Application Submitted to the United States Bureau of Reclamation for a WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year (FY) 2024 and FY 2025 Funding Opportunity No. R24AS00521

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February 2024

Table of Contents

List of Figures

List of Tables

Appendices

1 TECHNICAL PROPOSAL

(A) EXECUTIVE SUMMARY

GENERAL PROJECT INFORMATION

Proposal Name: SCADA Improvements for Water and Energy Efficiency
Date: February 22, 2024
Applicant Name: Fresno Irrigation District
City, County, and State: Fresno, Fresno County, California

PROJECT SUMMARY

The Fresno Irrigation District (FID or District) is a Category A applicant and provides agricultural water to approximately 247,000-acre area in Fresno County, California. The District proposes to improve water and energy efficiency through advancement and expansion of its SCADA system. These improvements include the addition of flow measurement at additional critical sites, the addition of solar power use for energy efficiency, and improved radio communications to increase data gathering frequency and control.

The project will be completed by December 2026, within the required two years from anticipated award for Funding Group I. The project is not located on a Federal facility.

(B) PROJECT LOCATION

The project will include sites throughout the District. FID has a service area of approximately 247,000 acres and diverts San Joaquin River and Kings River water into its 600+ mile canal and pipeline distribution system for both agriculture and municipal water uses. Figure 1 is a vicinity map of the project. Figure 2 shows the SCADA system locations throughout the District, including the two new flow measurement sites at critical locations.

(C) PROJECT DESCRIPTION

The proposed project includes updates to the District's SCADA system to provide improved water and energy efficiency. By updating the current system and adding additional monitoring sites, FID will be able to better manage all of the water it delivers throughout the year, and particularly provide improved data gathering for better operational decisions during storm events and flood water routing periods. A detailed project component list and supporting documentation is included in **Appendix A.** The proposed project includes the following components:

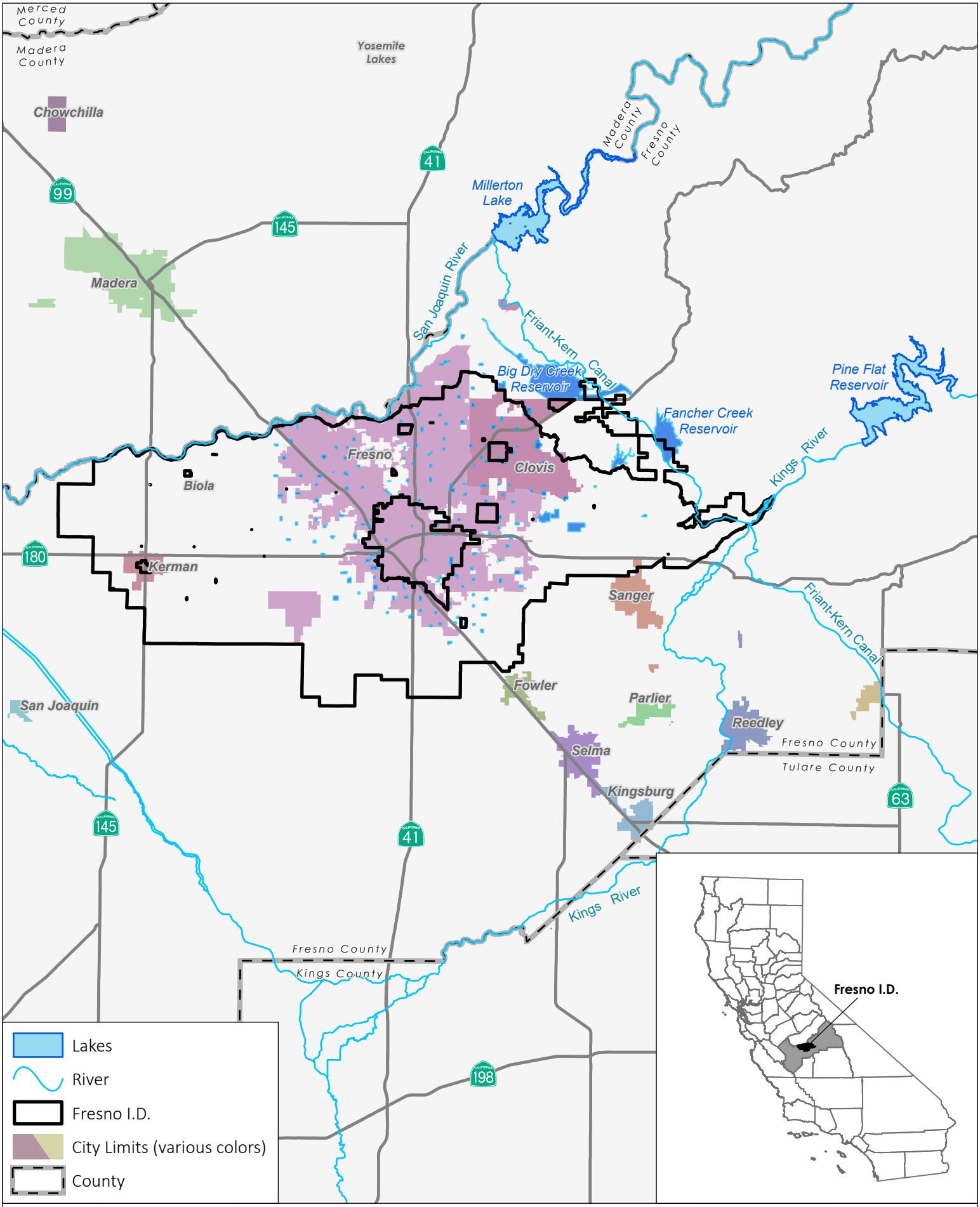
- *Ethernet radio, tower, antennas, cabling and programming for office and 2 remote repeater sites*
- Ethernet radio, mast, antennas, cabling and programming for at least 17 remote sites

- Battery Backup at 55 sites to maintain communication during storms and power outages
- New flow measurement added to FID's system at Big Dry Creek Reservoir and Fancher Creek Reservoir discharge locations. These sites will include a programmable logic controller (PLC), radio, antenna, solar panel, appurtenances and programming for at least these two new flow measurement sites

(D) PERFORMANCE MEASURES

The following performance measures will be used to evaluate the project:

- Addition of flow measurement data from the new measurement sites
- Comparison of the frequency of data collection at existing automated gate control and flow measurement locations
- Measurement of flow data from the new monitoring sites will be used to determine the total flows conserved during flood and storm events at those locations.



Fresno Irrigation District

SCADA Improvements for Water and Energy Efficiency

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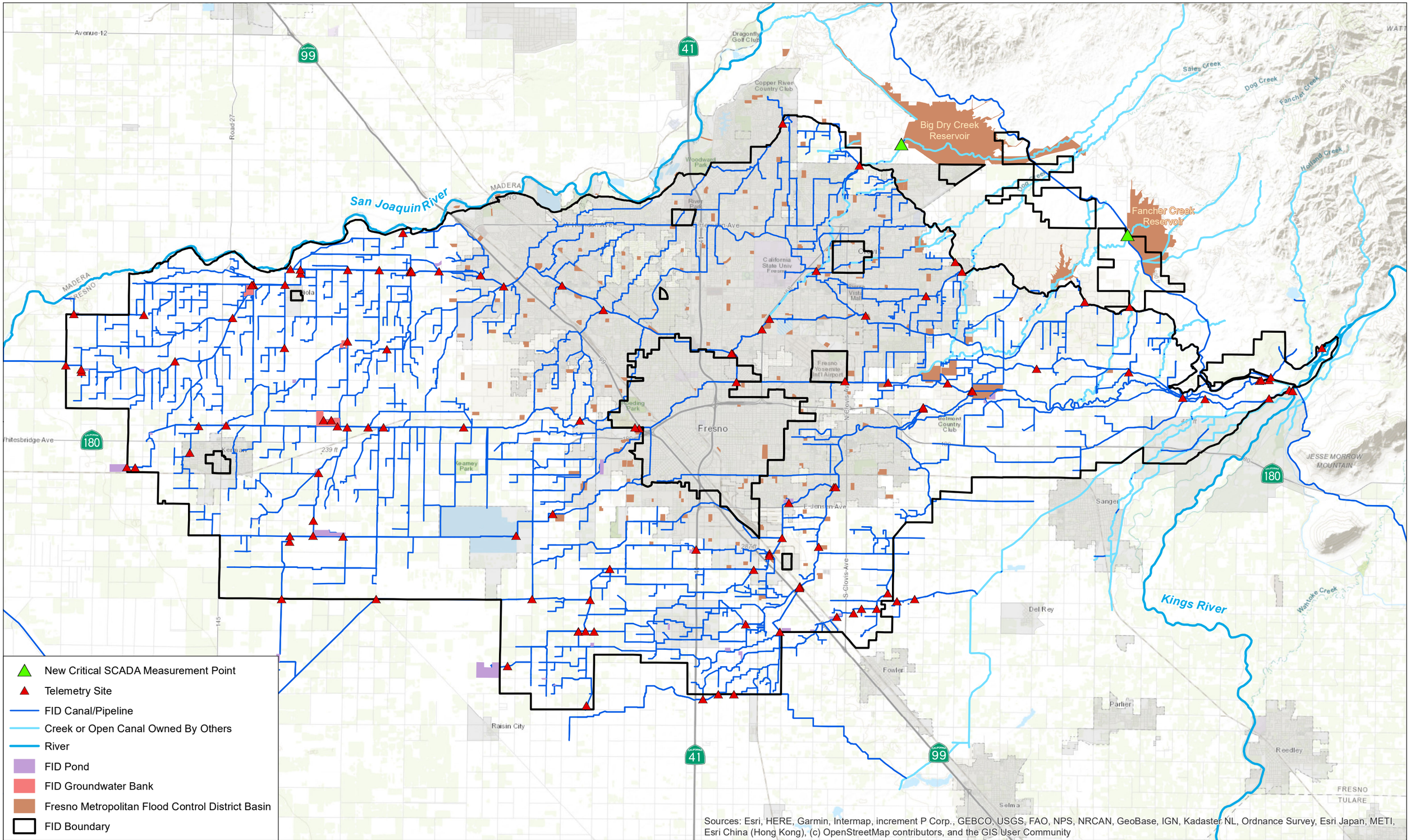

