constitute one and the same instrument.

16. Authority to Execute. Each person executing this Agreement represents and warrants that he or she is duly authorized and has legal authority to execute and deliver this Agreement for or on behalf of the parties to this Agreement. Each Party represents and warrants to the other(s) that the execution and delivery of the Agreement and the performance of such Party's obligations hereunder have been duly authorized.

IN WITNESS WHEREOF, the parties hereto have entered into this instrument as of the Effective Date set forth above.

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

By: _____
Name:
Date:

EAST VALLEY WATER DISTRICT

By: _____
Name:
Date:

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

By: _____
Name:
Date:

CITY OF REDLANDS

By: _____
Name:
Date:

APPENDIX C

Resolution of the Board of Directors of San Bernardino Valley Municipal Water District in Support of Valley District's Application to the United States Bureau of Reclamation

This appendix does not count towards page limit

RESOLUTION NO. 1170

RESOLUTION OF THE BOARD OF DIRECTORS OF SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT, IN SUPPORT OF VALLEY DISTRICT'S APPLICATION, AND APPROVING NEGOTIATION AND EXECUTION OF A GRANT OR COOPERATIVE AGREEMENT WITH THE UNITED STATES DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION, FOR A WATERSMART: WATER RECYCLING AND DESALINATION PLANNING GRANT (FUNDING OPPORTUNITY NO. R23AS00076)

WHEREAS, San Bernardino Valley Municipal Water District ("***Valley District***") is a municipal water district organized and operating pursuant to the Municipal Water District Law of 1911 (Water Code § 71000 *et seq*.); and

WHEREAS, the United States Department of the Interior, Bureau of Reclamation ("***Bureau***"), provides monetary grants to states, tribes, or local governments, and other entities such as water districts; and

WHEREAS, the Bureau is making grant funding available through its WaterSMART: Water Recycling and Desalination Planning program for new water recycling and desalination feasibility studies; and

WHEREAS, the Board of Directors of Valley District has reviewed and approves of the application for Bureau WaterSMART: Water Recycling and Desalination Planning grant funding; and

WHEREAS, Valley District has committed funding to maximize, diversify, and conserve water supplies, and to promote the efficient delivery and use of those supplies within Valley District's service area and watershed, including projects that build long-term resiliency to drought and reduce the need for emergency response actions; and

WHEREAS, Valley District agrees to the administration and cost sharing requirements of the WaterSMART: Water Recycling and Desalination Planning grant criteria;

NOW, THEREFORE, be it resolved, determined and ordered by the Board of Directors of the San Bernardino Valley Municipal Water District, as follows:

Section 1. Valley District shall apply for a grant through the Bureau WaterSMART: Water Recycling and Desalination Planning program for the project currently known as the "Bunker Hill Basin Regional Recycled Water Feasibility Study".

Section 2. If recommended for funding by the Bureau, Valley District's Board of Directors authorizes Valley District to accept a grant of up to $250,000.

Section 3. If recommended for funding by the Bureau, Valley District's Board of Directors authorizes and ensures the capability of Valley District to provide necessary matching funds in the form of cash, funding from partner agencies, and in-kind contributions.

Section 4. If recommended for funding by the Bureau, Valley District will work with the Bureau to meet established deadlines for entering into a grant or cooperative agreement.

Section 5. This Resolution shall become an official component part of Valley District's grant application.

BE IT FURTHER RESOLVED, that the Chief Executive Officer/General Manager, or designee, is hereby authorized and empowered to take all actions necessary to carry out the intent and purpose of this Resolution, including the negotiation, completion, and execution of a cooperative agreement with the Bureau and the undertaking and completion of the proposed project.

ADOPTED, SIGNED, and APPROVED this February 21, 2023

AYES: 5
NOES:
ABSENT:
OBSTAINED:

Paul R Kielhold
President

Heather P. Dyer
Secretary

APPENDIX D

Letters of Project Support

This appendix does not count towards page limit

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

380 East Vanderbilt Way
San Bernardino, CA 92408
phone: 909.387.9200
fax: 909.387.9247
www.sbvmwd.com

February 23, 2023

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

RE: **Support for the Bunker Hill Basin Regional Recycled Water Feasibility Study**

To Whom It May Concern:

On behalf of San Bernardino Valley Municipal Water District (Valley District), I would like to express my strong support Valley District's grant application to the Bureau of Reclamation WaterSMART Water Recycling and Desalination Planning Grant for funding of the Bunker Hill Basin Regional Recycled Water Feasibility Study.

