

FRESNO IRRIGATION DISTRICT

WATER METER PROJECT GROUP II

FRESNO COUNTY, CA



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. R24AS000521

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PREPARED FOR:
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NOVEMBER 2024

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Abbreviations

ACIP	ACIP Energy LLC
AF	Acre Feet
CEQA.....	California Environmental Quality Act
CO ₂	Carbon Dioxide
DAC.....	Disadvantaged Community
DC.....	Direct Current
DOI	Department of the Interior
EOPCC.....	Engineer’s Opinion of Probably Construction Cost
EQIP	Environmental Quality Incentives Program
ESA	Endangered Species Act
FID	Fresno Irrigation District
GHG	Green House Gas
kW	Kilowatt
kWH.....	Kilowatt per Hour
NEPA.....	National Environmental Policy Act
NOFO	Notice of Funding Opportunity
NO _x	Nitrogen Oxides
SCADA.....	Supervisory Control and Data Acquisition
So _x	Sulfur Oxides
USBR.....	United States Bureau of Reclamation

1 TECHNICAL PROPOSAL

(A) EXECUTIVE SUMMARY

General Project Information

Proposal Name: Water Meter Project Group II

Date: November 13, 2024

Applicant Name: Fresno Irrigation District

City, County, and State: Fresno, Fresno County, California

The Fresno Irrigation District (FID or District), organized in 1920, is a Category ‘A’ applicant and provides agricultural water to a 247,000-acre area in Fresno County, California. FID aims to protect and manage the surface and ground water resources of the region to meet the present and future needs of the District.

The Water Meter Project Group II (Project) proposes to assist landowners with the cost to purchase and install up to **200 electromagnetic flow meters** (magmeters) on private groundwater wells that are currently not metered. The Project is located in agricultural areas of Fresno County in Central California. The meters will measure groundwater extractions with an accuracy of $\pm 2\%$ delivered to **4,000 irrigated acres** within the District. This improved measurement will allow growers to better match supplies to crop demands and irrigation scheduling, resulting in a **7% water savings**, or **16,800 AF** over the metering devices’ 20-year life span. The telemetry-equipped magmeters will provide District growers with more detailed and accurate information on groundwater use and water scheduling to meet crop demand.

Additional Project benefits include increasing grower-awareness of water-use, conservation of groundwater due to more groundwater use, increasing groundwater levels, reductions in greenhouse gas emissions, drought protection, and energy savings. The Project will benefit agricultural, rural and urban water users.

The Project will not modify any existing facilities. The Project has no permitting requirements and will have no ground disturbing activities, as all wells are above ground, and surveys would reduce grower participation. There are no project partners, and the project is not a phase in a larger overall project.

The total cost of the Project is estimated to be \$4,000,000 with a requested grant of \$2,000,000. The District’s Official Resolution for the Project is included as **Appendix A**.

The total duration of the Project is less than the required 3 years, with work ending by June 30, 2028.

(B) PROJECT LOCATION

The Project will be located within the Fresno Irrigation District (FID or District) in Fresno County, CA. **Figure 1** shows the regional location of the District. The Project will install electromagnetic flow meters (magmeters) within the agricultural areas of the District, outside of the cities of Fresno and Clovis. The exact location of each meter will be determined based on which growers would like to participate in funding. There are currently more than 2,500 unmetered wells located throughout the District that would benefit from the Project. The Project will include the purchase and installation of 200 magmeters on unmetered wells. **Figure 2** shows the well density in the agricultural areas of the District.

