WaterSMART Drought Response Program

Funding Opportunity No. R22AS00020

Delano-Earlimart Irrigation District

Turnipseed Water Bank Phase VI

Project Location
Delano-Earlimart Irrigation District,
Tulare County
of the Southern San Joaquin Valley, CA

Applicant
Delano-Earlimart Irrigation District
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1.1 Executive Summary

Delano-Earlimart Irrigation District (District or DEID) proposes a cost-shared project with the U.S. Bureau of Reclamation (Reclamation or USBR). The Turnipseed Water Bank Phase VI (Project) proposes drought resiliency for in-District and external users through the implementation of an in-District recharge and recovery project that consists of 148 acres of spreading grounds as well as construction of three monitoring wells. Implementation of the Project will allow the District to store or bank water in the facilities through recharge during wet years and subsequent return during dry or drought years. Benefits of the Project primarily consist of banking wet year supplies to primarily be used by District landowners and/or banking partners, which may consist of users outside of the District's boundaries. For drought resiliency, this Project provides the District with additional recharge capacity for surface water storage and recovery to mitigate the effect of water shortages during dry or drought years. Total project costs equate to **$4,094,066**, with **$2,000,000** requested as Federal funding.

Table 1-1. Project and Applicant Information

Project Information	
Date	October 5, 2021
Project Name	Turnipseed Water Bank Phase VI
Estimated Construction	07/01/2022 to 06/30/2023
Expected Project Completion	32 to 36 months (December 2023)
Near a Federal Facility?	Yes
Applicant Information	
Name	Eric R. Quinley
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City, County, State	Delano, Tulare County, California
Applicant Category	Category A

As a participant of the Poso Creek Integrated Regional Water Management (IRWM) Group, DEID continues to participate in the Group's regional goal to improve absorptive capacity of available surface water supplies in their respective conjunctive use facilities. Implementation of this project is part of IRWM and DEID's long-term plan to develop interregional and district level projects to support water supply reliability and resiliency in the region. Additionally, the District has developed a Groundwater Sustainability Plan (GSP) in compliance with California's Sustainable Groundwater Management Act (SGMA) to assess groundwater conditions and supply vulnerability to achieve groundwater sustainability by 2040. Implementation of the proposed Project will further support SGMA efforts as it is a project/management action listed under the

District's GSP to support sustainability in the basin. Thus, implementation of this project collaboratively supports the District, the Poso Creek IRWM and, and SGMA implementation.

Qualitative benefits of this project include adding recharge capacity that will help mitigate drought vulnerabilities in the region and assist in maintaining groundwater levels under SGMA and other parallel planning efforts. The proposed spreading facility will recharge approximately 43,157 acre-feet (AF) of surface water over 10 years. The proposed Project and associated benefits are classified under *Task A – Increasing the Reliability of Water Supplies through Infrastructure Improvements* and *Task B – Projects to Improve Water Management through Decision Support Tools, Modeling, and Measurement*. Constructing recharge facilities improves the District's ability to recharge water year-round during wet years for later recovery during dry or drought years when surface water is limited or unavailable. Implementation of monitoring wells will allow the District to better manage and monitor water levels as well as water quality in the recharge facilities. This Project is estimated to provide the following annual and 10-year estimated benefits.

Table 1-2. Estimated Benefits

	Estimate Annual Benefits (AFY)	10-Year Benefits (AF)
Est. Additional Water/ Water Better managed	4,315	43,157
Total Additional Water Available	**4,315**	**43,157**

DEID was established in 1938 as a public agency and later signed its original water service contract for the supply of surface water from the Friant Division of the Central Valley Project (CVP) with the USBR in 1951. The District encompasses approximately 56,500 acres. As of 2018, DEID's records show over 90 percent of the irrigated lands in the District consisting of permanent crops, which primarily include grapes, almonds, pistachios, and oranges. The following sections provide background on the proposed Project by reviewing District water supplies and uses as well as its water delivery system. All figures referenced in the Technical Proposal are included following Section 1.5.6.

Primary Water Supplies and Sources: DEID's primary source of surface water is from the Friant Division of the CVP, which conveys snowmelt and rain runoff diverted at Friant Dam, which impounds Millerton Lake. From Friant Dam water travels up to 120 miles down the Friant-Kern Canal (FKC) to the District's distribution pipelines. This surface water is diverted to landowners through approximately 172 miles of distribution pipelines, 527 metered irrigation turnouts, and 79 smaller metered deliveries to municipal and industrial water users. Currently, the District provides more than 99 percent of its water supply for irrigation purposes and less than 1 percent (300 AF annually) for municipal and industrial uses. Additionally, landowners in the District utilize wells to extract underlying groundwater resources to meet water demands during dry years when surface water supplies are inadequate. Landowners in the District continue to own and operate groundwater production facilities aside from the District. 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. However, the District contracts with a consultant to collect, tabulate, and report on crop evapotranspiration demand for every parcel in the District. With this evapotranspiration information and the District's records related to surface water deliveries, the District is able to calculate the volume of groundwater that is pumped and consumed by District landowners.

DEID historically accomplished direct water recharge during surplus water years through operating a small 5-acre recharge basin near the District's headquarters and later through the larger Turnipseed Water Banking Project's numerous phases of development. The Turnipseed Water Banking Project began in 1993, with the purchase of an 80-acre parcel centrally located in the District and immediately adjacent to White River. This site, Phase I, was then developed into a recharge basin with water introduced through either the DEID distribution system or from diversions of CVP water from the FKC using White River. In 2007, DEID installed an initial recovery well. Phase II of the Turnipseed Water Banking Project began in 2009 with the purchase of the 80-acre parcel immediately south and adjacent to the Phase I site. An additional 4 recovery wells were installed on the Phase II site later in the same year. Phase III began in 2018 with the purchase of a 320 acre-site near Phases 1 and II and immediately adjacent to one of the mainlines within the District's distribution system. Phase III was completed in February of 2021 bringing the District's internal banking footprint to 480 acres. Expansion of the Turnipseed Water Banking project continues with Phases IV and V which are currently under construction and in the design phase, respectively. Phase VI is the latest addition to the Turnipseed Water Banking Project and, along with Phases IV and V, will bring the District's internal banking footprint to 944 acres. See Figure 1 for a map of the various phases of DEID's Turnipseed Water Banking Project.

In total, the District is contracted to receive up to 183,300 AF of water annually; however, the District is only allocated a small percentage, and in two cases 0 percent, of this water during dry or drought years. For example, DEID delivered 32,424 AF and 16,886 AF to District growers in 2014 and 2015, respectively, after receiving 0 percent allocations from Reclamation in both years. Deliveries made during those years were comprised primarily of water that was previously banked, water under exchange agreements, or purchased on the spot market. Conversely, the District received a 100 percent allocation from Reclamation in 2017 which, in combination with District purchases of water on the spot market, allowed for irrigation deliveries of 124,054 AF and an additional 85,341 AF deposit into internal and external water banks. The external banking agreements in which the District participates carry losses of up to 50 percent. As such, significant efficiencies can be realized by increasing the District's internal banking capacity and reducing external banking losses which will lead to an increase in stored water available in the basin for use by District landowners in dry years.

Furthermore, Millerton Lake runoff data from Reclamation (Figure 2) show that dry years are increasing in both frequency and severity, which forces District landowners to rely more heavily on groundwater resources to augment meager surface water supplies. These data also illustrate the critical importance of capitalizing on wet years, which have become rarer and possibly wetter in the last 30 years. The proposed recharge facility is the latest phase in the District's ongoing to effort to capture surplus surface water available during these increasingly rare wet years. While

the extreme wet year opportunities are sometimes rare, the available water can be substantial and building the infrastructure to capitalize on these opportunities is critically important to maintaining a sustainable water balance. Maintaining a sustainable water balance is at the heart of the continued economic viability of agriculture in the District and the Southern San Joaquin Valley.

