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Southern San Joaquin Municipal Utility District

Regan Groundwater Recharge Facility for Regional Drought Resiliency

WaterSMART Drought Response Program (FY 2022):

Drought Resiliency Projects

Notice of Funding Opportunity No. R22AS00020

Project Location

Southern San Joaquin Valley, Kern County, CA

Applicant

Southern San Joaquin Municipal Utility District

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October 5, 2021

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1.1 Executive Summary

Project Information	
Date	October 5, 2021
Project Name	Regan Groundwater Recharge Facility for Regional Drought Resiliency
Expected Completion	33 to 36 months (March 2025)
Construction Start	November 2022 with a duration of no more than 25 months
Near a Federal Facility	Yes, adjacent to CVP's Friant Kern Canal
Applicant Information	
Name	Roland Gross
Title	General Manager, Southern San Joaquin Municipal Utility District
City, County, State	Delano, Kern, California
Category	Category A – Water District

The Southern San Joaquin Municipal Utility District (SSJMUD, District), located in Kern County, proposes to utilize their resources in a cost shared project with the US Bureau of Reclamation (Reclamation, USBR) to construct 75 acres of recharge ponds as spreading facilities and improvements to existing conveyance within the District boundaries, which include upgrading and replacing SSJMUD's existing 4-8 and 4-9 Laterals with pressurized pipelines. The Regan Groundwater Recharge Facility for Regional Drought Resiliency (Project) is a Task A project – increasing the reliability of the District's water supplies through infrastructure improvements. The Project solves several water management issues identified by the District: the lack of in-district groundwater recharge capacity to provide the operational flexibility to absorb available surface water supplies for recharge in wet years, and the lack of effective conveyance mechanism for subsequent return of water supplies for use in dry years or drought conditions. As a member of the Poso Creek Integrated Regional Water Management (IRWM) Group, SSJMUD's Project will increase absorptive capacity in the region, which helps build long-term resiliency to drought by recharging an additional average annual amount of approximately 6,120 AFY of surface supply and will add recovery capacity for later delivery of recharged water for irrigation. The Project is supported by the Poso Creek Region's Drought Contingency Plan attached in Appendix A. The Project is to provide the following annual benefits, in acre-feet-per-year:

Table 1-1. SSJMUD Annual Water Benefits

	Estimated Annual Benefits (AF)	10-year Benefits (AF)
Est. Annual Water Recharged	6,120 AF	61,200 AF
Est. Annual Demand Reduction/ Water Better Managed	882 AF	8,820 AF
Total Water Benefits	7,002 AF	70,020 AF

It is anticipated that Facilities can be completed within 36 months from the time grant funding is secured. The Project would start April 2022 with all the components of construction and implementation being complemented by March 2025. The Project site parcel has been purchased and still requires final design and bidding (bidding for construction expected to occur in mid 2022). Anticipated construction is expected to begin after July 1, 2022 for a duration of no more than 25 months for completion by November 2024.

1.1.1 Background Information

The Southern San Joaquin Municipal Utility District (District) was organized in 1935, in accordance with the provisions of California laws pertaining to the formation and operation of municipal utility districts. The District was formed for the purpose of entering into a contract to purchase and distribute water from the Central Valley Project (CVP). The District's size is approximately 64,711 acres. As of 2019 District crop survey, about 90% of the District's irrigated lands are planted to permanent crops, primarily almonds (34%), grapes (34%), pistachios (10%), and oranges (10%). The following section provides background regarding the District and information on general water management and water use considerations to provide context for the Project need.

1.1.1.1 Primary Water Supplies and Sources

The District's primary source of irrigation water is their surface supply from the CVP. SSJMUD's system consists of 158 miles of pipelines. The District presently has 539 active deliveries and approximately 30 presently inactive. All deliveries are metered. Landowners in the District utilize wells to extract underlying groundwater resources to meet water demands when surface water supplies are inadequate. The District is in the process of developing its own banking facilities to recharge groundwater on behalf of its landowners. Landowners in the District continue to own and operate groundwater production facilities aside from the District; however, pumping from privately owned wells is not reported to the District unless the water is pumped into the District's system for conveyance and delivery. The cities of Delano and McFarland are located entirely within the District's service area boundary. The District does not make any direct deliveries to either community and is therefore not an urban water provider. The cities, however, do rely on the local groundwater supply, which is naturally recharged and recharged through local and regional groundwater banking activities. The District provides a small amount of recharge to the groundwater reservoir supply through on-farm, in-lieu recharge efforts, and recharge efforts through District reservoirs. A portion of this recharge accrues to the benefit of the urbanized areas.

SSJMUD has based its water distribution system on conjunctive management of its surface water and groundwater resources, to ensure long-term sustainability for water users. In addition, the District coordinates its activities with neighboring districts and continually reviews and modifies its water supply management practices to preserve and enhance the groundwater resources for the benefit of its landowners.

Presently, SSJMUD has a permanent contract for CVP Class 1 and Class 2 supplies in the combined amount of 142,000 AFY via the Friant Kern Canal (FKC). However, due to climate change and

regulatory requirements the District does not always receive water at times when it is needed the most to meet crop water requirements through irrigation. In recent drought, the District received zero percent allocations of CVP supply, thereby showing a decrease in the reliability of surface water supplies. In order to meet landowner demands and combat decline groundwater elevation that result from increased groundwater pumping during drought period, an increase in recharge capacity is needed. As a result, implementation of additional groundwater recharge facilities helps SSJMUD provide a reliable water supply for the District and landowners to pump without depleting the aquifer.

Water Use: The crop irrigation water requirement is estimated in SSJMUD's 2020 Agricultural Water Management Plan (AWMP) update by multiplying crop-specific gross crop water usage (AF/acre) by the number of acres for each respective crop. With this method, it was estimated that approximately 126,292 AFY is needed to meet crop water demand. Presently, there are no apparent long-term trends toward increasing irrigated acreage within the District.

1.2 Project Location

The Project is located in Kern County, California, approximately 75 miles from Fresno and 30 miles northwest of Bakersfield. The Project latitude is {35°42' 05"N} and longitude is {119°14' 43"W}. The recharge site is located at the Regan Garzoli-Peterson Parcel (APN: 06004019). The conveyance component will consist of replacing and upgrading the existing 4-8 and 4-9 Laterals of SSJMUD's Distribution system each consisting of 1.5 miles of pipeline. The 4-9 Lateral is immediately west of the recharge basin site, directly adjacent to the parcel; the 4-8 Lateral is in the right-of-way along Garzoli Ave, east of the recharge basin site. The location of the recharge basin site and proposed conveyance improvement in relation to the District is shown in Figure 1 and Figure 2.

1.3 Technical Project Description

The proposed Project will result in the construction of a 75-acre groundwater recharge facility and the replacement of two existing reinforced concrete pipe and mortar joined pipe laterals in SSJMUD's conveyance system with two approximately 1.5-mile pressurized PVC pipelines. The facilities will be connected to the District's existing conveyance system for delivery of water to and from the spreading facility. Upgrades to the existing laterals will increase conveyance capacity to meet growers demands at the existing turnouts and the additional flow requirements to deliver surplus supplies to the new recharge basin in wet years for later use in periods of drought. The pressurized system will allow for the existing well at the Project site to be used for water recovery to bring the recharge water back into the District's main conveyance system to deliver the recovered water elsewhere within the District. The location of the Project site and proposed conveyance improvements is shown in Figure 2. (Figure included at the end of this section).

The proposed groundwater recharge basin will include earthen exterior levees around the perimeter of the site and interior berms to direct the flow of water onto the site and facilitate even spreading. Interior ditches and channels will also be used to provide energy dissipation throughout the interior of the recharge basin. Earthwork will be designed so that the cut and fill quantities are balanced to minimize the importation or exportation of material. Earthwork will be performed with scrapers and

bulldozers to clear, grub, excavate, and place compacted fill. The lateral improvements will be installed in the existing rights-of-way for the 4-8 and 4-9 Laterals, connecting to existing turnouts, four new turnouts to the recharge basin, and one new connection on the 4-8 Lateral to allow for the existing well to be used for recovery of banked water. A backhoe and an excavator are the possible equipment to be used in exposing the existing laterals for removal and replacement and backfilling after installation of the new PVC laterals.

The total Project cost for installation of the recharge basin and conveyance improvements is approximately $5,699,132 (see Section 2 for budget estimation). This estimation includes grant administration, design, construction, and planning costs as described in the Budget Section. SSJMUD is requesting $2,000,000 from USBR towards this Project, with the remainder ($3,699,132) provided by the District as cost match.

1.4 Performance Measures

All deliveries of water into SSJMUD are measured at connection points using flowmeters, between pipelines and District water conveyance infrastructure. These meters are equipped with totalizers, a flow accumulation measurement device, periodically checked for measurement accuracy as part of the District's routine maintenance program. When properly installed and calibrated, this flowmeter with a totalizer provides an accurate method of measuring both the instantaneous flowrate at any given time and the total volume of water delivered to the District's system during a period of operation (SSJMUD AWMP, 2021).