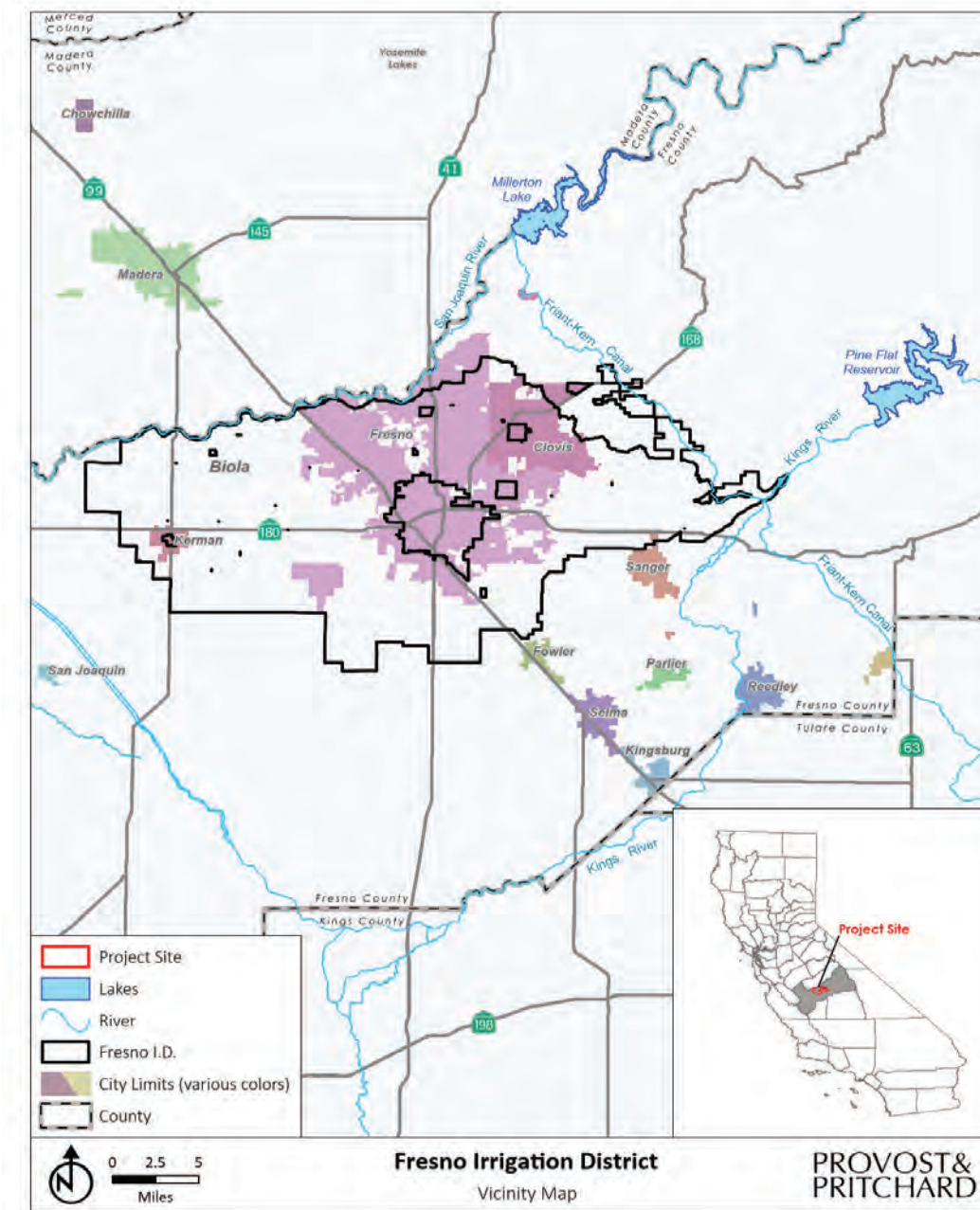


Figure 1 – Vicinity Map

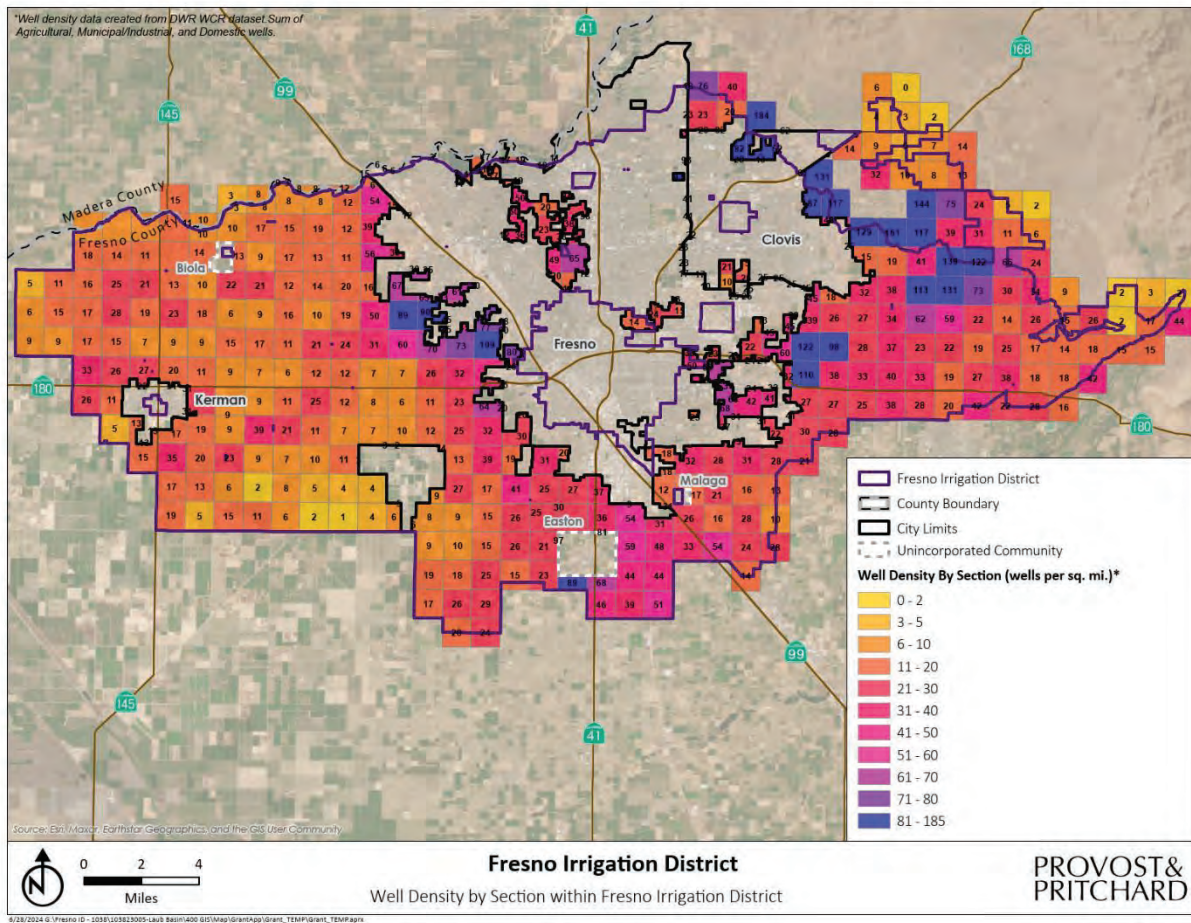


Figure 2 – Well Density Map

(C) PROJECT DESCRIPTION

The Water Meter Project Group II (Project) aims to support landowners by covering up to 50% of the cost to install magmeters on existing private wells using grant funding from this program. According to current data, there are over 2,500 private agricultural wells in the District. Most of these wells are lacking meters. The Project will install up to 200 magmeters on those unmetered wells. The District plans to use the funding to share the installation cost for these magmeters, allowing landowners to submit proof of an unmetered well and a cost estimate for the installation of an approved magmeter to qualify for participation. Selection for funding will continue until the grant funds are fully allocated.

Landowners must ensure that a District-approved meter is installed by a licensed contractor following the program's requirements. The District will inspect the well discharge piping before and after installation. Once the meter installation is verified, landowners can request reimbursement of up to 50% of the total cost, which includes equipment, materials, and installation. Meter specifications will vary, typically ranging from 8 to 18 inches. In some cases, a saddle meter may be appropriate for existing pipes, while others may require pipe section modifications and flanging for meter installation. The meters must display instantaneous flow in cubic feet per second, include a totalizer in acre-feet, be accurate to within $\pm 2\%$, and have remote telemetry capabilities. **Figure 3** illustrates an example of a compliant meter installation. Construction impacts will be limited to the discharge piping at the wellhead; therefore, no ground-disturbing activities will occur.

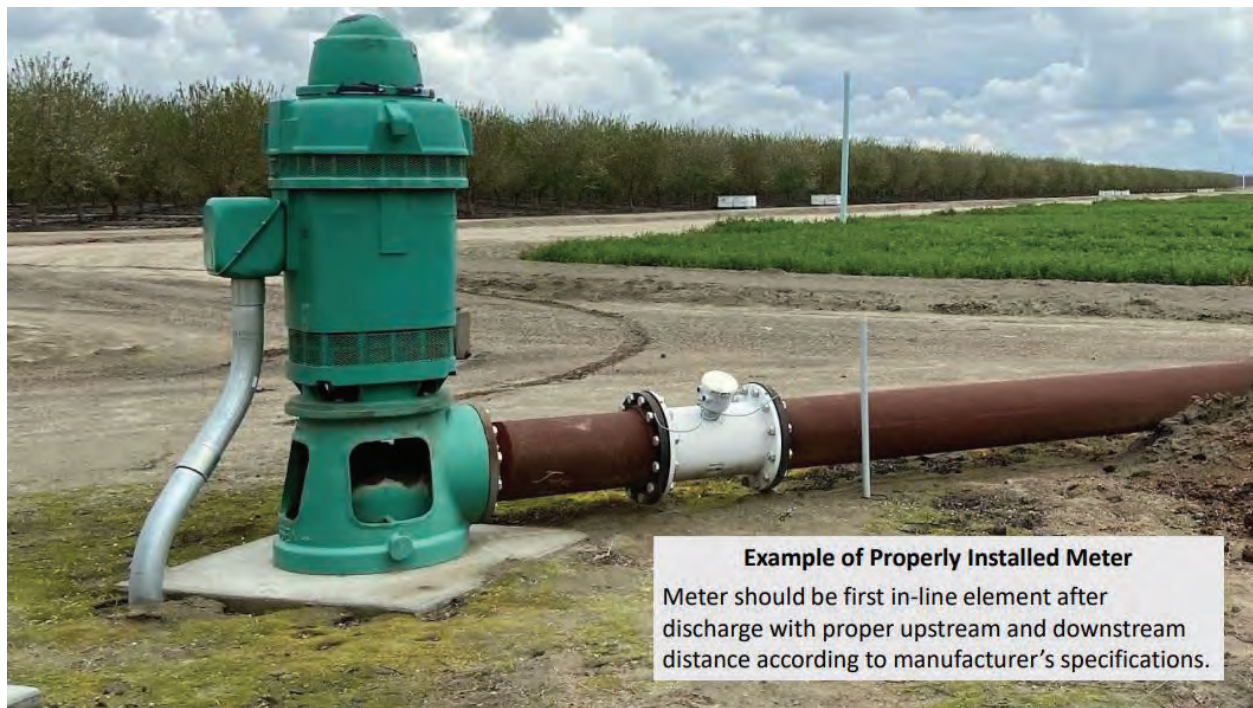


Figure 3 - Example of Installed Meter

(D) EVALUATION CRITERIA

The following performance measures will be used to evaluate the Project.

- Quantifiable Water Savings
- Renewable Energy
- Other Project Benefits
- Disadvantaged Communities and Tribal Benefits
- Complementing On-Farm Irrigation Improvements
- Readiness to Proceed
- Collaboration
- Nexus to Reclamation

EVALUATION CRITERION A – QUANTIFIABLE WATER SAVINGS

Describe the amount of estimated water savings.

- *For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project.*

The Project will assist landowners with the cost to purchase and install 200 electromagnetic flow meters (magmeters) on groundwater wells that are currently not metered. Each of the proposed magmeters will serve 20-acre parcels throughout the District and will result in the opportunity to conserve up to **840 AF/year** of groundwater, assuming a 7% water savings based on similar projects (4,000 irrigated acres x 3 AF/acre * 7%).

Not implementing the project will result in a missed opportunity to better manage up to 840 AF of water supply (up to 200 wells that serve 20-acre parcels using approximately 3 AF/acre) during certain years and hinder the basin's sustainability efforts.

Conserved water will stay in the aquifer for later use during dry or drought periods when surface water supplies are limited. Because the area is a conjunctive use area, the overall area will benefit from conserved water by reducing groundwater use. The water conserved will benefit the entire area served by the District, which includes a large disadvantaged community area, the cities of Clovis, Fresno, Kerman, and the communities of Biola, Easton, Pinedale, and Malaga.

The project will provide improved water measurement capabilities, in addition to an enhanced understanding and documentation of groundwater use. These benefits will conserve overall water use which may help prevent the potential for challenges over water use with the District and the region.

The Project will improve overall water supply management, conserve groundwater pumping, and ultimately help FID and the overall groundwater basin reach groundwater sustainability.

Describe current losses.

- *Explain where current losses are going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?*

Current losses due to unmetered private irrigation wells occur as over-application-induced seepage. These losses can be recovered for groundwater consumption but can also be an irrecoverable loss to the region if groundwater flows into canals or rivers. Installing magmeters

through this Project will enhance delivery measurement accuracy, allowing growers to better align water applications with crop needs and optimize irrigation scheduling.