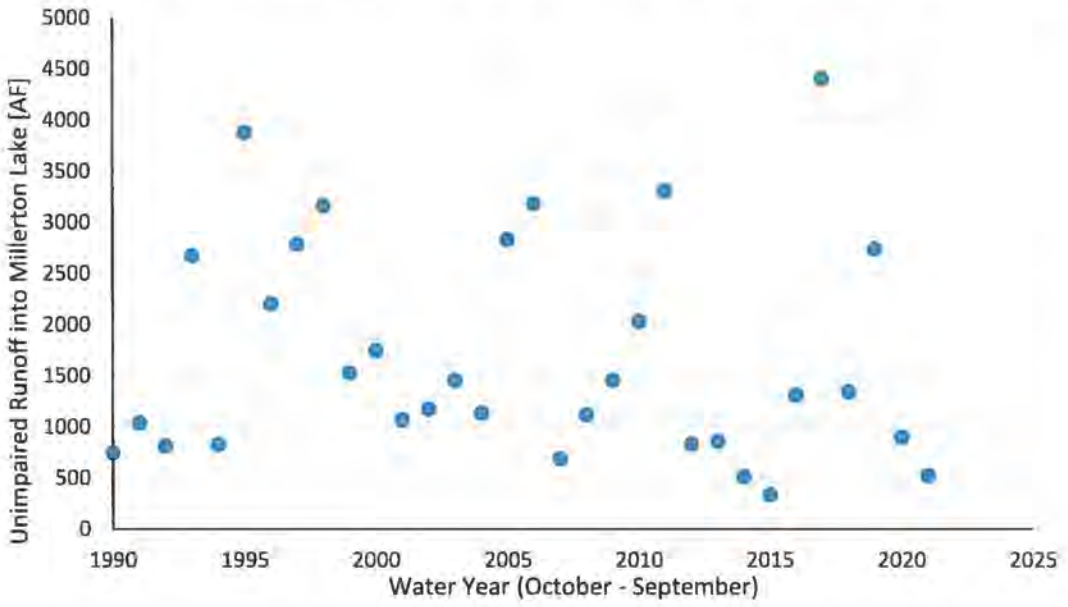


Figure 2: Historical Snow Melt and Rain Run-off into Millerton Lake

[1]This water is made available to contractors in the Friant Division of the CVP through the Friant Kern Canal (FKC). While the average runoff over the last 30 years has been largely constant, this is only due to a few exceptionally wet years. As the trend toward majority dry and minority wet continues to mature, increasing in-district storage capacity will be critical to insulating growers from the effect of varying surface water supplies.

DEID 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 (DEID GWMP, 2007).

Water Usage: Water delivered within the District is primarily used for irrigation purposes. The annual demand is approximately 122,000 acre-feet per year (AFY) and is met through use of surface water, water recovered from banking projects, native groundwater supplies, and precipitation.

1.2 Project Location

The proposed Project is within the District boundaries located in the southern portion of Tulare County in the Southern San Joaquin Valley of California as shown in Figure 3 and 4. The District's northern most boundary is Avenue 72, eastern-most boundary is California Highway 65, southern-most is Woollomes Avenue, and the eastern-most boundary is Avenue 128. The proposed project site is located at approximately 35°51'34.02"N, 119°12'6.25"W.

1.3 Technical Project Description

The proposed Project is to construct a 148-acre spreading facility within the District's boundaries for the purpose of recharging wet-year surface water supplies for later recovery through existing nearby landowner wells. Historic operations data from Turnipseed Phases 1- II (1993 – present) indicate that wet recharge activities will take place approximately six months out of the year when water is available. The primary function of the Project is to deliver wet-year supplies, available to the District via the FKC, through an existing 48-inch District pipeline to the new spreading facilities. Once the water is introduced to the Project's new spreading facilities, water will percolate into the underground aquifer, with subsequent recovery by District landowners through existing landowner wells. For project benefits, see discussion in Section 1.5.1.

By implementing this Project, drought resiliency within the District is expected to improve as increased recharge capacity will increase ability to respond to dry years or drought conditions. Providing added recharge capacity will improve drought resilience by allowing the District to capture and store wet year supplies that are later recovered and used to meet in-District demand and offset surface water supply shortages. Additionally, water supplies may be available for external Banking Partners to support regional drought resiliency.

Existing Water Management and Exchange Programs: DEID has and continues to implement water management and exchange programs throughout the District and the region to increase absorptive capacity and the ability to optimize water supplies brought into the District. Additionally, the District continues to expand and manage its conjunctive use facility through the construction and implementation of additional spreading facilities, recovery wells, and conveyance systems to actively increase drought resiliency in the region. As previously discussed, DEID has an established groundwater banking and recovery program to increase available groundwater storage and optimization of wet-year supplies.

Expansion of Water Management and Exchange Programs: As previously discussed, DEID is actively participating in multiple water management and exchange programs. As a member of the Poso Creek IRWM, planning activities are developed and implemented to increase conjunctive use management of the region and optimize the exchange of capture surface water to mitigate the effects of surface water shortages during dry or drought years. Additionally, under SGMA the District is actively implementing project and management actions listed in their GSP to support the expansion of its groundwater banking and recovery program to maintain groundwater levels and support long-term drought resiliency. Project and management actions under the GSP include projects pertaining to recharge activities, conveyance infrastructure, and increasing out of district banking operations. Thus, implementation of the proposed Project will support planning efforts of both IRWM and SGMA.

1.4 Performance Measures

Project performance will be measured by the quantity of water conveyed to the recharge basins. Additionally, the proposed monitoring wells will allow the District to measure and maintain water

quality and levels in the proposed Project location. The main purpose of the additional recharge facilities is to allow for the District to maintain a water balance, which allows agriculture to continue to be an economically viable practice in the region. As previously discussed, DEID is currently in the process of implementing their GSP developed under SGMA. One of the requirements of SGMA is the maintenance of groundwater levels to prevent a chronic decline of groundwater levels beyond a minimum threshold, which are values set by the District to prevent overuse or depletion of groundwater. Water brought into the basin will be monitored and accounted for in the District's water budget under SGMA, which will then be used to appropriately allocate water throughout the District while preserving groundwater levels. Coupled with the long-term storage capacity building benefit of this Project, the District will improve drought resiliency.

1.5 Evaluation Criteria

1.5.1 *Evaluation Criterion A: Project Benefits*

How will the project build long-term resilience to drought? The Project will build long-term resilience to drought by enhancing the reliability of surface water supplies delivered to the District. Since DEID engages in banking agreements with neighboring water districts as part of the Poso Creek IRWM Group, implementation of this project will further improve drought resiliency for the entire Region. This is done by supporting the regional effort to expand recharge and recovery capacity to allow for the capture of surplus or wet year supplies for use in dry or drought years when surface water supplies are limited. The District is uniquely placed upstream of all the banking partners within the Poso Creek Region, allowing for easy conveyance of recovered banked water downstream. Therefore, not only will this project contribute to drought resiliency within the District boundaries, but also provides the opportunity to extend its benefits to external partners and enhancing regional conjunctive water use goals and quality of water supply. The constructed Project will be a permanent addition to the District's existing infrastructure; however, for the purposes of this application the project lifespan is estimated to be 50 years.

Will the project make additional water supplies available? The proposed 148-acre spreading facility is anticipated to recharge available surplus water supplies at a rate of 0.45 acre-feet per day (AFD) at a frequency of 4 out of 10 years. This results in an estimated recharge rate of 1,998 AF/month (148 Acres x 0.45 ft/day x 30 days/month). The estimated monthly rate translates to an additional annual capacity of 11,988 AFY (1,998 AF/month x 6 months/per year), which assumes that the facility receives water for a duration of 6 months in an average wet year frequency of 4 out of 10 years. The annual average also accounts for an estimated 10 percent loss from evaporation and horizontal seepage loss. Given that wet years occur at a frequency of 4 out of 10 years, this project would yield an average of **4,315 AFY** (11,988 AFY x 4/10 years x 10-percent loss). Over a 10-year period, the implemented Project would yield approximately 43,157 AF of water. The additional supply represents approximately 2.4 percent of the District's total allocated water supply of 183,000 AFY (4,315 AFY/183,000 AFY).

Will the project improve the management of water supplies? Water better managed is

equivalent to water savings calculated in the previous section. Captured wet year water will be recharged and later returned to better manage during dry years. Use of returned wet year water will reduce over pumping of landowner wells which in turn will reduce pumping costs and mitigate other impacts of drought such as lowering of groundwater levels. These benefits could extend to banking partners as well who may have the ability to recover water and reduce over pumping of groundwater. The 148-acre recharge site will better manage water in the amount equivalent to water savings, which is approximately **4,315 AFY** that will benefit the District and the surrounding Poso Creek IRWM Region who would benefit from increased water levels in the underlying shared basin.

Will the project make new information available to water managers? The Project adds recharge capacity for the District and/or its banking partners by providing the ability to capture wet year water for later return in dry or drought years when shortages occur. Increased capacity for recharge allows the District to capitalize on available wet year supplies in excess of instantaneous grower demand, allowing for these volumes to be returned to growers during dry years. Added capacity will also allow for greater flexibility in meeting in-district needs of landowners and at the same time the provides the opportunity to meet the needs of neighboring banking partners. Additionally, implementation of the three monitoring wells will provide data related to water elevations, both static and seasonally variable data, as well as water quality data. These data points can be used to support implementation of SGMA which requires monitoring to prevent lowering of groundwater levels and degradation of water quality. Data can also be used by landowners and other stakeholders in support of the Irrigated Lands Regulatory Program (ILRP), a program developed and overseen by the California Regional Water Quality Control Board for the purpose of regulating discharges to surface water and groundwater. A letter of support is provided in Appendix A, addressing the need for this project within the Poso Creek IRWM Region to build drought resiliency for all members. Data collected pertaining to the volume of recharged water will be made available to water managers who participate in banking activities with the District.