The turnouts connected to the proposed recharge basin will have flowmeters and totalizers to allow SSJMUD to measure all supplies it delivers through the improved laterals. By measuring the volume of water delivered to each recharge pond, it will determine the total amount of water supply made available to the District's landowners and can report the measured volume that is of benefit. The volume of water retained by SSJMUD will be reflected on the reduced annual groundwater pumping rates. Records of monthly flow rate deliveries and volume deliveries will continue to be monitored and reported. In addition to metering the water delivered to the recharge basin, SSJMUD will also install a flowmeter at the existing well so that it may monitor the recovered groundwater that is pumped into the District's conveyance system for delivery to its landowners.

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? By increasing its ability to recharge groundwater during wet periods, when water is available, the Project will increase drought resilience by increasing groundwater recharge capacity and operational flexibility for the District and the region. SSJMUD has conducted a District-wide feasibility study to identify potential locations for in-district, direct recharge facilities. In addition to the District-wide study, SSJMUD has also conducted site-specific groundwater recharge evaluations to gather field data to confirm the findings of the study. While the District has pilot groundwater

recharge activities, SSJMUD has recently missed opportunities to capitalize on wet period storage of CVP supplies due to the complex changes in timing of available CVP supplies. As part of its efforts to develop its own groundwater recharge capacity, the District is planning to construct a 75-acre of recharge basin at the southwest corner of Garzoli Ave and Peterson Rd (Figure 2), which was shown to be a favorable location for groundwater recharge activities in wet periods for later recovery during drought.

Because the District has direct conveyance connections from the Friant-Kern Canal (FKC) to deliver CVP water to their distribution system, adding direct recharge ponds in District will add absorptive capacity and reduce the reliance on neighboring districts' banking facilities which typically retain a portion of the banked supply. Capacity in these third-party groundwater banks are in high demand during wet periods, and sometimes unavailable due to a priority of use for other CVP contractors. As the District is developing direct recharge and recovery facilities of their own, it must currently involve CVP third parties to recharge and recover water. This is often limited by capacity in the third-party conveyance systems and banking facilities. The third party typically require a portion of the water banked as a water fee to complete the banking agreement, which then reduces the volume of return water available to the District.

SSJMUD's improvements to existing conveyance will also allow the District to deliver water directly to and from the spreading facility for increased conveyance capacity. SSJMUD often has access to surplus CVP flows in the form of uncontrolled releases from Friant Dam as part of the management of water levels for dam safety. The District needs access to direct recharge capacity to capture these wet years flows and further increase its drought resiliency. The Project increases the opportunity to receive flows from releases uncontrolled seasons. These waters would otherwise be lost to the District, as they would continue to flow down the San Joaquin River and to the Sacramento-San Joaquin River Delta. For the purposes of this application, the 'life' of the project is estimated as 30 years for spreading ponds and conveyance pipelines operational life. This timeframe for life cycle analysis has been used in prior grant applications.

Will the project make additional water supplies available? The proposed recharge ponds are anticipated to recharge available CVP water into the District at a rate of 0.75 feet per day on 75 acres (68 acres wetted area) at a frequency of 4 out of 10 years. It is estimated that a recharge volume of 1,530 AF/month, which equates to an estimated capacity of 15,300 AF given a duration of 10 months for available water in the FKC. The average annual amount of water recharged is calculated to be approximately 6,120 AFY (15,300 AFY x 4 years/10 years), given four of ten years are classified as wet years. This assignment of water recharged given the frequency of wet years is based on the analysis of available "Other Water" (surplus floodwater) available at the FKC during a historical 83-year hydrology. The historical period of record, included in Appendix B, provides an indication of the frequency of use for the recharge ponds.

The Project provides a direct recharge facility and conveyance improvements to existing conveyance for return. The water supply captured by the Project would add supply to the District and the region, thus increasing its resiliency to drought. An analysis of historical supplies on the CVP system suggests that the Project would facilitate the capture of about 15,300 AF or more of water in a wet year

(Appendix B). This analysis identified events with an available surplus supply on the FKC of 100,000 AF or more of water occurring at a frequency stated indicating supplies are available to SSJMUD for delivery to in-district recharge and into neighboring banking programs for storage. Such events have occurred about every 4 out of 10 years.

The estimates of the water conserved for this project are based on the anticipated well capacity for the existing agricultural supply well at the spreading basin site which will be repurposed as a recovery well for the District to operate in dry years when banked water from the spreading basin will be pumped and used to augment the District's supply to its landowners. Assuming a production rate of 300 AF/month, an operating duration of 3 months per year, and a frequency of 3 out of every 10 years, the average annual volume of water conserved in the Project by SSJMUD is approximately 270 AFY (300 AF/month x 3 months/year x 3 years/10 years). The water better managed by this project is estimated to be about ten percent of the Project's additional supply; therefore, the District will better manage 612 AFY in the Project.

The benefit of in-district recharge facilities is demonstrated in these calculations. The amount to direct recharge in SSJMUD represents about 7.9 percent (6,120 AF/77,949 AFY) of their ten-year average surface water supply, 27.5 percent (6,120 AF/22,247 AF) of their 2019 groundwater supply, and 6.1 percent of their combined supply (6,120 AF/[77,949 AF + 22,247 AF]). Water stored in-district is available during critical dry years and not to forget the additional water brought into the neighboring districts related to this Project. Flood capture projects are instrumental to increasing regional drought resiliency and operational flexibility.

Environmental constraints on delivery of surface supplies from the CVP into the District, operational constraints due to loss of capacity in the FKC (due to permanent land subsidence), and the recent exceptional drought in California have caused growers to meet shortfalls in surface supplies by pumping groundwater. The volume of pumped water in the Kern County Subbasin (Subbasin) often exceeds the volume of natural and managed groundwater recharge replenishing the aquifers in the Subbasin; undesirable results, as defined by California's Sustainable Groundwater Management Act (SGMA), may occur. These results include chronic lowering groundwater levels, reduction in groundwater storage, permanent subsidence, and degradation of groundwater quality. Groundwater recharge and conveyance improvements, such as the proposed Project, work to mitigate each of these effects by direct recharge, or by delivering surface supplies in-lieu of pumping groundwater.

Will the project improve the management of water supplies? Wet year, flood capture projects are instrumental to increasing regional flexibility and drought resiliency. Environmental constraints on delivery of surface supplies from the CVP into the District, the recent exceptional drought in California, and conveyance constraints resulting from subsidence on the FKC, have caused growers to meet shortfalls in surface supplies by pumping groundwater. The volume of pumped water in the Kern County Subbasin (Subbasin) often exceeds the volume of natural and managed groundwater recharge replenishing the aquifers in the Subbasin; a number of undesirable results, as defined by California's Sustainable Groundwater Management Act (SGMA), may occur. These results include chronic lowering groundwater levels, reduction in groundwater storage, permanent subsidence, and degradation of groundwater quality. Groundwater recharge and conveyance improvements, such as

the proposed Project, work to mitigate each of these effects by direct recharge, or by delivering surface supplies in-lieu of pumping groundwater.

The Project helps to offset reliance on environmentally sensitive supply sources by providing operational flexibility to deliver supply to landowners in the District. Note that CVP Other Water supplies are only released as floodwater (Section 215) after all environmental and contract supplies (Class 1 or 2) have been met at the time of release. Constructing the Project gives the District a tool to offset the effects of drought and increase drought resiliency, each time surplus or floodwater is available for capture and delivered to the existing District's distribution system for use. Without recharge facilities, surplus or floodwater would otherwise be destined for discharge into the Pacific Ocean without beneficial use to the District.

Although the majority of the District is privately pumped they receive benefits from in-district recharge such as more stable groundwater levels and reduced impacts of decreasing groundwater levels. Upgrading and replacing two of SSJMUD's existing laterals adjacent to the spreading basins allow for a mechanism to protect growers if a private well fails during the growing season and provide conveyance for recovery of previously banked supply for drought resiliency. In addition, it is expected to increase the operational flexibility of the District to meet in-district critically dry year needs by providing more reliable return for previously banked supplies. Other areas of improvement implementing an additional recovery well allows the District to be able to better perform maintenance on portions of their system while being able to still convey water from various sources. Increasing the District's operational flexibility improves water supply management for the District's groundwater management and conjunctive use program; specifically, the Recharge and Conveyance improvement elements of the program while still fulfilling in-District landowner needs.

Increasing their delivery system's return capacity by improvement existing conveyance will improve the District's ability to return banked water in a critically dry year: operating the Project over three months would add to the local water supplies by 270 AFY in a critically dry year (ten year annual average) which would be managed either through the District recovery well, or the surrounding private wells benefitting from the recharge and increased groundwater levels. In addition to the water conserved through the operation of the recovery well, an average of 612 AFY would be better managed because SSJMUD in-district groundwater recharge would eliminate the estimated 10% leave behind typical of groundwater banking projects in the region. The combination of water conserved and water better managed is an annual average of 882 AF. This combined water managed in SSJMUD represents about 1.1 percent (882 AF/77,949 AFY) of their ten-year average surface water supply, 4.0 percent (882 AF/22,247 AF) of their 2019 groundwater supply, and about 1.0 percent of their combined supply (882 AF/[77,949 AF + 22,247 AF]).

