



**Valley Sanitary District**  
**Recycled Water Treatment Project**  
**Technical Proposal**

***Prepared For:***

Bureau of Reclamation  
Financial Assistance Support Section  
Attn: NOFO Team  
P.O. Box 25007, MS 84-27133  
Denver, CO 80225  
[SHA-DRO-FAFOA@usbr.gov](mailto:SHA-DRO-FAFOA@usbr.gov)  
303-445-2906

***Submitted By:***

Valley Sanitary District  
45500 Van Buren Street  
Indio, CA 92201  
Beverli Marshall, General Manager  
[bmarshall@valley-sanitary.org](mailto:bmarshall@valley-sanitary.org)  
760-238-5400

**BUREAU OF RECLAMATION**  
**WATERSMART: WATER RECYCLING AND DESALINATION**  
**PLANNING**

*February 28, 2023*



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## EXECUTIVE SUMMARY

<b>Date:</b> 2/28/2023	<b>Applicant Name:</b> Valley Sanitation District
<b>City:</b> Indio	<b>Project Length of Time:</b> 24 Months
<b>County:</b> Riverside	<b>Estimated Completion Date:</b> October 2025
<b>State:</b> California	<b>Located on a Federal Facility:</b> No

The Indio Water Authority (IWA) supplies potable water to 79,000 people within its 38 square-mile service area. IWA exclusively relies on groundwater from the Coachella Valley Groundwater Basin (CVGB), which has historically been in a state of overdraft and is designated as a High Priority Basin in California. Precipitation in this arid region of Southern California averages only 3.1 inches annually, so supplies for natural groundwater recharge are extremely limited. Therefore, IWA and other water agencies in the region mostly rely on the Colorado River to recharge the basin. However, the Colorado River Basin Regional Water Quality Control Board has determined that continued use of Colorado River water to recharge the groundwater is “unsustainable for the long-term”. In addition, the persistent onslaught of droughts in California brought on by climate change has strained the supplies of the Colorado River to a point where the largest reservoirs in the country are at historically low levels. Therefore, the U.S. Bureau of Reclamation has asked the seven states using water from the river to submit plans for reduction in use. The Recycled Water Treatment Project proposes to expand and upgrade Valley Sanitation District’s (VSD, the District) existing Water Reclamation Facility (WRF) to accommodate Title 22 tertiary treatment, which will result in non-potable reuse (irrigation) and potable reuse via recharge of the CVGB with recycled water. This funding request will further the planning effort for the Project by completing the following tasks:

1. Site specific investigations to gather design data.
2. Development and evaluation of Project alternatives.
3. Preparation of preliminary Project cost estimates.
4. Preparation of an engineering report to guide the final design of the Project.
5. Collection of data and gathering of documentation for environmental and cultural resources compliance.
6. Preparing all required technical studies for environmental documentation.
7. Preparing final environmental documents for CEQA and NEPA compliance.

## PROJECT LOCATION

The Project is within VSD’s WRF, which is located at 45500 Van Buren Street, Indio CA 92201. The City of Indio is located approximately 25 miles southeast of the City of Palm Springs in the Coachella Valley Groundwater Basin. Please see the location map in **Figure 1** below.

Figure 1. Project Location Map



## TECHNICAL PROJECT DESCRIPTION

VSD owns and operates the WRF, which provides wastewater treatment and collection services and receives its water supplies directly from users within its service territory. Please see **Figure 2** showing the WRF, which is also the Project site. The majority of VSD's users receive their water supplies from IWA, who obtains its water supply solely from groundwater. The East Valley Reclamation Authority (EVRA) was created in 2013 under a joint power agreement between the City of Indio through IWA and VSD to plan, implement and operate a recycled water program. In its 2015 Water Reclamation Facility Master Plan, VSD developed a preliminary study on recycled water expansion opportunities that identified a three-phase approach as described below.

As detailed in the 2015 Water Reclamation Facility Master Plan (WRFMP), the Project is separated into three phases which are detailed as Phase 2B, Phase 2C, and Phase 3. For simplicity, Phases 2B, 2C and Phase 3 are referred to as Phase 1, 2, and 3, respectively.

Phase 1 (formerly Phase 2B) is currently being implemented by VSD and is not part of this funding request. This involves various upgrades to the WRF to allow for Phase 2 and 3 to commence.

Phase 2 (formerly Phase 2C) involves the following components:

- Decommission Pond 2
- Build sludge drying bed extension.



- Install digester gas holding facility.
- Implement cogeneration with digester gas.