1.5.2 *Evaluation Criterion B: Sustainability and Supplemental Benefits*

Climate Change: Since DEID's main source of surface water is the CVP, availability is largely dictated by changes in the volume and timing of flow of the San Joaquin River. With changing climate, future surface water supplies are expected to become more infrequent and limited. These constraints on are already being felt with changes in the timing of delivery and conveyance constraints on the FKC caused by the San Joaquin Settlement Act, as well as subsidence in the FKC caused by overdraft of groundwater supplies. By the mid-to late-21st century, California's climate is expected to warm approximately 2 to 4° C and become 10 to 15 percent drier according to USGS California Water Science Center. These effects have already materialized in a recent severe drought when DEID had two years where they received 0 percent CVP allocations. With the more frequent and severe droughts due to climate change, CVP supplies are expected to become much less reliable increasing the importance of enhancing the conjunctive use facilities within the District. With reduced surface water imports and drier climates, agriculture becomes

more dependent on groundwater which could negatively impact the basin by reducing baseflow in streams, reducing groundwater outflows, increasing depths to groundwater, and increasing land subsidence.

Does the proposed project include green or sustainable infrastructure to improve community climate resilience such as, but not limited to, reducing the urban heat island effect, lowering building energy demands, or reducing the energy needed to manage water? Implementation of this project will provide capacity to recharge surface water and maintain groundwater levels in the region. Maintaining groundwater levels is crucial as it reduces the energy required to pump water during dry or drought years when water levels are at risk for lowering. As previously discussed, groundwater pumping is the primary method of irrigation or water delivery in the region. Water recharged during wet years is later recovered through groundwater wells to meet demand. Without this Project, the District will not be able to increase absorptive capacity that is needed to maintain groundwater levels. In turn, this will require more energy to pump groundwater from lower depths.

Disadvantaged or Underserved Communities: There are multiples disadvantaged communities (DACs) in the region that solely rely on the use of groundwater for drinking water purposes. During dry or drought years, water levels often decrease putting community drinking water wells at risk of failure. The proposed project will benefit the DACs by helping to achieve and maintain sustainable water levels in the shared aquifer. By building capacity to capture wet year water, the District can support sustainable groundwater levels that DACs directly rely on to supply water to their drinking water wells in the region. Implementation of this Project will ensure more water is available in the aquifer to help maintain groundwater levels, which could lead to less failures in the surrounding DACs.

Does the proposed project contribute to climate change resiliency in other ways not described above? As previously stated, surface water allocations are expected to reduce with increasing climate change. As part of the Poso Creek DCP, drought monitoring has been developed using surface water projections as indicators of drought, which include CVP for DEID. With climate change, droughts are expected to occur more frequently, limiting the precipitation and snowmelt runoff that supply Millerton Lake and reducing CVP allocations relied on by the District. As a result, droughts will be experienced more severely in the Southern San Joaquin Valley where surface water is crucial for maintain groundwater levels and supplying water for agricultural, industrial, and municipal uses. In turn, the District must adapt to changes in climate by building up recharge capacity to capitalize on and capture wet year or excess surface water supplies.

1.5.3 *Evaluation Criterion C: Drought Planning and Preparedness*

In partnership with the other members of the Poso Creek IRWM Group (Group), the District has developed and submitted a Drought Contingency Plan (DCP) under the direction of USBR to prepare for and better manage dry or drought periods with the goal of achieving regional drought resiliency. The DCP is currently under review by USBR and is expected to be adopted and

incorporated into the IRWM Plan by the end of 2021. Along with DEID, various stakeholders throughout the region came together to form a Task Force for the sole purpose of developing and implementing the DCP through a collaborative process. In direct support of this effort, Delano-Earlimart has provided information on in-district drought vulnerability as well as included mitigation and response actions in the DCP specific to the District. With drought, the District is vulnerable to potential reductions in imported surface water supplies and/or potential reductions in groundwater levels. To proactively address these vulnerabilities, the District has developed dry and wet year response actions for immediate and long-term drought relief. These actions include recovering wet year water and pumping of District and grower owned wells. These response actions are made possible through the implementation of developed District mitigation actions such as adding absorptive capacity through the construction of recharge facilities like the proposed Project. This Project is directly supported by the DCP as it is listed as a mitigation action to offset the long-term effects of drought.

The developed DCP is complementary to existing drought planning efforts in the Poso Creek IRWM Region such as the IRWM Plan as well as the District's GSP developed in compliance with California's SGMA. Elements of the IRWM Plan such as the climate change assessment and projects were utilized to develop the vulnerability analysis and mitigation actions outlined in the DCP. GSP analysis of past and projected drought conditions to set minimum thresholds and measurable objectives developed to manage groundwater sustainability levels provided the basis for drought monitoring outlined in the DCP. Delano-Earlimart has been committed to building drought resiliency for years, which has been documented over the last decade through existing planning documents that have been compiled into an official DCP. The Draft DCP has been included as Appendix B for reference.

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 if no action is taken and, how severe are those impacts? If the proposed Project is not implemented, there will be no increased in Delano-Earlimart's capacity to absorb wet year or surplus water. Increasing the District's absorptive capacity is critical in their goal to build long-term drought resiliency within the district as well as the Poso Creek IRWM Region. During dry or drought years, landowners and the District's banking partners rely on the recovery of previously banked water to support the agricultural and industrial activity.

Additionally, recharge activities also benefit rural communities within the District that rely solely on groundwater for drinking water supplies. While this benefit is indirect, added recharge capacity helps maintain the water levels and water quality for the overall underlying basin that community wells directly draw from. If climate change results in reduction in available surface water supplies, increased groundwater pumping by beneficial users including agricultural, municipal, and other users could lead to groundwater overdraft that may have negative impacts such as dewatering of wells, which can be costly for both the District and communities. Implementation of this project

will support the goal of maintaining groundwater sustainability through the construction of recharge facilities that benefit all beneficial users, including municipal.

Whether there are public health or social concerns associated with current or potential drought. As previously stated, there are multiple disadvantaged communities (DACs) within the District that rely solely on groundwater. These DACs often lack technical, managerial, and financial resources to maintain their water systems during dry or drought periods. Implementation of this project is part of efforts of the Poso Creek IRWM Group to create projects and programs that benefit the underlying groundwater basin, a shared basin that benefits all users. During drought periods, DACs are often susceptible to well dewatering or over pumping leading to increased pumping costs. These issues can disrupt service and be costly to mitigate. Thus, implementation of this project works to prevent and mitigate these possibilities by providing additional absorptive capacity that helps supply firm capacity and water quality through groundwater wells to DACs within the District.

Whether there are ongoing or potential environmental impacts. There are no impacts related to endangered or threatened species in the District's service area or facilities. The proposed Project site is located on previously disturbed agricultural land which is regularly maintained, disked, cleared, and grubbed. Phase I Environmental as well as a biological survey of the sire has already been completed with no findings to indicate environmental impacts. Implementation of this Project helps with flexibility of water supplies within the region. Since the District gave up a portion of its contracted water supplies for restoration of the endangered salmon species in the San Joaquin River, they have become more reliant on wet year supplies. The relinquished contracted water is now used by the San Joaquin River Restoration Program, a Reclamation operated program to restore the southernmost salmon run in the United States. There are three primary endangered species known to live within the District's boundaries, per the federally recognized candidate listing, are the San Joaquin Kit Fox, Tipton Kangaroo Rat, and the San Joaquin Wooly-Threads. The proposed Project is not expected to lessen or improve the status of these species.

Whether there are local or economic losses associated with current drought conditions. Water use within the District is primarily used for agricultural purposes followed by industrial/commercial and domestic uses. Since the agricultural industry is a major supporter of the economic viability of the region, it is important for the District to expand and maintain their conjunctive uses of surface water and groundwater supplies. As such, having the ability to replenish the basin with wet year or excess surface water means the ability to increase water supply available during dry or drought periods. Lack of surface water supplies reduces the District's ability to supply water to users which could lead to increased costs of agricultural production; increased fallowing and decrease in crop production; decreased agricultural employment; and significant other economic losses. As droughts become more and more frequent, it is increasingly more important to construct and implement projects that support the conjunctive use management within the District.

As previously discussed, there are multiple DACs in the region that rely on groundwater as their

sole source of drinking water. During drought periods when water levels decrease, these communities are susceptible to adverse effects of drought such as decrease in groundwater levels which could lead to well failures. Often, well replacements are cost-prohibitive for these small communities who lack the technical, managerial, and financial capacity to provide long-term, sustainable solutions, let alone emergency solutions. In these situations, the affordability of the water system is usually compromised due to rate increases to provide funds to implement emergency projects. Unlike larger systems that have a greater customer rate base to support large reserve funds that can be used in drought emergencies, these systems rely on a smaller population causing rates to be higher and often unaffordable. Implementation of this Project will ensure more water is available in the aquifer to help maintain groundwater levels, which could lead to less failures in the surrounding community water systems and help maintain system affordability.