Will the project make new information available to water managers? If so, what is that information and how will it improve water management? The Project will add recharge and conveyance capacity for the District. District managers affiliated with the Poso Creek IRWM Plan will benefit from greater flexibility for recharge, recovery, and return of stored, surplus water supply in times of drought or shortage. Added recharge and recovery capacity will allow for greater flexibility in meeting the in-district needs of landowners and at the same time the ability for the District to meet

the needs of the districts. Overall, the Project will help neighboring Districts to complete their agreements with North Kern within the Poso Creek IRWM Group due to the increased recovery and return capacity. Data collected pertaining to extraction volume will be made available to water managers. A Letter of Support has been included.

1.5.2 Evaluation Criterion B – Sustainability and supplemental Benefits

1.5.2.1 Climate Change

The climate of the District is typical of the San Joaquin Valley, being semi-arid and characterized by mild winters and hot, dry summers. Regarding the anticipated changing climate, several investigations have been conducted by the USGS California Water Science Center (CAWSC) regarding hydrological effects of typical climate change scenarios. Each of these investigations predict that California's climate will become warmer (+2 to +4° C) and drier (10 to 15 percent) during the mid- to late-21st century, relative to historical conditions. If these predictions materialize, the level of runoff from the Sierra Nevada Mountains, and thus the Kern River Watershed, is expected to be much less reliable with quantities presumably declining over time limiting Kern River supplies.

Reduced surface water deliveries to the District, as well as for other regional districts and agencies, which can be dedicated for agricultural uses, combined with increased demands for irrigation water due to the increasingly warmer, drier climate, will result in increased use of groundwater resources, the impacts of which could include the following: Reduced base flow in streams; Reduced groundwater outflows; Increased depths to groundwater, and Increased land subsidence.

Local communities, rural residences, and businesses also rely on groundwater from the Subbasin as their main supply. Should climate change result in a reduction in water available from traditional surface supplies, the increased frequency of groundwater pumping, from agricultural water districts and other users, will lead to a decrease in groundwater storage without the necessary means of replenishing the depleted storage. Climate change concerns, such as those listed above, set a high priority for exploring and importing any other available surface water supplies, such as CVP wet period water.

Does the proposed project include green or sustainable infrastructure to improve community climate resilience? Does this infrastructure complement other green solutions being implemented throughout the region or watershed? The project will indirectly reduce the energy needs to manage water. By increasing the amount of in-district recharge the District will be better able to operate and maintain higher groundwater levels and additional groundwater storage reducing the amount of energy required to pump for District wells, municipal supply wells, and private wells.

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses? The Project is converting 75 acres of irrigated land into a permanent groundwater recharge facility. The water applied to this land will be for the purposes of in-district groundwater banking, not consumptive use. Additionally, there is a water conservation component with respect to the District operating a recovery

well on landowners' behalf to recover banked groundwater, rather than the landowners pumping groundwater themselves.

1.5.2.2 Disadvantaged or Underserved Communities

Will the proposed project serve or benefit a disadvantaged or historically underserved community? In the surrounding area decreases in groundwater levels typically result in an increase in pumping costs. The project will in-directly benefit the adjacent cities of McFarland and Delano because in-district groundwater banking activities and increased importation of surface supply for agricultural use will conserve groundwater and maintain groundwater levels. With the District managing higher groundwater levels and increasing the groundwater storage groundwater quality is improved.

The cities of Delano and McFarland are classified by the State of California as Severely Disadvantaged Communities (SDAC). A SDAC is a community whose MHI is less than 60% the statewide MHI. As of 2019, the statewide MHI in California was $75,235; therefore, the threshold for classification as a SDAC in 2019 was $45,141. According to the US Census Bureau, the City of Delano's MHI was $43,641 in 2019; McFarland's was $35,346.

1.5.3 Evaluation Criterion C – Drought Planning and Preparedness

The drafted Poso Creek Drought Plan that is under review by Reclamation will be adopted in late 2021 can be found in Appendix A.

SSJMUD is a long-standing stakeholder and member of the Poso Creek IRWM Group. The IRWM Group published an Integrated Regional Water Management Plan (IRWM Plan), updated in 2019, that in part discusses regional vulnerability to drought and its impacts. A Drought Contingency Plan (DCP) outline is included in the 2019 Plan Update. The IRWM Plan recognizes that drought year preparedness begins in wet years by meeting the regional goals and measurable objectives set forth in the Plan. The drought relevant goals in the Plan include: 1) maintain and enhance water supply reliability, 2) improve operational efficiency and flexibility, and 3) improve flood management. Nearly all the measurable objectives outlined in the Plan work to mitigate the effects of drought.

SSJMUD, as a member of the Poso Creek IRWM Group, is participating in the development of the Poso Region DCP. SSJMUD, and the other governing members of the Poso Creek IRWM Group comprise the Poso Region DCP Interim Task Force. This task force is responsible for the development of the Work Plan drafting the Poso Region DCP, which also includes the establishment of a long-term Task Force with regional stakeholders and interested parties. A district specific DCP will be prepared as a part of the Poso Region DCP.

The development of the Poso Region DCP and the district-specific portions of the will also consider drought monitoring and response actions identified in the Groundwater Sustainability Plans (GSPs) prepared for compliance with California's Sustainable Groundwater Management Act (SGMA). The elements of the DCP will include:

1. **Drought monitoring** for predicting the probability of future droughts or confirming an existing drought and implementing appropriate response actions.
2. **Vulnerability assessment** to evaluate risks and impacts of drought to critical resources and the factors contributing to those risks.
3. **Mitigation actions** (drought resiliency actions) that will build long-term resiliency to drought and mitigate risks posed by drought.
4. **Response actions** that can be quickly implemented during specific stages of a drought, manage the limited supply, and decrease the severity of immediate impacts.
5. **Operational and administrative framework** to identify who is responsible for actions necessary to implement each element of the DCP.
6. **Plan update process** to monitor, evaluate, and update the DCP.

The Project provides SSJMUD recharge continuity and additional conveyance capacity by way of capturing surplus CVP water to allow for piped delivery of surface water to in-district irrigation distribution systems during dry and critical year types to meet later irrigation demand. As stated in the AWMP, this sort of opportunistic capture, or conjunctive use, is part of the Primary Goals of the Drought Management. In particular, the project addresses the critical operational consideration of "...improving water supply through ... facilitating water transfers for municipal and industrial, refuge, and agriculture to ensure the most critical supply needs are met throughout the service areas of the CVP and ensuring flow standards are as flexible as possible in order to capture runoff from multiple storm events under the otherwise dry conditions".

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? In the preparation of its SGMA-compliant Management Area Plan (SSJMUD, 2020) as part of the Kern Groundwater Authority's Groundwater Sustainability Plan (KGA GSP)(KGA, 2020), SSJMUD identified that a "no projects" condition in the District would lead to a projected water supply balance in overdraft. Without any groundwater recharge projects in the District, SSJMUD is projected to experience annual groundwater overdraft ranging from 400 AF to 18,000 AF; this range is dependent on the water year type.

The primary industry in the project area is agriculture to produce permanent tree crops, such as deciduous fruits and nuts, and grapes. If no projects are built, then the District would be required to fallow land to address the projected overdraft. With an average annual consumptive use of 3 AF/acre, SSJMUD would be required to take anywhere from 134 acres to 6,000 acres out of production.

In addition to the direct negative impacts to irrigated agriculture in the District, if no projects are undertaken, additional impacts will be realized by the cities in the form of increase pumping costs due to declining groundwater levels. Private water wells used to supply domestic water to homes in rural portions of the District would be more severely impacted by declining groundwater levels than the

cities' supply wells because rural domestic wells are typically drilled to shallower depths than municipal or agricultural supply wells.

Whether there are public health concerns or social concerns associated with current or potential drought conditions? The cities within SSJMUD's service area boundary are entirely groundwater dependent. They do not have an alternative supply, nor are they importers of surface water from either the CVP or the State Water Project (SWP). These cities are already at a severe economic disadvantage; therefore, increased costs associated with maintaining their municipal water supply would put further financial strain on these communities and the rural residents of the District.

Whether there are ongoing or potential environmental impacts (e.g., impacts to endangered, threatened or candidate species or habitat). No impacts to endangered, threaten, or candidate species or habitat are known at this time.

Whether there are local or economic losses associated with current drought conditions that are ongoing, occurred in the past, or could occur in the future (e.g., business, agriculture, reduced real estate values). With the main industry in the District being agriculture, mandatory land fallowing to address projected overdraft conditions would have direct economic impacts on the growers in the District and indirect impacts on the communities within the District. The indirect impacts would be in the form of reduced commerce, which would reduce tax revenue for the cities to maintain infrastructure and services to their residents.

Whether there are other drought-related impacts not identified above. None at this time.