Design for Phase 3 will commence once Phase 2 is nearing completion. The following objectives will be achieved once construction of Phase 3 is completed:

- Expand water treatment capacity increase to 10.0 MGD.
- Install two additional aeration basins.
- Install additional belt press.
- Implement tertiary treatment (Title 22) to produce 10.0 MGD of Title 22 water for landscaping and irrigation.
- Install of additional filtration, disinfection, equalization, storage, and pumping capacity
- Install one 1 MGD equalization basin downstream of secondary clarifiers to serve as a wet well for the filter influent transfer pumps to the cloth media filters.
- Three 16-disks units and chlorine contact tank
- 12 MGD reservoir and Title 22 pump station



Phase 2 and 3, which is the Project in this funding request will build upon Phase 1 (currently in Process) to expand and upgrade the WRF to accommodate Title 22 tertiary treatment, which will result in non-potable reuse (irrigation) and potable reuse via recharge of the CVGB with recycled water.

VSD is seeking funding under Funding Group I to complete the following tasks:

1. Site specific investigations to gather design data.
2. Development and evaluation of Project alternatives.
3. Preparation of preliminary Project cost estimates.



4. Preparation of an engineering report to guide the final design of the Project.
5. Collection of data and gathering of documentation for environmental and cultural resources compliance.
6. Preparing all required technical studies for environmental documentation.
7. Preparing final environmental documents for CEQA and NEPA compliance.

VSD is an eligible applicant as it is a local authority that provides wastewater services to its residents. The Project fits into Funding Group I as the Project has an anticipated total cost of less than \$500,000,000.

### Evaluation Criterion 1: Project Planning and Analysis (15 points)

#### Subcriterion No.1a- Water Recycling Needs and Opportunities

*Points will be awarded based on the extent to which the proposal demonstrates that the planning activities will explore opportunities for water reclamation and reuse in the area.*

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

IWA is the potable service provider to approximately 79,000 people in the City of Indio, with nearly 24,000 connections. The potable water uses include residential, commercial, industrial and irrigation and the demand amounted to approximately 20,000 acre-feet (AF) in 2020. The agency relies exclusively on groundwater from the Coachella Valley Groundwater Basin – Indio Subbasin. The CVGB has historically been in overdraft condition since the Indio Subbasin that IWA extracts its water from is unadjudicated and the extraction rate outpaces the natural recharge rate. The CVGB is designated as a High Priority Basin in California.

Precipitation in this arid region of Southern California averages only 3.1 inches annually, so supplies for natural groundwater recharge are extremely limited. Therefore, IWA and other water agencies in the region mostly rely on the Colorado River to recharge the basin. However, the extreme impacts of climate change on water availability have become clear in recent years. All scientific research, as well as actual current drought patterns, indicate the frequency, severity and duration of droughts are increasing. Climate change is resulting in very unpredictable weather patterns and hotter and drier summers, which is making the Southwestern United States water resources ever more vulnerable and unreliable. As a result, federal, state and local water planning and operating agencies have taken major efforts to shift water dependence from vulnerable sources to more sustainable resources.

The Colorado River is the source of water for 40 million people and millions of acres of farming operations. But the Colorado River has been one of the most susceptible water bodies to climate change and the droughts it has brought on. Consequently, the Colorado River Basin Regional Water Quality Control Board has determined that continued use of Colorado River



water to recharge the groundwater is “unsustainable for the long-term”. In addition, the persistent onslaught of droughts in California brought on by climate change has strained the supplies of the Colorado River to a point where the largest reservoirs in the country are at historically low levels. Therefore, the U.S. Bureau of Reclamation has asked the seven states using water from the river to submit plans for reduction in use.

To combat the effects of climate change and build resiliency to droughts, utility agencies in the Southwest must develop alternative sources of water that are reliable, sustainable, and not impacted by climate change such as recycled and desalinated water. The Project works toward this objective by taking wastewater that would otherwise be disposed of and turns it into water of quality that is suitable for groundwater recharge and irrigation.

In addition, Colorado River water is high in salt and nutrients. Recharging the CVGB with Colorado River water results in water that is high in salt and nutrients when it is pumped from the groundwater wells in the area, which requires additional treatment.

*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).*

As stated in the Technical Project Description section above, the Project scope in this funding request includes development of alternatives. More specifically, the feasibility of various alternative will be assessed for using recycled water including irrigation of potentially four golf courses in the City of Indio and recharge of the CVGB. The potential environmental impacts of the preferred alternatives will be analyzed, and mitigations devised if necessary. In addition, specific design parameters for the expansion of the existing WRF including capacity needed for additional future recycled water needs will be evaluated.