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

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(E) EVALUATION CRITERIA

EVALUATION CRITERION A- QUANTIFIABLE WATER SAVINGS

Describe the amount of estimated water savings. Please include a specific quantifiable water savings estimate; do not include a range of potential water savings

FID estimates that the SCADA improvements planned with this project will conserve about 1,000 acre-feet per year. The calculation of this estimate is described later in this section.

Describe current losses

During storm events and flood periods, FID receives water into its conveyance systems from both urban runoff and east side creeks. Water in the District generally flows from east to west. The water from urban areas is released into FID's conveyance system to free up room in urban basins for pending storms, and FID conveys the water west to its recharge basins and growers when there is demand. During these same periods, the east side ephemeral creeks flow into FID's same conveyance facilities, so FID has to also manage that water to convey it west through the urban area in order to prevent flooding. These east side creek flows are uncontrolled, so having timely flow measurement information for FID will help operational decisions. Additional flow information is particularly helpful to FID during the winter months, as FID has a limited number of water operations staff available during this time as many of their staff are working on maintenance and construction when the canals are not fully operating.

This program to convey creek and urban runoff water into FID's facilities has been in place for decades and is subject to agreements between FID, the Fresno Metropolitan Flood Control District, the County of Fresno and the cities of Clovis and Fresno. In addition to these urban and creek flows, the Kings River may also be in flood release from Pine Flat Dam during these same periods, and FID has rights to divert that water when it is available and there is capacity within FID's system. However, during these flood events, FID is also cautious to divert water because of the need to maintain some capacity in its canal system for urban and rural runoff.

Figure 3 provides a general map and flow direction of the various water sources.

As part of the east side creeks, the Big Dry Creek Reservoir detains water that is then diverted away from its historically natural to protect the urban area. The natural course of this water is into Big Dry Creek which connects into FID's system, but the water is often diverted away during storm because of the other storm flows being conveyed. The water diverted away from Big Dry Creek is lost to FID and the region. During wet years, which occur about every 5 years, the water lost to the region has averaged about 30,000 acre-feet.

The project includes the addition of a new measurement site at Big Dry Creek Reservoir, as well as Fancher Creek Reservoir. These locations are managed by the

Fresno Metropolitan Flood Control District (FMFCD) who has flow measurement at these locations and its own SCADA system, but FID is not connected to their system. This project will add telemetry for FID so that FID has direct access to the reservoir discharge flow rates that are flowing into FID's system. The improved measurement at the Big Dry Creek location will provide real time information for operational decisions to help reduce the lost water and allow for FID to maximize water in Big Dry Creek that can be recharged or utilized within FID.

The overall improvements associated with this SCADA project will provide more timely information of measurement during these storm events to allow FID to better manage deliveries and maximize beneficial water use across the District, including providing more timely system conveyance capacity which will help the District to better utilize available flood water from the Kings River.

Water Diverted Away From FID/Region During Heavy Storm Events

East Side Creek's Flow Into FID's System During Storm Events

Urban Runoff Conveyed Into FID's System During and In Preperation For Storm Events

Kings River Flood Water Available From Pine Flat For Diversion Into FID

Big Dry Creek Reservoir

Fancher Creek Reservoir

San Joaquin River

Kings River

Fresno

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

- FID Canal/Pipeline
- Creek or Open Canal Owned By Others
- River
- FID Pond
- FID Groundwater Bank
- Fresno Metropolitan Flood Control District Basin
- FID Boundary

0 1 2

Miles

Fresno Irrigation District

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Describe the support/ documentation of estimated water savings

The amount of water no longer lost to FID has conservatively been estimated at 1,000 acre-feet per year. The calculation is based on an analysis of historic delivery records and the amount of supply lost to FID during storm or flood events. At the Big Dry Creek location alone, there has been approximately 30,000 acre-feet spilled away from Big Dry Creek approximately every 5 years and lost to FID. The improved operational data and other improvements may help FID divert an estimated additional 5,000 acre-feet in those years. The 5,000 acre-feet is based on 25cfs per day (which is approximately 50 acre-feet) for 100 days. In addition, Kings River flood event have typically lasted for approximately 100 days about 1 in every 4 years. FID has had more than 20,000 acre-feet available to it for diversion in those years.

Irrigation Flow Measurement

a. ***How have average annual water savings estimates been determined? Please provide all relevant calculations, assumptions, and supporting data.***

The estimated water savings will be 1,000 acre-feet per year. This is based on the capture of an estimated 5,000 acre-feet during wet years when flood and storm water has been lost to FID. The 5,000 acre-feet is based on diversion of an additional 25cfs (which equals 50 acre-feet per day) for 100 days. For comparison, the 25cfs is a very small number compared to the Districts diversion capacity at the storm and flood water diversion points. The Big Dry Creek capacity is approved by the Army Corps of Engineers for 150cfs, and FID's two Kings River diversions have 500 and 1500 cfs capacity respectively. As noted previously, there is considerably more supply available, and the planned 25cfs diversion is well below available channel capacity. The SCADA improvements proposed in this project will provide the needed increased frequency of flow measurement data for FID staff to make operational decisions to maximize diversions during these flood and storm periods.

b. ***Have current operational losses been determined? If water savings are based on a reduction of spills, please provide support for the amount of water currently being lost to spills.***

The operational losses considered as part of this project are FID entitled water supplies that are lost to the District during wet years. As previously noted, the Big Dry Creek has an average of approximately 30,000 acre-feet lost to FID every 5 years. FID also has more than 20,000 acre-feet available to it from the Kings River approximately every 4 years.

c. ***Are flows currently measured at proposed sites and if so, what is the accuracy of existing devices? How has the existing measurement accuracy been established?***

The existing SCADA system includes various measurement types. The accuracy of each location is based on manufacturer provided specifications or calibration of replogle and parshall flumes. Existing measurement locations are accurate within 10% by volume.

d. Provide detailed descriptions of all proposed flow measurement devices, including accuracy and the basis for the accuracy.

The project includes the addition of four flow measurement sites to the District's SCADA system as well as other improvements. Two of the four planned sites are existing measurement sites maintained by the Fresno Metropolitan Flood Control District (FMFCD): the Big Dry Creek and Fancher Creek Reservoirs spills. These sites have been developed and calibrated by the FMFCD in coordination with the US Army Corps of Engineers as part of the development of the facilities. The accuracies are 10% by volume. FID does not have these sites connected to its SCADA system, however these sites spill water directly into FID's system during storm and flood events. The improved SCADA system will allow the District to program and make changes in its system downstream immediately or schedule changes to flowrates downstream to accommodate the changes in flows from these systems. The two additional flow measurement sites are planned for flowmeter devices that the District typically installs and typically have a 5 to 10% accuracy by volume according to their manufacturers and laboratory testing.

e. Will annual farm delivery volumes be reduced by more efficient and timely deliveries? If so, how has this reduction been estimated?

