San Bernardino Valley Municipal Water District

Cactus Basins Connector Pipeline Project

June 15, 2022

Bureau of Reclamation NOFO: R23AS00005

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List of Acronyms

AFY	Acre-feet per year
Amsl	Above Mean Sea Level
BMP	Best Management Practice
BTAC	Basin Technical Advisory Committee
CEQA	California Environmental Quality Act
CVP	Central Valley Project
CWA	Clean Water Act
DCAP	Devil Canyon Azusa Pipeline
DWR	California Department of Water Resources
EIR	Environmental Impact Report
E.O.	Executive Order
IRWMP	Integrated Regional Water Management Plan
IRUWMP	Integrated Regional Urban Water Management Plan
JPA	Joint Power Authority
MHI	Median Household Income
MWDSC	Metropolitan Water District of Southern California
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NOFO	Notice of Funding Opportunity
OWOW	One Water One Watershed
PM	particulate matter
Reclamation	Bureau of Reclamation
RWFF	Oliver P. Roemer Water Filtration Facility
SAM	System for Award Management
SAWPA	Santa Ana Watershed Project Authority
SBCFCD	San Bernardino County Flood Control District
SBWCD	San Bernardino Water Conservation District
SEIR	Supplemental Environmental Impact Report
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USAR	Upper Santa Ana River
USEPA	United States Environmental Protection Agency
UWMP	Urban Water Management Plan
Valley District	San Bernardino Valley Municipal Water District
WIFA	Watershed Infrastructure Financing Authority
WIFIA	Water Infrastructure Finance Innovation Act
WSCP	Water Shortage Contingency Plan
WVWD	West Valley Water District

Section 1: Technical Proposal and Evaluation Criteria

1.1 Executive Summary

Date:	June 15, 2022
Applicant:	San Bernardino Valley Municipal Water District
Applicant City, County, State:	San Bernardino, San Bernardino County, California
Applicant Category:	Category A
Project Name:	Cactus Basins Connector Pipeline
Unique Entity Identifier:	MCFHQJTK3WH8
ASAP/SAM Account Status:	Active

San Bernardino Valley Municipal Water District (Valley District) is a regional water supply and groundwater replenishment agency in San Bernardino County. Valley District imports water into its service area through participation in the California State Water Project (SWP) and manages groundwater storage within its boundaries through monitoring groundwater supplies and importing water for groundwater recharge.

Valley District is seeking funding for the implementation of the Cactus Basins Connector Pipeline (Project). Valley District will facilitate SWP recharge into several groundwater recharge and flood control basins managed by the San Bernardino County Flood Control District (SBCFCD), known as the Cactus Basins, in the City of Rialto, San Bernardino County, California. The project includes construction of a turnout, pipeline, and other appurtenances that will connect the Cactus Basins with the SWP. The Project will facilitate Valley District to recharge a portion of its SWP allocation from the California Department of Water Resources (DWR), when available, to recharge the local, severely-depleted Rialto-Colton Groundwater Basins with supplemental water during drought periods or other emergencies.

Valley District relies on the SWP to provide supplemental water to over 698,000 people in San Bernardino County, including many disadvantaged communities. The population within Valley District's service area is projected to reach 870,000 by 2045 (IRUWMP, 2021). However, due to extreme drought conditions, there are steadily declining groundwater storage levels in local groundwater basins due to reduced natural recharge, which has been compounded by climate change and reduced imported water supply availability. Imported water supplies have also experienced significant drought impacts resulting in curtailed deliveries and anticipated reductions in availability in the future. SWP 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 years in a row in 2021 and 2022. These water supply conditions have highlighted the importance of increased drought resilience and the need for larger-scale project implementation to take advantage of SWP supplies when they are readily available during wet years in order to maximize their use during dry years. However, due to a lack of infrastructure and availability to recharge these supplies in the local groundwater basins, Valley District has not had the ability to store water in this area for future use. The water made

available from this Project will be used to provide drinking water for many neighboring disadvantaged communities in San Bernardino County, and the cities of Colton, Rialto, and Fontana. Without the ability to access this supplemental supply, Valley District and its retail agencies do not have a reliable source of water during drought emergencies, leaving many communities vulnerable to severe water use restrictions as outlined in local Water Shortage Contingency Plans (WSCP). Implementation of this Project would make a maximum of 6,904 acre-feet-per-year (AFY) of SWP water supply available for recharge in the Rialto-Colton Groundwater Basin to improve groundwater levels in the severely depleted basin and improve local water supply security and drought resiliency (Geoscience, 2022). This Project is supported by the Upper Santa Ana River Integrated Regional Water Management Plan, the Santa Ana Watershed Project Authority (SAWPA) One Water One Watershed (OWOW) Integrated Regional Water Management Plan (IRWMP), and the Valley District's 2020 Integrated Regional Urban Water Management Plan, among other planning documents. All of these reports promote conjunctive use of surface water and groundwater management projects to increase water supply reliability and drought resiliency.

The proposed project will be completed within approximately 3 years of award of the grant, with construction anticipated to begin by October 2023 and be complete by April 2025.

The proposed project is not located in a federal facility or on federal land. Figure 1-1 provides a project location and vicinity map.