Whether there are other drought-related impacts not identified above, including tensions over water that could result in a water-related crisis or conflict. Since the adoption of SGMA in 2014, the District has developed and began implementing a GSP as part of the Tulare Subbasin, a Priority 1, critically overdrafted basin. SGMA was developed in response to drought related impacts and has led to tensions over water usage and supply that could result in a water-related conflict. Droughts have led to a decrease in the amount of surface water supplies the District receives which in turn has led to reliance on groundwater pumping. To combat this issue and comply with SGMA, the District plans to implement this Project, as listed in their GSP Project and Management Actions.

Describe existing or potential drought conditions in the project area. According to the U.S. Drought Monitor, sponsored by the U.S. Department of Agriculture and the National Drought Mitigation Center, DEID is experiencing "Exceptional Drought (D4)". Due to the recent drought conditions, surface water has been limited to users in the region which has resulted in land fallowing due to inadequate water supply. The latest release of this information was September 26, 2021. On May 10, 2021, the California Governor also issued a proclamation of a state of emergency declaring drought in over 41 California counties, including Tulare County with which the proposed Project resides. Counties are experiencing severe drought conditions and state agencies are being directed to take immediate action to preserve critical water supplies. Efforts are being focused toward mitigating the effects of the 2021 drought to ensure the protection of health, safety, and the environment. With the drought expecting to extend through the next few years, implementation of this Project is crucial for capturing any wet year water that may become available to mitigate drought affects during dry periods when surface water is limited.

Describe any projected increases to the severity or duration of drought in the project area resulting from climate change. The District, along with other members of the Poso Creek IRWM Group, conducted a climate change assessment under the recent IRWM Plan Update. The expected changes in the region because of climate change include reductions of imported surface water supplies which could lead to decreased ability to replenish groundwater, land following, and other changes that could affect the economic viability of the region. Additionally, future water supply/demand was assessed under SGMA, considering potential effects of climate change. With

droughts becoming more and more frequent, surface water allocations are at risk of decreasing as supply decreases. In turn, increased irrigation demands with reduced surface water deliveries would be met with groundwater pumping. This would likely lead to over pumping, increased depths to water, and increased land subsidence.

1.5.5 *Evaluation Criterion E: Project Implementation*

Based on the tasks listed in Section 1.3.1, the schedule for this Project is shown in Figure 3. Construction of the project is expected to occur in 2023, with an anticipated completion date of late 2023. For the purposes of this proposal, the start date of the grant contract was assumed as April 1, 2022, which is the assumed date of the signed grant agreement. The Project is not expected to deviate from Reclamation's proposed schedule of a construction start date of July 1, 2022, and completion within the 36-month project duration. Construction will not start until after the District receives a notice to proceed from Reclamation's grant officer confirming the completion of the environmental review and the construction component has completed the bid process.

Table 1-3. Project Schedule

Milestone	Estimated Start Date	Estimated Finish Date
Grant Administration	04/01/2022	12/31/2023
Project Reporting	04/01/2022	12/31/2023
Design and Project Layout	07/01/2021	11/30/2021
Environmental Documentation & Regulatory Compliance	07/01/2021	06/30/2022
Permits & Approval	02/01/2022	03/31/2022
Construction	07/01/2022	02/28/2023
Construction Administration & Management	07/01/2022	06/30/2023

DEID will own, operate, and maintain the Project for the benefit of its landowners. During project development, the District will work closely with consultants, contractors, and vendors to implement each component. As previously mentioned, the District has completed several previous project phases and has a good understanding for successful implementation of the Project.

Describe the implementation plan of the proposed project. Overall project and task schedule are presented in Table 1-3. Since the project will be implemented regardless of grant funding, most of the project tasks will start prior to formal award or entering into an agreement. In this regard, some of the tasks are underway. Construction will be delayed pending a grant award, to coincide with the completion of environmental compliance work. Accordingly, the schedule has been prepared to reflect this. Anticipated completion date would be mid-2023. For the purposes of this proposal, the start date of the grant contract was assumed as April 1, 2022. All Project work is expected to be completed by December 2023. The following is a description of tasks to be completed under the proposed Project.

- **Grant Administration**– Coordination of all Project activities, including budget, schedule, communication, and grant and cost-share administration.

- **Project 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 DEID and Reclamation.

- **Design and Project Layout**– Design is expected to be similar to previous phases of the proposed Project. Preliminary design items will be completed following land purchase and selection of the three monitoring well locations including the following supporting work: geotechnical investigation, topographical survey, and basis of design (BOD) report. The BOD will provide the overall project concept for use in development of final design, plans and specifications including preliminary earthwork calculations, preliminary design details for tank foundation, preliminary design details for 100percent (Final) design, plans, and specifications.

- **Environmental Documentation and Regulatory Compliance** – The project will require compliance with both the California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA). For the NEPA environmental compliance work, DEID proposes to work with the NEPA Reclamation team to determine what level of NEPA is required, including a Categorical Exclusion Checklist or an Environmental Assessment Document. For both efforts, DEID will retain a consultant to help prepare the appropriate document, including conducting cultural and biological surveys to support the CEQA and NEPA document. Prior to commencing earth-disturbing activities, DEID will complete pre-activity biological surveys by a qualified biologist and participate in an Awareness Program that describes habitats within the project area. The District understands that no ground-disturbing work can take place prior to completed environmental documentation compliance and a Notice to Proceed from Reclamation.

- **Permits & Approval** – The Project will be located exclusively within DEID: therefore, NPDES permitting, and the preparation of a Stormwater Pollution Prevention Plan will be required. A pre-activity survey will be ordered and conducted by a qualified biologist shortly before the start of construction; this includes, but is not limited to, protocol-level surveys for the San Joaquin Kit Fox, Western Burrowing Owl, and Tipton Kangaroo Rat. 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.

- **Construction** – The proposed Project includes several construction components that can be contracted within one overall construction contract, including equipment mobilization, earthwork for excavation of recharge/regulation basins and construction of basin perimeter berms of no greater than six feet in external height. Construction activities include mobilization and demobilization; site preparation; and construction and excavation.

- **Construction Administration and Management** – The District will be performing all construction administration and management for all components of the projects.

  Construction Administration involves everything from the solicitation of bids from pre-selected, qualified contractors to filing a Notice of Completion for the Project works and preparation of "As-Builts" drawings. Construction management activities can generally be categorized as field observation and contract administration, where the latter includes items such as the Notice to Proceed, pre-construction conference, correspondence with the Contractor, submittal review, progress payments, periodic meetings with the Contractor, Contract Change Orders, etc.

  The proposed Project will be implemented under the direction of DEID. District staff or consultants will conduct necessary construction management, administration, reporting, and coordination with local firms needed to comply with all grant requirements.

Describe any permits that will be required, along with the process for obtaining such permits. Since the proposed Project is located exclusively within DEID, and NPDES and preparation of a Stormwater Pollution Prevention Plan will be required. It is noted that the District is not subject to Country or City jurisdiction regarding building and grading permits related to water resources projects. DEID will comply with CEQA and NEPA before commencing any ground disturbing activities, as discussed further in Section 4.0. Additionally, a pre-activity survey will be conducted by a qualified biologist prior to the start of construction.

Describe any engineering or design work performed specifically in support of the proposed project. Project design is based upon previously completed phases of the Turnipseed Basin Expansion Project within the District and is currently 60 percent complete with the final design expected in late 2021. A Phase I Environmental Assessment was completed.

Describe any new policies or administrative actions required to implement the project. No new policies or administrative actions will be necessary to implement the proposed Project.

1.5.6 *Evaluation Criterion F: Nexus to Reclamation*

Describe the nexus between the proposed project and a Reclamation project or activity. Proposed Project location is in the Tulare Lake Basin, which also includes Reclamation's FKC. As discussed earlier, DEID is a CVP contractor within the Friant Division holding both Class 1 and Class 2 consisting of 108,800 and 74,500 ac-ft, respectively under contract with Reclamation. The proposed Project will become a permanent part of DEID's water system infrastructure and will add capacity to recharge surplus or wet year supplies for subsequent recovery using district or grower owned wells. This project also provides the opportunity to support neighboring CVP and SWP contractors with recovery during periods of insufficient surface water. The proposed Project will not benefit any tribe, as there are no tribes near to the District with connectivity to the District's system or the Friant-Kern Canal.