Annual farm deliveries may not be reduced by a significant amount individually, however over the total District volume allocated for farm deliveries may reduce with an updated system that immediately responds to a request to reduce water delivery to downstream locations.

This reduction can be estimated by considering the response time from when a action is made through the current system to when the action is carried out and water is diverted or shut off. This improvement will primarily be accomplished through the radio communication improvements that will report flow rates at different locations and allow upstream locations to be adjusted quicker. These timely adjustments will ultimately allow for a reduced amount of water to be diverted out of FID's storage and extend the delivery season. The amount of the reduction is estimated to be at least 500 acre-feet, which is just 0.1% of its annual deliveries that average 500,000 acre-feet.

f. How will actual water savings be verified upon completion of the project

The amount of water savings will be verified by comparing the water diverted during storm and flood events in future years to the amount diverted in prior years.

EVALUATION CRITERIA B- RENEWABLE ENERGY

SUBCRITERION B.2- INCREASING ENERGY EFFICIENCY IN WATER MANAGEMENT

If quantifiable energy savings is expected to result from the project, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.

The estimated energy savings is 216,000 kWh. This calculation is based on the conservative assumption of 1,000 acre-feet of water conserved and not having to be pumped from the aquifer. This calculation is based on groundwater depth of 120 ft from the 2022 and 2023 groundwater contour maps, using a cost of $0.27 per acre-foot per foot of lift. The $0.27/af/ft is based on 1.8kwh per foot of lift at $0.13/kwh which is typical for the area.

How will the energy efficiency improvement combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions.

The project will conserve an estimated 1,000 acre-feet per year and enable the District to extend its surface water delivery by that amount. By delivering 1,000 acre-feet, FID growers pumping will be reduced by that amount in total. This will reduce their need/ reliance on groundwater pumping. The reduction in pumping will reduce greenhouse gas emissions by 152 metric tons of CO_2. This is calculated based on EPA estimate of 7.0555×10^{-4} metric tons of CO_2 / kwh.

If the project will result in reduced pumping, please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements and energy usage?

As stated previously, the project will not result in additional pumping, but is anticipated to help reduce overall pumping in the area, or at minimum help recharge the aquifer and reduce the overall amount of lift and associated pumping costs as the groundwater levels are increased.

Please indicate whether your energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.

The energy savings estimate is based on the reduced pumping that growers will do at each individual well, so the usage at each meter.

Does the calculation include any energy required, if applicable?

No water treatment is associated with this project.

Will the project result in reduced vehicle miles driven, in turn reducing greenhouse gas emissions? Please provide supporting details and calculations.

With an updated SCADA system, District operational staff will not need to travel to remote sites as often because of the increased frequency of communication providing data at critical measurement locations. FID staff is estimating a reduction of 50 miles per day for at least 100 days primarily during the storm season. Using the EPA's guideline of 411 grams of CO2 per mile, the estimate of greenhouse gas emission reduction based on the reduced miles is 2.06 kg of CO_2 during the storm season.

Some of the new flow measurement sites will have solar panels for power supply.

EVALUATION CRITERIA C- OTHER PROJECT BENEFITS

Resilience and Sustainability Benefits

1) Explain and provide detail of the specific issue(s) in the area that is impacting water resilience and sustainability. Consider the following:

Describe recent, existing, or potential drought or water scarcity conditions in the project area.

Much of the Central Valley including the District area, has experienced long periods of drought that continue to increase in longevity and intensity.

Previous drought conditions have led farmers to rely heavily on groundwater supplies which has had a significant effect on the aquifers in the area which has left many residents in the area in need of drinking water.

Is the project in an area that is experiencing, or recently experienced, drought or water scarcity?

The project area is located within the Central Valley where prolonged drought related conditions persist even following a year of increased precipitation due to depleted aquifer conditions. Although this past year was an historic wet year, it followed a three-year drought period of 2020-2022, which was soon after the historically worst drought of 2012-2016. The District has experienced numerous droughts over the past 22 years according to the US Drought Monitor (https://droughtmonitor.unl.edu). **Figure 4** shows the Drought Severity and Coverage Index for the Fresno, California Area for the past 22 years. This index ranges from 0 to 500. Zero means that none of the area is abnormally dry or in drought, and 500 means that all of the area is in an exceptional drought. **Figure 4** shows that the area experienced some form of drought the majority of the time since 2000.

Drought conditions in California as of May 24, 2022 are shown below in **Figure 5.** According to this figure, 98% of California is currently experiencing a “Severe”, “Extreme” or “Exceptional” drought. The project site is shown on the figure and is within an area of “Extreme Drought”.

Figure 6 shows the groundwater level decline throughout FID versus surface water diversions. **Figure 7** shows Kings River runoff since 1895, including a trending decline, possibly due to climate change, change in watershed conditions, or some other factor outside of FID’s control.