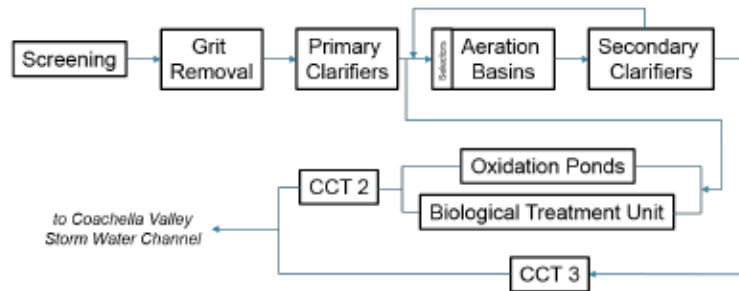
*4. Describe the source water that will be considered for the project, including location, capacities, existing flows, treatment processes, and quantities of impaired water available to meet the new reclaimed, recycled, or desalinated water demands.*

The wastewater collection system owned and operated by VSD conveys wastewater via approximately 254 miles of mains and 4 pump stations to the WRF. Currently, the system collects and treats an average of 6 MGD of wastewater at the WRF located adjacent to the Coachella Valley Stormwater Channel (CVSC). The first treatment that the influent undergoes at the WRF is initial screening, grit removal, and is then diverted to the primary clarifiers where liquid waste is delivered to aeration basins, oxidation ponds, or the biological treatment unit depending on its level of contamination after the initial treatment process. The solid waste collected from screening and grit removal is diverted to digesters where it is processed and ultimately hauled away by trucks. The liquid waste from the aeration basin is then processed by a secondary clarifier and sent to the chlorine contact tank 3 (CCT3) for final treatment. From the oxidation ponds and biological treatment unit, the wastewater is sent to the chlorine



contact tank 2 (CCT2) for final treatment. From CCT2 and CCT3, the water is treated to the required levels to be discharged into the CVSC. **Figure 3** below demonstrates the wastewater treatment flow chart. The CVSC then carries the treated wastewater 15 miles south to the Salton Sea where it is ultimately deposited.

Figure 3. Wastewater Treatment Flow Chart



### Subcriterion No.1b- Evaluation of Project Alternatives (15 points)

*Points will be awarded based on the extent to which the proposal demonstrates that the planning activities will develop and evaluate 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?*

Considering the Project will provide upgrades to the WRF by expanding the treatment capacity, implementing tertiary treatment, and groundwater recharge, the only alternatives considered are the Project vs. No-Project scenarios. In addition, a [2018 Recycled Water Program Development Feasibility Study](#) considered alternatives that are related to the use of effluent produced by VSD's WRF. The planning that will be conducted using funds in this grant application will expand on the alternative analysis.

Accordingly, the main design objective of the Recycled Water Treatment Project is to increase the capacity of the existing WRF and to implement tertiary level treatment capacity to be in compliance with Title 22 standards. This will produce recycled water of sufficient quality that is suitable for irrigation and groundwater recharge.

In general terms, Phases 2 and 3 (the Project in this funding request) will consist of the elements described in the Technical section. Funds in this request will be used to further develop and refine the Project scope. The technical design criteria that will be evaluated for the Project includes pump capacities, disinfection, storage, injection, and distribution. Specific treatment technologies will also be recommended.

Given the impacts of climate change evidenced by the state of droughts in the Southwest, recycled water was determined to be one of the most sustainable alternatives to shift away from the use of vulnerable sources such as the Colorado River. Therefore, the Project's focus is the production of recycled water.





*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 two reports that are relevant to the Project. The first is the [2015 Water Reclamation Facility Master Plan](#), which provides the phasing process for expanding the WRF's treatment capacity. This document completed an assessment of the WRF unit process, prioritized unit process expansion or improvement, selected and sized future treatment unit processes based on projected loads, and recommend the design criteria and phasing of treatment process expansion and improvements.

The second report is the 2018 Recycled Water Program Development Feasibility Study, which provides details regarding the production of tertiary treated water to be used for groundwater recharge of the CVGB and for irrigation.

The planning activities in this funding request will specifically define the technical design parameters, detail the exact scope of the Project, and further explore the reuse alternatives of the recycled water. The planning will also look into the future to verify projected availability of wastewater for recycling and the demand for the recycled water in VSD's service area and beyond. In addition, the activities will analyze and document environmental impacts of the selected project.

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

1. The selected project consists of expansion of the existing VSD WRF and implementation of tertiary wastewater treatment for recycled water production. The components of the Project are described in general terms in subsection 1.b.1 above. By using recycled water for irrigation and groundwater Shifting away from water sources that are vulnerable to climate change and the resulting droughts to a more sustainable resource.
2. Creating more operational flexibility for the IWA through the availability of recycled water to help the CVGB recover from its current state of overdraft and increase its reliability as a sustainable water resource. This results in higher resiliency in the face of recurring droughts.
3. The recycled water is of higher quality than Colorado River water, which is high in salt and nutrients. This reduces the amount of treatment needed for water pumped from the basin to turn it into potable water.
4. Adequate recharge of the CVGB helps the basin avoid land subsidence.

recharge, the Project has the following benefits:

Preliminary analyses of the Project were conducted as described in subsection 1.b.2 above. The anticipated total cost for the construction project is \$ 90,897,475.

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



VSD is ready to issue Request for Proposal upon notice of award of this grant to start the planning and pre-design process. The table below shows the Project’s detailed schedule.