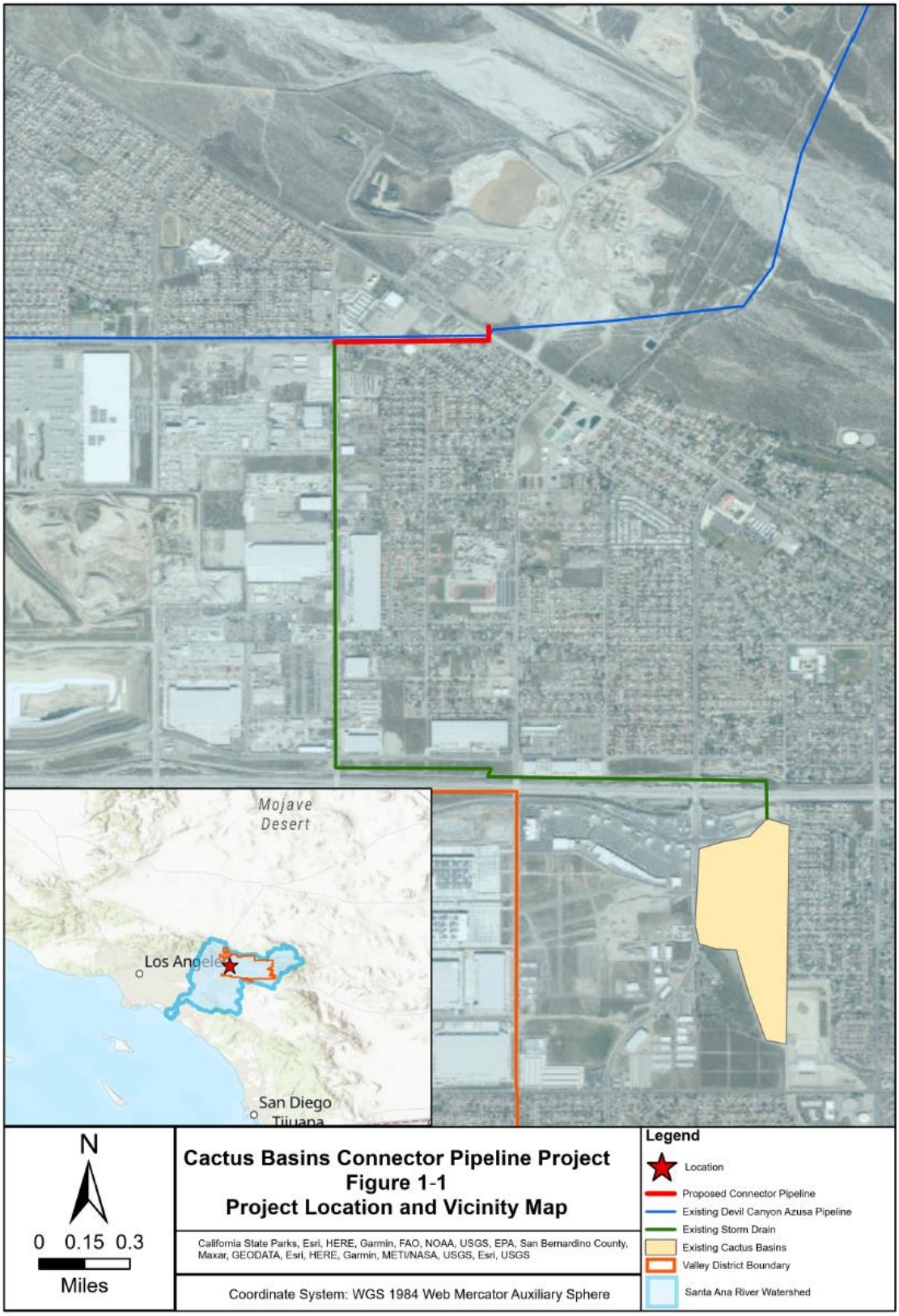
1.2 Project Location

The proposed Project will be implemented in the north-central portion of the city of Rialto, in San Bernardino County, California. Valley District has identified a preferred alternative for construction of a turnout facility near Riverside Avenue (34.158179, -117.402707) downstream of the recently completed hydroelectric generation plant at West Valley Water District's (WVWD) Oliver P. Roemer Water Filtration Facility (RWFF). The proposed Cactus Basin Connector pipeline will run south along Riverside Avenue and will transmit SWP westerly along the Metropolitan Water District of Southern California (MWDSC) Right-of-Way to the City of Rialto storm drain located in Locust Avenue. It will connect to San Bernardino County storm drainage facilities just north of Interstate 210, which then travel easterly to a culvert that crosses under Interstate 210 and discharges into the Cactus Basins. The partially developed flood control basins are located south of Interstate 210 and north of Etiwanda Avenue just west of Cactus Avenue basins in the east half of Township 1 North, Range 5 West, Section 34.

1.3 Technical Project Description

Valley District is a regional wholesale agency providing potable water to western San Bernardino County including 15 retail agencies with a population of approximately 698,000. Valley District relies on imported water supplies from the SWP to supplement its drinking water supplies and recharge local groundwater basins. Due to severe and prolonged drought conditions and curtailments in allocations from the SWP, Valley District has identified the critical need for increased local water storage when greater SWP allocations are available during wet hydrological years. Valley District recognizes the need for local infrastructure that can facilitate recharging high-quality water for the future water supply needs of the region.

Figure 1-1 Project Location and Vicinity Map



The proposed Project consists of the construction of a new turnout facility that connects to the SWP via the Devil Canyon Azusa Pipeline, an approximately 2,200-foot long "Cactus Basin Connector" pipeline, and other appurtenances to facilitate delivery and recharge of SWP water into the Rialto-Colton Groundwater Basin when it is available, and as needed in times of drought or other emergencies when supplies are unavailable or severely diminished. In addition, the Cactus Basins function as flood control facilities, serving as a multi-purpose water management tool intended to provide flood control protection by SBCFCD when the basins are not in use by Valley District for recharge. The Project would facilitate a maximum recharge of 6,904 AFY of high-quality water during normal SWP allocation years into Valley District's service area to enhance its local supplies during an extended drought and potentially reduce risk of flooding to nearby disadvantaged communities.

1.3.1 Project Components

Project components will include the construction of a turnout facility, a transmission pipeline, and associated appurtenances.

Pipeline and Structures

The Cactus Basins Connector Pipeline is proposed to convey water from a 36" nozzle located on the Devil Canyon Azusa Pipeline (DCAP) (at Station 1729+00). The nozzle is located approximately 1,300 feet northwest of the intersection of Linden Ave and Riverside Ave on the east side of roadway and will transmit SWP westerly along the Metropolitan Water District of Southern California (MWDSC) Right-of-Way to the City of Rialto storm drain located in Locust Avenue then into San Bernardino County storm drain systems and ultimately to the Cactus Basins.

A new concrete flow and metering structure (32 X 24 feet wide, 12 feet deep) would be installed adjacent to DCAP Station 1729+00. From the flow and metering station, the pipeline would be installed as follows:

- Within the Right-of-Way for Riverside Avenue, approximately 184' south, across the roadway to the southerly 10' of the MWDSC Right-of-Way.
- Westerly along the southerly 10 feet portion of the MWDSC Easement for approximately 2,168 feet, 24-inch high-density polyethylene (HDPE) fusion welded pipe
- A concrete transition structure (12 x 8 feet wide, 10 feet deep) will be constructed to convert the pressurized flow to open channel flow.
- From the transition structure westerly across Locust Avenue for approximately 54 feet to a City of Rialto 108-in Storm Drain pipe, in a 24-inch reinforced concrete pipe

The 2,200-ft pipeline would terminate at the existing City of Rialto 108-inch storm drain in Locust Avenue which flows to an existing San Bernardino County storm drain channel north of the Interstate 210 freeway. From the County storm drain channel, water would discharge into the Cactus Basins south of Interstate 210. The Cactus Basins Connector Pipeline would be installed within the maintained open area in the MWDSC right-of-way. Pipeline depth would vary by location, but in general, the pipe would be installed from 3 to 8 feet below ground surface in

order to avoid other existing utilities. The elevation of the Cactus Basins Connector Pipeline would be between 1,625 feet and 1,665 feet above mean sea level (amsl).

Land Requirements

SBCFCD is the owner of the Cactus Basins from which Valley District has entered into an agreement for completion of construction of necessary improvements and facilities related to recharge of SWP in these basins. Additionally, Valley District is currently working with SBCFCD to update a master recharge agreement to include recharge of SWP water in the Cactus Basins. Valley District will obtain permissions from MWDSC to utilize their right-of-way and is not including land acquisition in the project scope or budget.

Design Plans and Specifications

Thirty percent design drawings are currently being prepared. Final design will commence thereafter. The design will include drawings and technical specifications necessary for public bid, and include the following major components of the project: general sheets, hydraulic profile and process schematics, civil engineering, structural/mechanical design of pipe and facilities, electrical and instrumentation, any "special" crossings, pipeline trench and bedding, surface rehabilitation and restoration, permit and environmental compliance mitigation, cost estimates, and a detailed construction schedule.

1.3.2 Project Tasks

Task 1 Project Management, Administration and Reporting

Project management will be provided by Valley District staff for successful project implementation. Activities will include administrative project oversight, securing contracts, managing contractors, and conducting progress meetings to verify appropriate progress and completion within budget and on schedule. Upon receipt of the grant award and for the duration of the grant agreement, grant administration will also be performed including activities to execute the grant agreement, ensure compliance with grant requirements, preparation and submittal of regular invoice and progress report materials, and regular coordination with the grant manager, as necessary. A grant administration consultant will be considered for assisting with this task. Valley District has not included project costs for staff time and administrative costs for this task.

Task 2 Design and Engineering

Valley District will select a design engineer to conduct final design, including the preparation of plans and specifications for the pipeline, turnout, and system improvements. Final design will be completed by June 2023. Valley District has not included design or engineering costs incurred prior to March 2022.

Task 3 Environmental Documentation

Valley District has been working with SBCFCD to incorporate the Project's recharge components into the current and future flood control improvements at the Cactus Basins. SBCFCD has circulated a supplemental environmental impact report (SEIR) for the Cactus Basin No. 3/3A, 4, & 5 Flood Control System Enhancements Project and certified the EIR. Valley

District, in cooperation with SBCFCD, is initiating a separate but parallel California Environmental Quality Act (CEQA) process to evaluate potential impacts to the environment related to recharging imported water into the basins. This process will also include obtaining environmental permits as required by various regulatory agencies to perform long-term maintenance activities for the purposes of recharge within the basins, which will be likely assumed by Valley District. Valley District has selected a consultant to prepare the appropriate CEQA documents for this project. It is anticipated that CEQA will be completed by September 2023. NEPA compliance would occur simultaneously. Valley District will not include project costs for environmental documentation incurred prior to March 2022.