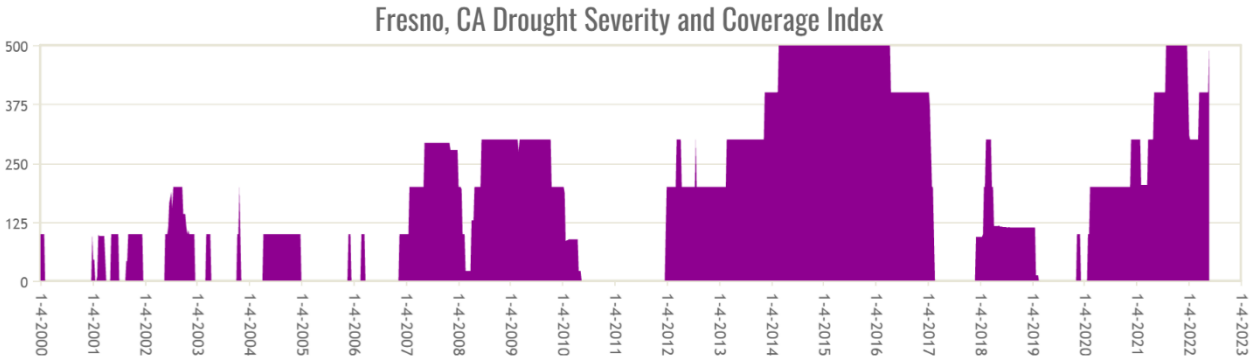


Figure 4 – Drought Severity and Coverage Index for Fresno, California Area

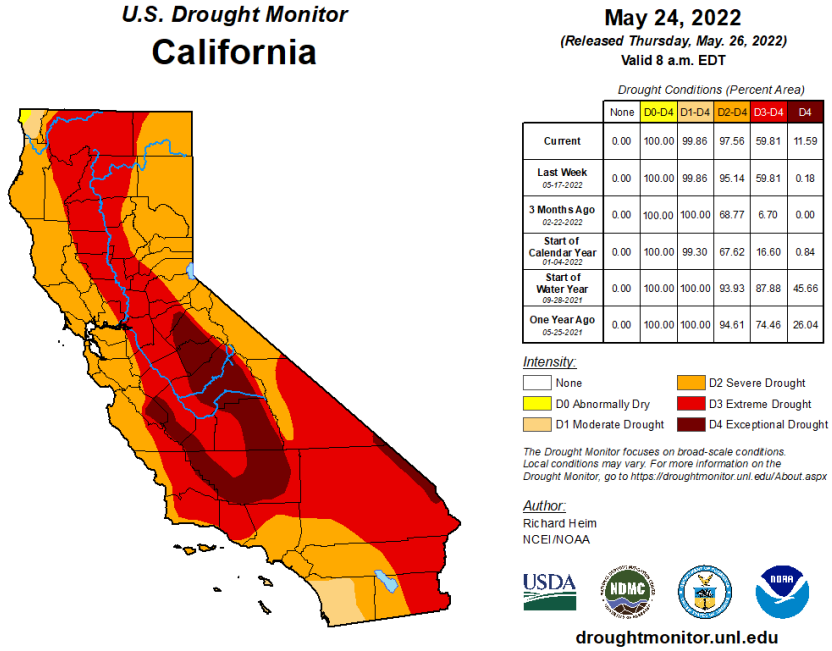
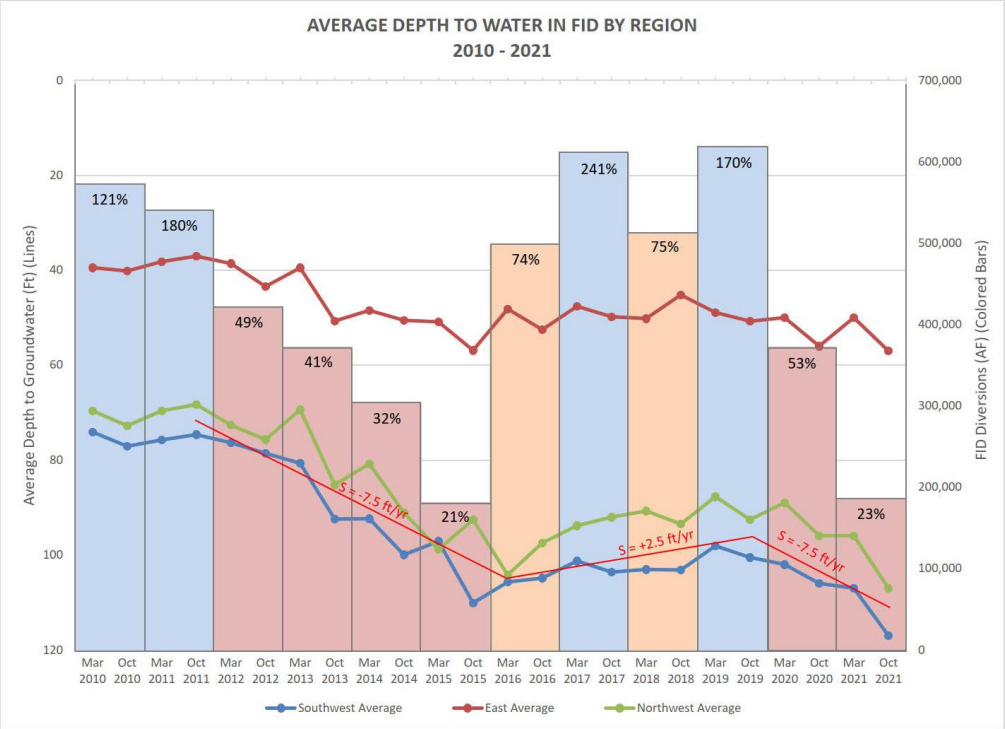


Figure 5 – U.S Drought Monitor Report (May 24, 2022)



Notes: FID Diversions are for calendar year (January - December). Percentages shown are Kings River water year runoff percent of normal.
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Figure 6 – Groundwater Depth vs Surface Water Diversions

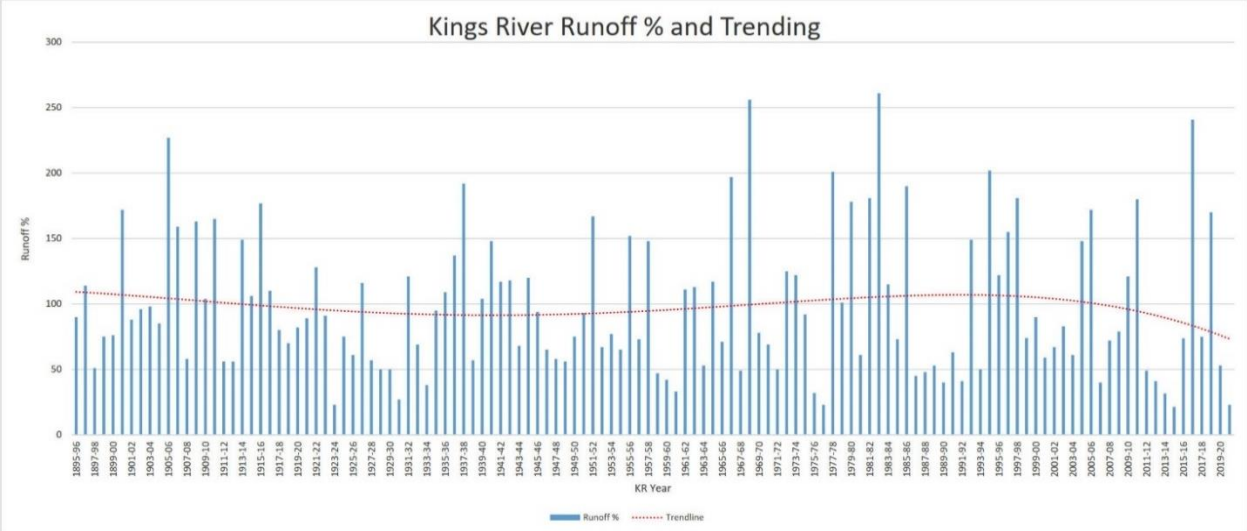


Figure 7 – Kings River Runoff (1895-2022)

Describe any projected increases to the severity or duration of drought or water scarcity in the project area. Provide support for your response (e.g., reference a recent climate informed analysis, if available).

The 2022 North Kings Groundwater Sustainability Plan (Section 3.3.10) included an analysis of future water budgets, including the impacts of climate change by 2030 and 2070. The analysis predicted increases in evapotranspiration of 3% by 2030 and 8% by

2070. The analysis predicted only minor changes in precipitation or river flow, but also predicted '*a major shift in timing*' of precipitation. The report concluded that '*Maintaining the same level of water supply*' would require '*increased recharge during non-irrigation and low-irrigation periods*.

2) *Explain and provide detail of the specific issue(s) in the area that is impacting energy sustainability, such as reliance on fossil fuels, pollution, or interruptions in service.*

Agricultural, rural residential and municipal water users are impacted by droughts in the FID area, and the declining groundwater levels are causing increased pumping and energy usage. Better management of all water sources, including the water flood and storm water conserved by this SCADA project will help reduce overall energy usage. These impacts can all be serious due to the severity of droughts in the region.

- *Groundwater level declines and reduction in groundwater storage*
- *Reduction in well yield*
- *Wells going dry*
- *Restrictions on groundwater pumping*
- *Higher water costs for water users*
- *Mandatory water conservation programs*

In addition, agricultural water users could suffer from lower crop yield, crop losses and land fallowing. During the 2015 drought, FID water deliveries could only be provided for two weeks. For the first time ever, locks and explanatory tags were added to all the turnout control valves to discourage water theft.

3) *Please describe how the project will directly address the concern(s) stated above.*

The project will directly address the water and energy efficiency by helping capture and utilize an estimated 1,000 acre-feet per year of water that has been historically lost to the District, and thereby reducing overall energy usage by the associated pumping costs for that amount of water.

4) *Will the project directly result in more efficient management of the water supply? For example, will the project provide greater flexibility to water managers, resulting in a more efficient use of water supplies?*

The radio system improvements will be District-wide, providing more frequent data collection and operation for all water that the District delivers. During storm and flood periods, FID's canal system receives rural stream flows and urban runoff for disposal. FID has a limited number of water operations staff available due to work on maintenance and construction when the canals are not fully operating during. The improved SCADA system will help FID manage water during storm and flood periods by providing additional information to determine how much available capacity it has to divert extra water from Big Dry Creek and Kings River.

5) ***Please address where any conserved water as a result of the project will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.***

During the winter months, the project will conserve storm and flood water lost to the District. The water will be delivered directly to growers for irrigation, as well as to FID's groundwater recharge facilities.

During the irrigation season, the project will provide improved operational management to make more timely operation decisions and make more on-time delivery changes, resulting in additional water remaining in surface storage before it needs to be diverted for delivery.

6) ***Indicate the quantity of conserved water that will be used for the intended purpose(s).***

As mentioned above, the 1,000 acre-ft per year conserved is intended to be dispersed more evenly throughout the district.

a) ***Provide a description of the mechanism that will be used, if necessary, to put the conserved water to the intended use.***

The water will be conveyed through the District's existing canal and pipeline conveyance system directly to growers for use, as well as to FID recharge basins for groundwater recharge and later recovery.

b) ***Will the project assist States and water users in complying with interstate compacts?***

The project will not directly assist States and water users in complying with interstate compacts, however the project will help the District maintain local supplies and sustainability, thereby reducing overall statewide competition for water supplies.

c) ***Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?***

Yes, updating the SCADA system will allow FID to improve its overall water operations, capture water lost to the region, and progress toward overall groundwater sustainability by increasing surface water use.