Table 1. Project Schedule

Project Component	Estimated Completion Date
<b>Environmental Process</b>	Start upon notice of award
Cultural and Historical Assessment Report	2/2025
Biological Assessment Report	2/2025
Final Impact Statement (IS)/Mitigation Negative Declaration (MND)	2/2025
Final Notice of Determination (NOD)	3/2025
<b>Design Plans and Construction Documents</b>	
Preliminary Design Documents – Phase 2	10/2024
Preliminary Design Documents – Phase 3	10/2025
Preliminary Design Documents – Groundwater Recharge	10/2025

Evaluation Criterion 2- Stretching Water Supplies (20 points)

Points will be awarded based on the extent to which the project being investigated will help to secure and stretch water supplies and contribute to a more sustainable water supply.

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

The Recycled Water Treatment Project will produce recycled water to be used for irrigation and groundwater recharge. This production of recycled water will be offset in the same amount of imported water from the Colorado River and underground water pumping from the CVGB (proportional to the amount used for each purpose). Therefore, the Project has a direct and equal reduction in the amount of water supplies from non-recycled water sources. As demands for potable water increase in the future while production of recycled water also increases with the implementation of the Project, the need for additional non-recycled water supplies and infrastructure, such as digging new wells, is reduced, or eliminated.

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.

IWA is the primary water supply provider within VSD’s service area to approximately 79,000 people within its 38 square-mile service area. The only potable water supply is local groundwater from the CVGB, which is replenished with imported water from the Colorado River. The CVGB is an irreplaceable water resource that can store up to 39 million acre-feet per year (AFY) and provides drinking water supplies to a population of 320,000.

The Project will enable VSD to produce recycled water for utilization by IWA to distribute to its customers for non-potable uses (irrigation) and to inject the water into the CVGB. With



implementation of Phases 2 and 3 of the Project, the capacity of the WRF will be expanded to 10.0 MGD and with an estimated recycled water production of 12,890 AFY. IWA supplied a total of 19,880 AF of water to its customers in 2020.

The Colorado River, which originates in the Colorado Rocky Mountains, has been a consistent water source that seven Western US states and Mexico rely on. However, there has been a prolonged 21 year warming and drying trend that is pushing one of the nation's largest water supplies to record lows. In response to the historic lows, the Federal Government has declared a Tier 1 water shortage in the Colorado River for the first time ever in August 2021. This declaration has reduced water allocations from the River for Arizona, Nevada, and Mexico.

This production of recycled water will be offset in the same amount in imported water from the Colorado River and underground water pumping from the CVGB (proportional to the amount used for each purpose). Recycled water is a sustainable and reliable local water resource that converts water that would otherwise be disposed of into valuable, usable water. This translates into a substantial reduction in the amount of imported Colorado River water and pumped groundwater, thereby alleviating pressure on the vulnerable Colorado River and the over drafted CVGB.

*3. Describe the potential for the project to make water available to address a specific concern. Explain the specific concern and its severity. Also explain the role of the project being investigated in addressing that concern and the extent to which the project will address it. Specific concerns may include, but are not limited to:*

- *Water supply shortages*
- *Water supply reliability*
- *Groundwater depletion*
- *Water quality issues*
- *Natural disasters that may impact water supply infrastructure.*
- *Heightened competition for water supplies*
- *Availability of alternative supplies*
- *Increasing cost of water supplies*

AS mentioned above, IWA exclusively relies on underground water pumped from the CVGB, which has historically been in a state of overdraft and is designated as a High Priority Basin in California. Precipitation in this arid region of Southern California averages only 3.1 inches annually, so supplies for natural groundwater recharge are extremely limited. Therefore, IWA and other water agencies in the region mostly rely on Colorado River to recharge the basin. However, supplies from the Colorado River are currently unprecedentedly scarce, which means that they are not a long-term sustainable source of water. With the Colorado River and the CVGB being relied on by many people and acres of farmland and yet both being vulnerable and unsustainable, water agencies must find more reliable alternatives. The Project creates a locally produced reliable water resource that replaces water from vulnerable sources, which addresses the following:



- Water supply shortages: long, intense, and severe droughts are an evident result of climate change. As has been demonstrated in the last 10 to 15 years, droughts and water shortages are becoming the norm in the Southwestern U.S. Therefore, development of alternative sources of water that are reliable and drought resistant must be taken on by water agencies. The Project works towards this goal.
- Water supply reliability: locally produced recycled water is a reliable water resource since it is made from already available wastewater.
- Groundwater depletion: the Project offsets the use of groundwater by shifting to recycled water for irrigation and contributes to the recharge of the CVGB.
- Water quality issues: Colorado River water is high in salt and nutrients and is not ideal for groundwater recharge. Recycled water is of higher quality.
- Heightened competition for water supplies: The seven Southwestern U.S. states that use Colorado River water are currently in disagreement over the amount of water each state needs to reduce as requested by Reclamation. The Project is exactly what the region needs to implement to reduce reliance on the Colorado River and avoid competition and potential litigation among states and water agencies.  
In addition, there are current local legal conflicts over water. The implementation of the Project that provide an additional water supply to benefit the region.
- Availability of alternative supplies: the Project constitutes an alternative water supply.
- Increasing cost of water supplies: with water becoming more scarce from vulnerable sources such as the Colorado River, already expensive water is only anticipated to become more costly. The Project will ultimately increase the available water supply by up to 12,890 AFY of locally produced and affordable water.