Describe existing or potential drought conditions in the project area. As identified in the SSJMUD Management Area Plan (SSJMUD, 2020) in the KGA GSP (KGA, 2020) the chronic lowering of groundwater levels has been identified as an undesirable result. SSJMUD established groundwater level elevations for monitoring conditions in its service area to prevent the District and the cities within its service area from experiencing further undesirable results related to drought conditions, such as permanent land subsidence and degradation of water quality.

Is the project in an area that is currently suffering from drought, or which has recently suffered from drought? Yes. According to the National Integrated Drought Information System (NIDIS) the state of CA, particularly the San Joaquin Valley, is currently in drought. The state and region also experienced a historic drought from 2012 to 2016. Under current drought conditions, SSJMUD and other Friant CVP contractors received 20% of their allocation this year. Growers within the District are relying on groundwater to meet their crop irrigation demands, which is causing groundwater levels to decline. While they have not yet reached a condition where the District would have to take action to fallow land and implement other water conservation measures, continued groundwater pumping without the ability to replenish extracted water is not sustainable over the long-term.

Describe any projected increases to the severity or duration of drought in the project area resulting from changes to water supply availability and climate change The National Drought Mitigation Center recognized the Project area as undergoing some intensity of drought for nearly the entirety of the previous decade. The near constant state of drought has recently been punctuated by

an exceptional drought (category D4) or extreme drought (category D3) over the previous few years. In times of drought, irrigation and municipal agencies often meet shortfalls in surface supplies by pumping groundwater. The sustained need to pump has contributed to many drought indicators within the Kern Subbasin, including:

- Nearly two inches of subsidence in the nearby City of Delano between 2008 and 2010(https://www.usgs.gov/centers/ca-water-ls).

- A 160-foot decrease in groundwater elevation within neighboring Cawelo between 1970and 2015 (https://www.usgs.gov/centers/ca-water-ls; Well 27S26E21F001M)

Without further improvements in water management infrastructure, these trends are likely to continue. Overall, the District noted its vulnerability to drought and climate change as 'high', since each year the groundwater elevation lowers, the existing groundwater supply decreases, along with its resiliency. The Project helps to mitigate the impact of drought by storing wet period water for delivery in dry and critical year types, so that any groundwater level decrease is offset.

1.5.5 Evaluation Criterion E – Project Implementation

Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: design, environmental and cultural resources compliance, permitting, construction/installation. The overall project and task schedule, as presented in Table 1-2, gives a task-wise schedule. If the requested grant funding is awarded to the Project, a grant agreement is expected to be signed in April 2022; design work is expected to begin in April 2022 with an estimated end date in July 2022, environmental and cultural compliance work is expected to begin in April 2022 with completion prior to construction. Construction bidding is to take place in mid-2022 with construction starting after July 1, 2022 and completed by end-2024 or early-2025. All required Project work will be done and is expected to be completed within 36 months with a final report completed by March 31, 2025.

Table 1-2: Project Schedule

Milestone	Estimated Start Date	Estimated Finish Date
Grant Administration	04/01/2022	03/31/2025
Project Reporting	04/01/2022	03/31/2025
Design and Project Layout	04/01/2021	07/01/2022
Environmental Documentation & Regulatory Compliance	04/01/2021	10/03/2022
Permits & Approval	04/01/2021	07/01/2022
Construction	11/01/2022	11/29/2024
Construction Administration & Management	11/01/2022	11/29/2024

The following list details the anticipated task associated with the Project work:

- **Task 1: Grant Administration** – Coordination of all Project activities, including budget, schedule, communication, and grant and cost-share administration.
- **Task 2: Grant Reporting** – Report on project financial status on a semi-annual basis and prepare significant development reports and a Final Project Report. In addition, the Project will comply with any other reporting requirements specified in the potential grant agreement between SSJMUD and Reclamation.
- **Task 3: Environmental Documentation** – SSJMUD will work under the direction of consulting firms and in coordination with Reclamation to ensure compliance with NEPA and CEQA. Typically, Reclamation will lead preparation of the NEPA compliance documentation should this project receive federal funding. Under this task, both monetary and personnel support will be provided, as needed, for preparation of the necessary NEPA compliance documents. The District and consulting firms will coordinate work with the California Department of Fish and Wildlife (Fish and Wildlife) regarding potential environmental risks or effects on local (endangered) flora and fauna.
- **Task 4: Design** – Design will follow soils testing and surveying at the Project site. Prepare final design plans and specs and engineering estimate of probable cost.
- **Task 5: Permit and Approvals** – The Project is located exclusively within SSJMUD, therefore, bids for construction will be solicited through a competitive bidding process based on final plans and specifications. This would include, but is not limited to, any required NPDES permitting and the preparation of a Stormwater Pollution Prevention Plan. A pre-activity survey will be conducted by a qualified biologist shortly before the start of construction; this would include, but is not limited to, protocol-level surveys for the San Joaquin Kit Fox and the Western Burrowing Owl. It is noted that the District is not subject to County or City jurisdiction regarding building and grading permits related to water resource projects. Accordingly, no City or County issued permits will be required.
- **Task 6: Project Construction** – Once design is completed, and necessary environmental documentation and permits are secured, SSJMUD staff, with the assistance of the Engineering Consultants, will conduct construction contracting, consisting of contractor bidding and selection (as necessary). A Contract for construction of the Project is to be competitively bid. Accordingly, the work will include publishing the notice bid solicitation; conducting a job-site tour for prospective bidders; responding to contractors' questions; issuing addenda to the specifications if required; opening and evaluating bids, including costs, required bonds, suppliers, and subcontractors, and checking bidder's references and experience successfully executing this type of work; awarding of contract; and issuance of the Notice to Proceed.
- **Task 7: Construction Administration** – Construction management activities can generally be categorized as field inspection and contract administration, where the latter includes items such as the pre-construction conference, correspondence with the Contractor, submittal review, progress payments, periodic meetings with the Contractor, Contract Change Orders, etc.

Describe any permits that will be required, along with the process for obtaining such permits. The Project is located within the rights-of-way of SSJMUD, and the land of growers within the

Districts. All the required modifications to the land are within the experience of the District and its consultants. As design plans and specifications are further developed, the District will engage Reclamation and local agencies to ensure all required permits, reviews, and special approvals are met so that the integrity of the lands intercepted by the pipeline replacement and recharge basin construction are not compromised.

In addition to and accordance with the permitting and approval concerns stated in Task 5 of the Project Work (Section 1.3.1), the following paragraphs detail specific points of the District's commitment to obtaining all relevant permits and approvals. a) "The District, at its sole cost and expense, comply with all laws, rules, ordinances and regulations of all governing bodies having jurisdiction over the work, obtain all necessary permits and licenses therefore..." This would include, but is not limited to, such things as any required NPDES permitting and the preparation of a Storm Water Pollution Prevention Plan for construction of the Project. b) A pre-activity survey will be ordered and conducted by a qualified biologist shortly before the start of construction; this would include, but is not limited to, protocol-level surveys for the San Joaquin Kit Fox and the Western Burrowing Owl (or other local endangered species).c) Note that the District is not subject to the County's or City's jurisdiction about building and grading permits relative to water resource projects. Accordingly, no city or County-issued permits will be required.

Identify and describe any engineering or design work performed specifically in support of the proposed project. The District completed a preliminary feasibility study and preliminary design through meeting with a local consulting engineer and completed a preliminary cost estimate based on the components of the Project.

Describe any new policies or administrative actions required to implement the project. The District does not anticipate any policies or administrative actions required as part of implementing the Project.