ECOLOGICAL BENEFITS

Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please describe the relationship of the species to the

water supply, and whether the species is adversely affected by a Reclamation project or is subject to a recovery plan or conservation plan under the Endangered Species Act (ESA).

The project will not directly benefit species.

1) ***Will water remain in the system for longer periods of time? If so, provide details on current/future durations and any expected resulting benefits (e.g., maintaining water temperatures or water levels, recreational benefits, etc.)***

During storm water capture periods, the water will be diverted directly to growers for irrigation, or to FID basins for groundwater recharge. Water recharged will be recovered within a year or two using FID recovery wells or landowner wells nearby the recharge basins. During the irrigation season, additional surface water may remain in surface storage upstream as a result of overall improved water management to make more timely deliveries downstream. The water retained in storage will allow the District to extend the season and divert the water at the end of the irrigation season.

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

While it will not directly reduce the chances for a species to be listed, water better managed can add to the viability of habitat.

2) ***Please describe any other ecosystem benefits as a direct result of the project.***

As a result of overall improved water management, more water will remain in the system for an extended period of time.

CLIMATE CHANGE

1) ***Describe how the project addresses climate change and increases resiliency.***

   Climate change is expected to result in more precipitation as rainfall and less as snowfall. Hence, the watershed will have lower ability to store water. Better management of the system will help to reduce any potential losses of excess water and evenly disperse throughout the system.

2) ***For example, does the project help communities adapt to bolster drought resilience?***

Improvement to the SCADA system can offer support to better control and reduce the potential for flood risk on the San Joaquin and Kings River and spread water slightly more even throughout the District including water for groundwater recharge. The additional captured flood water will help the region progress toward groundwater sustainability and reduce drought impacts.

3) ***Does the project seek to improve ecological resiliency to climate change?***

The project will help directly address climate change by:

- Capturing additional water supply lost to the region
- Provide improved operational management during flood and storm events, especially as climate change causes increased weather fluctuation, lower snow levels, and earlier runoff periods.

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

Energy will be saved by extending surface water delivery periods, reducing groundwater pumping, raising groundwater levels and reducing pumping lifts for nearby wells. The energy savings and greenhouse gas emissions reduction have been calculated and provided in other sections of this application.

5) Does the proposed project include green or sustainable infrastructure to improve community climate resilience?

Energy will be saved by extending surface water delivery periods, reducing groundwater pumping, raising groundwater levels and reducing pumping lifts. FID is a part of the North Kings GSA which is required to reach groundwater sustainability by 2040. The water conserved will help FID and region reach sustainability by capturing lost water supply and improving operational management of its surface water supply. Using the assumptions previously described in this application, the energy savings will be about 216,000 KWH which has a value of about $648,000. This also equates to a reduction in greenhouse gasses of 152 metric tons/year (see **Appendix B** for calculations).

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

Climate change is expected to result in more precipitation as rainfall and less as snowfall. Hence, the watershed will have lower ability to serve as a reservoir for storing water. The SCADA system improvements will directly improve operational management to deliver and recharge water if runoff volumes increase or change because of climate change.

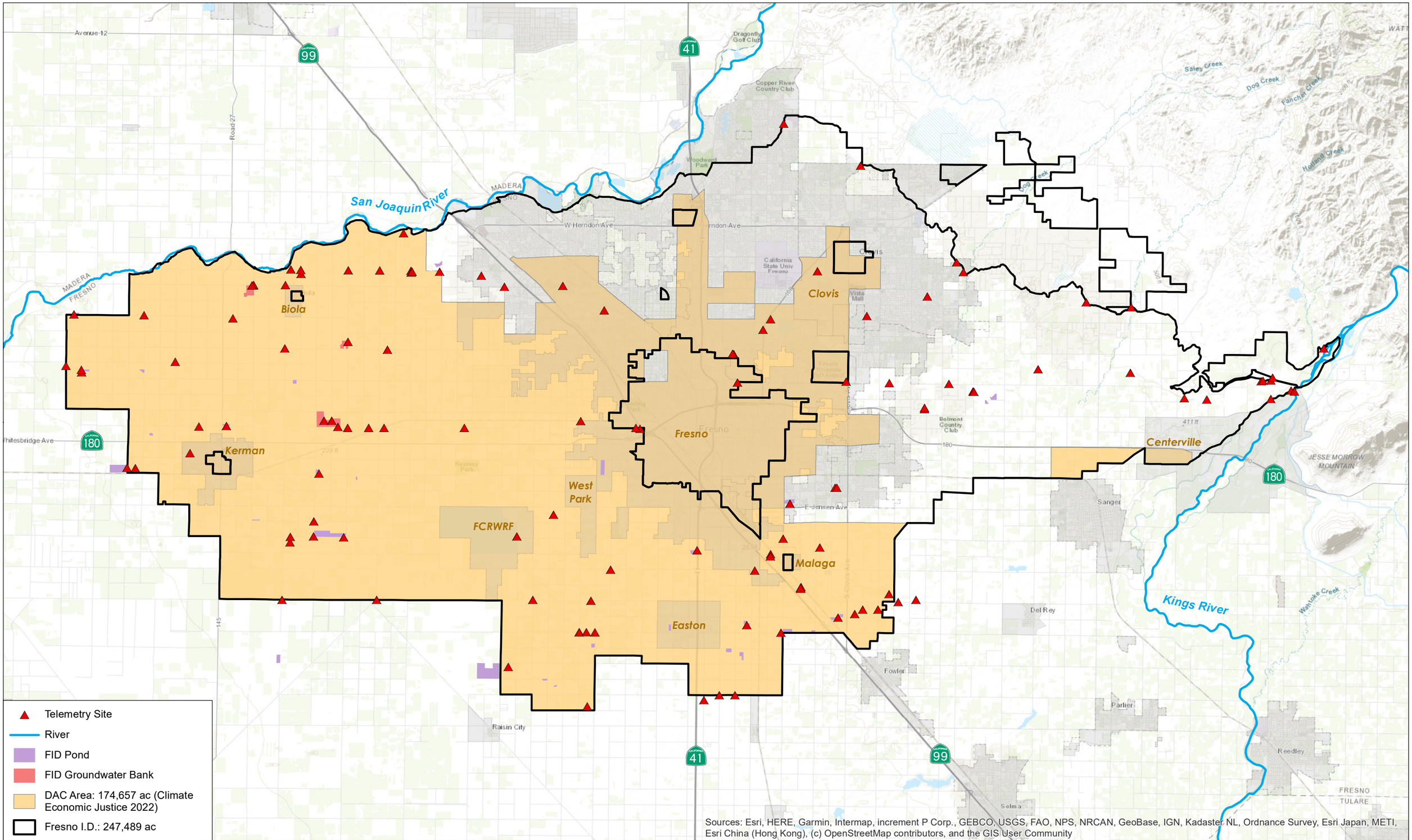
EVALUATION CRITERIA D- DISADVANTAGED COMMUNITIES, INSULAR AREAS, AND TRIBALS BENEFIT

1) If applicable, describe how the proposed project will serve or benefit a disadvantaged community, identified using the tool. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantaged community?

Much of the project is located within disadvantaged communties according to the Climate and Economic Justice Screening Tool https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5) and as shown in Figure 4. The Screening Tool identifies all of these areas as

disadvantaged including in the area of energy. Specifically Energy Cost, PM2.5 in the Air, and Low Income. This project will directly address this issue by helping reduce energy use costs for the District and the downstream growers that will benefit from the conserved water being delivered.

Insular Areas – The Project is not in Insular area.
Tribal Benefits – The Project will not have a benefit to tribes.



Fresno Irrigation District

SCADA Improvements for Water and Energy Efficiency

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EVALUATION CRITERIA E- COMPLEMENTING ON FARM IRRIGATION IMPROVEMENTS

Describe any planned or ongoing projects by farmers/ranchers that receive water from the applicant to improve on-farm efficiencies.

The Fresno Irrigation District is one of four agencies in Fresno and Madera counties selected to receive funding for its growers through the EQIP WaterSMART Initiative. This program partners funds from the Bureau of Reclamation's WaterSMART funding pool for conservation planning and improvement with the well-established EQIP program run by the USDA's Natural Resources Conservation Service. Funding is intended to improve water conservation and irrigation water use efficiency on eligible farms within FID's boundaries through farm-scale projects. FID has announced the program on its website (https://www.fresnoirrigation.com/grants), through its social media, and conducted an informational webinar.

Provide a detailed description of the on-farm efficiency improvements.