In addition, Valley District through collaboration with several regional water agencies is developing a groundwater model, the Santa Ana River Integrated Model, which covers the Upper Santa Ana River Watershed, including the Rialto-Colton Groundwater Basin. The model was used to evaluate issues relating to groundwater contamination and remediation of the Basin, including remediation required by the United States Environmental Protection Agency (USEPA), recharge of the Basin, and other basin-wide management activities. Conclusions of the modeling exercises will be incorporated into the environmental documentation for the Project. Valley District is not included costs for the modeling effort.

Task 4: Permitting

This task includes acquisition of necessary permits for implementation of the project, which will be acquired prior to the start of construction by the selected contractor. Permitting is anticipated to be minimal and will be identified more specifically during Task 3. Potential permits that may be required are outlined in Section 4. Permitting costs were not incurred prior to March 2022.

Task 5: Construction

Upon completion of final design, Valley District will prepare bid documents and conduct a competitive bidding process for the selection of the Project construction contractor, in accordance with the Public Contracts Code and Valley District's standard procedures. The selected contractor will perform construction according to the bid documents and final design plans and specifications. Construction will include the turnout, pipeline, and other improvements. Construction is expected to last approximately 16 months and will be completed by April 2025.

Project Deliverables will include Final Design documents, CEQA/NEPA documentation, Permits, Progress Reports, and a Final Completion Report.

1.4 Performance Measures

The proposed project supports Valley District's efforts to increase water supply reliability, improve local groundwater conditions, and address and enhance drought resiliency. The specific anticipated benefits and their related methods for measuring performance are detailed in the following table.

Table 1-1 Benefits and Related Performance Measures

Benefit Type	Description	Method of Performance Measurement
Water Supply	The Project will facilitate recharge of up to 6,904 AFY of SWP water to the Rialto-Colton Groundwater Basin when available to use during drought periods or emergencies.	SWP water volumes will be metered at the turnout
Supply Reliability/ Drought Resiliency	By constructing the pipeline, Valley District can facilitate recharge of SWP water necessary to maintain groundwater levels and increase reliability of the groundwater basin as a source of local potable water and increase drought resiliency.	Improved supply reliability will be based on the additional amount of water that can be recharged. Pre- and post-project supply data will be compared using meter data.
Emergency Water Supplies	The project will facilitate the storage of drinking water that can be accessed if emergency supplies are needed.	Improved water supply reliability in general and during emergencies.

1.5 Evaluation Criteria

1.5.1 Evaluation Criterion A – Project Benefits

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

The proposed Project will facilitate the use of Valley District's existing SWP allocation to deliver supplemental SWP water to recharge the Rialto-Colton Groundwater Basin in order to help maintain groundwater levels and improve long-term water supply reliability of this region. Improving the ability to augment local supply infrastructure with imported water supplies, when they are available during wet hydrological years, is essential for maintaining a diverse water supply portfolio and creating drought resiliency.

Valley District is one of 29 contractors of the SWP. The SWP is a critical source of surface water originating from the Sacramento-San Joaquin Bay-Delta that stores water in a series of state dams and reservoirs that is allocated to water systems throughout California. However, climate change and stark fluctuations in snowpack levels, have resulted in challenges to meet expected water deliveries. During dry hydrological years, this results in prolonged drought conditions and decreased surface water levels. During normal or wet hydrological years, the SWP has excess capacity. Storage of groundwater in local groundwater basins would be conveyed through this excess capacity of the SWP when supplies are available and would provide state water contractors supplies for use during dry periods or during any prolonged disruption of SWP service. This method of conjunctive use enables contractors such as Valley District to better manage their water supply portfolio in the face of climate change.

Implementation of the proposed Project would facilitate this supplemental supply source to be delivered to Valley District's service area and recharged in the Cactus Basins when supplies are available. The recharge of excess SWP water during wet hydrological years will help Valley District to meet customer needs during drought periods and also maintain more sustainable groundwater levels in the Rialto-Colton Groundwater Basin. By utilizing existing water supply sources, the proposed project will improve water supply reliability and reduce Valley District's and its retail agencies' risk to water supply shortages. This increased supply reliability would help build long-term drought resilience for the region.

Will the project make additional water supplies available?

Yes, see responses below.

- *If so, what is the estimated quantity of additional supply the project will provide and how was this estimate calculated?*

The Project will facilitate recharge of up to 6,904 AFY of SWP water, which is especially critical when water supplies are otherwise at risk of shortage or unavailable during drought periods. By using surface water supplies to percolate naturally into aquifers using existing local water infrastructure, such as the Cactus Basins, the Project enables Valley District to reserve water to be used at a later date.

The 6,904 AFY of available water supply is based on calculations conducted by Valley District through modeling efforts, based on SWP infrastructure and anticipated unused capacity in the basins and based on Valley District's "normal" year average allocation of 59,508 AFY.

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

Currently, Valley District has a full allocation of 102,600 AFY from the SWP. It is estimated that approximately 59,508 AFY could be available during "normal" water supply years and delivered to Valley District's service area. Of these amounts, imported water used by Valley District for groundwater replenishment, varies from hydrological year. For example, in the single dry year of 2020, Valley District's supplies consisted of 17% used for groundwater recharge. In 2017, a "wet" hydrological year, Valley District was able to use approximately 56% of total water for groundwater recharge. By making use of normal SWP allocations when they are available, Valley District facilitates increased groundwater recharge and storage for the region, to mitigate for exceptionally dry years, when SWP allocations are exceptionally low, making more supplies available to meet its water demands during drought emergencies. With the additional water that would become available with this Project, 6,904 AFY, would therefore make up approximately 12% of Valley District's total annual water supplies during normal years. Use of the Cactus Basins for recharge into the Rialto-Colton Groundwater Basin for this project would account for approximately 17% of the total average groundwater recharge for Valley District's operations.

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

The benefits of this additional water supply are substantial for the following reasons. By making this supply available to Valley District and increasing groundwater recharge in local groundwater basins, this Project helps improve long-term water supply reliability on a regional basis. The Project will not only facilitate provision of supplemental SWP water for storage in Valley District's service area but will also provide emergency water supply to the region. In the case of drought conditions when SWP water supplies are extremely limited in the Valley District service area, this Project will provide substantial resiliency to Valley District's water supply. In the case of potential supply disruption caused by natural disasters, climate change, or other catastrophic failures that may impact the SWP supplies, this Project could provide emergency supplies as storage. Overall, the Project would improve water security to communities in western San Bernardino County.

This project would support Valley District's plans to extend its local water supply during the earliest stages of a drought emergency. Valley District's retail agencies have adopted their respective WSCPs, which outline practices for individual retail agencies to follow during stages of drought emergencies. In response to an anticipated drought-related water shortage, the WSCPs apply a reduction of water supplies available to customers dependent on individual agency water supplies, including imported water supplies managed by Valley District. If Valley District allocations continue to diminish, and not enough groundwater is stored to meet supplies, the associated response would include severe restrictions for all water uses. With groundwater recharge, Valley District could enhance critical water supply availability and limit the need for the most severe restrictions.

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

This Project directly improves the management of Valley District water supplies by facilitating two critical management strategies: increasing water supply and mitigating flood risk. By collaborating with other regional agencies on water management strategies, Valley District improves water supply reliability and helps provides protection against the effects of climate change, including drought and flooding, for its service area and the region.

- *How will the project increase efficiency or operational flexibility?*

Without the Project, Valley District could not store the 6,904 AFY of water in this area when it is available. This Project will help Valley District maintain critical water supplies and therefore increase operational efficiency to avoid critical water shortage response actions. It will improve operational flexibility by constructing the infrastructure necessary to deliver supplemental SWP water that could improve Valley District's ability to provide water during drought emergencies.