*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 creates a locally produced water resource that is made from wastewater that would otherwise be disposed of. The availability of wastewater is minimally impacted by drought recurrence (volumes may be less in drought years in response to water conservation efforts but should not substantially affect the amount available for recycling). Having a steady, reliable, and relatively fixed quantity of water every year regardless of drought conditions allows for great flexibility and predictability in allocating water resources and avoiding drastic and sudden cuts that affect populations' health, well-being, and livelihoods.

#### **Evaluation Criterion- Environment and Water Quality (20 points)**

*Points will be awarded based on the extent to which the project being investigated will improve surface, groundwater, or effluent discharge quality; will restore or enhance habitat for non-listed species; or will provide water or habitat for federally listed threatened or endangered species. Indirect benefits of the project will also be considered under this criterion.*



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

The recycled water produced by the Project will come from wastewater from customers in VSD's service area. The effluent water quality produced by the Project will be at levels beyond what is necessary to meet State discharge requirements. Therefore, treated wastewater that would otherwise be discharged into natural water bodies will be further treated and used for irrigation and groundwater recharge. The secondary treatment water that will be eliminated from being discharged into water bodies has nutrients that contribute to algae growth and oxygen depletion that greatly impact water life. Any reduction in unnatural wastewater being introduced into natural ecosystems will contribute to healthier habitats that support thriving aquatic life.

In addition, Colorado River water is high in salt and nutrients and has resulted in the California Regional Water Quality Control Board- Colorado River Basin Region having to develop a Groundwater Basin Salt and Nutrient Management Plan. Groundwater recharge with new recycled water supplies is one of the priority solutions recommended in this Plan as groundwater recharge with water from the Colorado River is resulting in high salinity and nutrient concentrations for the basin. Production from wells throughout the basin do not meet ideal drinking water concentrations for salt and nutrients and therefore requires additional treatment which is costly and inefficient.

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

Please see subsection 1 above.

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

Effluent water from the WRF is discharged into the Coachella Valley Stormwater Channel. The Project will take wastewater from the facility and treat it to recycled water standards to use for irrigation and groundwater recharge instead of discharging additional effluent into the channel.

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

As detailed above, the Project creates a locally produced alternative source of water that that is sustainable during drought events, and offsets the use of Colorado River water. Lake Powell and Lake Meade on the Colorado River, the two biggest water reservoirs in the U.S. are at historically low water levels. Therefore, any drop potentially saved translates into a lifesaving resource for the ecology in these two water bodies

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

The Colorado River and the SWP are the primary sources of water supply for the District's region and are home to species of flora and fauna listed as state or federally endangered. These endangered species will benefit from the additional water supply that will remain at source by reducing the use of these supplies for groundwater recharge.



The water from the SWP originates in the Delta, which is a complex network of channels and reclaimed islands at the confluence of the Sacramento and San Joaquin Rivers and home to various species listed under the Federal and State Endangered Species Acts. Some of the endangered species in the Delta include the Delta Smelt, Chinook Salmon and Sacramento Splittail. The Project contributes to likelihood of reducing the amount of water diverted from the Delta.

The impact to the environment due to recent drought conditions has been tremendous. According to the Pacific Institute, many of the State's environmental flows went unmet during the drought period, affecting aquatic ecosystems and decreased protections for endangered species. The drought has caused losses or destruction of fish and wildlife habitat, loss of wetlands, more wildfires and lower water levels in reservoirs, lakes, and ponds. Dry creeks and rivers led 18 fish species to diminish to near extinction.

Additionally, the Colorado River is relied upon by seven US states or approximately 40 million people for water. The high demand and impacts on water levels from climate changed induced droughts, has caused the Colorado River to be classified as the [most endangered river](#) in the county by the organization, American Rivers. Furthermore, the Colorado River runs through five US states and Baja California of varying habitats, making it home to several [threatened and endangered species](#). These species include, but are not limited to, the Whooping Crane, Interior Least Turn, Pallid Sturgeon, Piping Plover, Razorback Sucker, Colorado Pikeminnow, Bonytail Chub, and Humpback Chub. The Project will reduce diversions from this heavily relied upon water source by creating a new source of water that can be used for recharging the CVGB.

Given the state of the water levels in the Colorado River and Delta, any increment of water saved, no matter how small, translates into a lifesaving resource for the ecology that relies upon these waterbodies.