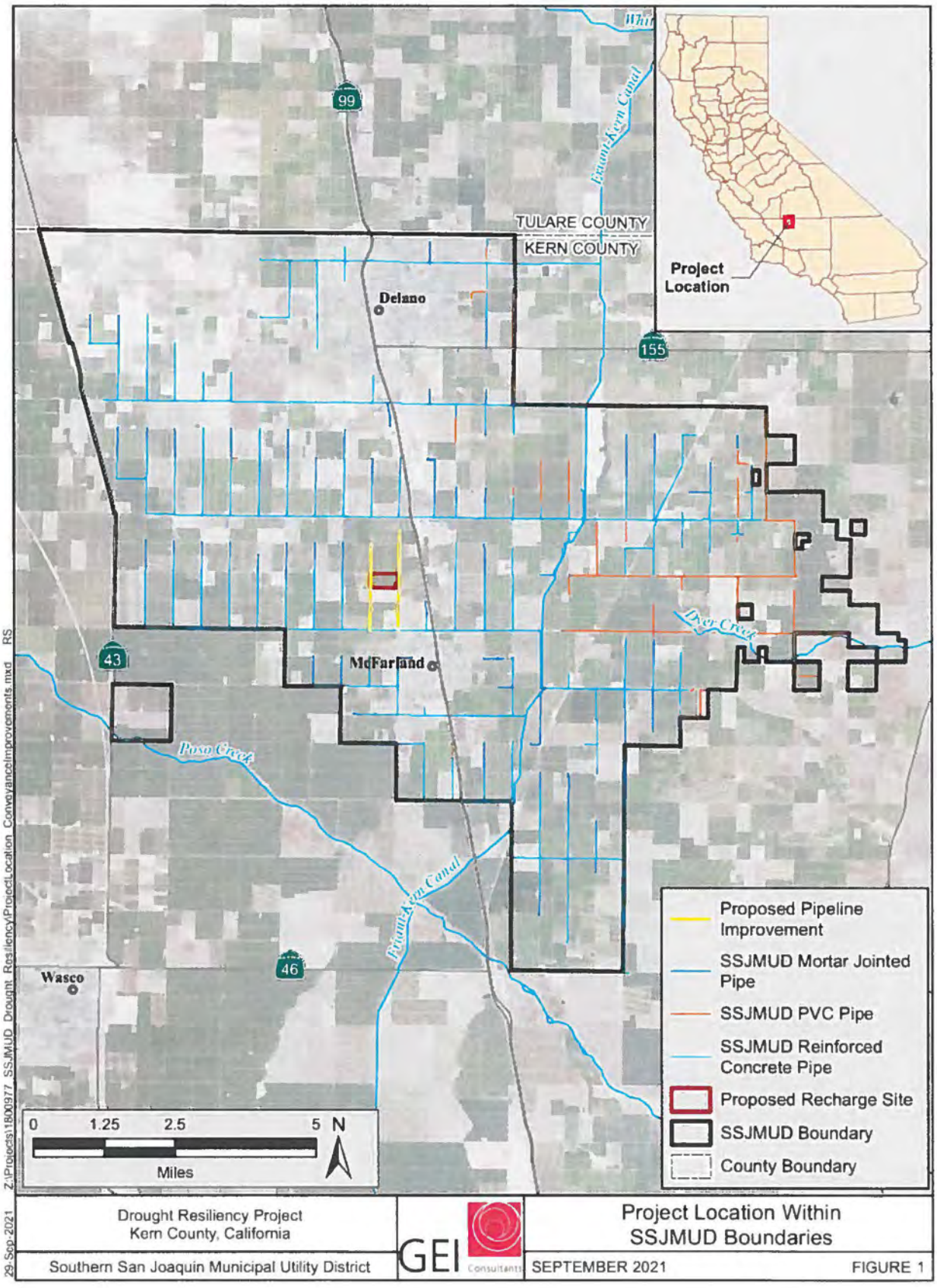
1.5.6 Evaluation Criterion F – Nexus to Reclamation

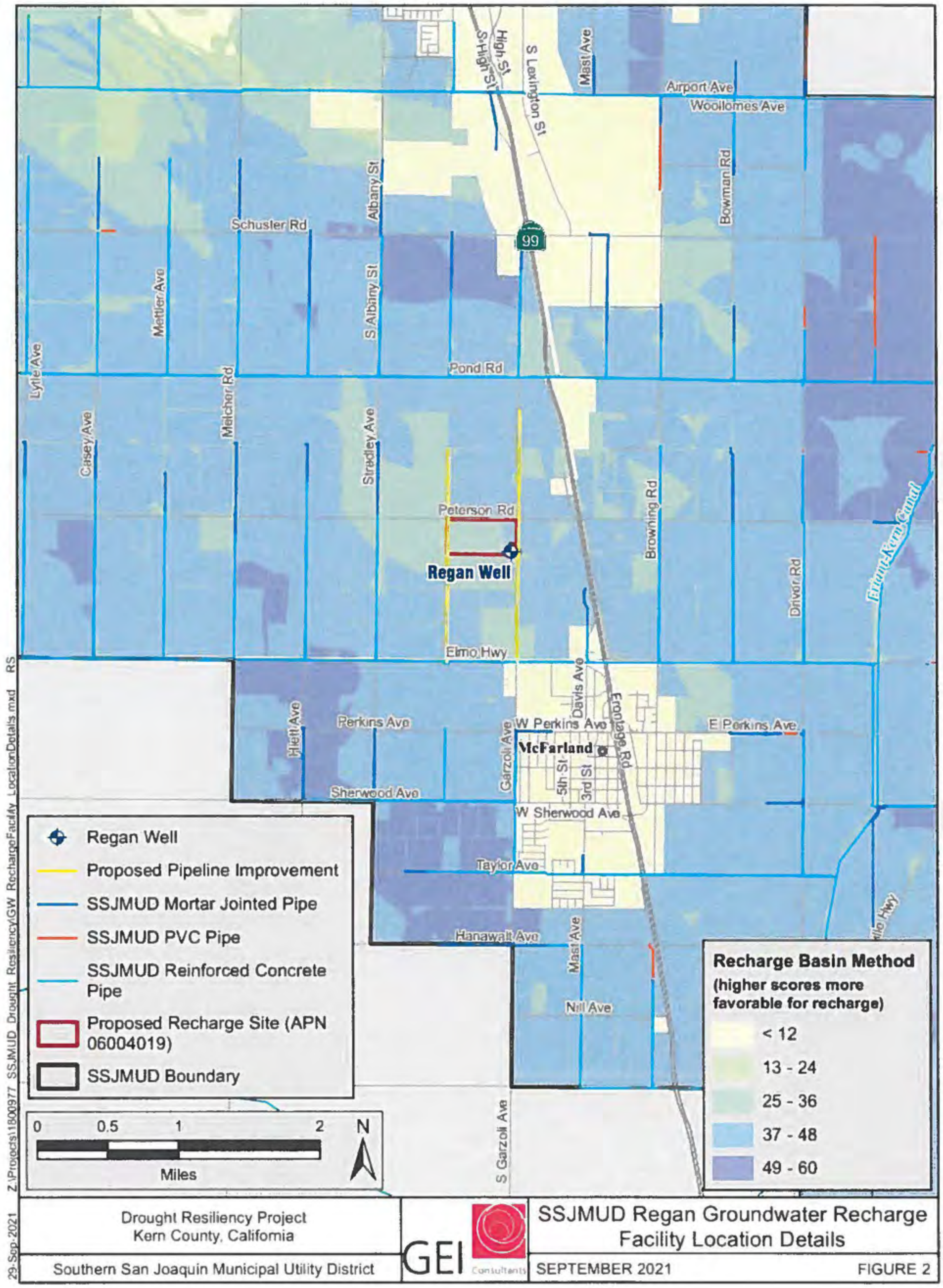
Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. The proposed project is located in the Tulare Lake Basin, which also includes Reclamation's FKC. The Project lands do not meet trust responsibilities to Tribes.

SSJMUD is a registered CVP contractor and receives both Class-1 and Class-2 allocations through the FKC. The proposed project will add recharge, recovery, and return capacity to the District by establishing an in-district spreading facility, which will bank CVP water from the FKC in SSJMUD and replace existing conveyance. The proposed surface water that would be storage and delivered to through District conveyance systems is CVP water from the FKC that is available during wet periods and otherwise lost to the District during times of water surplus.

The Project is within a CVP Contractor district. The District will effectively utilize its absorptive capacity to bank excess water during wet years on behalf of SSJMUD or other CVP Contractor and deliver back to them during the dry years when the demand for water is at its peak. This enables

operational flexibility for improves effective utilization of their surface water sources, and promotes regional co-operation towards making this basin self-sufficient, which is a crucial nexus to mitigate drought.


TULARE COUNTY
KERN COUNTY
Project Location
Delano
McFarland
Wasco
99
155
43
46
Friant-Kern Canal
Deer Creek
Poso Creek
0 1.25 2.5 5 N
Miles
Proposed Pipeline Improvement
SSJMUD Mortar Jointed Pipe
SSJMUD PVC Pipe
SSJMUD Reinforced Concrete Pipe
Proposed Recharge Site
SSJMUD Boundary
County Boundary
Z:\Projects\1800977_SSJMUD_Drought_Resiliency\ProjectLocation_ConveyanceImprovements.mxd RS
29-Sep-2021
Drought Resiliency Project
Kern County, California
Southern San Joaquin Municipal Utility District
GEI Consultants
Project Location Within SSJMUD Boundaries
SEPTEMBER 2021
FIGURE 1


Regan Well
Proposed Pipeline Improvement
SSJMUD Mortar Jointed Pipe
SSJMUD PVC Pipe
SSJMUD Reinforced Concrete Pipe
Proposed Recharge Site (APN 06004019)
SSJMUD Boundary
0 0.5 1 2
Miles
N
Recharge Basin Method
(higher scores more favorable for recharge)
< 12
13 - 24
25 - 36
37 - 48
49 - 60
Airport Ave
Woollomes Ave
Schuster Rd
Pond Rd
Peterson Rd
Elmo Hwy
Perkins Ave
W Perkins Ave
E Perkins Ave
Sherwood Ave
W Sherwood Ave
Taylor Ave
Hanawalt Ave
Nill Ave
Lytle Ave
Casey Ave
Mettler Ave
Melcher Rd
Albany St
S Albany St
Stradley Ave
High St
S High St
S Lexington St
Mast Ave
Bowman Rd
Browning Rd
Driver Rd
Hiett Ave
Garzoli Ave
S Garzoli Ave
Davis Ave
Frontage Rd
5th St
3rd St
McFarland
Friant-Kern Canal
99
Drought Resiliency Project
Kern County, California
Southern San Joaquin Municipal Utility District
GEI Consultants
SSJMUD Regan Groundwater Recharge Facility Location Details
SEPTEMBER 2021
FIGURE 2
29-Sep-2021

2. Project Budget

2.1 Funding Plan and Letters of Commitment

Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments). Any costs that will be contributed by the applicant.