The program was just initiated by FID with initial applications from growers due on February 16, 2024, so no projects have been initiated under the program. Funding opportunities under the program include:

- Microirrigation system
- Irrigation ditch lining
- Irrigation pipeline
- Irrigation reservoir
- Irrigation water management
- Mulching
- Cover crop
- Reduced tillage or no-till
- Well decommissioning
- Windbreaks and hedgerows

Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future?

The program has just been initiated by FID in coordination with NRCS, but applications are anticipated for funding assistance as well as presumably some technical assistance.

If available, provide documentation that the on-farm projects are eligible for NRCS assistance, that such assistance has or will be requested, and the number or percentage of farms that plan to participate in available NRCS programs.

Through this EQIP-WaterSMART initiative, the wide range of eligible projects are eligible for assistance. The amount of interest in the program has not yet been identified since applications are due about the same time as this application. FID has promoted the program and anticipates interest from growers within the District. A percentage of growers interested can be determined after applications have been received and considered.

Applicants should provide letters of intent from farmers/ranchers in the affected project areas.

A listing of support letters for this Water and Energy Efficiency Grant application is included within this application, including a letter from the Fresno County Farm Bureau which represents farmers/ranchers in the District.

Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement.

The SCADA Improvement project will complement planned on-farm improvements by helping FID operations staff have more timely data from monitoring sites within the system. The additional information and frequency will help FID and its system make more timely operational changes to provide improved on-time adjustments to meet grower demands. FID has been encouraging growers to maintain surface water delivery systems. FID's delivery system was built for flood irrigation, where surface water was delivered in a larger slug of water over a shorter period of time, typically a scheduled day or two during the month. As landowners convert to drip or micro-sprinkler systems, they require surface water delivery at lower volumes over extended periods of time. Managing the changing demands on the system is a challenge for District operations staff as growers along a lateral may convert at different times, and some have chosen to no longer take surface water deliveries. The SCADA system will provide for improved operational changes to meet these demands, and the EQIP-WaterSMART program funding will allow growers to make on-farm system changes to maintain surface water deliveries.

Will the proposed WaterSMART project directly facilitate the on-farm improvement? If so, how? For example, installing a pressurized pipe through WaterSMART can help support efficient on-farm irrigation practices, such as drip-irrigation.

Recovering additional water that can be conveyed in FID's system will extend the FID's delivery schedule and encourage overall on-farm use of surface water by growers.

OR

Will the proposed WaterSMART project complement the on-farm project by maximizing efficiency in the area? If so, how?

The project will provide solar power so that the District can maximize the use of the recovery wells and pump station, thereby extending the delivery season and use of surface water on-farm by growers.

Describe the on-farm water conservation or water use efficiency benefits that are expected to result from any on-farm work.

There is no direct on-farm work associated with the project, however the project will allow for additional water in FID's canals and pipelines, extending the season for on-farm use, rather than individual pumping.

Estimate the potential on-farm water savings that could result in acre-feet

per year. Include support or backup documentation for any calculations or assumptions.

The project is conservatively estimated to provide 1,000 acre-feet per year of water savings as previously documented in this application. The amount of water conserved and delivered to growers is the amount that will not be pumped by growers during that delivery period.

Please provide a map of your water service area boundaries. If your project is selected for funding under this NOFO, this information will help NRCS identify the irrigated lands that may be approved for NRCS funding and technical assistance to complement funded WaterSMART projects.

The boundary of FID is included in **Figure 1** through **Figure 3** and **Figure 8.**

EVALUATION CRITERIA F- READINESS TO PROCEED

Identify and provide a summary description of the major tasks necessary to complete the project. Note: Do not repeat the more detailed technical project description provided in Section D.2.2.2 Application Content. This section should focus on a summary of the major tasks to be accomplished as part of the project.

It is assumed that the grant contract will be signed on December 31, 2024. Recent experience with other USBR grant funded projects is that the NEPA process, particularly the Cultural Review, has been taking considerable time for the USBR and its review partners to complete. Although the project is anticipated to be eligible as a categorical exception, the time for this process is the critical path and has been included in the schedule. It is estimated that all work will be completed by December 2026 prior to the funding deadline. This provides a comfortable buffer in case of unforeseen delays, and it should be noted that if the NEPA process does not take as long as it has been, the project should be able to be completed much sooner. The schedule is consistent with other similar projects. A detailed schedule is included in **Appendix C.**

The Project, if awarded funding, could start immediate, with construction starting in July 2025. The District will utilize its existing integrators experienced with its system for the construction.

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

Required permits for the project are limited to a Fresno County building permit for the construction of the planned antenna towers for improved radio communication. Electrical permitting is not anticipated as the existing sites all have electrical service, and the planned new flow measurement sites will have solar power.

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

No significant design work will be needed for this project. FID's Integration contractor will perform the installation of the on-site telemetry equipment and radio ethernet

improvements. Radio testing has already been completed and a recommended system proposed. The radio tower supplier has standard footing designs and is not anticipated to need additional design. FID has a standard measurement site configuration for its SCADA equipment and no design is needed.

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

No policies or administrative actions will be required for this project.

4) ***Describe the current design status of the project. If additional design work is required prior to construction, describe the planned process and timeline for completing the design work.***

Radio testing and system design has already been completed.

5) ***Please also 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: complete environmental and cultural compliance; mobilization; begin construction/installation; construction/installation (50% complete); and construction/installation (100% complete). Was the expected timeline for environmental and cultural compliance discussed with the local Reclamation regional or area office?***

A detailed project schedule showing key milestones is included in **Appendix C.**

EVALUATION CRITERIA G- COLLABORATION

1) ***Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project.***

The Project is supported by FID stakeholders, surrounding agricultural and farming communities. As noted, the stormwater and flood water management is agreed to by the FMFCD, County of Fresno, City of Clovis and City of Fresno. FID will coordinate directly with the FMFCD for installation of the new flow measurement points at the reservoirs. Letters of support are included in **Appendix A,** and were provided from North Kings Groundwater Sustainability Agency, Fresno County Farm Bureau Kings Basin Water Authority and Kings River Conservation District.

2) ***What is the extent of their involvement in the process?***

FID coordinates directly with the FMFCD for storm water routing. The Big Dry Creek as well as the other rural streams spill into FID's system during significant storm events. FID has entered into a stormwater disposal agreement for the routing of the stormwater. The FMFCD, City of Clovis, City of Fresno and Fresno County have all entered into this master discharge agreement to coordinate stormwater routing and cover operation and maintenance associated costs. During storm events, FMFCD discharges urban runoff ponding basins into FID canals to provide capacity for pending additional storm events. FID is then responsible to convey the water through the urban core to its growers and

recharge basins. The east side streams also drain directly or are discharged into FID facilities. During storm events, coordination between the agencies is critical. FID and FMFCD continue to strive to improve their SCADA systems to provide increased flow measurement information to provide more timely operational management.

3) ***What is the significance of the collaboration/support?***

The collaboration has allowed for improved flood protection for urban and rural areas and better management of available water supplies.

4) ***Will this project increase the possibility/likelihood of future water conservation improvements by other water users?***

Improvements to SCADA system will support the District to better manage water used through the system and provide more on-time deliveries which will help encourage surface water use and overall water conservation by water users.

5) ***Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?***

The project will provide benefits to agricultural users, municipalities and rural residents by:

- *Extending the surface water delivery season*
- *Providing additional flood control management and protection*
- *Capturing additional water lost to the region and recharging the aquifer*

6) ***Please attach any relevant supporting documents (e.g., letters of support or memorandum of understanding).***

The Project is supported by FID stakeholders, surrounding agricultural and farming communities. Letters of support are included in **Appendix A.** As noted, the letters of support included are from North Kings Groundwater Sustainability Agency Fresno County Farm Bureau, Kings Basin Water Authority, and the Kings River Conservation District.

EVALUATION CRITERIA H- NEXUS TO RECLAMATION

1) ***Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. Please consider: Does the applicant have a water service, repayment, or operations and maintenance (O&M) contract with Reclamation?***

FID currently holds a water contract with the USBR (Friant Division Central Valley Project contract No. 14-06-200-1122A-D (C2)) for 75,000 acre-feet of Class II San Joaquin River water.

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

Not applicable.

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

Yes, the project and the District are both located within the Central Valley Project's Friant Division, and the District is within the CVP Place of Use. FID is dependent on their CVP supplies to meet their full water demands. The project will directly benefit a Reclamation Project Area.