#### Evaluation Criterion 4- Department of the Interior Priorities (15 points)

*Up to 15 points may be awarded based on the extent that the project demonstrates support for the Biden-Harris Administration's priorities, including E.O. 14008: Tackling the Climate Crisis at Home and Abroad, E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, and the President's memorandum, Tribal Consultation and Strengthening Nation-to-Nation Relationships. Points will be allocated based on the degree to which the project supports the priorities listed, and whether the connection to the priority(ies) is well supported in the application. Without repeating benefits already described in previous criteria, describe in detail how the proposed project supports a priority(ies) below.*

*Climate Change: Points will be awarded based on the extent the project will reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity. Address the following as relevant to*



*your project.*

*E.O. 14008: Tackling the Climate Crisis at Home and Abroad, focuses on increasing resilience to climate change and supporting climate- resilient development. For additional information on the impacts of climate change throughout the western United States, see: [www.usbr.gov/climate/secure/docs/2021secure/2021SECUREREport.pdf](http://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREREport.pdf). Please describe how the project will address climate change, including the following:*

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

Climate change has become evident in California with hotter summers and more frequent and intense droughts with longer durations. In their various planning efforts, VSD and IWA thoroughly consider the effects of climate change and develops policies, strategies, and specific projects to build resiliency to climate change. The Project directly serves VSD's and IWA's robust strategy to adapt to climate change and achieves resiliency by shifting reliance on water supplies from the climate change-vulnerable Colorado River, and instead using a local resource that is shielded from the effects of climate change.

Severe drought conditions brought on by climate change can also negatively affect air quality according to the Centers for Disease Control and Prevention. Droughts create an increased risk for wildfires and dust storms. Particulate matter suspended in the air from these events can irritate the bronchial passages and lungs. Some drought-related health effects are experienced in the short-term and can be directly observed and measured. Additionally, the slow rise of drought can also result in longer term, indirect health implications. By reducing dependence on imported water and making those supplies more available to mitigate drought impacts (firefighting, irrigation, etc.), the Project can help reduce air pollution and reduce resulting detrimental effects on air quality. The proposed Project will provide a sustainable and drought resistant solution to deal with the current climate change issues.

- 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?*

The Project directly shifts away from using the climate change-impacted Colorado River to recycled water, a resource that has steady and known availability, which makes it sustainable for many years into the future.

*Disadvantaged or Underserved Communities: Points will be awarded based on the extent to which the Project serves economically disadvantaged or underserved communities in rural or urban areas.*

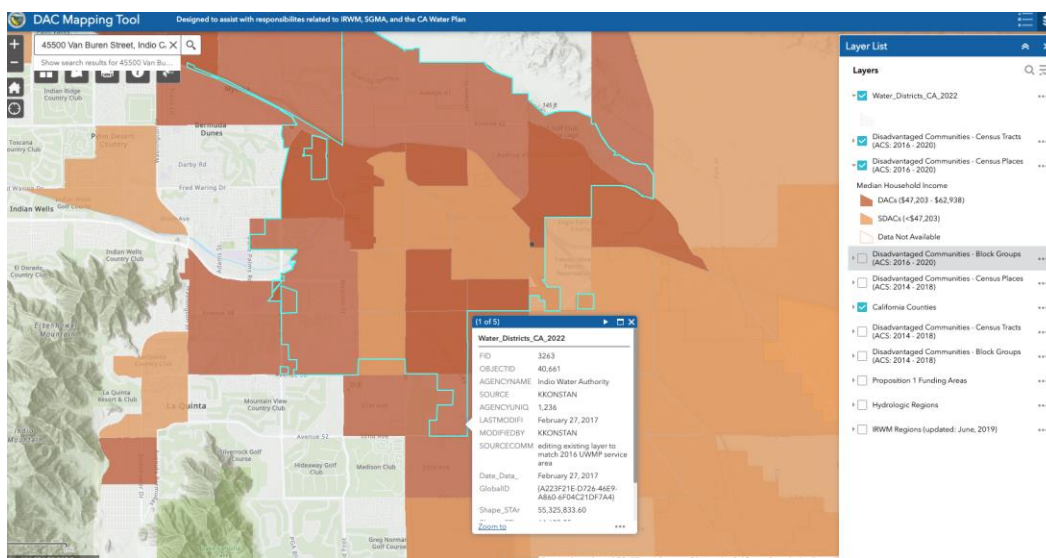
- Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.*

The Project will provide direct and meaningful benefit to underserved communities in its service area, particularly in the City of Indio. The State of California defines Disadvantaged Communities (DAC) as census geographies with an annual median household income (MHI) that is less than 80 percent of the Statewide annual MHI. The other group that is defined is Severely Disadvantaged Communities (SDAC), which are census geographies with an annual MHI that is less than 60 percent of the Statewide annual MHI. The current California statewide MHI is \$84,097.