In addition to the District's requested reclamation funding of $2,000,000, funds for the implementation of the proposed Project will be obtained from the District's financial reserve for capital improvement projects. The District employs an experienced crew of operations and maintenance people that routinely install irrigation pipe. However, for the construction of spreading ponds and pipeline, contractors will be hired. To construct the Project in the most cost-effective manner possible, the District intends on obtaining bids for the Project work. Furthermore, the design, permitting, and construction management components of the application are within the capabilities of District personnel and their engineering consultant. The following table provides an overview of the funding sources.

Any third-party in-kind costs (i.e., goods and services provided by a third party). None

Any cash requested or received from other non-Federal entities. No other non-Federal funding has been requested or received for the proposed work.

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 District does not have any pending requests that have not yet been approved for the Project components.

In addition, please identify whether the budget proposal includes any project costs that have been or may be incurred prior to award. No, the budget does not include any project costs that have been or may have been incurred prior to award.

2.2 Budget Proposal

The total Project budget for the Regan Groundwater Recharge Facility for Regional Drought Resiliency (Project) is estimated at $5,699,132 with $2,000,000 in requested grant funds (Federal Cost Share) and $3,699,132 in Non-Federal Cost Share funds. The approach has been reflected in the budget estimates. The total requested grant funds amount to about 35 percent of total project costs, with the remainder (65 percent) funded by the Applicant. Refer to Table 2-1 and Table 2-2, which provides a summary of the estimated budget, including Reclamation and Applicant contributions.

Table 2-1. Total Project Cost Summary

SOURCE	AMOUNT
Costs to be reimbursed with requested Federal funding	$2,000,000
Costs to be paid by the applicant	$3,699,132
Value of third-party contributions	$0
TOTAL PROJECT COSTS	$5,699,132

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

FUNDING SOURCE	AMOUNT
Non-Federal Entities	
1. SSJMUD	$3,699,132
2. State Funding	–
Non-Federal Subtotal	$0
REQUESTED RECLAMATION FUNDING	$2,000,000

The Project budget was prepared based on the level of effort required to implement the project as discussed in Section 1.5.5 – Tasks and Project Work. The Work Plan identifies and describes eight tasks used to define the overall Project Scope, Schedule, and Budgets:

Task 1: Grant Administration

Task 2: Grant Reporting

Task 3: Environmental Documentation

Task 4: Design

Task 5: Permits and Approvals

Task 6: Project Construction

Task 7: Construction Administration

Several tables have been prepared in support of these budget estimates, which immediately follow this section in the order shown below.

a. Table 2-3 provides a summary of costs by budget item for the Budget Proposal.

b. Tables 2-4 through 2-10 provide a summary of project costs by task and follow the "sample budget proposal format" from the NOFO.

c. Tables 2-11a and 2-11b provide hourly rates of District staff and Consultant respectively.

2.3 Budget Narrative

Salaries and Wages – Roland Gross, General Manager for SSJMUD, is the representative for the Applicant and will provide overall project management, technical design, and construction of the project components. Additionally, the District will have accounting staff responsible for tracking costs and maintaining financial records to administer Project finances, including making all payments for contracted services and collecting monies from funding partners as required for meeting Project cash-flow requirements.

SSJMUD will enlist the professional services of consultants, such as, GEI Consultants, Inc.; (GEI), a consulting engineering firm under a professional services contract to the district.

Concerning District staff, the work under the Project will be completed as part of the Districts' daily operations. In this regard, the District will be asking for reimbursement for any Salaries and Wages cost as part of this Project. The District is proposing to track these costs separately from daily operations for employees who will be providing services necessary for implementation of the grant-funded Project.

Fringe Benefits – This item is included in salaries and wages of the General Manager and District Administrator.

Travel – The District will not be charging any travel expenses to the project, nor will they be asking for reimbursement of any incidental travel costs.

Equipment – The proposed Project will be advertised for bid and the District will be soliciting sealed bids for construction of the Project work. In this regard, the District will contract with a local contractor who will provide costs to "furnish and install" the necessary project components. Equipment expenses have not been included inasmuch as the District will not be purchasing or leasing any equipment to construct the project works, but rather the successful contractor will be providing such equipment as part of the work. Accordingly, no "Equipment" expenses have been included.

Materials and Supplies – Acquisition of materials and supplies for office use is not anticipated; rather, the District will provide any incidental supplies. Accordingly, no "Materials and Supplies" expenses have been included.

Contractual – With regards to contractual costs, the District will use an existing professional services contract, an example is one in place with GEI Consultants, one of the District's engineering consultants, to assist the District with implementing the Project including providing bid-phase support, and construction assistance as needed. In this regard, the District operates with minimal professional staff and have maintained a long-standing relationship with the consultant, who is familiar with District facilities and operations. Additionally, sub consultants will be retained to supplement the engineering consultant's technical expertise. It is noted that work described in the work plan other than construction will be completed primarily by the engineering consultants, with assistance from the District. In this regard, costs for the engineering consultant and sub consultants to complete the work have been estimated under the category "Contractual" for all tasks. Refer to Tables 2-3 under the

category "Contractual" for a summary of the contractual costs. The construction contractual costs were determined through prior project actuals and estimates prepared by licensed engineers. The budgets under the "Contractual" category for each task are estimates at this time. However, they have been prepared based on the level of effort to complete past projects by the consultants and sub consultants, whom over the years, have provided similar services to the District for projects that have been similar in scope and complexity.

The contractual cost also includes costs associated with bid advertisement in a local newspaper and online platforms per state and federal laws, and printing of plans and specs. The estimate presented is based on recent experience and recent work done for implementation of various projects funded by Reclamation and similar recharge basin and pipeline design projects.

Third-Party In-Kind Contributions – No work will be accomplished by third-party in-kind contributions.

Environmental and Regulatory Costs – Permitting and environmental fees are estimated and identified as to be part of the District's expenses. Once the Project moves into construction, only the invoiced expenses paid by the District will be part of the incurred expense, invoiced reimbursement requests. The costs are shown in Table 2-6 to identify the overall cost of this Project.

The District intends to work with Reclamation to determine the potential environmental effects the proposed Project may have in relation to NEPA, NHPA, ESA, and the Clean Water Act to ensure compliance with all applicable environmental laws. All major work is located on District-owned and maintained rights of way. Accordingly, it is anticipated that it will not be difficult to obtain permits or approvals necessary for the work that is the subject of this Proposal.

Other Expenses – Costs under this category were included for project tasks. A description of other costs by tasks are as follows:

Task 5 – Design: The cost for utility locating is based on a quote received in September 2020 for the SSJMUD Giumarra Recharge basin, which consists of a 78-acre recharge site. The final amount may vary based on an updated quote for the service.

Task 6 – Permits and Approvals: Other expenses for this task include the NPDES filling fee and PM-10 Application filling fee. These amounts are based on the published 2020-2021 rates.

Indirect Costs – No indirect costs are included in the budget. Accordingly the category does not apply.

Table 2-3
Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
Supervisor	$60.49	12	HR	$725.93
District Administrator	$53.71	17	HR	$913.02
General Manager	$102.09	49	HR	$5,002.18
Subtotal				**$6,641.12**
FRINGE BENEFITS				
Supervisor	-	0	HR	-
District Administrator	-	0	HR	-
General Manager	-	0	HR	-
Subtotal				**$0.00**
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Engineering Consultant				
Subtotal				**$242,834.00**
Contract 2 - Aerial Survey	$14,200.00	1	LS	**$14,200.00**
Contract 3 - Geotechnical Consultant	$5,700.00	1	LS	**$5,700.00**
Contract 4 - Construction	$5,422,478.61	1	LS	**$5,422,478.61**
OTHER				
Pacific Coast Utility Locators	$ 3,135.00	1	LS	**$3,135.00**
NPDES Application Filing Fee (13 Ac)	$ 3,721.00	1	LS	**$3,721.00**
PM-10 Dust Control Application Filing Fee	$ 422.00	1	LS	**$422.00**
TOTAL DIRECT COSTS				**$5,699,131.73**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL COSTS				**$5,699,131.73**

Table 2-4
Task 1 - Grant Administration[1]

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
District Administrator	$53.71	0	HR	$0.00
General Manager	$102.09	10	HR	$1,020.85
Subtotal				**$1,020.85**
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Engineering Consultant				
Grade 7	$274.00	25	HR	$6,850.00
Grade 5	$203.00	100	HR	$20,300.00
Grade 3	$153.00	20	HR	$3,060.00
Admin	$114.00	40	HR	$4,560.00
Subtotal				**$34,770.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$35,790.85**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED SUBRECIPIENT COSTS				**$35,790.85**

Notes:

(1) This amount is in accordance with District and consulting engineer experience reporting on Federal Grants, and recent agreements for Southern San Joaquin Municipal Utility District. It is assumed that the total amount is 1% of total project costs.