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

Valley District anticipates up to 6,904 AFY of SWP supply will be available for recharge (Geoscience, 2022). The 6,904 AFY of available water supply is based on calculations conducted by Valley District's modeling efforts, based on SWP infrastructure, and anticipated unused capacity in the basins, and based on Valley District's "normal" year average allocation of 59,508 AFY (IRWUMP, 2021). Therefore, approximately 6,904 AFY of supplies will be better managed and put to beneficial use by enhancing Valley District's groundwater recharge operations with SWP supplies. In addition, as the SWP supplies will contribute to the long-term reliability of

Valley District and may contribute to improved water quality at Valley District, the Project is considered to help better manage the full amount of supplies delivered from the SWP in normal years, 59,508 AFY.

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

Valley District can supply approximately 59,508 AFY in a normal year to meet its retailer water demands. Therefore, the total amount of water better managed by the project (6,904 AFY) makes up about 12% of Valley District's total normal year supplies.

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

The improved management of water supplies that this Project supports is significant for Valley District's overall water supply reliability and drought resiliency. As noted above, the Project is critical for addressing water supply challenges, including long-term drought, and in particular for a service area that meets the needs of 698,000 people and several disadvantaged communities. Effective water resource management depends on optimizing available resources and utilizing multiple sources. This Project achieves that goal by facilitating use of SWP water to recharge local depleted groundwater basins in times of drought. Maintaining the reliability of groundwater storage with available supplies is a critical management strategy to improve long-term reliability and water security in the region.

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

The implementation of this Project will provide valuable information for other water managers considering this type of project. This multi-benefit effort is particularly relevant at the moment due to the importance of collaboration between regional agencies, conjunctive use, and redundancy of local water infrastructure due to the lack of available open space serving as recharge facilities in the highly urbanized region. The Cactus Basins also act as flood control facilities. The Project would facilitate the recharge a maximum of 6,904 AFY of high-quality supplemental water during normal SWP allocation years into its service area to enhance its local supplies during an extended drought and potentially reduce risk of flooding to nearby disadvantaged communities. As such, this project could serve as a useful example of effective water resource management for water supply reliability, drought resiliency, and climate resiliency providing data that can be shared among regional partners in order to improve water management.

1.5.2 Evaluation Criterion B – Drought Planning and Preparedness

- *Provide a link to the applicable drought plan.*

Excerpts of the following plans are included in Appendix B:

- Valley District 2020 Upper Santa Ana River Watershed Integrated Regional Urban Water Management Plan (IRUWMP)

- Santa Ana Watershed Project Authority (SAWPA) 2018 Integrated Regional Water Management Plan One Water One Watershed (OWOW) Plan Update

- Valley District 2020 Urban Water Management Plan (UWMP)

- *Explain how the applicable plan addresses drought.*

See responses below.

- *Does the drought plan contain drought focused elements including a system for drought monitoring, sector vulnerability assessments related to drought, prioritized mitigation actions, and response actions that correlate to different stages of drought?*
- *Explain whether the drought plan was developed with input from multiple stakeholders. Was the drought plan developed through a collaborative process?*

The Urban Water Management Planning (UWMP) Act requires that urban water suppliers develop projections for potential short and extended drought periods over the next 20 years. These projections inform planning of supply actions for future water supply reliability. Valley District's 2020 Integrated Regional Urban Water Management Plan (IRUWMP) provides a detailed drought contingency plan which identifies groundwater recharge as a crucial water management tool to mitigate against drought. The IRUWMP defines Valley District's Cactus-Basins Connector Pipeline Project as a future water supply project to meet water demands during normal, single-dry, and multiple dry-year events for the next 25 years.

Valley District's 2020 IRUWMP was prepared in coordination with the Basin Technical Advisory Committee (BTAC), which includes Valley District's retail agencies, water districts, public agencies, flood control districts, and other local agencies with common interests in Valley District's water resources. These agencies have a long history of working collaboratively to solve water resources-related issues, including drought. The cities of Rialto, Colton, Loma Linda, Redlands, San Bernardino, Yucaipa, and others were also invited to collaborate on the 2020 IRUWMP. Stakeholder participation and public engagement were crucial to the development of the plan. The BTAC solicited public involvement in the planning process by presenting updates at the regularly scheduled BTAC and Valley District board meetings, via email announcements, and website postings.

The OWOW Plan Update 2018 is the IRWMP for the Santa Ana River Watershed, administered by SAWPA. The OWOW Plan update was developed to bring together regional water agencies, non-profits, and stakeholders to describe new integrated actions needed to address the water challenges facing the watershed, including drought. The OWOW Plan identifies ongoing and future drought conditions as a key challenge for the region. The OWOW Plan prioritizes projects that address drought resiliency and includes multi-benefit and multipurpose projects as one of the primary goals of the Plan. This Project meets the goals of the OWOW Plan by promoting interagency collaboration to create a reliable, cost-effective water supply for the future.

The OWOW Plan was developed as part of a collaborative process to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives. The Plan was prepared in coordination with regional, cities, local water and sanitary districts, non-governmental organizations (NGO), community services districts, and other special

districts. This Project supports the goals of the IRWMP and is identified in the Plan as a regional project by the IRWMP stakeholder group.

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

Yes. Several drought plans that include the Cactus Basins Connector Pipeline Project include consideration of climate impacts to drought. Valley District's IRUWMP is a highly important water resources planning document that analyzes water supply reliability. As required by California State Water Code 10603 and 10635(b), the analysis considers climate change and multi-year droughts to develop water demand and supply projections and identify potential future projects needed to improve supply reliability. The IRUWMP describes climate change vulnerabilities applicable to Valley District's service area. Since Valley District relies on imported water supplies for most of its supplies, the impacts of climate change are magnified when rainfall is scarce or limited. The IRUWMP notes that the region is subject to an extreme variation in climate conditions, ranging from multiple years of extreme drought, which adds uncertainty to the availability of water supplies. Considering this variation, and the likelihood of future and more extreme drought conditions in San Bernardino County, the IRWUMP notes that the availability of Valley District supply can be directly influenced by long-term droughts, changes to diversion, and storage conditions, and subsequent changes to groundwater quality as groundwater levels fluctuate.

The OWOW Plan describes climate change in the Santa Ana River watershed, which includes Valley District's service area. Through the IRWMP stakeholder collaboration process, climate change vulnerabilities are identified and prioritized based on stakeholder discussion. One of the main vulnerabilities identified in the plan includes a decrease in available water supply and increased drought potential.

- *Describe how your proposed drought resiliency project is supported by an existing drought plan.*
  - *Does the drought plan identify the proposed project as a potential mitigation or response action?*

Strategies specified in the OWOW Plan, to mitigate climate change impacts in the Santa Ana River watershed include regional collaboration and multi-benefit projects, such as the proposed Project. The OWOW Plan identifies the proposed project.

Valley District's 2020 IRUWMP is a detailed drought contingency plan which identifies groundwater recharge as a crucial water management tool to mitigate against drought. The IRUWMP defines Valley District's Cactus Basins Connector Pipeline Project as a future water supply project to meet water demands during normal, single-dry, and multiple dry-year events for the next 25 years.

Overall, the proposed Project directly addresses identified strategies in multiple drought plans by using water supplies to the extent possible when they are available and improving long-term water supply reliability.

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

Increasing water supplies are specific needs and strategies identified in the IRUWMP and will be directly addressed and implemented with the proposed Project. The IRUWMP identified the need for implementation projects that could mitigate against impacts of climate change, which this Project does. As such, the project will help increase water supply reliability under climate change conditions, including prolonged droughts.

- *Describe how the proposed project is prioritized in the drought plan?*

In the plans, water supply projects are a high priority to improve overall water supply reliability. As stated in the IRUWMP "Valley District is working collaboratively with the San Bernardino County Flood Control District to recharge supplemental water in the Cactus Basins, which would recharge high-quality water into the Rialto-Colton sub basin. The project includes the construction of new basins 3 and 3A, which are being built for flood control. Basin development will include the construction of a bypass pipeline to manage flood flows. To optimize the joint use of these basins for flood control, the recharge is planned to occur during the dry season, from April to October." (Page 3-49). Additionally, this Project is one of the means identified in the IRUWMP to provide water security.