- *If known, please explain how current losses are being used. For example, are current losses returning to the system for use by others? Are current losses entering an impaired groundwater table becoming unsuitable for future use?*

Seepage losses can potentially be reused by others within the District. Seepage from over-application of groundwater can be pumped and reused, which supports the urban, agriculture, and rural communities within the District that rely on a stable groundwater supply. These losses can be recovered for groundwater consumption but can also be an irrecoverable loss to the region if groundwater flows into canals or rivers. The current losses are not entering an impaired aquifer.

- *Are there any known benefits associated with where the current losses are going? For example, is seepage water providing additional habitat for fish or animal species?*

As noted, most overapplication may be reused/pumped at a later time, unless it is lost to the District and the region. There are no other known benefits associated with the current losses. The Project's expected water savings, approximately **840 AF/year** (a 7% water savings of the 12,000 AF Project area water use), will directly benefit the District's critically over-drafted aquifer, as determined by the California State Department of Water Resources. This volume is greater than the minor benefits of seepage. By improving landowner metering capabilities, the Project ensures that growers can conserve water use and decrease energy consumption through more precise scheduling of groundwater use to meet crop demand.

Describe the support/documentation of estimated water savings.

- *Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations.*

The installation 200 magmeters throughout District will result in a 7% water savings and the opportunity to conserve up to **840 AF/year** of groundwater (7% * 12,000 AF/year), or a total of **16,800 AF** over the metering devices' 20-year life span. The **7% water savings estimate** is a conservative approach to account for variability in equipment maintenance, groundwater quality, and land-use across the District. Following a few years of implementation, similar projects conducted by the Westlands Water District¹ (an adjacent District in Central Valley, CA) and a Nebraska Natural Resources District² saw water savings of 5.3% and 10%, respectively. A 7% water savings estimate is used for this Project and is recognized as a conservative approach to account for variability. A **20-year life span** is also a conservative estimate. Magmeters have an expected service life of 30 years³. The service life can vary based on factors such as maintenance and water quality.

¹ https://www.usbr.gov/watersmart/weeg/docs/2021/132_westlands_water_district_fy_21_weeg_508.pdf

² <https://irrigationleadermagazine.com/volume-12-issue-4-april/>

³ <https://www.processingmagazine.com/process-control-automation/instrumentation/flow-measurement/article/15581476/five-questions-to-ask-when-choosing-a-mag-meter>
<https://www.mccrometer.com/cms-view.jsa?page=/cms/guides/Reduce-the-risk-en.jsp>
<https://www.silverinstruments.com/support/technical-reference/flow-instruments/considerations-for-choosing-a-magnetic-flow-meter.html>

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

The Project is expected to result in an estimated 840 AF/year average annual water savings on the 4,000-acre Project area. As mentioned earlier, a conservative estimate of 7% water savings is assumed for the Project based on the results of similar projects and to account for variability in conditions across the District.

Estimated Water Savings (7%) x Water Demand for Project Area based on 3 AF/acre (12,000 AF)

$$\text{Annual Water Savings} = 7\% \times 12,000 \text{ AF/year} = \mathbf{840 \text{ AF/year}}$$

- *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.*

Current groundwater pumping is estimated and not measured, so the project will provide critical measurement information at numerous well sites to give a better understanding of groundwater pumping. The basin is currently in overdraft by more than 120,000 AF/year in accordance with the Groundwater Sustainability Plans (GSPs) for the area. This project will help conserve water pumped within the basin and help the region on its path to sustainability.

- *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 Project proposes to install 200 magmeters on unmetered, private irrigation wells.

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

The District will require magmeters be installed that have an accuracy of $\pm 2\%$ in accordance with the District's well meter policy. The magmeters installed for this Project will measure groundwater pumped for an estimated 4,000 acres. This estimate is supported by multiple references: <https://www.technoflo.com/pdfs/ultramagps.pdf> and <https://www.bellflowsystems.co.uk/mag-5100-w-dn200-siemens-electromagnetic-flow-meter-1.html#:~:text=High%20accuracy%20down%20to%200.25%25%20of,rate%20%28Standard%20unit%200.5%25%20UKAS%20Certified%29>.

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

Groundwater extraction from private irrigation wells is projected to decrease by approximately **840 AF** annually, resulting in a total reduction of **16,800 AF** over the 20-year lifespan of the magmeters. This anticipated water savings comes directly from enhanced water-use efficiency that will help growers better synchronize water deliveries with crop requirements. The 7% estimated water savings is based on the improved accuracy of water measurements, which reduces over-application and minimizes seepage.

- *How will actual water savings be verified upon completion of the project?*

Existing power bills and electrical usage for the well service may be compared to post installation meter readings to estimate the amount of water savings and change in use by the landowners. The magmeters may be integrated with the District’s Reclamation-funded SCADA system to monitor and verify actual water savings. Through FID’s SCADA system, water measurement data is transmitted directly from the well meters, providing a streamlined method for tracking and reporting groundwater pumping.

EVALUATION CRITERION B – RENEWABLE ENERGY

SUBCRITERION B.2 – INCREASING ENERGY EFFICIENCY IN WATER MANAGEMENT

- *Describe any energy efficiencies that are expected to result from implementation of the water conservation or water efficiency project (e.g., reduced pumping).*

Project implementation will reduce groundwater pumping and raise groundwater levels, which will save energy by reducing pump lifts. The Project will reduce energy use by a total of approximately **272,160 kWh/year** (based on 1.8 kWh per foot of lift) and reduce greenhouse gases by **113 metric tons CO2/year** (based on 4.17×10^{-4} metric tons CO₂ / kWh from EPA Greenhouse Gas Calculator).

The installation of telemetry-equipped magmeters across the District will also enhance water management and reliability for the acreage monitored by these magmeters. This Project enables real-time data collection, significantly improving water-use efficiency. By aligning surface water deliveries more closely with crop demands, especially during dry years when surface water is scarce, the Project will reduce reliance on groundwater. Lowering the need for supplemental groundwater pumping will support local groundwater levels, reduce pumping lifts, conserve energy, and cut greenhouse gas emissions, ultimately leading to cost savings in groundwater extraction.

- *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.*

Project implementation will reduce groundwater pumping and raise local groundwater levels throughout the Project area. Reduced groundwater pumping will result in a total reduced energy use of **272,160 kWh/year** (based on **1.8 kWh per foot** of lift). Approximately **12,000 AF** of groundwater is pumped annually for agricultural use within the estimated 4,000-acre area that will be served by the wells in the project. Based on local groundwater level records, the depth to water in fall 2023 ranged from 90 to 120 feet below ground surface (median of **105 feet bgs**). Water levels are expected to rise **3 feet/year** as a result of the reduced groundwater use. The energy use savings is demonstrated in the following equations:

Energy Savings from Rising Groundwater Levels
113,400 kWh/year = 1.8 kWh/ft x 12,000 AF/year x 3 ft of annual groundwater rise x 2 years of benefit before water saved is pumped or flows out of the area

Energy Savings from Reduced Groundwater Pumping
158,760 kWh/year = 1.8 kWh/ft x 840 AF/year of Project water savings x 105 ft
Total Average Annual Energy Savings
272,160 kWh/year = 113,400 kWh/year + 158,760 kWh/year

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

The Project will facilitate real-time data collection, enhancing the efficiency of water use in a subbasin with a critically over-drafted aquifer. By improving water management, this Project will help sustain agricultural lands, supporting carbon sequestration in soils and reducing greenhouse gas emissions. The reduced groundwater pumping and associated energy savings are projected to cut greenhouse gases by approximately **114 metric tons per year**, based on EPA's Greenhouse Gas Calculator emissions factor of 4.17×10^{-4} metric tons CO₂ per kWh. The calculation of greenhouse gas reductions due to these energy savings is demonstrated in the following equations.

Reduced Greenhouse Gas Emissions from Rising Groundwater Levels
47 metric tons/year = 113,400 kWh/year x 0.000417 metric tons of CO ₂ /kWh
Reduced Greenhouse Gas Emissions from Reduced Groundwater Pumping
66 metric tons/year = 158,760 kWh/year x 0.000417 metric tons of CO ₂ /kWh
Total Average Annual Greenhouse Gas Reduction
114 metric tons/year = 47 metric tons/year + 66 metric tons/year

- *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?*

Most irrigation wells within FID use vertical turbine pumps powered by electric motors around 70 horsepower or similar. Enhanced irrigation management practices under the Project are projected to reduce groundwater pumping in the Project area by 7%, or roughly 840 AF annually, leading to proportional energy savings for the District. This 840 AF reduction in groundwater pumping is estimated to save approximately 272,160 kWh each year.