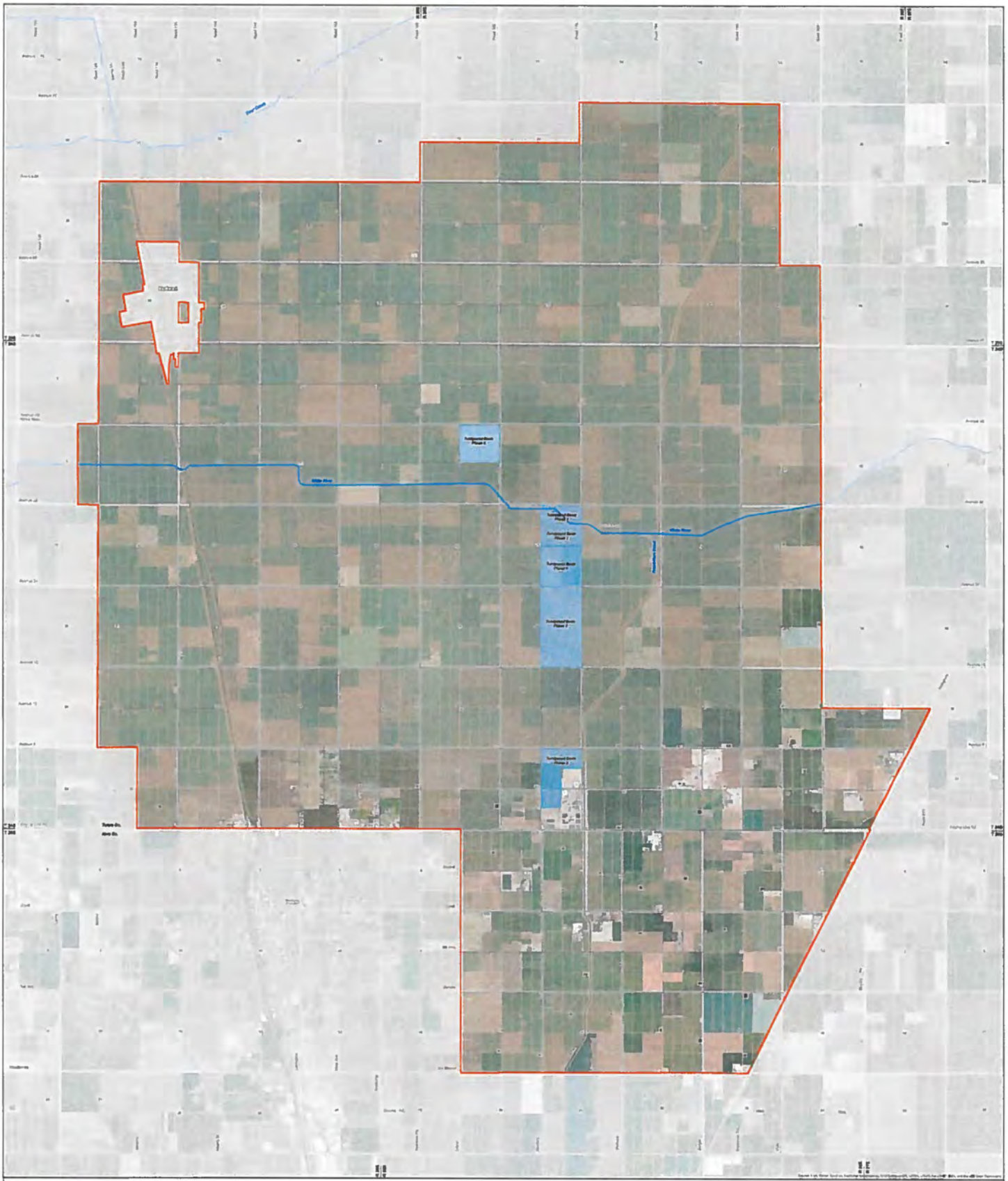
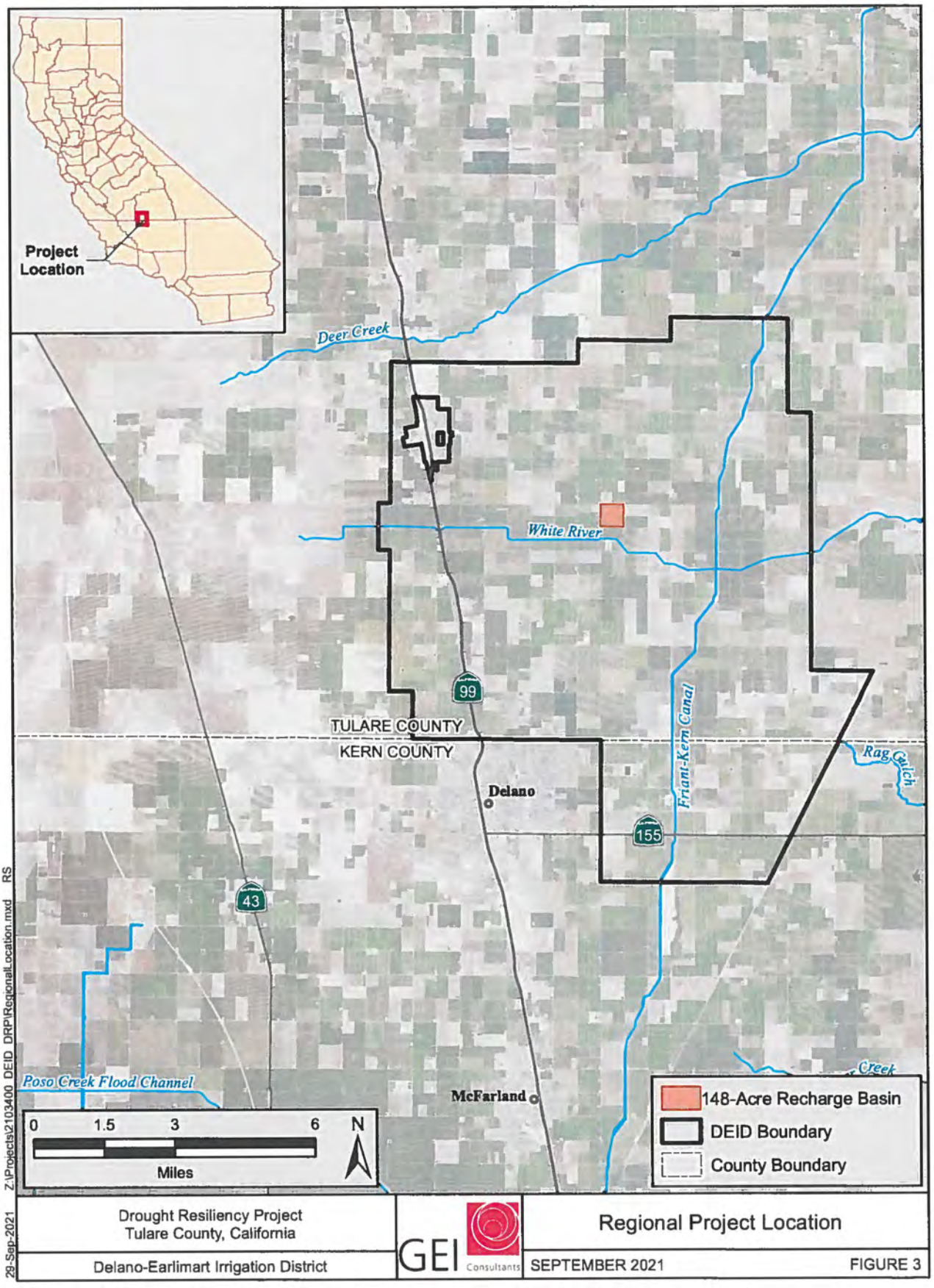

DELANO-EARLIMART IRRIGATION DISTRICT
PROVOST& PRITCHARD
0 0.25 0.5 1 Miles
0 2,000 4,000 8,000 Feet
1 inch = 2,000 feet
N
Legend
Rivers
Roads
County Boundary
Turnipseed Water Bank
DEID Boundary
Section
Delano-Earlimart Irrigation District

Figure 1


Project Location
Deer Creek
White River
TULARE COUNTY
KERN COUNTY
Delano
McFarland
Friant-Kern Canal
Rag Gulch
Poso Creek Flood Channel
99
155
43
0 1.5 3 6
Miles
N
148-Acre Recharge Basin
DEID Boundary
County Boundary
29-Sep-2021 Z:\Projects\2103400 DEID DRP\RegionalLocation.mxd RS
Drought Resiliency Project
Tulare County, California
Delano-Earlimart Irrigation District
GEI Consultants
Regional Project Location
SEPTEMBER 2021
FIGURE 3

29-Sep-2021 Z:\Projects\2103400 DEID DRP\RechargeBasin.mxd RS

Drought Resiliency Project Tulare County, California	GEI Consultants	Turnipseed Phase VI Recharge Basin
Delano-Earlimart Irrigation District	SEPTEMBER 2021	FIGURE 4

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.