1.5.3 Evaluation Criterion C - Sustainability and Supplemental Benefits

1. Climate Change:

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

The SBCFCD may utilize the basins for flood control when it is not in use for recharge. The Cactus Basins were primarily developed by SBCFCD to provide 100-year flood protection to residences, businesses, and public infrastructure adjacent to the Cactus Channel and Rialto Channel in the cities of Rialto and Colton, San Bernardino County, California. The Rialto Channel begins at the southwest corner of Cactus Basin 3/3A. This channel receives the majority of storm runoff within the City and was previously unable to handle peak flow from a 100-year flood event. Increased runoff from Interstate 210 to the north of the basins, and continued development of new residential, commercial, and industrial uses upstream, have and will continue to increase the demands of the flood control system and the subject basins. Completion of the basins by SBCFCD was determined to be the most cost-effective means of offsetting flood hazard impacts associated with new development in northern Rialto to protect nearby communities.

- *Does the proposed project include green or sustainable infrastructure to improve community climate resilience such as, but not limited to, reducing the urban heat island effect, lowering building energy demands, or reducing the energy needed to manage water? Does this infrastructure complement other green solutions being implemented throughout the region or watershed?*

The Project will attempt to reduce the energy needed to manage water, where possible.

- *Will the proposed project establish and use a renewable energy source?*

The proposed project will not establish or use a renewable energy source.

- *Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution?*

The Rialto-Colton Groundwater Basin is the subject of significant groundwater management issues, including contamination issues that require extensive investigation and remediation efforts. Due to significant drawdown in groundwater levels, the recharge basins will need to be recharged with alternative water sources. As part of this Project, Valley District and project partners are collaborating on a groundwater modeling effort to further understand groundwater contamination issues, recharge potential, and other groundwater management activities.

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

The proposed Project will not reduce greenhouse gas emissions.

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

Increased storage can result in more water being available for irrigation. The SWP water will provide a critical source of water, and will also be a sustained flow of clean, safe, reliable potable water to replenish the Rialto-Colton Groundwater basin.

- *Does the proposed project contribute to climate change resiliency in other ways not described above?*

The overall Project is considered an adaptation to ongoing drought and climate change. The Project would increase opportunities for water storage which provides a strategy to deal with water supply variability to sustain long-term drought conditions. Increasing groundwater storage in local basins could increase water and energy security and provide resiliency against the impacts of climate change on water supplies.

2. Disadvantaged or Underserved Communities

- *Please describe in detail how the community is disadvantaged or underserved based on a combination of variables that include the following: low income/poverty, high unemployment and underemployment, racial and ethnic residential segregation, linguistic isolation, high housing cost burden, and substandard housing, distressed neighborhoods, high transportation cost burden and/or low transportation access, disproportionate impacts from climate change, high energy cost burden and low energy access, jobs lost through energy transition, access to healthcare.*

The service area of Valley District, the area that will receive the drought benefit from the project, qualifies as a disadvantaged community as defined by Section 1015 of the Cooperative Watershed Act (defined as a community with an annual median household income (MHI) that is less than 100 percent of the statewide annual median household income for the state).

According to the US Census Bureau, 2019 American Community Survey 5-Year Estimate the median California Median Household income is $75,235. Based on 2019 American Community Survey 5-year estimate the Median Household Income of San Bernardino County is $63,362. Specific urban areas within San Bernardino County served by Valley District include:

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

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

In addition, the project is located in the City of the Rialto. The City of Rialto is characterized as a low-income community that has a poverty rate that is 36% above the state poverty level (US Census Bureau, 2020). The highly urbanized community is located in an industrial area that has a pollution burden of 66 – 90 percent, according to CalEnviroScreen 4.0. The area includes distressed neighborhoods that are geographically isolated due to industrial warehouses and major railyards. A map showing the disadvantaged communities near the project area and overlying the Rialto-Colton Groundwater Basin is included in Appendix C.

3. Tribal Benefits

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

The proposed Project does not provide any tribal benefits.

- *Does the proposed project support Reclamation's tribal trust responsibilities or a Reclamation activity with a Tribe?*

The proposed Project does not specifically support Reclamation's tribal trust responsibilities.

4. Environmental Benefits

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

The project does not seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit wildlife, fisheries, or habitats. Additional water delivered to the Cactus Basins may provide a benefit to species, however, further benefits and impacts will be addressed during implementation of Task 3 activities identified in Section 1.3.2.

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

The proposed project is not expected to provide improved habitat for species.

- *Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status?*

The proposed project is not expected to reduce the likelihood of a species listing. However, Valley District's operations under the Upper Santa Ana River Habitat Conservation Plan support a variety of habitats and species, which may be listed as federally threatened or endangered species.

***5. Other Benefits**. Will the project address water sustainability in other ways not described above?*

Yes. See responses below.

- *Will the project assist state and water users in complying with interstate compacts?*

The Project does not assist states and water users in complying with interstate compacts.

- *Will the project benefit multiple sectors and/or users?*

Valley District's retail agencies serve water users including residential, commercial, industrial, agricultural, and irrigation users. This Project will benefit users in multiple sectors by implementing a collaborative, cost-efficient, and multi-benefit water management solution to address water supply issues to meet the needs of many, especially under severe drought conditions.

- *Will the project benefit a larger initiative to address sustainability of water supplies?*

With the uncertainty of climate impacts on imported water supplies, reliance on yearly normal allocations from the SWP increases the vulnerability of Valley District to meet the current demands of its retail agencies. The project uses conjunctive use of surface water from the SWP and local groundwater basins when supplies are available to mitigate water shortage problems. The project addresses the sustainability of water supplies by using this water management strategy to improve its water supply reliability over the long-term.

1.5.4 Evaluation Criterion D – Severity of Actual or Potential Drought Impacts to be addressed by the Project

- *What are the ongoing or potential drought impacts to specific sectors in the project area if no action is taken, and how severe are those impacts?*

Without the proposed project, and projects like it, Valley District and its retail agencies will experience growing challenges in fully meeting demands and maintaining adequate water supplies, especially under drought conditions with below-normal snowpack making imported water supplies unavailable during dry years.

Valley District provides a critical source of drinking water for 698,000 people in a dry, arid, heavily urbanized region. Valley District provides water to the cities of Highland, Rialto, Colton, Yucaipa, Redlands, and communities of unincorporated San Bernardino County. SWP water is the primary water source of Valley District and a substantial portion of the region's water supply, but that resource is becoming increasingly stressed by drought. Over the last several years, Valley District has seen a decline in allocations from the SWP water levels due to ongoing drought conditions. Over the last two years, Valley District's water supply allocations from the SWP have declined substantially. These impacts have reduced the reliability of water and created challenges for water management. Valley District has been seeking additional options for

increasing the reliability of its water supplies in an effort to improve regional water security and drought resiliency.

The proposed Project is particularly important for expanding Valley District's groundwater supply portfolio for improved reliability of water supplies during droughts. Without the project, Valley District would be increasingly reliant on annual supply allocations from the SWP in dry years. In the face of more frequent and severe droughts, Valley District is vulnerable to the effects of climate change, despite growing needs for water supplies.

Under conditions of curtailed imported supplies and supply shortages, the state of California has enacted mandatory water use reductions to address water shortages. In addition, some retail agencies have implemented their own water use reductions. Without the project, it could be expected that the stage of action identified in retail agencies respective WSCPs would reach more restrictive and catastrophic levels sooner, whereas increasing water supplies with the project would help mitigate the unavailability of imported water during dry years to reduce the severity of water shortage contingency actions.

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

The primary concern to be addressed with the project is drinking water availability and reliability, which is a public health issue. By increasing its water supply reliability, Valley District can mitigate source-specific shortages and improve its ability to continue to reliably meet regional water needs.