- *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.*

All energy savings estimates are based on the power used by irrigation wells that pump groundwater from the local aquifer to supplement surface water supplies. This Project will not involve any additional diversion sites.

- *Does the calculation include any energy required to treat the water, 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.*

The meters will be suitable for the District to connect to telemetry, providing data directly back to the District office and network, eliminating the need to drive to the site to check meter readings. Currently well pumping is not metered or tracked, however in future years it is anticipated that groundwater pumping records will be required to be reported. A conservative estimate of the reduction in miles driven to read meters is 2 miles per meter per month, so 1,000 miles per month.

- *Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).*

Where necessary, small solar panels will be installed with the meter to allow for the SCADA system connection and transmission of data to the District.

EVALUATION CRITERIA C- OTHER PROJECT BENEFITS

Resilience and Sustainability Benefits.

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

Over the past 22 years, the District has frequently experienced water scarcity from drought conditions, as tracked by the U.S. Drought Monitor (<https://droughtmonitor.unl.edu>), including a three-year drought from 2020–2022 and from 2012–2016. **Figure 4** presents the Drought Severity and Coverage Index for the Fresno, California area, ranging from 0 (no drought) to 500 (full area in exceptional drought). The figure shows that the area has been in some stage of drought for most of the time since 2000.

Drought and water scarcity affect all water users within FID:

- **Urban Water Supply:** FID provides surface water to Fresno and Clovis, the San Joaquin Valley’s largest metropolitan area, where it is treated for local use. During droughts, these cities rely heavily on groundwater to meet demands.
- **Agricultural Water Supply:** Agriculture within FID is highly reliant on conjunctive use irrigation, supporting crops like almonds, vines, and citrus. Agriculture is a major economic driver in Fresno County, with more than 50% of FID’s total acreage being designated for agriculture purposes. More than 70% of all crops are permanent crops. In order to continue to meet present and future water needs within the District, landowners are encouraged to ensure their irrigation system and practices avoid over-irrigation and water loss. However, drought conditions can delay irrigation schedules and increase groundwater extraction, especially vulnerable during dry years.
- **Rural and Domestic Water Supply:** Domestic wells in rural areas may face reduced yields, drying wells, and increased pumping costs due to lower groundwater levels.

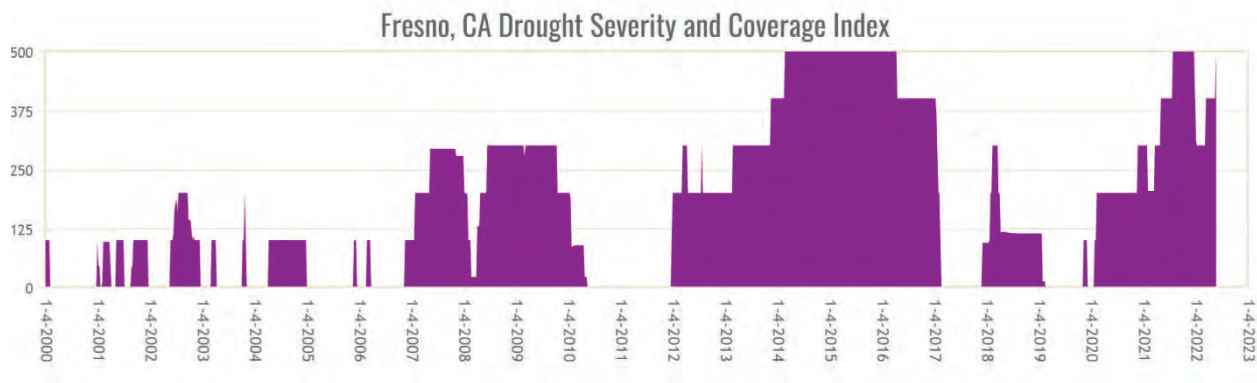


Figure 4 – Drought Severity and Coverage Index for Fresno, California Area

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

Yes. FID has experienced drought and water scarcity conditions several times over the past few years. As a result, the District has practiced drought management for several years, embracing flexibility in on-farm irrigation and encouraging grower water conservation efforts, as shows in the District’s Smart Water Management flier

(https://www.fresnoirrigation.com/files/ugd/932427_5436d3dcdfa04eb59bd6a6996bd690c7.pdf). Located in California’s Central Valley, the Project area frequently faces prolonged droughts and water scarcity, with the most recent drought occurring between 2020 and 2022. According to the U.S. Drought Monitor (<https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx>), there have been three major “exceptional drought” periods since 2000. **Figure 5** through **Figure 8** shows drought maps from the U.S. Drought Monitor for this period, with annotations marking the general Project location. **Figure 9** illustrates the percentage of Fresno County in drought since 2000 and the severity levels experienced.

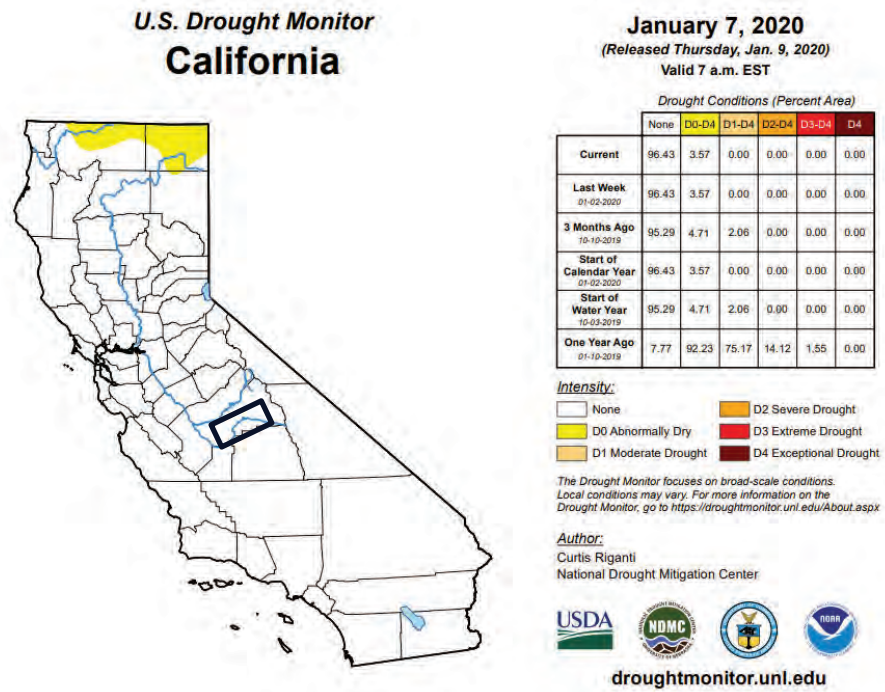


Figure 5: U.S Drought Monitor Report (January 7, 2020)

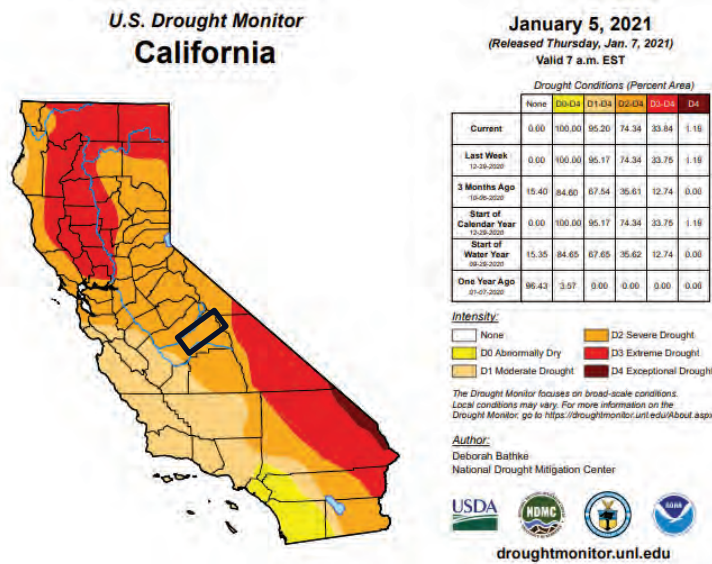


Figure 6: U.S Drought Monitor Report (January 5, 2021)