Delano-Earlimart Irrigation District has identified the need to designate monetary funds from their District capital improvement, reserve, or revenue account. The District has identified the Capital Improvement and Reserve Funds for 2022 and into 2023 to be utilized to meet the cost obligations for the implementation for the project.

Any third-party in-kind costs (i.e., goods and services provided by a third party).

No third-party in-kind costs.

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 funding 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.

Pre-award costs may be incurred prior to a fully executed agreement. This could include costs for environmental documentation, permitting, and other efforts in preparation for construction of the Project.

2.2 Budget Proposal

The estimated total cost for the Project is $4,094,066, with $2,000,000 in requested Federal funding and $2,094,066 in Applicant provided cost share. A summary of the estimated total cost is shown in Table 2-1. A summary of funding sources is shown in Table 2-2. The Budget Proposal, by budget category, is show in Table 2-3. Task level budgets for tasks discussed in the Project Implementation section are presented in Tables 2-4 through 2-10.

Table 2-1. Total Project Cost Summary

Source	Amount
Costs to be reimbursed with the requested Federal funding	$ 2,000,000.00
Costs to be paid by the applicant	$ 2,094,066.00
Value of third-party contributions	$ -
Total Project Cost	**$ 4,094,066.00**

Table 2-2. Funding Sources Summary

Funding Sources	Amount
Non-Federal Entities	
1. Applicant	$ 2,094,066.00
2. N/A	$ -
Non-Federal Subtotal	
Requested Reclamation Funding	**$ 2,000,000.00**

Table 2-3. Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				**$0.00**
FRINGE BENEFITS				**$0.00**
TRAVEL				
Mileage (Rounded)	$0.56	18720	Miles	**$10,000.00**
EQUIPMENT				**$0.00**
MATERIALS AND SUPPLIES				**$0.00**
CONTRACTUAL/CONSTRUCTION				
Contract 1 - Grant Administration Consultant				
Administrator	$114.00	60	HR	$6,840.00
Grade 3	$153.00	42	HR	$6,426.00
Grade 5	$203.00	20	HR	$4,060.00
Grade 7	$274.00	10	HR	$2,740.00
Subtotal				**$20,066.00**
Contract 2 - Engineering Consultant	Appendix C-2			
Principal Engineer I	$190.00	224	HR	$42,560.00
Senior Engineer IV	$174.00	180	HR	$31,320.00
Associate Engineer IV	$142.00	580	HR	$82,360.00
Assistant Engineer V	$120.00	452	HR	$54,240.00
Senior Technician III	$150.00	220	HR	$33,000.00
Project Administrator IV	$98.00	320	HR	$31,360.00
Licensed Surveyor III	$160.00	28	HR	$4,480.00
Associate Technician IV	$119.00	18	HR	$2,142.00
2 man Survey Prevail	$285.00	76	HR	$21,660.00
Principal Planner I	$173.00	12	HR	$2,076.00
Senior Planner III	$153.00	48	HR	$7,344.00
Associate Planner IV	$130.00	90	HR	$11,700.00
Associate Biologist I	$100.00	40	HR	$4,000.00
Associate GIS Specialists III	$113.00	20	HR	$2,260.00
Principal Construction Manager IV	$205.00	570	HR	$116,850.00
Sub Consultants	$153,000.00	1	LS	$153,000.00
Fees		1	LS	$14,000.00
Subtotal (Rounded)				**$614,000.00**
Contract 3 - Construction	See Appendix C-3, Engineers Opinion of Probable Cost		LS	**$3,450,000.00**
OTHER				**$0.00**
TOTAL DIRECT COSTS				**$4,094,066.00**
INDIRECT COSTS				**$0.00**
TOTAL ESTIMATED COSTS				**$4,094,066.00**

2.3 Budget Narrative

Estimates presented in the Budget Proposal (Table 2-3) are based on an Engineer's Opinion of Probable Cost (EOPC), Engineer's Fee Estimate, and the District's and consultants' experience with prior phases of the Project and similar projects. Supporting documentation, including consultant rate sheet, EOPC, and Fee Estimate are included in (Appendix C) . It is acknowledged that, at the time of this application, construction material costs are extremely volatile due to supply chain complications and COVID-19 related impacts.

Salaries and Wages – Eric Quinley, General Manager, will serve as the Project Manager and Applicant point of contact. A District Engineer will assist Mr. Quinley with project management tasks. Salaries and Wages are not included in the Budget Proposal.

Fringe Benefits – As Salaries and Wages are not included in the Budget Proposal, neither are Fringe Benefits.

Travel – Approximately 18,720 miles have been included in the budget proposal at 56 cents per mile. Incurred mileage is anticipated to be in support of design and construction management, with the destination being the Project site. Travel costs in the Budget Proposal are limited to local travel mileage. No airfare, per diem, or lodging is included in the Budget Proposal.

Equipment – The Project will be contracted as a "furnish and install" contract with the contractor responsible for equipment. Equipment costs are not included in the Budget Proposal.

Materials and Supplies – The Project will be contracted as a "furnish and install" contract with the contractor responsible for materials and supplies. Materials and supplies costs are not included in the Budget Proposal.

Contractual/Construction – It is anticipated that three contracts will be implemented in support of the Project. The District operates with minimal operations staff; therefore, the first two contracts will be with engineering consultants: one contract for grant administration (Contract 1: Grant Administration Consultant) and another contract (Contract 2: Engineering Consultant) for grant reporting, engineering, design, environmental documentation and compliance, bidding, permitting, and construction management. Contract 2: Engineering Consultant includes expenses for permitting fees, County of Kern and Department of Fish and Wildlife filing fees, newspaper fees for bidding advertisement, and subconsultant expenses for geotechnical investigation and construction testing. Rates and estimated hours are provided in Tables 2-3, 2-4, and Appendix C-2, Fee Estimate. Estimates are based on an Engineer's Fee Estimate, the District's and consultants' experience with similar scopes of work, and the level of effort estimated at this time. Contracts will be procured in accordance with the District's purchasing policy. Estimates are provided in Tables 2-4 through 2-10 for tasks discussed in the Project Implementation section (Section 1.5.5). It is noted that consultant rates may increase each year.

The third anticipated contract will be for construction including project wide items and permits; construction of recharge basins; and construction of laterals and turnouts. The contract will be to "furnish and install"; thus, the contractor will be responsible for equipment, materials, and

supplies. The cost estimate provided in Table 2-9 is based on an Engineer's Opinion of Probable costs calculated based on experience on recent, similar projects and quotes from local vendors. The construction contract will be procured through publicly advertised solicitation of sealed bids with a contract awarded to the lowest responsible bidder as approved by the District's Board of directors.

Third-Party In-Kind Contributions – There are no Third-Party In-Kind contributions included in the Budget Proposal.

Environmental and Regulatory Compliance Costs – While not included in the Budget Proposal at this time, the District acknowledges that Reclamation may withhold part of an award for Reclamation's Environmental and Regulatory Compliance costs and intends to coordinate with Reclamation on required documentation and approvals. An estimate for consultant costs for environmental compliance and documentation is included in the Budget Proposal (Table 2-7). The District understands that no ground-disturbing work can take place prior to completed environmental documentation compliance and a Notice to Proceed from Reclamation.

Other Expenses – No other expenses are included in the Budget Proposal.

Indirect Costs – No indirect costs are included in the Budget Proposal.

Table 2-4. Grant Administration

Task 1. Grant Administration

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
				$0.00
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
EQUIPMENT				
				$0.00
MATERIALS AND SUPPLIES				
				$0.00
CONTRACTUAL/CONSTRUCTION				
Contract 1 - Grant Administration Consultant				
Administrator	$114.00	60	HR	$6,840.00
Grade 3	$153.00	42	HR	$6,426.00
Grade 5	$203.00	20	HR	$4,060.00
Grade 7	$274.00	10	HR	$2,740.00
Subtotal				**$20,066.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$20,066.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED COSTS				**$20,066.00**

Table 2-5. Grant Reporting

Task 2. Grant Reporting

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
				$0.00
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
EQUIPMENT				
				$0.00
MATERIALS AND SUPPLIES				
				$0.00
CONTRACTUAL/CONSTRUCTION				
Contract 2 - Engineering Consultant	See Appendix C-2		HR	**$20,000.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$20,000.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED COSTS				**$20,000.00**