The map shown in **Figure 4** below is taken from a DAC mapping tool developed by the California Department of Water Resources. The map shows that the entire service area for IWA is DAC / SDAC.

The Project creates a locally produced water resource that is made from wastewater that would otherwise be disposed of. Having a steady, reliable, and relatively fixed quantity of water every year regardless of drought conditions allows for great flexibility and predictability in allocating water resources and avoiding drastic and sudden cuts that affect populations' health, well-being, and livelihoods.

**Figure 4. Disadvantaged Communities Map**



- *Please describe in detail how the community is disadvantaged based on a combination of variables that may include the following:*
  - *Low income, high and/or persistent poverty*
  - *High unemployment and underemployment*
  - *Racial and ethnic residential segregation, particularly where the segregation stems from discrimination by government entities*
  - *Linguistic isolation*
  - *High housing cost burden and substandard housing*
  - *Distressed neighborhoods*





- *High transportation cost burden and/or low transportation access*
- *Disproportionate environmental stressor burden and high cumulative impacts*
- *Limited water and sanitation access and affordability*
- *Disproportionate impacts from climate change*
- *High energy cost burden and low energy access*
- *Jobs lost through energy transition*
  - *Access to healthcare*

The District is an economically disadvantaged community, with an average MHI below 80% of the state average. Please see description and map above.

Additionally, the City of Indio (District service area) suffers from disproportionate exposure to environmental stressors. According to the California Office of Environmental Health Hazard Assessment (OEHHA)'s online tool, CalEnviroScreen 4.0, ozone concentrations in the service area are higher than 89% of the rest of the State of California. VSD's service area also suffers from impaired waters, with 77% more impaired waters than the rest of the State.

Furthermore, the City of Indio suffers from extreme levels of unemployment. California's unemployment rate as of December 2022 is 4.1%. Meanwhile, the majority of census tracts in VSD's service area are in the 90<sup>th</sup> percentile (90% higher than the rest of the State) with unemployment rates as high as 17%.

- *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 described in the section above, VSD's service area is an economically disadvantaged community that is also disproportionately exposed to impaired waters and high concentrations of ozone compared to other census tracts throughout the State.

The Project will reduce VSD's reliance on expensive and imported water supplies from the SWP and Colorado River for groundwater recharge. The reduced reliance will allow VSD to keep sewer user rates down while continuing to provide high quality wastewater services.

*Tribal Benefits: Points will be awarded based on the extent to which the Project will honor the Federal government's commitments to Tribal Nations.*

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

There are multiple Tribes within Riverside County, who rely on CVGB. As an example, Cabazon Band of Mission Indians is the tribe with one of the golf courses. The water produced through the implementation of the Project will reduce the imported water and its impacts on the region including the salt and nutrient levels, supplement the groundwater



supplies from the CVGB, which provide water resources to tribes and rural communities. Creating more operational flexibility for the SWP and CVGB systems will indirectly benefit tribes and rural communities.

By reducing imported water supply from the Colorado River, the Project directly supports tribal communities that depend on this water body.

- *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?*

As mentioned above, not only IWA but the region has relied on Colorado River water exchanged for SWP water to replenish the CVGB. These sources of water have seen legal battles, at times contentious, over this precious resource. SWP water supplies are threatened by prolonged drought periods and other legal and climatic restrictions which makes the region susceptible to the uncertainty of supply and delivery.

Even though there is a set allocation of SWP water through 2035, if that volume of water is not available, they will be delivered a lesser amount and will have to pause groundwater recharge, reducing water service reliability. Implementing the Project will help avoid having to navigate through the legalities of obtaining water from the SWP or Colorado River, potentially increasing the chances for tensions and conflict over water.

Additionally, currently there are potential legal constraints with the Agua Caliente Band of Cahuilla Indians and other water agencies over sustainable groundwater management. If SWP water becomes insubstantial to exchange for Colorado River water for groundwater recharge, conflict with Tribes is highly likely.

By increasing water supplies through new local resources, VSD will be able to provide a new water supply previously wasted to meet demands and for groundwater recharge. This new water supply will be imperative to well being of all residents but specifically the tribal communities that rely on them for their livelihood and economic growth. The golf course in the Cabazon Band of Mission Indians is an example of how one of the tribes in the VSD's service area will directly benefit from the proposed project.

**Evaluation Criterion 5- Watershed Perspective and Stakeholder Involvement (15 points)**  
*Points will be awarded based on the extent to which the project being investigated promotes or applies a watershed perspective by implementing an integrated resources management approach, implementing a regional planning effort, forming collaborative partnerships with other entities, or conducting public outreach.*

*A watershed perspective generally means an approach to planning directed at meeting the need of geographically dispersed localities across a region or a watershed that will take advantage of economies of scale and foster opportunities for partnerships. This approach also takes into account the interconnectedness of water and land resources, encourages the active*



*participation of all interested groups, and uses the full spectrum of technical disciplines in activities and decision making.*

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

VSD and IWA have long cooperated on water and wastewater activities in their service areas. In their most effective effort yet, the agencies formally teamed up by creating the East Valley Reclamation Authority in 2013 under a joint power agreement between them. The EVRA is specifically tasked with implementing and operating a recycled water program.