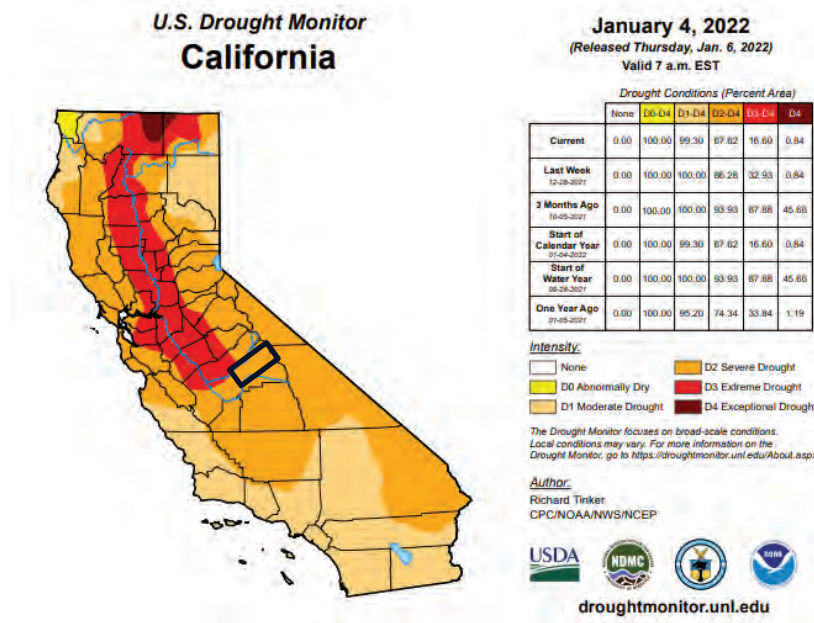


Figure 7: U.S Drought Monitor Report (January 4, 2022)

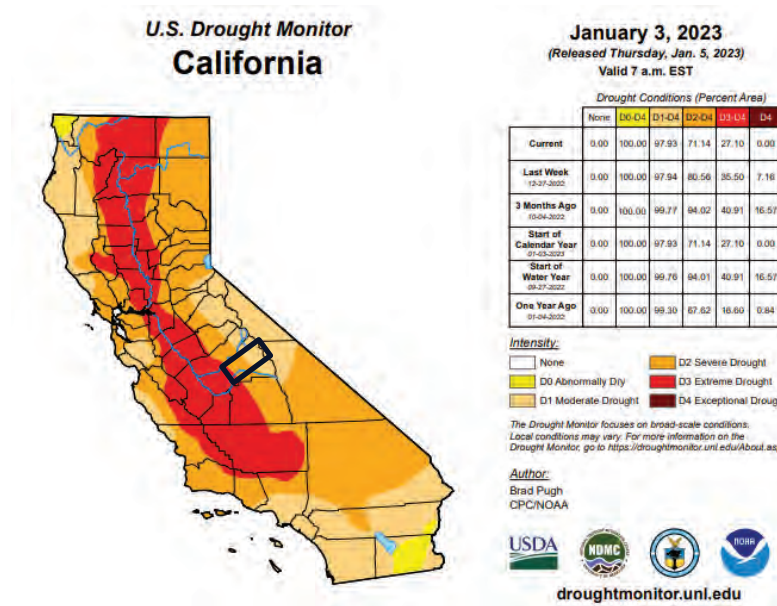


Figure 8: U.S Drought Monitor Report (January 3, 2023)

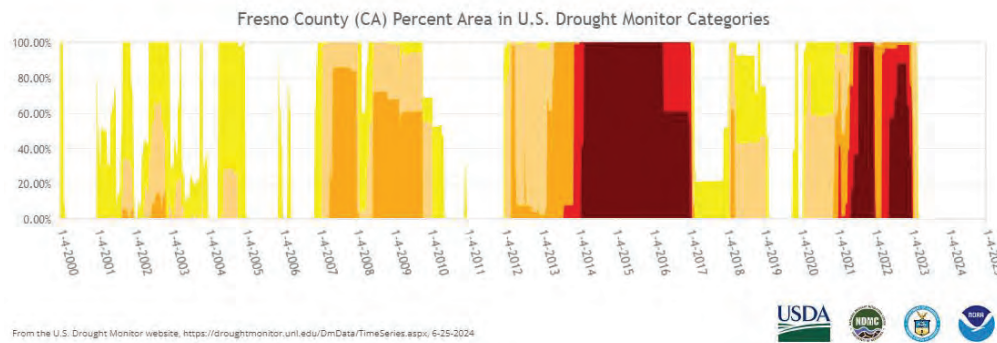


Figure 9: Percentage of Drought in Fresno County since 2000

- *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.’

- *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.*

The region is dependent on groundwater as a primary source to meet demands and has one utility provider in the area. Reducing pumping costs and maintaining higher groundwater levels will help limit and reduce energy impacts in the area. More specific issues are described below:

- **Grid Reliability during Droughts:** Due to frequent droughts relying on groundwater increases. Groundwater extraction is energy-intensive and contributes to higher energy consumption and costs, which adds extra pressure on the energy grid, especially during peak irrigation months. The energy grid in Central California often faces stress during high-demand periods.
- **Central Valley Air Pollution:** Fossil fuels and increased greenhouse gas (GHG) emissions from vehicle transportation contribute significantly to pollution in the Central Valley. GHG emissions increase during peak irrigation months when irrigated acres require growers to visit each site for monitoring and meter reading. The Project will also reduce air pollution by reducing vehicle GHG emissions associated with the new magmeters and telemetry system.

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

The Project meets the goals of the District’s United States Bureau of Reclamation (USBR) Drought Management Plan to better manage water demand during drought by “[encouraging] growers within the District to improve irrigation efficiency and on-farm water management, especially during drought.” Metering will result in water savings and better water management for the landowners. Secondary project benefits include the following: raise groundwater levels, increase groundwater storage, reduce groundwater pumping costs in the local area, reduce

greenhouse gases due to more efficient water use and benefit local disadvantaged communities. Water savings from the project is conservatively estimated to average approximately 840 AF/year. (assuming a 7% conservation for as many as 200 wells that are metered that typically serve 20-acre parcels using approximately 3 AF/acre in certain years).

- *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?*

Yes. The Project will result in reduced groundwater pumping from participating growers by improving measurement accuracy and by making real-time water usage data available. Real-time usage data will encourage irrigation flexibility to growers and will allow growers to evaluate the efficiency of their water system.

- *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.*

Conserved water will stay in the aquifer helping the District and the region reach sustainability for the next generation. The conserved water will also raise groundwater levels and help prevent rural and domestic wells from going dry. FID encourages growers to participate in smart water management to help increase the reliability of our groundwater supply so it's available not just during the next drought, but for the next generation on the farm.

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

The estimate of conserved water is 840 AF/year, or 16,800 AF over the 20-year life span of the magmeters. All of the water will be beneficially used by the District for irrigation demand in dry years. Some conserved water may benefit rural and domestic wells.

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

Conserved water will be stored in the region's principal aquifer. Private and municipal wells will be used to pump out the conserved water in later years for direct beneficial use to meet domestic, municipal and agricultural needs.

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

There are no direct interstate compacts associated with the Project; however, conserved water will help reduce overall demand and competition for limited supplies within the area.

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

Yes, the Project will play a significant role in helping the region progress on its path towards groundwater sustainability, as required by the State of California's Sustainable Groundwater Management Act (SGMA). The drought and water scarcity conditions experienced by the District and most of the Central Valley has not been without increased water-related tensions.

FID is located within a “critically over-drafted” groundwater basin, as designated by SGMA. Overall groundwater use in the basin must reach sustainability and avoid undesirable results, such as continued decline in water levels, by 2040. To meet these goals and prevent further water tension, FID is initiating this Project to incentivize meter installation in a largely un-metered area and encourage smart water management within FID. Critically over-drafted groundwater basins who fail to achieve these goals face the possibility of State intervention, which will result in more significant water-related tensions, especially during drought.

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. However, conserved water will continue to help provide habitat for waterfowl, shorebirds, resident, and migratory birds along with a variety of other wildlife. Improved overall water supply management within the District will help support the District’s responsibility in the Kings River Fisheries management program.

- *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.).*

With the installation of magmeters, water that would have previously been over-applied to fields will now be conserved and will remain in the aquifer, maintaining water levels in the aquifer. The amount of conserved has been conservatively estimated at 840-acre feet per year.

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

Improving groundwater management directly supports better overall water management and reduces surface water demands, supporting endangered species. Improved overall water supply management within the District will help support the District’s responsibility in the Kings River Fisheries management program.