Water supplies in California, and particularly that of western San Bernardino County, are stressed by competing needs of large urban centers and a changing and increasingly unstable climate. Local and imported water supplies from Northern California, are becoming increasingly unreliable due to climate fluctuations including more frequent periods of drought, making it more difficult to predict water supplies to sustain the needs of the region.

Climate change is threatening all aspects of the western San Bernardino County water supply portfolio, therefore, new, expanded local water supplies are critical for long-term water supply reliability. The agencies of western San Bernardino County, including Valley District, East Valley Water District, the City of Redlands, and San Bernardino Municipal Water Department have already taken extraordinary steps to ensure local supplies, including implementing vast water conservation, creating groundwater recharge opportunities, and utilizing recycled water for irrigation purposes.

In their mission to provide safe, reliable, and long-term water supplies, these agencies are looking to broaden their portfolio through the use of recycled water for groundwater replenishment. The Bunker Hill Basin Regional Recycled Water Feasibility Study, among other things, is a collaborative effort between these agencies to evaluate the feasibility of building a regional recycled water facility to treat water high in total dissolved solids (TDS) and utilize the treated water for groundwater recharge into the Bunker Hill Basin.

SAN BERNARDINO Valley MUNICIPAL WATER DISTRICT

380 East Vanderbilt Way
San Bernardino, CA 92408
phone: 909.387.9200
fax: 909.387.9247
www.sbvmwd.com

We urge Reclamation's consideration of Valley District's grant application for the Bunker Hill Basin Regional Recycled Water Feasibility Study. I would be happy to discuss Valley District's interest and support of the study. Feel free to contact me at (909) 387-9200 or heatherd@sbvmwd.com.

Sincerely,

Heather Dyer, MS, MBA
Chief Executive Officer/General Manager

City of
REDLANDS
Incorporated 1888
Municipal Utilities & Engineering Department
35 Cajon Street, Suite 15A
Redlands, CA 92373
909-798-7698

JOHN R. HARRIS
Director

February 16, 2023

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

RE: Support for the Bunker Hill Basin Regional Recycled Water Feasibility Study

To Whom It May Concern:

On behalf of the City of Redlands, I would like to express my strong support for San Bernardino Valley Municipal Water District's (Valley District) grant application to the Bureau of Reclamation WaterSMART Water Recycling and Desalination Planning Grant for funding of the Bunker Hill Basin Regional Recycled Water Feasibility Study.

Water supplies in California, and particularly that of western San Bernardino County, are stressed by competing needs of large urban centers and a changing and increasingly unstable climate. Local and imported water supplies from Northern California are becoming increasingly unreliable due to climate fluctuations, including more frequent periods of drought, making it more difficult to predict water supplies to sustain the needs of the region.

Climate change is threatening all aspects of the western San Bernardino County water supply portfolio; therefore, new, expanded local water supplies are critical for long-term water supply reliability. The agencies of western San Bernardino County, including Valley District, East Valley Water District, the City of Redlands, and San Bernardino Municipal Water Department have taken extraordinary steps to develop local supplies, including implementing water conservation programs, creating groundwater recharge opportunities, and utilizing recycled water for irrigation purposes.

In their mission to provide safe, reliable, and long-term water supplies, these agencies are looking to broaden the regional water portfolio through the use of recycled water for groundwater replenishment. The Bunker Hill Basin Regional Recycled Water Feasibility Study, among other things, is a collaborative effort between these agencies to evaluate the feasibility of building a regional recycled water facility to treat wastewater high in total dissolved solids (TDS) and utilize the treated water for groundwater recharge into the Bunker Hill Basin. Redlands City Councilor Mario Saucedo is an active member of the Recycled Water Ad Hoc

Committee and has expressed support for the project. The Redlands City Council will consider approval of a project Memorandum of Understanding and Funding Agreement on March 7, 2023 and I will provide a formal Letter of Funding Commitment the following day.

We urge Reclamation's consideration of Valley District's grant application for the Bunker Hill Basin Regional Recycled Water Feasibility Study. I would be happy to discuss the City of Redlands' interest and support of the study. My contact information is provided below. Feel free to reach out anytime to discuss.