In addition, IWA and VSD are part of the Coachella Valley Water Management Group, which includes four other water agencies. The group developed the [2018 Coachella Valley Integrated Regional Water Management Plan & Stormwater Resource Plan](#). Recycled water is discussed in detail throughout the document and the Project specifically meets the following goals and objectives of the plan:

**Goals:**

1. Optimize water supply reliability.
2. Protect or improve water quality.
3. Provide stewardship of water-related natural resources.
4. Coordinate and integrate water resource management.
5. Ensure cultural, social, and economic sustainability of water in the Coachella Valley

**Objectives:**

1. Provide reliable water supply for residential and commercial, agricultural community, and tourism needs.
2. Manage groundwater levels to reduce overdraft, manage perched water, and minimize subsidence.
3. Maximize local supply opportunities, including water conservation, water recycling and source substitution, and capture and infiltration of runoff.
4. Protect groundwater quality and improve, where feasible.

Also, California Governor Gavin Newsome issued Executive Order Number N-10-19, which is an initiative to develop resiliency to droughts and better manage the state's water resources. To implement the Governor's Executive Order, the state issued the California Water Resilience Portfolio in July 2020. The Portfolio establishes policies and objectives to prepare the state for a water sustainable future. Some of the objectives of the Portfolio are to maintain and diversify water supplies, protect and enhance natural ecosystems and be prepared. The Project contributes to all three of these state's objectives, thus furthering this larger state initiative.

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



Yes. The Project will ultimately result in the creation of 12,890 AFY of recycled water for the entire service area of IWA.

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

As mentioned above, IWA and VSD are part of the Coachella Valley Water Management Group, which encompasses 1,420 square miles. Planning for the region is carried out collaboratively by the member agencies. The agencies are continually planning to optimize the region's water resources with input from all stakeholders. For example, the development of the 2018 Coachella Valley Integrated Regional Water Management Plan / Stormwater Resource Plan was done with extensive stakeholder input ranging from federal and state agencies to local residents and businesses. Similarly, funds requested in this grant application will be used to further develop the Project through an extensive stakeholder and community engagement process.

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

IWA and VSD have been engaged with customers for some time to explain and promote the use of recycled water. As part of the planning and construction of Phase 1, IWA and VSD worked closely with the community on information about the project. The community outreach will continue for the Project with a robust program containing the following elements:

- A. Develop a project website with a project factsheet and updates of the Project progress and schedule. The website will allow members of the community to provide input at any time.
- B. Hold two community workshops to educate people about recycled water in general and the Project specifically and receive input from the participants.
- C. Post project information and updates on various social media platforms.

## PROJECT BUDGET

### Funding Plan

The District will utilize funding from its sewer service fees to provide the required 50% funding match.

### Budget Proposal

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

Funding Sources	Amount
<b>Non-Federal Entities</b>	
1. Valley Sanitary District	\$280,439
<b>Non-Federal Subtotal</b>	\$280,439
<b>Requested Reclamation Funding</b>	\$280,439



Table 3. Total Project Cost

Source	Amount
Costs to be reimbursed with the requested Federal Funding	\$280,439
Costs to be paid by the applicant	\$280,439
Value of third-party contributions	\$0
<b>Total Project Cost</b>	<b>\$560,878</b>

### Budget Narrative

Please see the attached SF-424A form. All Project costs are contractual costs associated with the preparation of environmental and design documents.

### Letters of Funding Commitment

There are no third-party contributors, therefore this is not applicable.

## REQUIRED PERMITS OR APPROVALS

No permits will be required for the planning and preliminary design efforts for the proposed Project. However, the following permits are anticipated for Project construction:

- State Water Resources Control Board- Division of Water Rights
- State Water Resources Control Board- Division of Drinking Water- Change Petition
- Colorado River Regional Water Quality Control Board

## OFFICIAL RESOLUTION

The District will submit the signed official resolution after its next board meeting.

## OVERLAP OR DUPLICATION OF EFFORT STATEMENT

The Valley Sanitary District certifies that there is no overlap between the proposed Project or any other active or anticipated projects in terms of activities, costs, or commitment of key personnel. Additionally, Valley Sanitary District certifies that this proposal does not duplicate any proposal that has been submitted for funding consideration to any other potential funding sources.

## UNIFORM AUDIT REPORTING STATEMENT

The Valley Sanitary District acknowledges the requirement for a Single Audit report and has/will continue to comply with this requirement.

## CONFLICT OF INTEREST DISCLOSURE STATEMENT

No actual or potential conflicts of interest associated with the implementation of the Project have been identified prior to or during the time of submission of this proposal.