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

Drought conditions can impact fish and wildlife viability, reduce quality and quantity of habitat, and reduce resiliency to disease or other changes in the environment. It is unknown to what extent the project could contribute to improved environmental conditions. However, it is anticipated that improved groundwater storage will allow Valley District to implement other projects using surface water supplies that will improve habitat conditions for birds, fish, and plant species. As such, the project could contribute to locally improved environmental conditions, especially during droughts when surface waters are most impacted.

- *Whether there are ongoing, past, or potential, local, or economic losses associated with current drought conditions (e.g., business, agriculture, reduced real estate values).*

Potential supply shortages under drought conditions could result in economic burdens to Valley District's retail agencies due to Valley District's reliance on imported water supplies. Most retail agencies annually consider the setting of water rates to reflect the cost of water management operations. If a water shortage occurs due to drought, retail agency customers could face a conservation penalty that will be applied to individual customer billing for each unit of water that is in excess of their allocation imposed at a certain stage of drought.

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

Drought conditions can increase competition over supplies and require necessary, sometimes drastic, water reduction measures in order to stretch available supplies. Depending on the volume of storage available in Valley District, regional agencies could face 20 to 50 percent allocation

reductions for certain uses. By improving water supply reliability and drought resiliency, Valley District can reduce the likelihood of water-related conflicts and the need for regional implementation of strict water use reduction measures.

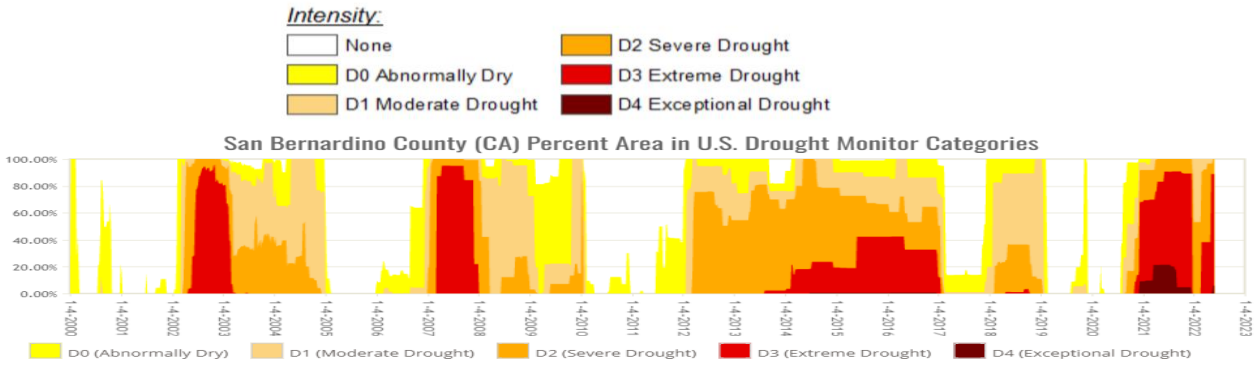
- *Describe existing or potential drought conditions in the project area*

See responses below.

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

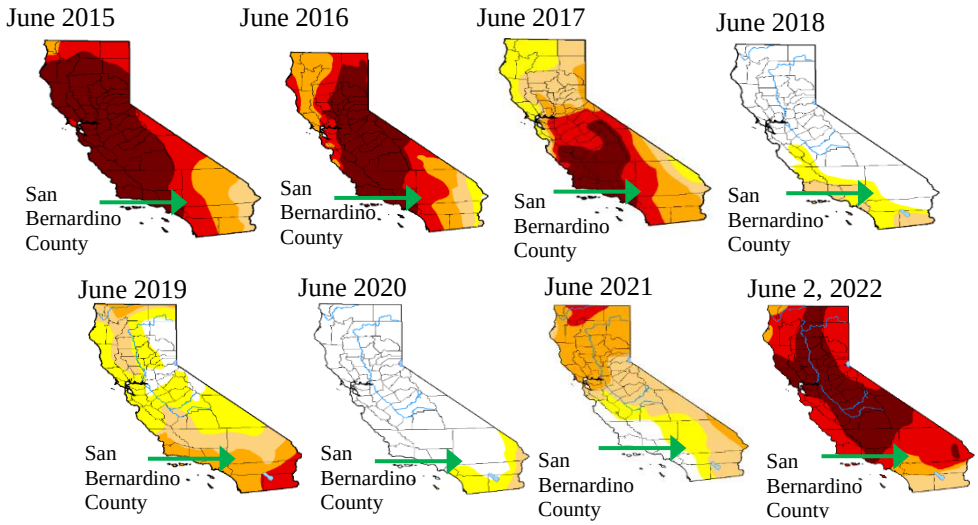
Valley District's service area and the project site are located within western San Bernardino County, which has experienced among the most severe and prolonged drought conditions, both, statewide and nationwide. Starting in 2014 through the end of 2021, the County experienced abnormally dry to extreme drought conditions, with the majority of the County experiencing at least extreme drought for a majority of those years. The western portion of the County experienced the most prolonged drought and generally most severe conditions during that timeframe, which due to the reliance on imported water supplies, decreased precipitation, increased demand, and a lack of access to SWP water for drought resiliency, made this area extremely vulnerable. See Figures 1-3 and 1-4, below. Imported water supplies were particularly hard hit by recent drought conditions. It is impossible to predict how drought conditions may improve or worsen in the next few years, however, severe drought conditions are certain to occur in the short-term and the long-term. Groundwater level declines and water quality impairments are anticipated to ensure as a direct result. It is for this reason, that Valley District is proactively taking steps to facilitate maximization of groundwater recharge to ensure continued reliable water management operations.

Figure 1-2 Drought Timeseries for San Bernardino County in Percent Area



Source: https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx

Figure 1-3 Drought Across California 2015 to 2022



Source: https://droughtmonitor.unl.edu/Maps/MapArchive.aspx

*The month of September reflects the end of the water year and drought conditions following summer peak demand.

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

Among the climate change impacts projected for the region are droughts of higher frequency, longer duration, and greater intensity. These conditions are in part due to projected increase in average and extreme temperatures and projected decreases in precipitation. These findings are discussed in the *Santa Ana Watershed Basin Study, Technical Memorandum 1: Climate Change Report* developed by the Bureau of Reclamation. San Bernardino County has experienced recent extreme and persistent drought periods. Currently, the region is experiencing among the most intense and long-lasting drought in the recent past, based on historic occurrences and climate change projections, these conditions are highly likely to impact the project area again in the near future, with increasing frequency and increasing intensity.

1.5.5 Evaluation Criterion E – Project Implementation

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

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

Table 1-2 Proposed Project Schedule

Task/Activity Name	Start	Finish
Grant Award Notification (Assumed Date)	March 2023	March 2023
Task 1. Project Management, Administration and Reporting	March 2023	July 2025
Task 2. Design and Engineering		
Final Design	March 2022	June 2023
Task 3. Environmental Documentation		

Task/Activity Name	Start	Finish
CEQA Documentation	March 2022	September 2023
Task 4. Permitting	July 2023	September 2023
Task 5. Construction		
Construction Contracting and Bidding	September 2023	October 2023
Construction	October 2023	April 2025

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

All necessary permits will be obtained by Valley District prior to construction. Required permits are listed and described in Section 4.

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

The Project is currently in the design stage. Final Design documents will be completed by June 2023.

- *Describe any new policies or administrative actions required to implement the project.*

Implementation of the proposed project would not require any new policies or administrative actions. The project is part of the regional Watershed Connect program, an overarching effort to improve water supply management to meet demands for the region and adapt to climate change. Watershed Connect is governed by the Upper Santa Ana River Watershed Infrastructure Financing Authority (USAR WIFA), a Joint Powers Authority (JPA), representing regional agencies including Valley District, San Bernardino Water Conservation District (SBWCD), City of San Bernardino Municipal Water Department, and Yucaipa Valley Water District, and potential future member agencies. The effort is also supported by stakeholders that would benefit from the project, as indicated in the attached support letters.