4) ***Is the applicant a Tribe?***

The applicant is not a state or federally recognized tribe

(F) PERFORMANCE MEASURES

The following performance measures will be used to evaluate the project:

- Addition of flow measurement data from the new measurement sites
- Comparison of the frequency of data collection at existing automated gate control and flow measurement locations
- Measurement of flow data from the new monitoring sites will be used to determine the total flows conserved during flood and storm events at those locations.

2 BUDGET NARRATIVE

The budget proposal has been developed based on a key study by Cal Poly Irrigation Training and Research Center (ITRC) that is attached as **Appendix D,** as well as cost proposals from the District's SCADA integrator and consulting firm with professional experience with developing similar projects, including projects that include USBR grant funding. A detailed summary report of the project work including cost is included in **Appendix E.** The District will perform administration and management and oversee the entire process; however, it will not charge its time to the project.

The District will contract with the appropriately licensed and experienced professional consultants and contractors to complete the work associated with the project. The

District's consulting engineer will prepare any required structural plans for antenna tower footings and secure necessary permitting from the County. **Table 1** provides a summary of the totals under each category to complete the work, and the detailed supporting information for each of the items is included in **Appendix E.** A more detailed description of the costs for each category is included below.

The District will provide more than the required 50% cost share as shown in the table below.

Table 1 – Budget Totals

Budget Item Description	Computation		Quantity Type	Total Cost
	Unit Cost	Quantity		
Salaries &Wages (FID)	$0			$0
Fringe Benefits (FID)	$0			$0
Travel (under contractual)	$0			$0
Equipment (under contractual)	$0			$0
Supplies/Materials (under contractual)	$0			$0
Contractual (see Appendix F for details)				
Professional Services				
Grant Administration (see attached professional fees detail)	$15,000	1	LS	$15,000
CEQA/NEPA and Permitting (see attached fees detail)	$34,400	1	LS	$34,400
Engineering Design (see attached fees detail)	$21,552	1	LS	$21,552
Contractor				
Integrator/Electrical Contractor (see attached EOPCC detail)	$926,348	1	LS	$926,348
Other	$0			$0
Total Direct Costs				**$997,300**
Indirect Costs – 0.0%				$0
Total Project Costs				**$997,300**

Funding Sources	Amount	Percentage
Costs to reimbursed with the requested Federal funding	$498,650	50.00%
Costs to be paid by the applicant	$498,650	50.00%
Value of third-party contributions	$0	0%
Totals	$997,300	100%

Funding Sources	Amount
Fresno Irrigation District – Cash Contributions	$498,650
Subtotal: Non-Federal Funding	$498,650
Requested Reclamation Funding	$498,650
Other Federal Funding	$0
Project Funding Total	$997,300

a. Personnel

The project manager will be the District's Chief Engineer Laurence Kimura. District staff will participate in contract negotiations, project management, project administration, consultant management, design review and grant reporting. The Chief Engineer and District staff have successfully completed numerous similar projects, including several that have received USBR grant funding. These efforts will not be billed to the project and FID will not seek either reimbursement or credit towards cost share.

b. Fringe Benefits

Since FID will not charge salary costs to the project or provide work-in-kind, there will be no fringe benefit costs included.

c. Travel

Travel expenses will include limited mileage costs for consultants to attend project meetings, visit the site, perform surveying, and monitor construction. These will be billed at the standard IRS mileage rate in effect at the time of the project. Since these costs are for consultants, they are placed in the Contractual category.

d. Equipment

The Project will include SCADA equipment that will be provided by contractors, with their costs falling under the Contractual category below.

e. Supplies

Materials and supplies needed for the Project will be provided by consultants and contractors, with their costs falling under the Contractual category below.

f. Contractual

The District will contract with the appropriately license professionals and contractors to complete the work. The District will contract with a licensed and experienced design and permitting professional to prepare required plans and complete the permitting process. The District's consulting engineer is experienced with the structural design needed for tower footings, as well as the required permitting process. The summary cost for these services is included in **Appendix E.** A detailed estimate of hours and rates is included in **Appendix E.**

Environmental and regulatory compliance will incur costs for CEQA compliance and NEPA Compliance. Although CEQA and NEPA exceptions (exemptions) are anticipated for the work, budget has been included for USBR typically required cultural and biological technical studies. The environmental and regulatory compliance costs are summarized in the Estimate of Consulting Fees (see **Appendix E).** These costs are incorporated into the fee estimate spreadsheet for consulting services (see **Appendix E).**

The District will have its SCADA Integrator responsible for its SCADA system perform the required upgrades to the system. A Preliminary Engineer's Opinion of Probable Construction Cost (EOPCC) has been prepared and included in **Appendix E.** The EOPCC was prepared based on prior studies, actual quotes from the Integrator, and the District's consulting engineer. A detailed listing of potential bid items in included in the EOPCC.

g. Construction

A Preliminary Opinion of Probable Construction Cost (EOPCC) has been prepared and included in **Appendix E.** The costs for construction are included under the Contractual category.

h. Other Direct Costs

There are no other direct costs associated with the project, and no third-party contributions.

i. Total Direct Costs

A detailed listing of the categories and totals for each category is shown in **Appendix E.** The detail supporting these costs is included in **Appendix E.**

j. Indirect Costs

The project will not have indirect costs.

j. TOTALS

A detailed listing of the categories and totals for each category is shown in Table 2. The detail supporting these costs is included in **Appendix E.** The District will provide more than the required cost share.

3 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

The project is anticipated to be eligible under a Categorical Exception as the project is limited to replacement of existing electronic and communication equipment at existing SCADA locations that already have measurement.

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

The project will provide no impact to the surrounding environment.

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?

The Project does not have any listed species or proposed species to be listed.

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

There are no wetlands or surface waters that fall under the jurisdiction of the CWA or that are considered WOTUS on the sites.

When was the water delivery system constructed?

The Fresno Irrigation District was formed in 1921 with most of the delivery system constructed in the late 1800's. The system was constructed to deliver water from the Kings River to previously non-irrigated parts of Fresno County. The work associated with the project will not directly modify the water conveyance system as all work will be at existing SCADA locations and be outside of the wetted channel.

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

The Project would not result in any modifications or effects to individual features of the irrigation system therefore this does apply. The work is limited to electrical and communication equipment outside of the wetted channel or pipeline facilities.

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.

Prior to construction, a Cultural Resources technical study will be completed in accordance with USBR requirements.

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

There are no known archeological sites in the project area. The project will modify existing SCADA and telemetry equipment.

Will the proposed project have a disproportionate and adverse effect on any communities with environmental justice concerns?

The project will not have a disproportionate or adverse effect on any communities with environmental justice concerns. To the contrary, much of the project area is within a DAC, and the project will help improve water and energy efficiency in the area to benefit those stakeholders including DACs.

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

The project will not limit access to, and ceremonial use of, Indian sacred sites or cause an impacts on tribal lands.

The proposed project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area.

4 REQUIRED PERMITS OR APPROVALS

Required permits for the project are limited to a Fresno County building permit for the construction of the planned antenna towers for improved radio communication. Electrical permitting is not anticipated as the existing sites all have electrical service, and the planned new flow measurement sites will have solar power.

5 OVERLAP OR DUPLICATION OF EFFORT STATEMENT

FID is not aware of any overlap or duplication of efforts associated with this project.

6 CONFLICT OF INTEREST DISCLOSURE STATEMENT

FID is not aware of any actual or potential conflicts of interest that would impact either the grant application or the project if it is funded by USBR. FID will notify USBR promptly if a conflict of interest arises.

7 UNIFORM AUDIT REPORTING STATEMENT

FID was not required to file a Single Audit Report last year.

8 CERTIFICATION REGARDING LOBBYING

FID is requesting more than $100,000. The required SF-424 form is included with this application.

9 SF-LLL: DISCLOSURE OF LOBBYING ACTIVITIES (IF APPLICABLE)

FID has not engaged in any lobbying, therefore form SF-LLL is not required.

10 LETTERS OF SUPPORT

The project benefits are described above, but the qualitative significance of the project benefits is best demonstrated by the numerous letters of support from stakeholders, which can be found in **Appendix A.** Several stakeholder groups provided letters including: local water agencies, regional water management agencies, disadvantaged communities, and non-profit organizations. Letters were received from the following:

- *North Kings Groundwater Sustainability Agency*
- *Fresno County Farm Bureau*
- *Kings Basin Water Authority*
- *Kings River Conservation District*

There is no known opposition to the project. No letters of opposition have been received, and no opposition to the project was made during the adoption of the Resolution to prepare the grant application.