Table 2-6. Design

Task 3. Design

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
Subtotal				**$0.00**
FRINGE BENEFITS				
Subtotal				**$0.00**
TRAVEL				
Mileage	$0.56	720	Miles	**$403.00**
EQUIPMENT				
				$0.00
MATERIALS AND SUPPLIES				
				$0.00
CONTRACTUAL/CONSTRUCTION				
Contract 2 - Engineering Consultant				
Survey	See Appendix C-2		HR	$15,000.00
Design	See Appendix C-2		HR	$115,597.00
Geotechnical Investigation Subconsultant	See Appendix C-2		LS	$43,000.00
Bidding	See Appendix C-2		HR	$28,000.00
Fees and Filing Expenses	See Appendix C-2		LS	$2,000.00
Subtotal				**$203,597.00**
OTHER				
TOTAL DIRECT COSTS				**$204,000.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED COSTS				**$204,000.00**

Table 2-7. Environmental Documentation

Task 4. Environmental Documentation

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
				$0.00
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
EQUIPMENT				
				$0.00
MATERIALS AND SUPPLIES				
				$0.00
CONTRACTUAL/CONSTRUCTION				
Environmental Documentation	See Appendix C-2		HR	**$31,000.00**
Fees (County and Dept. of Fish and Wildlife)	See Appendix C-2		LS	**$7,000.00**
OTHER				
TOTAL DIRECT COSTS				**$38,000.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED COSTS				**$38,000.00**

Table 2-8. Permits and Approvals

Task 5. Permits and Approvals

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
				$0.00
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
EQUIPMENT				
				$0.00
MATERIALS AND SUPPLIES				
				$0.00
CONTRACTUAL/CONSTRUCTION				
SWPPP/DCP Permitting	See Appendix C-2		HR	**$7,000.00**
Fees	See Appendix C-2		HR	**$5,000.00**
OTHER				
TOTAL DIRECT COSTS				**$12,000.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED COSTS				**$12,000.00**

Table 2-9. Construction

Task 6. Construction

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
				$0.00
FRINGE BENEFITS				
				$0.00
TRAVEL				
				$0.00
EQUIPMENT				
				$0.00
MATERIALS AND SUPPLIES				
				$0.00
CONTRACTUAL/CONSTRUCTION				
Contract 3 - Construction				
Construct 148-acre Basin	See Appendix C-3 for Engineer's Opinion of Costs			**$3,450,000.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$3,450,000.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED COSTS				**$3,450,000.00**

Table 2-10. Construction Administration

Task 7. Construction Administration

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
SALARIES/WAGES				
				$0.00
FRINGE BENEFITS				
				$0.00
TRAVEL				
Mileage	$0.56	18000	Miles	**$10,000.00**
EQUIPMENT				
				$0.00
MATERIALS AND SUPPLIES				
				$0.00
CONTRACTUAL/CONSTRUCTION				
Construction Oversight	See Appendix C-2		HR	**$230,000.00**
Testing Subconsultant	See Appendix C-2		LS	**$110,000.00**
OTHER				
				$0.00
TOTAL DIRECT COSTS				**$350,000.00**
INDIRECT COSTS				
No Indirect Cost				$0.00
TOTAL ESTIMATED COSTS				**$350,000.00**

3. Environmental and Cultural Resources Compliance

The following section summarizes DEID's approach to avoid, minimize, and mitigate any potential environmental impacts related to the construction of the proposed 148-acre spreading facility. The following paragraphs address the specific questions posted in the Environmental and Cultural Resources Compliance section of the NOFO.

Will the project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)?

The extent of construction activities (footprint) is relatively small for this Project and located within property owned by DEID or property that DEID would have access through via land purchase or easements. At this time, the District is not aware of any part of this Project that will have a significant impact on soil, air, water, or animal habitat, since all work will be on actively disturbed and farmed property. However, all applicable environmental compliance measures will be followed, 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 the necessary biological site surveys.

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?

No, there are no species or proposed species listed as a Federal threatened or endangered species in the project area. A biological survey has already been completed for the proposed Project site and has confirmed these findings.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?"

No.

When was the water delivery system constructed?

The District's irrigation delivery system was completed in the early 1950s. The District's irrigation delivery system is composed of a series of pumping plants and pipelines for the primary purpose of delivering water for agricultural irrigation.

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

The proposed Project will not alter any existing features of an irrigation system.

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

No.

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

No, there are no known archeological sites in the initial 148-acre project area. A cultural resources survey may need to be completed as part of the environmental evaluation of the proposed Project. Since the proposed Project is already on disturbed area, it is anticipated there will be no significant impacts to cultural resources from the Proposed Action.

If Reclamation deems necessary, the District will work with Reclamation cultural resources staff to obtain clearance for archaeological sites within the project area. The District will retain a private cultural resources management consultant or arrange for Reclamation staff to carry out a consultation to conduct a Phase I intensive pedestrian cultural resource survey, and a cultural resources records search and Native American consultation to evaluate any impacts to cultural sites. Impacts to cultural resources are not expected. Nevertheless, the District is prepared to implement any necessary mitigation measures should cultural resources be identified for any component of the Project.

Will the 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 have only positive impacts on low income or minority populations in the area.

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

No.

Will the 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 or Approvals

The proposed Project will be located exclusively within land to be purchased by DEID. 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. It is anticipated that only two permits related to construction will be required and application will be made for these permits prior to construction commencing. Below are the two permits that will be secured prior to construction commencing:

1. **National Pollutant Discharge Elimination System (NPDES) Permit** – Application will be made to the State Water Resource Control Board for an NPDES permit related to storm water discharges from construction activities (such as clearing, grading, excavating, and stockpiling). A Notice of Intent (NOI) will be submitted certifying that all permit eligibility conditions have been met. As part of the preparation of an NOI, a State Water Pollution Prevention Plan (SWPPP) will be developed and implemented during construction of the Project. The SWPPP will spell out Best Management Practices to prevent waste and pollutants from flowing to surface water and groundwater. This permit will be obtained immediately prior to construction.

2. **PM-10 Dust Control Permit** – Application will be made to the San Joaquin Valley Air Pollution Control Board for a PM-10 Dust Management Plan permit. This permit will require that a dust control management plan be prepared and implemented during construction to prevent air pollution.

It is noted that the District is not subject to the County's jurisdiction regarding building and grading permits. Accordingly, no County-issued permits will be required. The District will comply with CEQA and NEPA before commencing any ground disturbing activities. Additionally, a pre-activity survey will be conducted by a qualified biologist prior to the start of construction. There are no expected impacts related to endangered or threatened species in the District's service area or facilities. Project site is located on previously disturbed agricultural land which is regularly maintained, disked, cleared, and grubbed.

5. Existing Drought Contingency Plan

As previously described in Section 1.5.3, DEID is currently in the process of developing a Drought Contingency Plan (DCP) with the Poso Creek IRWM Group. The draft DCP has been developed and submitted to Reclamation. A full review is underway; however, the draft DCP is included in Appendix B for reference.

6. Official Resolution

The Official Resolution for adoption by the District's Board of Directors, in support of filing an application with the USBR for a grant under the *WaterSMART Drought Response Program* will be adopted at the District's October 14th Board meeting. following application submittal. The signed Official Resolution will be submitted to USBR within 30 days of application submittal.

7. System of Award Management (SAM) and ASAP Registration

The following screen shot shows the District's active System of Award Management (SAM) account. In addition, the District is in the process of opening an Automated System Application for Payment (ASAP) account, which will be set up prior to any award.

Appendix A – Letter of Support

POSO CREEK IRWMP
Management Group

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

September 23, 2021

Mr. Eric Quinley
General Manager
Delano-Earlimart Irrigation District
14181 Avenue 24
Delano, CA 93215

Re: Proposed Project – *Turnipseed Basin Phase VI*

Dear Mr. Quinley,

On behalf of the Poso Creek Integrated Regional Water Management (IRWM) Group, I express support of Delano-Earlimart Irrigation District's (DEID) *Turnipseed Basin Phase VI* project and their efforts to facilitate the conservation of 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 148-acre spreading facility.

The Poso Creek IRWM Group is interested in and supportive of the *Turnipseed Basin Phase VI* 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. 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. I hope that our expression of support is helpful in your efforts to secure grant funding assistance to implement this project. If the funding agency would like to discuss our interest and support of your project, I would be happy to do so.

Sincerely,

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

Appendix B – Drought Contingency Plan Draft

Appendix C – Budget Support

C-1: Consultant 1 Rate Sheet

C-2: Consultant 2 Fee Estimate

C-3: Engineer's Opinion of Probable Cost (Construction)

Appendix C-1

FEE SCHEDULE

Personnel Category	*Hourly Billing Rate* $ per hour
Staff Professional – Grade 1	$ 127
Staff Professional – Grade 2	$ 140
Project Professional – Grade 3	$ 153
Project Professional – Grade 4	$ 172
Senior Professional – Grade 5	$ 203
Senior Professional – Grade 6	$ 231
Senior Professional – Grade 7	$ 274
Senior Consultant – Grade 8	$ 307
Senior Consultant – Grade 9	$ 375
Senior Principal – Grade 10	$ 375
Senior Drafter and Designer	$ 153
Drafter / Designer and Senior Technician	$ 140
Field Professional	$ 115
Technician, Word Processor, Administrative Staff	$ 114
Office Aide	$ 89

These rates are billed for both regular and overtime hours in all categories.
Rates will increase up to 5% annually, at GEI's option, for all contracts that extend beyond twelve (12) months after the date of the contract. Rates for Deposition and Testimony are increased 1.5 times.