Sincerely,

John R. Harris
City of Redlands
Municipal Utilities and Engineering Director
(909) 798-7658
jharris@cityofredlands.org

CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT

"Trusted, Quality Service since 1905"

February 15, 2023

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

RE: Support for the Bunker Hill Basin Regional Recycled Water Feasibility Study

To Whom It May Concern:

On behalf of the City of San Bernardino Municipal Water Department (SBMWD), I would like to express my strong support for San Bernardino Valley Municipal Water District's (Valley District) grant application to the Bureau of Reclamation WaterSMART Water Recycling and Desalination Planning Grant for funding of the Bunker Hill Basin Regional Recycled Water Feasibility Study.

Water supplies in California, and particularly that of western San Bernardino County, are stressed by competing needs of large urban centers and a changing and increasingly unstable climate. Local and imported water supplies from Northern California are becoming increasingly unreliable due to climate fluctuations, including more frequent periods of drought, making it more difficult to predict water supplies to sustain the needs of the region.

Climate change is threatening all aspects of the western San Bernardino County water supply portfolio; therefore, new, expanded local water supplies are critical for long-term water supply reliability. The agencies of western San Bernardino County, including Valley District, East Valley Water District, the City of Redlands, and SBMWD have taken extraordinary steps to develop local supplies, including implementing water conservation programs, creating groundwater recharge opportunities, and utilizing recycled water for irrigation purposes.

In their mission to provide safe, reliable, and long-term water supplies, these agencies are looking to broaden the regional water portfolio through the use of recycled water for groundwater replenishment. The Bunker Hill Basin Regional Recycled Water Feasibility Study, among other things, is a collaborative effort between these agencies to evaluate the feasibility of building a regional recycled water facility to treat wastewater high in total dissolved solids (TDS), and utilize the treated water for groundwater recharge into the Bunker Hill Basin.

We urge Reclamation's consideration of Valley District's grant application for the Bunker Hill Basin Regional Recycled Water Feasibility Study. I would be happy to discuss SBMWD's interest and support of the study. Feel free to contact me at 909-384-5091 and Miguel.Guerrero@sbmwd.org.

Sincerely,

Miguel J. Guerrero, P.E.
General Manager
City of San Bernardino Municipal Water Department

31111 Greenspot Road
Highland, CA 92346

(909) 889-9501
www.eastvalley.org

February 21, 2023

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

RE: Support for the Bunker Hill Basin Regional Recycled Water Feasibility Study

To Whom It May Concern:

On behalf of East Valley Water District, I would like to express strong support for San Bernardino Valley Municipal Water District's (Valley District) grant application to the Bureau of Reclamation WaterSMART Water Recycling and Desalination Planning Grant for funding of the Bunker Hill Basin Regional Recycled Water Feasibility Study.

Water supplies in California, and particularly that of western San Bernardino County, require a strategy to responsibly balance the needs of the region as drought cycles add long-term planning complexities. Local and imported water supplies from Northern California are increasingly unreliable due to climate fluctuations, enhancing the need for evaluation of additional water supply projects.

Preparing for drought conditions impact all aspects of the western San Bernardino County water supply portfolio; therefore, new, expanded local water supplies are critical for long-term water supply reliability. The agencies of western San Bernardino County, including Valley District, East Valley Water District, the City of Redlands, and San Bernardino Municipal Water Department have taken extraordinary steps to develop local supplies, including implementing water conservation programs, creating groundwater recharge opportunities, and recycled water for a multitude of beneficial purposes. East Valley Water District, along with the City of Redlands and San Bernardino Municipal Water District have made significant investments in the development of recycled water through a regionwide approach.

Working together to achieve their mission to provide safe, reliable, and long-term water supplies, these agencies are looking to broaden the regional water portfolio through recycled water for groundwater replenishment. The Bunker Hill Basin Regional Recycled Water Feasibility Study, among other things, is a collaborative effort between these agencies to evaluate the feasibility of building a regional recycled water facility to treat wastewater high in total dissolved solids (TDS), and utilize the treated water for groundwater recharge into the Bunker Hill Basin. Analysis of this potential drought-proof local supply could increase water supply sustainability through investments in existing infrastructure.

We urge Reclamation's consideration of Valley District's grant application for the Bunker Hill Basin Regional Recycled Water Feasibility Study. Please feel free to contact me regarding East Valley Water District's interest and support of the study at (909) 885-4900 or mmoore@eastvalley.org.

Sincerely,

Michael Moore
General Manager/CEO