Table 2-5
Task 2 - Grant Reporting

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
District Administrator	$53.71	7	HR	$375.95
General Manager	$102.09	7	HR	$714.60
Subtotal				**$1,090.55**
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Engineering Consultant				
Grade 7	$274.00	30	HR	$8,220.00
Grade 5	$203.00	30	HR	$6,090.00
Grade 3	$153.00	105	HR	$16,065.00
Admin	$114.00	0	HR	$0.00
Subtotal				**$30,375.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$31,465.55**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED SUBRECIPIENT COSTS				**$31,465.55**

Notes:

(1) Hours based on an estimated 15hrs/semi-annual report for Consultant Grade 3 and 5hrs/semi-annual report for Consultant Grade 5, as well as 15hrs/ Final Report for Consultant Grade 3. Assumes 1hr/semi-annual report for both General Manager and District Administrator, as well as 1hr/final report for both General Manager and District Administrator

(2) Assuming six semi-annual reports, each with a reimbursement request and QA/QC, over a three year period, and one final report.

(2) Assumes that Reporting will be done by a contracting or engineering firm.

Table 2-6

Task 3 - Environmental Documentation and Regulatory Compliance[1]

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
District Administrator	$53.71	5	HR	$268.53
General Manager	$102.09	5	HR	$510.43
Subtotal				**$778.96**
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Engineering Consultant[2]				
Grade 7	$274.00	35	HR	$9,590.00
Grade 5	$203.00	70	HR	$14,210.00
Grade 3	$153.00	150	HR	$22,950.00
Admin	$114.00	45	HR	$5,130.00
Subtotal				**$51,880.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$52,658.96**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED SUBRECIPIENT COSTS				**$52,658.96**

Notes:

(1) Assume the Total amount of the Environmental Task is about 2% of the Overall Project Costs

(2) Hours based on expected effort to complete CEQA and NEPA requirements for the project.

Table 2-7
Task 4 - Design[1]

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES[2]				
Supervisor	$60.49	10	HR	$604.94
District Administrator	$53.71	0	HR	$0.00
General Manager	$102.09	10	HR	$1,020.85
Subtotal				**$1,625.79**
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Engineering Consultant[2]				
Grade 7	$274.00	20	HR	$5,480.00
Grade 5	$203.00	40	HR	$8,120.00
Grade 3	$153.00	160	HR	$24,480.00
Admin	$114.00	0	HR	$0.00
CAD	$153.00	25	HR	$3,825.00
Subtotal				**$41,905.00**
Contract 2- Aerial Surveying[3]	$14,200.00	1	LS	**$14,200.00**
Contract 3- Geotechnical Consultant[3]	$5,700.00	1	LS	**$5,700.00**
OTHER				
Pacific Coast Utility Locators[3]	$3,135.00	1	LS	**$3,135.00**
TOTAL DIRECT COSTS				**$66,565.79**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED SUBRECIPIENT COSTS				**$66,565.79**

Notes:

(1) The amount is in accordance with Southern San Joaquin Municipal Utility District and consulting engineer experience. Total amount is based on approximately 3% of construction budget.

(2) Hours are based on work required to complete 30%, 60%, 90%, and 100% Design Reports as well as district review and adress comments. Hours for CAD staff represent time to draft and finalize Design plans at each design level.

(3) Costs based quotes obtained in September 2020 for the SSJMUD Giumarra Spreading Basin, which consists of the construction and development of a 78-acre reacharge site. These amounts are estimates and do not represent final amounts for each identified service.

Table 2-8
Task 5 - Permits and Approvals

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
District Administrator	$53.71	0	HR	$0.00
General Manager	$102.09	0	HR	$0.00
Subtotal				**$0.00**
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Engineering Consultant				
Grade 7	$274.00	0	HR	$0.00
Grade 5	$203.00	2	HR	$406.00
Grade 3	$153.00	6	HR	$918.00
Admin	$114.00	0	HR	$0.00
Subtotal				**$1,324.00**
OTHER				
NPDES Application Filing Fee (75 Ac)	$3,721.00	1	LS	**$3,721.00**
PM-10 Dust Control Application Filing Fee	$422.00	1	LS	**$422.00**
TOTAL DIRECT COSTS				**$5,467.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED SUBRECIPIENT COSTS				**$5,467.00**

Notes:

(1) Cost based on hours needed to prepare and review permit documentation

(2) NPDES Application filing fee and PM-10 Application filing fee based on published 2020-2021 fees

Table 2-9
Task 6 - Construction

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
District Administrator	$53.71	0	HR	$0.00
General Manager	$102.09	0	HR	$0.00
Subtotal				**$0.00**
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Construction Components				
Project Wide	See Table 2-7b			$217,712.63
Conveyance	See Table 2-7b			$4,787,383.63
Grading	See Table 2-7b			$417,382.36
Subtotal				**$5,422,478.61**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$5,422,478.61**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED SUBRECIPIENT COSTS				**$5,422,478.61**

Table 2-10
Task 7 - Construction Administration[1]

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
Supervisor	$60.49	2	HR	$120.99
District Administrator	$53.71	5	HR	$268.53
General Manager	$102.09	17	HR	$1,735.45
Subtotal				**$2,124.97**
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
CONTRACTUAL				
Contract 1 - Engineering Consultant				
Grade 7	$274.00	20	HR	$5,480.00
Grade 5	$203.00	12	HR	$2,436.00
Grade 3	$153.00	488	HR	$74,664.00
Admin	$114.00		HR	$0.00
Subtotal				**$82,580.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$84,704.97**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED SUBRECIPIENT COSTS				**$84,704.97**

Notes:

(1) Total amount is based on approximately 2% of the construction cost. This amount is in accordance with District and consulting engineer experience.

(2) Assume time for Bid Advertisement and Specs based on costs for previous project ad in newspaper and cost of making Specifications Book. This cost includes Bid Advertise, Prebid tour, Agenda Mtg Meeting Minutes, Addenda, Bid Opening, Bid Proposal Analysis and NOA/NOP.

(3) Assumes Project manager (Grade 7) will take care of weekly meetings for the five-month construction duration and time to do monthly pay applications.

(4) Assumes Field Observer (Grade 3) is at one site for five month construction duration.

Table 2-11a

Calculation of Burdened Labor Hourly Rate for District Staff

Job Classification	Hourly Rate	Fringe Benefits	Total Burdened Hourly Rate
General Manager	$102.09		$102.09
Accounting Manager	$53.71		$53.71
Supervisor	$60.49		$60.49
Dispatcher	$31.88		$31.88
Ditchrider	$27.09		$27.09
Maintenance Tech	$29.71		$29.71
System Operator	$31.55		$31.55

Table 2-11b
Calculation of Burdened Labor Hourly Rate for GEI Staff

Personnel Category	Hourly Billing Rate
Senior Consultant-Grade 8	$307.00
Senior Professional-Grade 7	$274.00
Senior Professional-Grade 6	$231.00
Senior Professional-Grade 5	$203.00
Project Professional-Grade 4	$172.00
Project Professional-Grade 3	$153.00
Staff Professional-Grade 2	$140.00
Staff Professional-Grade 1	$127.00
Field Observer	$115.00
Senior CAD Drafter/Designer/GIS	$153.00
Administrative Staff	$114.00

3. Environmental and Cultural Resources Compliance

The following section summarizes the District's approach to avoid, minimize, and mitigate any potential environmental impacts related to construction of the proposed Project. The following paragraphs address the specific questions posted in the Environmental and Cultural Resources Compliance section of the NOFO.

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

The extent of construction activities (footprint) for the Project is relatively small and will be located within land purchased and owned by SSJMUD. The site location has been chosen in consideration of State, or Federal Animal and Plant status based on an assessment of the parcel examined in the Recharge Feasibility Study performed in 2018. The proposed recharge site is on previously disturbed soils, located on land that is currently under cultivation or is used for existing roadways and water conveyance infrastructure. Regardless, all applicable environmental compliance measures will be followed, at a minimum, to ensure no improper disturbances are made to the environment and animal life. Such environmental measures include executing the PM-10 Dust Control Plan, Storm Water Pollution Prevention Plan, and all necessary biological site surveys.

Best Management Practices (BMPs) will be implemented during construction to mitigate any construction related impacts. Dust-control measures will be implemented during earth-disturbing activities, including the application of water to prevent excessive dust during all clearing, grading and earthmoving. During grading and construction activities, all equipment will be powered down when not in use to reduce unnecessary emissions, all equipment will be maintained and tuned, and to the extent possible, all equipment will be equipped with exhaust systems to minimize emissions. Additionally, the District will engage a qualified biologist to conduct a pre-activity survey prior to the start of construction to ensure that the construction area remains unoccupied by sensitive (endangered) species. In addition, standard avoidance and minimization protocols will be included in the project specifications and will be followed during construction. Moreover, the duration of the construction activity is expected be relatively short (i.e., construction to occur over a period of six months within the two-year window for utilizing the grant funds).

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?