11 LETTER OF PARTNERSHIP (CATEGORY B APPLICANTS)

Fresno Irrigation District is a Category A applicant so this section does not apply.

12 OFFICIAL RESOLUTION

Appendix G includes the resolution authorizing the preparation of this application and funding for the District's cost share that will be adopted at FID's February 8, 2024 Board meeting.

13 LETTERS OF FUNDING COMMITMENT

FID will provide the entire local cost share for the project. A funding source other than the applicant (FID) is not included or required. **Appendix F** is documentation for the District's cost share. The total reserve funds exceed the proposed cost share and ensures that FID will have sufficient assets to enter the grant agreement and complete the project.

14 UNIQUE ENTITY IDENTIFIER AND SYSTEM FOR AWARD MANAGEMENT

FID has previously received grants from USBR and is already registered with the System for Award Management and meets other requirements for award and implementation of a grant contract.

The District uses the following identifiers:
Employer Identification Number: 23-7046670
Unique Entity Identifier : KCMZJ7VGCUM3

Appendix A – Letters of Support

Upper Kings Basin IRWM Authority
4886 East Jensen Avenue
Fresno, CA 93725
phone: (559) 237-5567
fax: (559) 237-5560

KINGS BASIN
Water Authority

February 8, 2024

Mr. Laurence Kimura, PE
Fresno Irrigation District
2907 S. Maple Ave.
Fresno, CA 93725

Re: Letter of Support for USBR Water and Energy Efficiency Grant for Fresno Irrigation District

Dear Mr. Kimura:

The Kings Basin Water Authority (KBWA) is supportive of the Fresno Irrigation District's (FID) project to: 1) Install solar arrays at existing groundwater banking and pumping facilities; and 2) Improve their SCADA system at various facilities throughout the District.

The KBWA is a collaborative effort among nearly 60 public, private, and non-governmental agencies to manage water resources in the Kings Groundwater Subbasin and oversees the implementation and monitoring of the Kings Basin Integrated Regional Water Management Plan (IRWMP). The communities and industries in our region are dependent on the surface water delivered by FID for both direct delivery as well as to help reach and maintain sustainable groundwater conditions. These FID projects will improve water management and energy efficiency, leading to improved overall water management and operational efficiency for FID and its stakeholders. The solar project will help reduce FID's overall operational costs and increase FID's ability to use its pumping facilities to provide extended water supply deliveries when needed. The SCADA project will provide for improved operational efficiency and overall surface water measurement, monitoring, and management allowing FID to potentially increase controlled diversions and deliveries during storm event periods when additional water supply is available.

The KBWA strongly encourages the United States Bureau of Reclamation to award FID's proposal and fund their project. If you have any questions, please contact me at MFast@reedley.ca.gov.

Sincerely,

Mary Fast

Mary Fast,
Chair

MF/SL/sjs

UKB L24-0004
File UKB 101.01.04

KRCD
Kings River Conservation District

4886 East Jensen Avenue
Fresno, California 93725

Tel: 559.237.5567
Fax: 559.237.5560

www.krcd.org
@kingsrivercd

February 8, 2024

Laurence Kimura, PE
Fresno Irrigation District
2907 S. Maple Ave.
Fresno, CA 93725

Re: Letter of Support for USBR Water and Energy Efficiency Grant for Fresno Irrigation District

Dear Mr. Kimura:

The Kings River Conservation District (KRCD) is supportive of the Fresno Irrigation District's (FID) project to: 1) Install solar arrays at existing groundwater banking and pumping facilities; and 2) Improve their SCADA system at various facilities throughout the District.

Many communities and industries in our service area are dependent on the surface water delivered by FID for both direct delivery as well as to help reach and maintain sustainable groundwater conditions. These FID projects will improve water management and energy efficiency, leading to improved overall water management and operational efficiency for FID and its stakeholders. The solar project will help reduce FID's overall operational costs and increase FID's ability to use its pumping facilities to provide extended water supply deliveries when needed. The SCADA project will provide for improved operational efficiency and overall surface water measurement, monitoring, and management allowing FID to potentially increase controlled diversions and deliveries during storm event when additional water supply is available.

KRCD strongly encourages the United States Bureau of Reclamation to award FID's proposal and fund their project. If you have any questions, please contact me at DMerritt@krcd.org.

Sincerely,

David Merritt
General Manager

DM/SL/dmr

L24-0019
File 400.10

NORTH KINGS GROUNDWATER
SUSTAINABILITY AGENCY

February 12, 2024

Mr. Laurence Kimura, PE
Fresno Irrigation District
2907 S. Maple Ave.
Fresno, CA 93725

Dear Mr. Kimura:

RE: **North Kings Groundwater Sustainability Agency's Letter of Support for USBR Water and Energy Efficiency Grant for Fresno Irrigation District**

On behalf of the North Kings Groundwater Sustainability Agency (NKGSA), I write in support of the Fresno Irrigation District's (FID) project to: 1) Install solar arrays at existing groundwater banking and pumping facilities; and 2) Improve their SCADA system at various facilities throughout FID.

The NKGSA and the region are dependent on the surface water delivered by FID for both direct delivery for municipal and agricultural uses and it is critical to help reach and maintain sustainable groundwater conditions. These FID projects will improve water management and energy efficiency, leading to improved overall water management and operational efficiency for FID and its stakeholders. The solar project will help reduce FID's overall operational costs and increase FID's ability to use its pumping facilities to provide extended water supply deliveries when needed. The SCADA project will provide for improved operational efficiency and overall surface water measurement, monitoring, and management allowing FID to potentially increase controlled diversions and deliveries during storm event periods when additional water supply is available.

Internet
www.NorthKingsGSA.org

Mail
North Kings GSA
c/o Fresno Irrigation District
2907 S. Maple Ave.
Fresno, CA 93725

Phone
559-233-7161

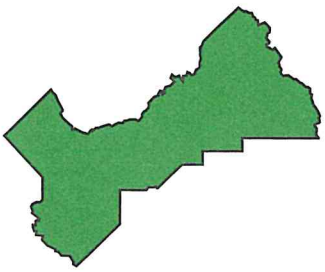
About NKGSA: The North Kings Groundwater Sustainability Agency is a Joint Powers Authority formed in December 2016. Composed of local public agencies and others engaged through binding agreements, the NKGSA is the governing body of a portion of the Kings Subbasin (DWR Bulleting 118, 5-22.08) in compliance with the Sustainable Groundwater Management Act of 2014. NKGSA members are Bakman Water Company, Biola Community Services District, City of Clovis, City of Fresno, City of Kerman, County of Fresno, Fresno Irrigation District, Fresno Metropolitan Flood Control District, Garfield Water District, and International Water District.

The NKGSA encourages the United States Bureau of Reclamation to award FID's grant and fund their project. Thank you for considering these FID projects and all their benefits. Please do not hesitate to reach out should you have any questions. I can be reached at 559-233-7161, x. 7109 or by email at kchauhan@fresnoirrigation.com.

Sincerely,

Kassy D. Chauhan,
Executive Officer

Fresno County
Farm Bureau
Serving agriculture since 1917



February 13, 2024

Fresno Irrigation District
Laurence Kimura, PE
2907 S. Maple Ave.
Fresno, CA 93725
Telephone: (559) 233-7161 x7103
E-mail: LKimura@fresnoirrigation.com

Subject: Letter of Support for USBR Water and Energy Efficiency Grant for Fresno Irrigation District

Mr. Kimura,

On behalf of the Fresno County Farm Bureau, I write in support of the Fresno Irrigation District's (FID) projects to: 1) Install solar arrays at existing groundwater banking and pumping facilities; and 2) Improve their Supervisory Control and Data Acquisition (SCADA) system at various facilities throughout the district.

Our agency and the region are dependent on the surface water delivered by FID for both direct delivery as well as to help reach and maintain sustainable groundwater conditions. These FID projects will improve water management and energy efficiency, leading to improved overall water management and operational efficiency for FID and its stakeholders.

The solar project will help reduce FID's overall operational costs and increase FID's ability to use its pumping facilities to provide extended water supply deliveries when needed. The SCADA project will provide for improved operational efficiency and overall surface water measurement, monitoring and management allowing FID to potentially increase controlled diversions and deliveries during storm event periods when additional water supply is available.

We strongly encourage the United States Bureau of Reclamation to award FID's grant and fund their projects.

Sincerely,

Mark Thompson
President