1.5.6 Evaluation Criterion F – Nexus to Reclamation

- *Does the applicant have a water service, repayment, or O&M contract with Reclamation?*

No.

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

Valley District is not a Reclamation contractor. SWP water that will be used during drought emergencies will come from the southern end of the Sacramento-San Joaquin Delta. It will not include water from any other Reclamation projects or facilities, including Central Valley Project (CVP) water.

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

No.

- *Is the applicant a Tribe?*

The applicant is not a tribe.

Section 2: Project Budget

2.1 Funding Plan and Letters of Commitment

- *Describe how the non-Federal share of project costs will be obtained. Please identify the sources of the non-Federal cost share contribution for the project, including:*
  - *Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments).*

Valley District will provide the non-federal share of project costs.

2.1.1 Any costs that will be contributed by the applicant.

- *Any third-party in-kind costs (i.e., goods and services provided by a third party).*
- *Any cash requested or received from other non-Federal entities.*
- *Any pending funding requests (i.e., grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied.*

The estimated total allowable project cost for the proposed Project is $2,707,038.03 With this application, Valley District is requesting less than 50 percent of the total project costs, or $1,353,519.01. Valley District will fund the remaining project costs using internal funds from Valley District's rate structure. Valley District has a pending funding request for a cumulative loan from the USEPA WIFIA program. The application is currently in progress, therefore, the loan has not yet been approved or funded. Valley District has also submitted this project for consideration in the Proposition 1 Integrated Regional Water Management Grant Program, Round 2 funding request for the Santa Ana region. In the event that the project is not selected or approved for grant or loan funding, either fully or partially, any remaining costs would be paid for by Valley District revenues, obtained from local property taxes. Therefore, the project will not be affected if such funding is denied. The Project is included in Valley District's proposed Budget for FY 22/23, to be approved by Valley District's Board of Directors after the date of this application.

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

- *Identify whether the budget proposal includes any project costs that have been or may be incurred prior to award. For each cost, describe:*
  - *The project expenditure and amount*
  - *The date of cost incurrence*
  - *How the expenditure benefits the project*

The budget proposal includes project costs that have been or are anticipated to be incurred prior to award, but after March 2022. Valley District intends to provide these costs as part of the non-federal cost share. Design is currently underway. Project costs will be incurred prior to and after

the award date. Valley District's cost share will be applied towards costs spent after March 1, 2022 and prior to award.

CEQA documentation is currently being prepared and will be complete by September 2023. Valley District is providing project costs for CEQA documentation incurred and to be incurred between March 1, 2022 and September 2023. Complete CEQA documentation will help Valley District meet state environmental requirements and provide appropriate mitigation measures to be implemented during construction and during operation and maintenance. Valley District's cost share will be applied towards CEQA costs.

Permitting activities have not yet commenced, however, the project schedule indicates a completion date of September 2023, prior to start of construction. Approval of all construction permits will help Valley District meet construction timelines. Valley District does not anticipate incurring permitting costs prior to award.

2.2 Budget Proposal

The following tables (Tables 2-1 and 2-2) summarize total costs and funding sources for the proposed Project. The total eligible cost of the proposed Project is $2,707,038.03. Funding sources for the project include funding from Valley District and requested funding from Reclamation. A federal loan funding request for the USEPA WIFIA Loan Program is underway, however, loan funding has not been awarded and is not anticipated to be directed as a grant, therefore, it is not assumed in the tables below.

Table 2-1 Total Project Cost Table

Source	Amount
Costs to be reimbursed with the requested Federal funding	$1,353,519.01
Costs to be paid by the applicant	$1,353,519.02
Value of third-party contributions	$0
Total Project Cost	**$2,707,038.03**

Table 2-2 Summary of Non-Federal and Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	
1. Valley District /WIFIA loan*	$1,353,519.02
Non-Federal Subtotal	**$1,353,519.02**
Requested Reclamation Funding	**$1,353,519.01**

* Since the WIFIA loan is still outstanding, it is not included in the SF-424 form.

The budget proposal consists of costs associated with implementation of the proposed Project which fall under the Contractual/Implementation and Other categories. The budget proposal is provided in Table 2-3 and is described in more detail in the following Budget Narrative.

Table 2-3 Budget Proposal

Budget Item Description	Computation		Quantity Type	Total Cost
	$/Unit	Quantity		
Salaries and Wages (a)				
Not Applicable	-	-	-	-
Fringe Benefits				
Not Applicable	-	-	-	-
Travel				
Not Applicable	-	-	-	-
Equipment				
Not Applicable	-	-	-	-
Supplies and Materials				
Not Applicable	-	-	-	-
Contractual/Implementation				
Design & Engineering	Valley District Engineer's Cost Estimate			$185,500
Construction Management	Valley District Engineer's Cost Estimate			$100,000
Construction	Valley District Engineer's Cost Estimate			$1,793,494.82
Construction Contingency	Valley District Engineer's Cost Estimate * Construction Cost Index (March – June 2022) (28.1%)			$372,721.70
Other – Environmental and Regulatory Compliance				
CEQA/NEPA & Permitting	Contractual Agreement dated 10/01/2019 (Part A) with costs incurred after March 2022			$255,321.51
Indirect Costs				
Not Applicable				-
	Total Estimated Project Costs			**$2,707,038.03**

2.3 Budget Narrative

Salaries, Wages, and Fringe Benefits

Project implementation will primarily be conducted by specialized contractors whose costs are further detailed below. Valley District will not seek reimbursement for staff time spent on the Project, such as project management activities. Fringe benefits are not included in the overall project budget.

Travel

Valley District does not anticipate any travel costs.

Equipment

Valley District does not anticipate any equipment costs.

Materials, and Supplies

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

Contractual

Contractual/Construction work to be performed for this Project includes design and engineering and construction, including the installation of the pipeline, turnout facility, various improvements, and construction management. Design costs include all Final Design costs to be incurred after March 1, 2022. Design costs were estimated based on the original consulting services agreement. Construction costs were estimated based on engineers' cost estimates, based on experience with similar projects. Additional costs include costs for an independent construction manager who would also have responsibility for labor compliance during construction. All procurements with an anticipated aggregate value that exceeds the Simplified Acquisition Threshold (currently $10,000) will use a competitive procurement method.

All estimates are considered fair and reasonable.

Third-Party In-Kind Contributions

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

Environmental and Regulatory Compliance Costs

CEQA costs are based on an original contractor agreement and amendment dated October 1, 2019. The contractor was selected using a competitive-procurement method. The CEQA costs are based on the anticipated need of a CEQA FEIR for this Project and only include costs incurred after March 1, 2022, noted as Part A of the agreement and pertinent only to the Cactus Basins Connector Pipeline project. Permitting costs were estimated based on an existing proposal from the selected contractor. No permitting costs have been incurred to date.

Other Expenses

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

Indirect Costs

Valley District does not anticipate indirect costs.

Section 3: Environmental and Cultural Resources Compliance

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

Initial review of the project has been completed, but a full environmental analysis, including preparation of an EIR is in progress. The statements below are based on site visits and desktop studies done as part of the initial review.

The proposed Project consists of the installation of a pipeline, turnout, and improvements at the associated facilities. Construction of these facilities has the potential to result in soil disturbance which also has the potential to impact other resources. Soil disturbance would occur during excavation for the Cactus Basins Connector Pipeline. Site preparation for pipeline installation would be unlikely to impact top soils since these would have been removed during previous ground disturbance associated with the installation of the Devil Canyon Azusa Pipeline. Pipeline installation would be done in compliance with best management practices (BMPs), including measures to control erosion from the construction area.

Soil disturbance may also occur during recharge basin maintenance. As part of recharge basin maintenance accumulated sediments would be removed but native soils would largely be left intact. With compliance with stormwater regulations, impacts related to erosion and loss of topsoil are expected to be less than significant.