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

Solar panels typically have a lifetime of 25 years. By offsetting GHG and reducing the amount of air pollution, the Project will be beneficial to both wildlife and the human population. Overall water conservation and improved efficiency of water use will help keep land in production, providing critical carbon sequestration and healthier soils.

Climate Change.

- *Describe how the project addresses climate change and increases resiliency. For example, does the project help communities adapt to bolster drought resilience?*

The Project will improve water management and water reliability for up to 200 wells that serve 20-acre parcels, or a total of 4,000 un-metered acres. The benefits will be recognized over the

entire 247,000-acre District. Improving water efficiency will help keep those lands in agricultural production, which will sequester carbon in soils and reduce greenhouse gas emissions. In addition, Project implementation will reduce groundwater pumping and raise groundwater levels, which will save energy by reducing pump lifts.

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

Climate change is expected to result in more precipitation as rainfall and reduced precipitation as snowfall, lowering the ability for reservoirs to store water. The Project will improve the management of the District's surface water and groundwater supply by reducing potential overwatering, especially in dry years when the surface water supply is more variable.

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

The Project will directly reduce the amount of GHG and air pollution that is associated with the critical pumping by FID landowners. This reduction, as a response to increased water management, will help FID contribute to the protection of the climate and air quality within the community.

- *Does the proposed project include green or sustainable infrastructure to improve community climate resilience?*

The project will directly help the region on its path toward groundwater sustainability and climate resiliency by improving overall water conservation and water use. The magmeters may be paired with telemetry units that require a small solar panel.

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

The Project will increase water and energy efficiency, enhance groundwater storage for use during dry years, and improve water reliability for agriculture and regional Disadvantaged Communities. The Project will help keep agricultural lands within FID in agricultural production, which will continue to sequester carbon in the soils.

EVALUATION CRITERIA D – DISADVANTAGED COMMUNITIES, INSULAR AREAS, AND TRIBAL BENEFITS

SUBCRITERION D.1 – DISADVANTAGED COMMUNITIES

- *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?*

Project site locations that were identified as disadvantaged communities using the Climate and Economic Justice Screening Tool (<https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>) are shown in **Figure 10**. The Project area is also located within US Census areas that are considered disadvantaged based on a California Department of Water Resources Statewide dataset. The Cities of Biola, Easton, Kerman, Malaga and rural areas within the District are disadvantaged. Areas within the large Cities of Fresno and Clovis are also considered disadvantaged.

The Project will provide regional benefits to the entire service area of FID by reducing over-watering and preserving groundwater, including benefits to public health and economic growth.

Economic Growth – Agriculture plays a major role in Fresno County’s economy, with more than half of FID’s total acreage being designated for agriculture purposes, with over 70% of those acreages being permanent crops. In order to continue to meet present and future water needs within the District, landowners are encouraged to ensure their irrigation system and practices avoid over-irrigation and water loss. The Project provides the following economic benefits – 1) support current and future agricultural water demand, 2) ensure job security for those working in agriculture management, food processing and other agricultural industries, 3) reduce costs of water supplies for landowners and municipalities, and 4) improve water and energy efficiency, which helps reduce groundwater extraction and energy consumption associated with pumping.

Public Health - Reducing groundwater extraction will make more groundwater available to underserved communities and other public water systems. During times of scarcity, FID landowners partially rely on groundwater to irrigate. Most of the disadvantaged communities in the area rely solely on groundwater for their potable water supply. The Project will result in improved efficiency and reduced reliance on the aquifer.

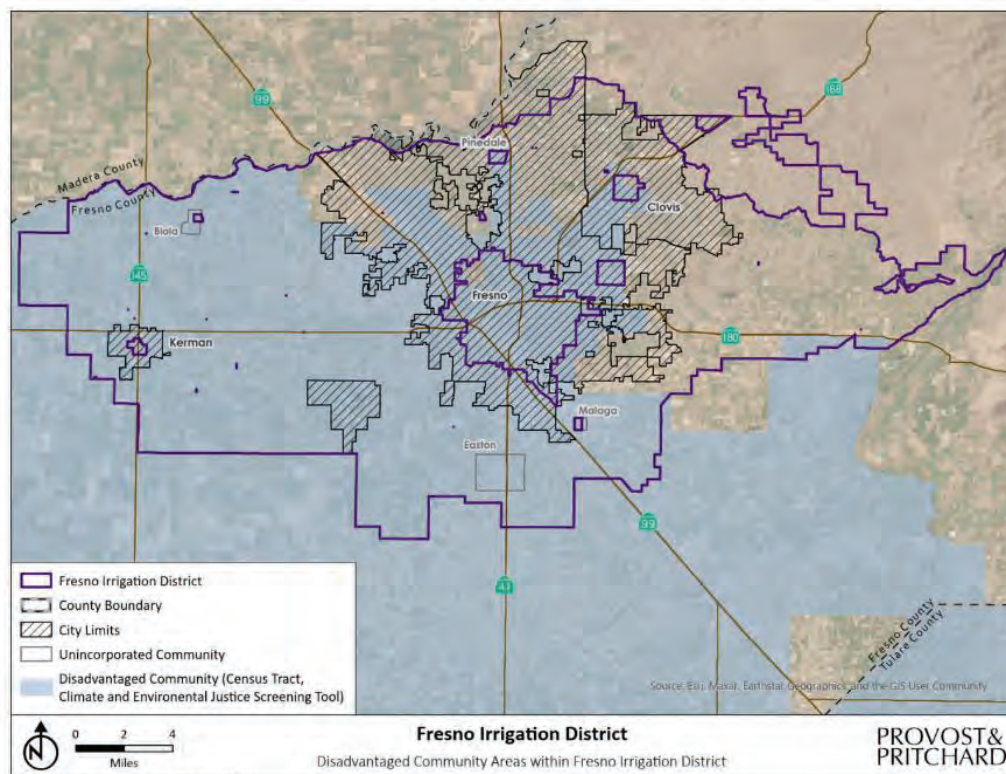


Figure 10 - Disadvantaged Community Areas

SUBCRITERION D.2 – TRIBAL BENEFITS

Tribal Benefits - The Project will not have a benefit to tribes.

EVALUATION CRITERION E – COMPLEMENTING ON-FARM IRRIGATION IMPROVEMENTS

- *If the proposed project will complement an on-farm improvement eligible for NRCS assistance, please address the following:*
- *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 initiated by FID with initial applications from growers due on February 16, 2024. Funding opportunities under the program include:

- Micro irrigation 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?*

Technical assistance has been requested by some growers for on-farm efficiency projects and further requests are anticipated in the future. Further applications are being accepted through November 15, 2024. (www.fresnoirrigation.com/grants)

- *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, a wide range of 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. Currently, the number of applications from FID landowners interested in EQIP funding exceeds the total available funding. A total 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 are included within this application as **Appendix B**. Letters were received in support of the Project from the North Kings Groundwater Sustainability Agency, along with growers Matt Abercrombie, Ausin Hubbell, Sayre Miller, and James McFarlane.

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

The project will provide a funding source to allow landowners to install meters on their wells, further supporting FID's water conservation efforts. FID has continued to encourage growers to maintain surface water delivery systems to avoid over irrigation and support District conservation efforts. Originally, FID's delivery system was built for flood irrigation, where surface water was delivered in large volumes over a shorter period of time – typically a scheduled day or two during the month. As more landowners convert to drip or micro-sprinkler systems, they require surface water delivery at lower volumes over extended periods of time. The project will complement these evolving needs.

- *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.*

The project will directly provide for landowners to install meters on their wells, encouraging improved on-farm management of groundwater use, such as conversion to drip or micro-sprinkler systems, when surface supplies are not available.

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

Yes, the project will result in an estimated 7% water savings and directly complement the District's existing EQIP funding program that provides for on-farm improvements.

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

Meters on wells will provide for improved management of groundwater use, and as noted the project will provide up to 840 AF/year of conserved water.

- *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 840 AF/year of water savings as previously documented in this application.

- *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.*

The boundary of FID is included in **Figure 1**. **Figure 2** shows the areas that could benefit from the magmeters.

EVALUATION CRITERION F – READINESS TO PROCEED

- *Identify and provide a summary description of the major tasks necessary to complete the project.*

An estimated Project schedule is provided below with major tasks and milestones described is enclosed below.