SSJMUD is aware that threatened and endangered species exist in the Southern San Joaquin Valley. The Fish and Wildlife Service (FWS) Endangered Species Database listed several threatened and endangered species within Kern County. However, based on experience of the District, the Kern

Council of Governments Habitat Conservation map, and federally listed species mapping, as mentioned above no known endangered species inhabit the area of the proposed recharge site and conveyance improvements.

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.

No wetlands and other surface water locations have been eliminated from potential sites.

When was the water delivery system constructed?

The District formally organized in 1935. In 1945, the Board of Directors of the SSJMUD executed a contract with the United States providing for Class I and Class II water service contract via the CVP. The SSJMUD delivery system is a gravity system and some pressurized pipe system which delivers water using nine turnouts from the FKC. The original 158 miles of pipelines (of the current 175 miles) within the district were completed in the early 1950's. The nine turnouts are metered using propeller meters with totalizers into the District.

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

There will be no extensive modifications to the existing irrigation distribution 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.

No, the selected site does not have existing buildings or structures. Southern San Joaquin Municipal District will contract with a private cultural resources management consultant and arrange for Reclamation staff to coordinate to determine what, if any previous cultural resources surveys have been conducted in the project area.

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

No. Because this project location is on previously disturbed land, it is expected that there will be no obstacles to receipt of clearance with respect to archeological sites. In addition, the District is prepared to implement any necessary mitigation measures should cultural resources be identified by the private cultural resource's management consultant.

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

No. Construction of the project will support the important agricultural-based economy in the Southern San Joaquin Valley and should have only positive impacts on low income or minority persons living in the region.

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

No.

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.

4. Required Permits and Approvals

The Project will be located exclusively within land purchased and owned by SSJMUD. All the required permitting, construction management, and construction administration tasks are within the experience of the District and its consultants. As design plans and specifications are further developed, the District will engage Reclamation and local agencies to ensure all required permits, reviews, and special approvals are met. The following paragraphs detail the main points of the District's commitment to obtaining all relevant permits and approvals.

(1) Bids for construction will be solicited through the competitive bidding process based on final plans and specifications. The standard specifications will include language relating to obtaining permits and approvals prior to construction. The standard language in the specifications state "The Contractor is an independent contractor and shall, at his sole cost and expense, comply with all laws, rules, ordinances and regulations of all governing bodies having jurisdiction over the work, obtain all necessary permits and licenses therefore..." This would include, but is not limited to, such things as any required NPDES permitting and the preparation of a Stormwater Pollution Prevention Plan.

(2) A pre-activity survey will be ordered and conducted by a qualified biologist shortly before the start of construction; this would include, but is not limited to, protocol-level surveys for the San Joaquin Kit Fox and the Western Burrowing Owl (or other local endangered species).

(3) It is noted that the District is not subject to the County's or City's jurisdiction regarding building and grading permits relative to water resource projects. However, it is anticipated that County encroachment permits for construction within the County road right-of-way will be obtained as needed. The District will comply with CEQA and NEPA before commencing any ground disturbing activities.

5. Existing Drought Contingency Plan

As a member of the Poso Creek Group, SSJMUD has developed a Drought Contingency Plan (DCP), (see Section 1.5.3 for details). The draft DCP has been submitted to Reclamation for review. After the review process is complete, the Poso Creek IRWM Group plans to adopt the final DCP by the end of 2021. The draft can be found in Appendix A.

6. Letter of Project Support

POSO CREEK IRWMP
Management Group

1101 Central Avenue, Wasco, CA 93280
661-758-5113

September 22, 2021

Mr. Roland Gross
General Manager
Southern San Joaquin Municipal Utility District
11281 Garzoli Ave.
Delano, CA 93215

Subject: Proposed Project – *SSJMUD Regan Groundwater Recharge Facility for Regional Drought Resiliency*

Dear Mr. Gross:

On behalf of the Poso Creek Integrated Regional Water Management (IRWM) Group, I express support of Southern San Joaquin Municipal Utility District's (SSJMUD) *Regan Groundwater Recharge Facility for Regional Drought Resiliency* (Project) and their efforts to conserve groundwater resources within the district by building the means to recharge during wet years for subsequent return of supply during dry years or drought conditions. This will be possible through the construction of a 75-acre spreading facility and improvements to existing district conveyance to deliver water to the facility in wet years and recover banked water during dry years.

The Poso Creek IRWM Group is clearly interested and supportive of the Project, as it will support drought resiliency and groundwater sustainability in the region by providing a means to recharge available surface water during wet years without loss to prime farmland. This effort will help maintain groundwater levels, support groundwater sustainability, and increase water supply reliability in years of drought.

This Project is an important improvement in the Poso Creek Region and further supports drought resiliency and groundwater sustainability by providing additional capacity for groundwater banking. We hope that our expression of support is helpful in your efforts to secure grant funding assistance to implement your plans. If the funding agency would like to discuss our interest and support of your project, we would be happy to do so.

Sincerely,

Ram Venkatesan
Vice Chairman, Poso Creek IRWM Group
ram@northkernwsd.com
(661) 746-3364

7. Official Resolution

Resolution 21-12

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SOUTHERN SAN JOAQUIN MUNICIPAL UTILITY DISTRICT

WATERSMART DROUGHT RESPONSE PROGRAM: DROUGHT RESILIENCY PROJECT GRANT APPLICATION

WHEREAS, Southern San Joaquin Municipal Utility District (SSJMUD, or the District) partnered with several neighboring water districts in the Poso Creek Integrated Regional Water Management Plan (Plan), adopted in July 2007 and updated in 2014 by each of the districts for their collective area; and

WHEREAS, District staff, in conjunction with surrounding water districts, communities, and stakeholders, has formulated a plan of improvements; and

WHEREAS, the Plan identified regional projects that, once implemented, would improve the water management of the Region and the ability for SSJMUD to regulate water supplies available to the district; and

WHEREAS, the Plan promotes reductions of overdraft and operation changes in responding to reductions in water supply reliability to the region; and

WHEREAS, District staff has formulated an improvement project, referred to as the *Regan Groundwater Recharge Facility for Regional Drought Resiliency (Project),* which has the support of surrounding water districts and communities; and would be funded by SSJMUD funds, in-kind services, and grant funds; and

WHEREAS, the Project will be able to provide greater operational flexibility by increasing groundwater recharge capacity in the District to bank available water during wet years; and

WHEREAS, the United States Bureau of Reclamation is currently soliciting proposals for grant funding assistance under their *WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year 2022* (Funding Opportunity No BOR-DO-20-F002); and

WHEREAS, District staff has formulated a grant proposal to construct 75-acre spreading facility and conveyance improvements to deliver water to the facility.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Southern San Joaquin Municipal Utility District as follows:

a. The District's Board of Directors has reviewed and supports the submission of a grant application to Reclamation entitled *Regan Groundwater Recharge Facility for Regional Drought Resiliency,*

b. The District's Manager, Roland Gross, is hereby authorized and directed to submit the grant application and is authorized to enter into an agreement with Reclamation on behalf of SSJMUD for grant funding under Reclamation's *WaterSMART Drought Response Program.*

c. The Applicant is capable of providing the amount of funding and in-kind contributions specified in the application; and

d. The Applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement.

THEREFORE, BE IT RESOLVED, the Southern San Joaquin Municipal Utility District Board of Directors have reviewed the application and support its submittal for Reclamation assisted funding. The Board of Directors approve Roland Gross, General Manager, as the official with legal authority to enter into a cooperative agreement with Reclamation and confirm that Southern San Joaquin Municipal Utility District is capable of providing the amount of funding specified in the application. Southern San Joaquin Municipal Utility District will work with Reclamation to meet established deadlines for entering into a cooperative agreement.

PASSED APPROVED AND ADOPTED on this 8th day of September, 2021 by the following vote:

AYES:	Dulcich, Morris, Regan.
NOES:	None.
ABSENT:	Fisher, Morris.
ABSTAINED:	None.

SOUTHERN SAN JOAQUIN MUNICIPAL UTILITY DISTRICT

Roland Gross, Secretary

8. Unique Entity Identifier and System of Award Management

All applicants are required to be registered in the System for Award Management (SAM) before submitting its application; provide a valid unique entity identifier in its application; and continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal agency.

The District is providing a screenshot (below) of their account as sufficient verification of an open and active System of Award Management (SAM) account.

In addition, the District maintains an open and active Automated System Application for payment (ASAP) account.

SOUTHERN SAN JOAQUIN MUNICIPLE UTILITY DISTRICT

DUNS Unique Entity ID
961717782

SAM Unique Entity ID
G55HFMKMN411

CAGE/NCAGE
5FU13

Physical Address
11281 Garzoli AVE
Delano, California
93215-9302, United States

Expiration Date | *Registration Status*
Feb 17, 2022 | Active

Purpose of Registration
Federal Assistance Awards Only

Mailing Address
P. O. Box 279
Delano, California
93216-0279, United States

*The DUNS number is currently the official Unique Entity ID

Appendix A

Appendix A- Drought Planning Documents

- Draft of Poso Creek Drought Contingency Plan