Air pollutant emissions associated with construction of the Cactus Basins Connector Pipeline would result from construction equipment, vehicles, and personnel. The construction area is in non-attainment for ozone (8-hour), particulate matter 10 microns or less in diameter (PM10), and particulate matter 2.5 microns or less and project construction would exacerbate air quality in the project area. In addition, project construction would contribute to greenhouse gas emissions.

The specific biological resources that could be impacted by project construction and operation have not been identified at this time. However, it is possible that pipeline construction and recharge basin operation could negatively affect species and habitat. Appropriate mitigation measures will be used to avoid or lessen impacts. Mitigation measures may include restoring temporary disturbance areas and conducting an arborist study to prevent impacts to protected trees of significance.

Project operation, including groundwater recharge could interfere with cleanup actions of an existing perchlorate plume. To minimize potential impacts to waters and water quality, all work within the drainage area would be clearly delineated with highly visible material. Street sweeping may be used to prevent off-site tracking of loose construction and landscape materials. To prevent the discharge of pollutants to waters, silt barriers or other materials will be used as appropriate. Site washout areas will be located at least 100 feet away from an open water source.

Construction activities will be conducted in compliance with local and state stormwater laws and, if found necessary, a Stormwater Pollution Prevention Plan (SWPPP) will specify best management practices to reduce and prevent related water quality impacts. Mitigation measures will be outlined in the pending EIR.

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

No threatened or endangered species have been identified thus far. The majority of the project site is in the easement for the Devil Canyon Azusa pipeline, which consists of denuded, compacted soil. However, impacts will be determined during the preparation of the EIR. If significant impacts are identified, implementation of mitigation measures would reduce direct and indirect impacts to special status wildlife species to less than significant.

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

The project site is not expected to affect any wetlands or other surface waters under Clean Water Act (CWA) jurisdiction.

- *When was the water delivery system constructed?*

The majority of the water delivery system was constructed by the late 1970s; however, some infrastructure continues to be constructed today as the service area is being built out. New infrastructure will be constructed as part of the project to recharge the groundwater basin. The extracted water will rely upon the existing water delivery system, which will not be modified as a part of this project.

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

The proposed project will not result in any modifications of or effects to any irrigation system.

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

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

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

There are no known archeological sites located within the proposed project area.

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

The project will not have a disproportionately high or adverse effect on low income or minority populations. The project would have a long-term benefit of increasing the resiliency of the local water distribution and improving regional water supply reliability. These benefits would serve all residents in the project area regardless of race, ethnicity, or income level.

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

No, the project is not anticipated to access to or ceremonial use of Native sacred sites or result in other impacts on tribal lands.

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

No, the Project is not intended to contribute to spread of noxious weeds. Any earth-disturbing work would have limited potential to contribute to the introduction, continued existence, or spread of, noxious weeds or non-native invasive species.

Section 10: 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 will be provided to Reclamation within 30 days of the application deadline.

City of Rialto
California

June 9, 2022

Attn: Heather Dyer, CEO/General Manager
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408

Re: Support for San Bernardino Valley Municipal Water District's WaterSMART Drought Response Program: Drought Resiliency Project Application

Dear Ms. Dyer,

San Bernardino Valley Municipal Water District (Valley District) is applying to the U.S. Bureau of Reclamation's WaterSMART Drought Response Program: Drought Resiliency Project (R23AS00005) to implement the Cactus Basin Connector Pipeline Project. The Project is an integral part of the plan to facilitate recharge of imported water, when it is available, up to 6,904-acre feet per year, in the Cactus Basins to the severely depleted Rialto-Colton Groundwater Subbasin to ultimately recover this water from the local groundwater basin and use it for potable water supply during drought emergencies. As one of the retail agencies relying on groundwater productions from the Rialto-Colton Basin, the City of Rialto appreciates Valley District being proactive in implementing projects to address the region's water supply issues and to ensure the required facilities are in place.

The WaterSMART Drought Response Program supports a proactive approach to drought by providing financial assistance to water managers to implement projects that will build long-term resilience to drought (Drought Resiliency Projects). The proposed Project accomplishes the goals of the funding opportunity enhancing groundwater recharge capabilities for ultimate potable water use.

The City of Rialto is proud to support Valley District's WaterSMART grant application for the Cactus Basin Connector Pipeline Project.

If you have any questions or need additional information do not hesitate to contact me by email tjcrowley@rialtoca.gov or by phone, (909) 820-8056.

Sincerely,

Thomas J. Crowley

Thomas J. Crowley, P.E.
Utilities Manager

West Valley Water District

ESTABLISHED AS A PUBLIC AGENCY IN 1952

WEST VALLEY WATER DISTRICT'S MISSION IS TO PROVIDE OUR CUSTOMERS WITH SAFE, HIGH QUALITY AND RELIABLE WATER SERVICE AT A REASONABLE RATE AND IN A SUSTAINABLE MANNER.

June 9, 2022

Attn: Heather Dyer, CEO/General Manager
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408

Re: Support for San Bernardino Valley Municipal Water District's WaterSMART Drought Response Program: Drought Resiliency Project Application

Dear Ms. Dyer,

West Valley Water District (WVWD) supports San Bernardino Valley Municipal Water District's (Valley District) application for the U.S. Bureau of Reclamation's WaterSMART Drought Response Program: Drought Resiliency Project (R23AS00005) to implement the Cactus Basin Connector Pipeline Project. The Project consists of improvements to existing facilities and construction of new facilities to deliver and recharge SWP water to the severely depleted Rialto-Colton Groundwater Subbasin. These facilities are needed to facilitate Valley District to recharge up to 6,904 acre feet per year of imported water, when it is available, and ultimately recover this water from the local groundwater basin and use it for potable water supply during drought emergencies. As one of the stakeholders of the Rialto-Colton Basin, WVWD appreciates Valley District working collaboratively with its retail agencies in implementing projects to address the region's water supply issues, especially in this time of drought.

The WaterSMART Drought Response Program supports a proactive approach to drought by providing financial assistance to water managers to implement projects that will build long-term resilience to drought (Drought Resiliency Projects). The proposed Project accomplishes the goals of the funding opportunity enhancing groundwater recharge capabilities for ultimate potable water use.

WVWD is proud to support Valley District's WaterSMART grant application for the Cactus Basin Connector Pipeline Project.

Sincerely,

Van Jew, P.E.
Acting General Manager
West Valley Water District

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FONTANA WATER COMPANY
A DIVISION OF SAN GABRIEL VALLEY WATER COMPANY
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June 9, 2022

Heather Dyer
CEO/General Manager
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, California 92408

Subject: Support for San Bernardino Valley Municipal Water District's WaterSMART Drought Response Program: Drought Resiliency Project Application

Dear Heather:

Fontana Water Company supports San Bernardino Valley Municipal Water District's (Valley District) application for the U.S. Bureau of Reclamation's WaterSMART Drought Response Program, Drought Resiliency Project No. R23AS00005, to implement the Cactus Basin Connector Pipeline Project (Project). The Project consists of improvements to existing facilities and construction of new facilities to facilitate recharge of imported water in quantities up to 6,900 acre feet per year, when available. This Project would replenish the severely depleted Rialto-Colton Groundwater Subbasin for ultimate recovery as a potable water supply. As one of the agencies producing groundwater from the Rialto-Colton Basin, Fontana Water Company appreciates Valley District working collaboratively with its retail agencies in implementing projects to address the region's water supply issues.

The WaterSMART Drought Response Program supports a proactive approach to drought by providing financial assistance to water managers to implement projects that will build long-term resilience to drought (Drought Resiliency Projects). The proposed Project accomplishes the goals of the funding opportunity enhancing groundwater recharge capabilities for ultimate potable water use.

Fontana Water Company is providing this letter in support of Valley District's WaterSMART grant application for the Cactus Basin Connector Pipeline Project.

Very truly yours,

Josh Swift
Vice President and General Manager

JMS:bf