OTHER PROJECT COSTS

Subconsultants, Subcontractors and Other Project Expenses - All costs for subconsultants, subcontractors and other project expenses will be billed at cost plus a 15% service charge. Examples of such expenses ordinarily charged to projects are subcontractors; subconsultants: chemical laboratory charges; rented or leased field and laboratory equipment; outside printing and reproduction; communications and mailing charges; reproduction expenses; shipping costs for samples and equipment; disposal of samples; rental vehicles; fares for travel on public carriers; special fees for insurance certificates, permits, licenses, etc.; fees for restoration of paving or land due to field exploration, etc.; state and local sales and use taxes and state taxes on GEI fees. The 15% service charge will not apply to GEI-owned equipment and vehicles or in-house reproduction expenses.

Field and Laboratory Equipment Billing Rates – GEI-owned field and laboratory equipment such as pumps, sampling equipment, monitoring instrumentation, field density equipment, portable gas chromatographs, etc. will be billed at a daily, weekly, or monthly rate, as needed for the project. Expendable supplies are billed at a unit rate.

Transportation and Subsistence - Automobile expenses for GEI or employee owned cars will be charged at the rate per mile set by the Internal Revenue Service for tax purposes plus tolls and parking charges or at a day rate negotiated for each project. When required for a project, four-wheel drive vehicles owned by GEI or the employees will be billed at a daily rate appropriate for those vehicles. Per diem living costs for personnel on assignment away from their home office will be negotiated for each project.

PAYMENT TERMS

Invoices will be submitted monthly or upon completion of a specified scope of service, as described in the accompanying contract (proposal, project, or agreement document that is signed and dated by GEI and CLIENT).

Payment is due upon receipt of the invoice. Interest will accrue at the rate of 1% of the invoice amount per month, for amounts that remain unpaid more than 30 days after the invoice date. All payments will be made by either check or electronic transfer to the address specified by GEI and will include reference to GEI's invoice number.

Appendix C-2

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DELANO-EARLIMART IRRIGATION DISTRICT

ESTIMATED FEES FOR TURNIPSEED BASIN PHASE VI

PROVOST& PRITCHARD

	Turnipseed Basin Phase VI	Principal Engineer I	Senior Engineer IV	Associate Engineer IV	Assistant Engineer V	Senior Technician III	Project Administrator IV	Licensed Surveyor III	Associate Technician IV	2 man Survey Prevail	Principal Planner I	Senior Planner III	Associate Planner IV	Senior Envir. Spec. III	Associate Biologist I	Associate GIS Specialist III	Principal Const. Manager IV	Total Hours	Mileage	Expenses / Subconsultants	Subtotal Labor	Subtotal Reimb & Subs	Total Fee
TASK		$190	$174	$142	$120	$150	$98	$160	$119	$285	$173	$153	$130	$175	$100	$113	$205		0.560				
1	Surveying	0	0	0	0	0	0	16	16	36	0	0	0	0	0	0	0	70			$14,962	$0	$15,000
2	Project Design	80	40	200	260	160	60	0	0	0	0	0	0	0	0	0	10	830	720		$116,090	$403	$116,000
3	Geotechnical Investigation	Quote from BSK Laboratories																0		$43,000	$0	$43,000	$43,000
4	SWPPP/DCP Permitting	0	20	0	32	0	0	0	0	0	0	0	0	0	0	0	0	52		$5,000	$7,320	$5,000	$12,000
5	CEQA / Bio / ISR / ESA	0	0	0	0	0	40	0	0	0	12	48	90	0	40	20	0	250		$7,000	$31,300	$7,000	$38,000
6	Project Bidding (Assumes 2 Contracts)	24	0	80	40	20	40	0	0	0	0	0	0	0	0	0	0	204		$2,000	$27,640	$2,000	$30,000
7	Construction Oversight, Compaction Testing, & SWPPP/DCP Inspections (Assumes 2 Contracts)	100	120	240	80	40	120	12	0	40	0	0	0	0	0	0	560	1,312	18000	$110,000	$229,440	$120,080	$350,000
8	Grant Reporting	20	0	60	20	0	60	0	0	0	0	0	0	0	0	0	0	160			$20,600	$0	$20,000
	Total units	224	180	580	452	220	320	28	16	76	12	48	90	0	40	20	570	2,878	18720				
	Total $	$42,560	$31,320	$82,360	$54,240	$33,000	$31,360	$4,480	$2,142	$21,660	$2,076	$7,344	$11,700	$0	$4,000	$2,260	$116,850		$10,483	$167,000	$447,352	$177,483	$624,000

Appendix C-3

PROVOST & PRITCHARD CONSULTING GROUP
An Employee Owned Company

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Delano-Earlimart Irrigation District
Turnipseed Basin Phase 6 Expansion Project

10/4/2021

Item No.	Item Description	Quantity	Unit	Unit Price	Amount
	GENERAL				
1	Mobilization/Demobilization, Bonds and Insurance and Permits	1	LS	$ 98,000	$ 98,000
2	Worker Protection	1	LS	$ 19,000	$ 19,000
3	Miscellaneous Facilities and Operations	1	LS	$ 20,000	$ 20,000
4	Storm Water Pollution Prevention Plan (SWPPP) and Dust Control Plan (DCP) Implementation	1	LS	$ 37,000	$ 37,000
				Subtotal	**$174,000**
	RECHARGE BASINS				
5	Demolition of Irrigation Facilities	1	LS	$ 20,000	$ 20,000
6	Clearing and Grubbing	1	LS	$ 25,000	$ 25,000
7	Construct Levee Keyway	8,300	CY	$ 5.50	$ 46,000
8	Construct Basin Levees	163,000	CY	$ 5.50	$ 897,000
9	Construct Interbasin Structures	12	EA	$ 58,000	$ 696,000
10	Construct Stilling Well	2	EA	$ 14,000	$ 28,000
11	Place Rip Rap in Distribution/Settling Channel	1	LS	$ 40,000	$ 40,000
12	Construct Monitoring Wells (D = (2) 400' & (1) 150')	3	EA	$ 45,000	$ 135,000
				Subtotal	**$ 1,887,000**
	LATERALS AND TURNOUTS				
13	Construct Lat 113.7W Junction Box	1	LS	$ 160,000	$ 160,000
14	F&I DEID Lateral 113.7W-2.0S 48-Inch AWWA C200 CMLC Steel Pipeline	96	LF	$ 1,800	$ 173,000
15	F&I DEID Turnipseed Phase VI BT16	1	LS	$ 190,000	$ 190,000
16	F&I DEID Turnipseed Phase VI BT16A	1	LS	$ 131,000	$ 131,000
17	Construct 48-Inch Distribution/Settling Channel Outlet	1	LS	$ 150,000	$ 150,000
18	F&I Chain Link Fence, Man Gate, and Drive Gates	1	LS	$ 10,000	$ 10,000
				Subtotal	**$ 814,000**
			CONSTRUCTION SUBTOTAL		**$ 2,875,000**
	ALTERNATIVE BID ITEMS				
AB1	F&I DEID Lateral 113.7W-2.0S 48-Inch AWWA C200 ELC Steel Pipeline	96	LF	$ 1,730	$ 167,000
AB2	F&I DEID Lateral 113.7W-2.0S 48-Inch ASTM C361-C50 RGRCP Pipeline	96	LF	$ 1,840	$ 177,000
AB3	Constructed Nested Monitoring Wells (D = 400' & 150')	3	EA	$ 65,000	$ 195,000
	NON-CONSTRUCTION ITEMS				
1	Surveying	1	LS	$ 15,000	$ 15,000
2	Project Design	1	LS	$ 80,000	$ 116,000
3	Geotechnical Investigation	1	LS	$ 43,000	$ 43,000
4	SWPPP / DCP Permitting	1	LS	$ 12,000	$ 12,000
5	CEQA Documentation / Bio / ISR / ESA	1	LS	$ 38,000	$ 38,000
6	Project Bidding (Assumes 2 Contracts)	1	LS	$ 30,000	$ 30,000
7	Construction Oversight, Compaction Testing, SWPPP/DCP Inspections	1	LS	$ 350,000	$ 350,000
8	Grant Reporting	1	LS	$ 20,000	$ 20,000
			NON-CONSTRUCTION SUBTOTAL		**$ 624,000**
				Total (Excludes Additive and Alternative Bid Items	**$3,499,000**
				Contingency :	20%
				Preliminary Cost Estimate :	**$4,199,000**