1. **CEQA Compliance.** A Notice of Exemption is anticipated to be the appropriate level of CEQA for the installation of magmeters at each site. It is anticipated that CEQA will be completed by the end of February 2025.
2. **NEPA Compliance.** If awarded a grant and NEPA is required for the grant funding, a Categorical Exclusion for NEPA with technical studies for Biological and Cultural studies is anticipated to be appropriate for USBR as the NEPA lead agency. It is anticipated that NEPA would be completed by the end of May 2025.
3. **Outreach/Landowner Solicitation.** The District will conduct outreach to landowners to solicit interest in the program. Landowners shall submit to the District proof of an existing non-metered well, and a cost estimate for installation of a District-and-program-acceptable meter. Landowners will be selected for funding until the grant funds have been exhausted.
4. **Magmeter Purchasing.** Purchase chosen meters based on District metering recommendations.
5. **Installation Training.** Provide hands-on District training sessions for meter installation and equipment upkeep to support system optimization and ensure meters are installed properly. Testing and calibration of meters shall be performed by the District or manufacturer approved contractor at intervals specified by the meter manufacturer. Calibration records shall be made available to the District.
6. **Grant Administration.** Perform contract management and ensure compliance with required grant reporting.

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

No permits are required for the meter installation work described. The improvements will fall under a CEQA Notice of Exemption and NEPA Categorical Exclusion.

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

The Project does not require any engineering or design work. A list of approved meter types and requirements has been developed by the District, and the landowner shall have the District and program-approved meters installed in accordance with manufacture specifications. The units will directly connect to the existing water supply infrastructure.

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

The project does not require any new policies or administrative actions to implement the project. The District does plan to continue its outreach efforts associated with on-farm efficiency improvement opportunities and meter installation.

- *Describe the current design status of the project.*

A copy of the District’s meter requirements is included in **Appendix C**. Magmeters eligible under this Project shall meet the following requirements identified by the District:

1. The meter shall be an electromagnetic flow meter with microprocessor based signal converter capable of communicating with remote telemetry
 2. The meter shall be either a flange or saddle type meter.
 3. The meter shall contain a flow sensor based on Faraday’s law of electromagnetic induction.
 4. The meter shall be accurate to within plus or minus two percent (+/- 2%) of actual flow.
 5. The meter shall report actual flow rate and contain an aggregate flow totalizer to capture total pumping volume, with flow reported in cubic feet per second and total pumping reported in acre-feet.
 6. The meter shall be appropriately sized for the production rate and discharge piping of the well.
 7. Meters must be installed in strict adherence to all applicable manufacturer specifications by an approved contractor.
 8. Meters shall be installed upstream of filtration/booster stations and should be first-inline element after discharge with proper upstream and downstream distances according to manufacturer’s specifications.
 9. The meter shall have a measurement range that matches the expected range of production rates from the well on which it is installed.
 10. Testing and calibration of meters shall be performed by a District or manufacturer approved contractor at intervals specified by the meter manufacturer. Calibration records shall be made available to the District.
- *Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Was the expected timeline for environmental and cultural compliance discussed with the local Reclamation regional office?*

It is assumed that the grant contract will be signed on October 31, 2025. Recent experience with other USBR grant funded projects is that the NEPA process, particularly the Cultural Review, has been taking 12 months for the USBR and its review partners to complete. The time for this process is the critical path and has been included in the schedule. It is estimated that all magmeter installation will be completed by **June 30, 2028**. This is well before the anticipated contractual deadline of October 31, 2028. 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. The Project, if awarded funding, could start construction within a few months, if not sooner depending on USBR cultural review consultation and approval timeframe.

An estimated Project schedule is provided below with major tasks and milestones described is enclosed below.

1. **CEQA Compliance.** A Notice of Exemption is anticipated to be the appropriate level of CEQA for the installation of magmeters at each site. It is anticipated that CEQA will be completed by the end of **February 2025**.
2. **NEPA Compliance.** If awarded a grant and NEPA is required for the grant funding, a

Categorical Exclusion for NEPA with technical studies for Biological and Cultural studies is anticipated to be appropriate for USBR as the NEPA lead agency. It is anticipated that NEPA would be completed by the end of **May 2025**.

3. **Outreach/Landowner Solicitation.** The District will conduct outreach to landowners to solicit interest in the program. Landowners shall submit to the District proof of an existing non-metered well, and a cost estimate for installation of a District-and-program-acceptable meter. Landowners will be selected for funding until the grant funds have been exhausted.
4. **Magmeter Purchasing.** Purchase chosen meters based on District metering recommendations.
5. **Installation and Installation Training.** Provide hands-on District training sessions for meter installation and equipment upkeep to support system optimization and ensure meters are installed properly. Testing and calibration of meters shall be performed by the District or manufacturer approved contractor at intervals specified by the meter manufacturer. Calibration records shall be made available to the District. It is estimated that all magmeter installation will be completed by **June 30, 2028**
6. **Grant Administration.** Perform contract management and ensure compliance with required grant reporting.

EVALUATION CRITERION G – COLLABORATION

- *Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project. What is the extent of their involvement in the process?*

FID's participating growers will be highly involved in the project implementation. Each grower involved in the project will have an opportunity to participate in educational sessions on the benefits and goals of the project, as well as how they can access and use the flow data to improve their farming operations/water efficiency. The Project is supported by FID stakeholders, along with surrounding agricultural and farming communities. Letters of Support from the North Kings Groundwater Sustainability Agency, along with growers Matt Abercrombie, Ausin Hubbell, Sayre Miller, and James McFarlane are included in **Appendix B**. No known opposition exists, as no letters or voiced concerns against the project have been received from stakeholders. The total amount of interest in the project has not yet been determined.

FID 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. FID has promoted the program and anticipates interest from growers within the District. Currently, the number of applications from FID landowners interested in EQIP funding exceeds the total available funding. The District expects a similar amount of interest in the project described in this application.

- *What is the significance of collaboration/support?*

The Project will increase collaboration between FID water system operators and landowners by providing real time water usage data that can be used by landowners to make more informed water management decisions, especially during droughts. This Project significantly reflects FID's

commitment to reaching groundwater sustainability, reducing GHG emissions and providing reliable, cost-effective water for their clients, which ultimately supports the local and State economy through agriculture.

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

As the Project could directly benefit both the District, the surrounding communities, and the Kings Subbasin. Successful implementation of the Project and highlighting the benefits of embracing flexibility in on-farm irrigation may inspire other Districts or users to implement similar projects.

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

The Project will benefit multiple sectors including agricultural and rural water users. The Project will directly pass on the savings to agricultural water users, especially in times of drought when the surface water supply is limited. Agriculture is a major economic driver in Fresno County, with more than 50% of FID's total acreage being designated for agriculture purposes. Project will also serve rural and urban sectors, including disadvantaged communities, which will benefit from FID being able to implement greater water and energy efficiency. The water conserved by the Project will remain in the aquifer that all sectors within the area are dependent upon (agricultural, municipal, etc.) and will help the District and groundwater basin reach groundwater sustainability by 2040.

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

Letters of Support are attached in **Appendix B**.

EVALUATION CRITERION H – NEXUS TO RECLAMATION

- *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.

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

This does not apply.

- *Will the proposed work benefit a Reclamation 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.

- *Is the applicant a Tribe?*

The District is not a Tribe therefore this does not apply.

(E) PERFORMANCE MEASURES

- *Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved). For more information calculating performance measure, see Appendix A: Benefit Quantification and Performance Measure Guidance.*

The electrical power usage after completion of the project will be compared to historic usage. There are PG&E meters at existing irrigation wells that will be used for the comparison. To quantify the change in well usage and estimate the water conserved, a pump test may be conducted and prior electrical bills used to compare usage to new meter readings of post-project use.

2 BUDGET NARRATIVE

BUDGET PROPOSAL

FID is seeking funds to reimburse landowners for the cost of installation of flow meters on their wells. The budget for the Project is \$4,000,000. FID is requesting \$2,000,000 of federal funds under this grant application. A budget of \$40,000 has been included for grant administration based on experience from prior grants in finalizing contract with USBR and providing the necessary progress reports and reimbursement requests over the course of the loan. \$10,000 has been included to finalize the CEQA and NEPA process in coordination with the USBR. And \$60,000 has been included for education and outreach to landowners regarding the program.

The remainder of the funding will go toward the installation of meters. Meter size and installation cost will vary by location. Quotes for meter and installation were received and are included as **Appendix D**. Typically, costs are anticipated to vary from \$6,000 to \$12,000. In addition to the meter cost, some wells may require additional discharge piping to provide the required straight-line section upstream and downstream of the meter to provide adequate measurement. Using a conservative estimate of \$19,780 (\$12,000 for a meter and \$7,780 for pipe discharge modification), it is estimated that a total of 200 meter installations are anticipated with the \$4,000,000 total project funding. FID landowners will cover the non-Federal cost share of this Project, as FID will utilize the grant funding to reimburse landowners for up to 50% of the cost of their meter installation upon successful completion and inspection of the meter installation. There is no other grant funding and no third-party in-kind costs associated with this Project.

RESOLUTION NO. 2024-16

**A RESOLUTION BY THE BOARD OF DIRECTORS OF THE
FRESNO IRRIGATION DISTRICT
FOR A GRANT FROM THE UNITED STATES BUREAU OF RECLAMATION
WATERSMART WATER AND ENERGY EFFICIENCY PROJECTS FOR FISCAL
YEAR 2025 FOR WATER METER PROGRAM**

Whereas, the Fresno Irrigation District is a public agency and is eligible to submit an application for funding from the WaterSMART Water and Energy Efficiency Resiliency Projects for Fiscal Year 2025;

Whereas, the Fresno Irrigation District plans to provide a water meter program for wells within its boundaries for willing landowners;

Whereas, Fresno Irrigation District will commit to the financial and legal obligations associated with receipt of financial assistance under the grant program;

Whereas, the Fresno Irrigation District has reviewed and supports the proposed application;

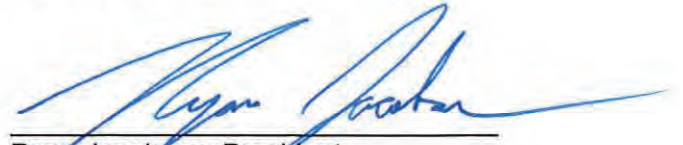
Whereas, the Fresno Irrigation District has the full capability to provide the amount of funding and/or in-kind contributions specified in the funding plan;

Whereas, if selected for a grant, the Fresno Irrigation District will work with United States Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

RESOLVED by the Board of Directors of the Fresno Irrigation District that pursuant and subject to all of the terms and provisions of the WaterSMART Water and Energy Efficiency Grant Application, and amendments thereto, application by this District be made to the United States Bureau of Reclamation to obtain a grant for the solar project.

The General Manager is hereby authorized and directed to prepare the necessary data, make investigations, sign, and file such application, and if awarded work directly with the United States Bureau of Reclamation to finalize the necessary documents for award, reporting and reimbursement under the grant contract.

Fresno, California, on this 12th day of September 2024, by the following votes:


Ryan Jacobsen, President

I, BILL STRETCH, Secretary of the Board of Directors of the Fresno Irrigation District (the "BOARD"), hereby certify that the foregoing is a full, true and correct copy of Board Resolution No. 2024-16 (the "Resolution"), that the Board has not amended or repealed the Resolution, and that the Board duly adopted the Resolution at a regular Board meeting held on the 12th day of September 2024, and that the Board adopted the Resolution by the following vote:

	<u>Aye</u>	<u>Nay</u>	<u>Absent</u>	<u>Abstain</u>
President Ryan Jacobsen	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Vice President Jerry Prieto, Jr.	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Director George Porter	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Director Chris Woolf	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Director Greg Beberian	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>


Bill Stretch, Secretary

6/19/2024

Kassy Chauhan
Special Projects Manager
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Subject: Letter of Support for FID Grant Application

Dear Ms. Chauhan:

I am aware that Fresno Irrigation District (District) is planning to submit a grant application to the United State Bureau of Reclamation (USBR) to support landowner metering efforts by providing up to 50% of the cost of meter installation on wells. I am a landowner in the District, and I am writing this letter to show my support for the grant application. Should the grant application be successful, I may pursue funding from this program in order to provide better measurement of water use on my property to help manage water use.

Sincerely,

A handwritten signature in black ink, appearing to read 'Austin Hubbell', with a stylized, cursive script.

Austin Hubbell
Landowner and Irrigation Consultant
Certified Crop Advisor #383867

June 19, 2024

Kassy Chauhan
Special Projects Manager
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Subject: Letter of Support for FID Grant Application

Dear Ms. Chauhan:

I am aware that the Fresno Irrigation District (District) is planning to submit a grant application to the United State Bureau of Reclamation (USBR) to support landowner metering efforts by providing up to 50% of the cost of meter installation on wells. As a landowner in Fresno ID, and I am writing this letter in support of the grant application. Should the grant application be successful, I may pursue funding from this program in order to provide better measurement of water use on my property to help manage our water supply.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sayre Miller', with a stylized flourish at the end.

Sayre Miller
Partner
McFarlane and McFarlane

June 19, 2024

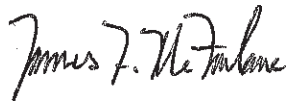
Kassy Chauhan
Special Projects Manager
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Subject: Letter of Support for FID Grant Application

Dear Ms. Chauhan:

I am aware that Fresno Irrigation District (District) is planning to submit a grant application to the United State Bureau of Reclamation (USBR) to support landowner metering efforts by providing up to 50% of the cost of meter installation on wells. I am a landowner in the District, and I am writing this letter to show my support for the grant application. Should the grant application be successful, I may pursue funding from this program in order to provide better measurement of water use on my property to help manage water use.

Sincerely,

A handwritten signature in black ink that reads "James F. McFarlane". The signature is written in a cursive, flowing style.

James F. McFarlane
General Manager
McFarlane and McFarlane
Academy Ranch, LLC

July 3, 2024

Mr. Bill Stretch, General Manager
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Member Agencies

*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
International Water District*

Board of Directors

*Chairman Jerry Prieto, Jr.
Fresno Irrigation District
Vice-Chairman Brian Pacheco
County of Fresno
Steve Pickens
Bakman Water Company
Mathew Basgall
City of Clovis
Jerry Dyer
City of Fresno
Kyle Moeller
Seat 7 – Members At Large
Karl Kienow
Garfield Water District*

Executive Officer

Kassy D. Chauhan, P.E.

Internet

www.NorthKingsGSA.org

Mail

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

Phone

559-233-7161

Subject: Letter of Support for Fresno Irrigation District (FID) Grant Application

Dear Mr. Stretch:

The North Kings Groundwater Sustainability Agency (NKGSA) is writing in support of the Fresno Irrigation District's (FID) submission of a grant application to the United State Bureau of Reclamation (USBR) to support landowner metering efforts by providing up to 50% of the cost of meter installation on wells. The FID lies in the Kings subbasin (subbasin), designated as a high priority, critically over-drafted basin. As such, it is subject to the requirements of the Sustainable Groundwater Management Act (SGMA). The NKGSA is responsible for SGMA implementation in the subbasin and developed and submitted a Groundwater Sustainability Plan (GSP) in January 2020. This plan was reviewed by the Division of Water Resources (DWR) in 2022. Revisions to the plan were completed and it was resubmitted to DWR in July of 2022. DWR has since determined that the GSP was deemed to be complete as designated in the determination letter from DWR.

The addition of measurement for groundwater extraction facilities (wells) is identified as a management action and project in the GSP. Having resources available to landowners wishing to proceed with the addition of meters to their groundwater wells will significantly help the implementation of that program and management action as well as provide valuable groundwater extraction data. The NKGSA commends the FID for seeking these resources to assist landowners with the needed changes to achieve groundwater sustainability in the Kings Subbasin.

Letter of Support – FID Grant Application
July 3, 2024
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Please do not hesitate to contact me should you have any questions at 559-233-7161, x. 7109.

Sincerely,



Kassy D. Chauhan
Executive Director

November 13, 2024

Kassy Chauhan
Special Projects Manager
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Subject: Letter of Support for FID Grant Application

Dear Ms. Chauhan:

I am aware that Fresno Irrigation District (District) is planning to submit a grant application to the United State Bureau of Reclamation (USBR) to support landowner metering efforts by providing up to 50% of the cost of meter installation on wells. I am a landowner in the District, and I am writing this letter to show my support for the grant application. Should the grant application be successful, I may pursue funding from this program in order to provide better measurement of water use on my property to help manage water use.

Sincerely,



Matt Abercrombie
Abercrombie Farms

Funding Sources	Amount	Percentage
Costs to reimbursed with the requested Federal funding	\$2,000,000	50.00%
Costs to be paid by the applicant	\$2,000,000	50.00%
Value of third-party contributions	\$0	0%
Totals	\$4,000,000	100%

Funding Sources	Amount
Fresno Irrigation District – Cash Contributions (Landowners)	\$2,000,000
Subtotal: Non-Federal Funding	\$2,000,000
Requested Reclamation Funding	\$2,000,000
Other Federal Funding	\$0
Project Funding Total	\$4,000,000