FRESNO IRRIGATION DISTRICT

GOULD CANAL-FRIANT-KERN CANAL INTERTIE PROJECT

FRESNO COUNTY, CA

APPLICATION SUBMITTED TO THE
UNITED STATES BUREAU OF RECLAMATION
FOR A WaterSMART: WATER AND ENERGY
EFFICIENCY GRANT
FOR FISCAL YEAR 2016

(FUNDING OPPORTUNITY ANNOUNCEMENT NO. R16-FOA-DO-004)

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January 2016

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1 . Executive Summary

(A) General Project Information

Proposal Name: Fresno Irrigation District Gould Canal-Friant Kern Canal Intertie Project
Date: January 20, 2016
Applicant Name: Fresno Irrigation District
City, County and State: Fresno, County of Fresno, California

(B) Project Summary

Fresno Irrigation District (District or FID) is pursuing the development of an intertie project that will help to accomplish the goals of this funding opportunity by providing improved water management and marketing capabilities within the region. FID has rights to the Kings River, which is stored in Pine Flat Reservoir and conveyed to FID via the Gould Canal along with a contractual water supply from the Central Valley Project (CVP) Friant Division. This project involves construction of approximately 200 cfs capacity pump station that would connect the Gould Canal with the Friant-Kern Canal (FKC), allowing diversion of Kings River water into the FKC. The pump discharges would consolidate into a pipe manifold and water delivered through approximately 100 feet of 84-inch diameter pipeline into a new outlet structure in the FKC. This project creates opportunities for other Friant Contractors that have downstream diversions from the FKC to exchange their CVP supplies for Kings River water stored in Pine Flat Reservoir. FID could either directly use the exchanged CVP water or store it for future use via groundwater recharge. Interested districts could also identify other partners and form agreements to exchange recaptured Restoration Flows in the California Aqueduct with Kings River water, and FID could transfer this Kings River water via the intertie to the FKC. The project will replace a 40-cfs temporary pumping station with rented pumps that was constructed in 2014 and used to exchange water for delivery to Disadvantaged Community systems along the FKC that were solely dependent on water from the FKC for potable water. This project was identified as a Priority Project (ranked fifth overall) in the USBR's Water Management Goal Investment Strategy Final Report (March 2015) for the San Joaquin River Restoration Program (SJRRP). Table 1 shows the funding requests and Table 2 shows the Districts average annual water supply and the estimated water conserved.

Table 1 2016 Funding Request Summary

Funding Source	Funding Amount
Non-Federal Entities	
Fresno Irrigation District	$3,700,000
Non-Federal Subtotal:	$3,700,000
Reclamation Funding:	$300,000
TOTAL PROJECT FUNDING	$4,000,000

Table 2 Water Summary

ITEM	Quantity (AF/YR)
District Total Annual Average Water Supply	500,000
Estimated Water Conserved/Marketed After Project	10,000

(C) Project Duration and Estimated Completion Date

The preliminary work on the Project began in September 2015 and has made steady progress since then. The Project will be ready for bidding in August 2016 and should begin construction in the winter of 2016. The duration of the construction will be approximately 4 months and will be complete by January 2017. A Gantt chart schedule for the Project is included as Attachment A. The schedule shows major tasks, milestones, and major deliverables. The schedule tasks are consistent with those used in the Work Plan and Budget. The schedule is based on the time required for completion of similar projects.

(D) Project Benefits Summary

Project benefits include the following:

- Increase the water supply reliability, enhance operational flexibility, and reduce system constraints by providing a mechanism for water transfer between the Kings River and Friant-Kern Canal Systems.
- Establish a mechanism for drought and dry year supply capacity to the USBR CVP Friant Division Contractors, including addressing critical water supply needs of Disadvantaged Communities along the Friant system that are dependent on this system as their sole water supply.
- Create ability to divert floodwater and other exchanged supplies from the Kings system to the Friant system and FID's groundwater banking facilities.
- Provide additional flood protection.
- Facilitate the potential exchange of recaptured CVP Friant Division water supplies with Kings River water supplies to support the recirculation element of the SJRRP.

(E) Federal Facility

The project will connect to the Friant Kern Canal which is a Federal facility.

TECHNICAL PROPOSAL

2 . Background Data

(A) Geographic Location

The Fresno Irrigation District was formed in 1920 under the California Irrigation Districts Act as the successor to the privately owned Fresno Canal and Land Company and is located in the geographic center of Fresno County. The District encompasses and provides service to approximately 245,000 acres including the Fresno-Clovis metropolitan area near its center. It stretches from the San Joaquin River to the north, to near the City of Fowler to the south, and roughly from the Friant-Kern Canal on the east to about five miles west of the City of Kerman. The project is located near the intersection of FID's Gould Canal and the Friant-Kern Canal, west of Trimmer Springs Road. Refer to Figure 1 for a Map of the Project Location and Figure 2 for a map of the Pump Station Layout.

(B) Water Supply

The District (FID) typically delivers about 500,000 acre-feet (average annual) of surface water from the Kings River and San Joaquin River through the Friant Division of the Central Valley Project (CVP) to more than 4,000 growers. Water from the Kings River is diverted at two (2) locations along the Kings River downstream of Pine Flat Dam. Water from the CVP is conveyed to the District from Millerton Lake behind Friant Dam through the Friant-Kern Canal. The specific water supply for this project is discussed under Section 3 – Technical Project Description of this application. Most of the District's water supplies are delivered to agriculture, although an increasing share is used for groundwater recharge in the urban area and direct delivery to two recently constructed surface water treatment plants. In addition to receiving surface water deliveries, individuals and the Cities pump a significant amount of groundwater in and around the District to meet urban and agricultural demands.

(C) Water Delivery System

The agricultural lands in the District are predominantly permanent crops (about 69 percent). Grape vineyards make up nearly 30 percent of the total District acreage. Nuts, citrus, and deciduous fruits have also increased as cotton and pasture has declined. The conversion of agricultural lands to urban uses in the expanding Fresno-Clovis metropolitan area has significantly increased in recent years and has reduced the amount of agricultural crops as the land has been converted. Currently, about 150,000 acres or 60 percent of the District remains as farmed agricultural land. Nearly 30 percent of the District is now urban, with the remaining 10 percent of land area classified as rural residential.

The District has two primary diversion points along the Kings River. The headwork at Fresno Weir diverts water to the Fresno Canal and the headwork at Gould Weir diverts water to the Gould Canal. The headwork capacities for the Fresno Canal and Gould Canal are 1,500 and 500

cubic-feet-per-second (CFS), respectively. From these two locations, about 680 miles of District conveyance facilities direct Kings River water throughout the District. Currently, there are still about 330 miles of open canal and the remainder has been pipelined. Along the approximately 680 miles of conveyance system, there are approximately 4,000 customer turnouts and several hundred control and flow measurement structures maintained and operated by the District. Additionally, the District maintains and operates 30 regulating and recharge reservoirs totaling about 2,100 acres. The on-farm irrigation efficiency is not regularly calculated by the District but within the region has been estimated to range from 80% to 85%. Canal infiltration tests performed in 1980s estimated canal seepage at 20% of annual water usage.

(D) Energy Sources and Uses

The District primarily delivers water by gravity through canals and pipelines. The District does operate a few lift pumps for service to landowners that cannot receive water by gravity systems, and the District also operates a few wells at its groundwater banking facilities. The District also operates telemetry and electrically actuated canal gates at several locations. The District receives electrical power from Pacific Gas & Electric for these services.

(E) Past Working Relationships with Reclamation

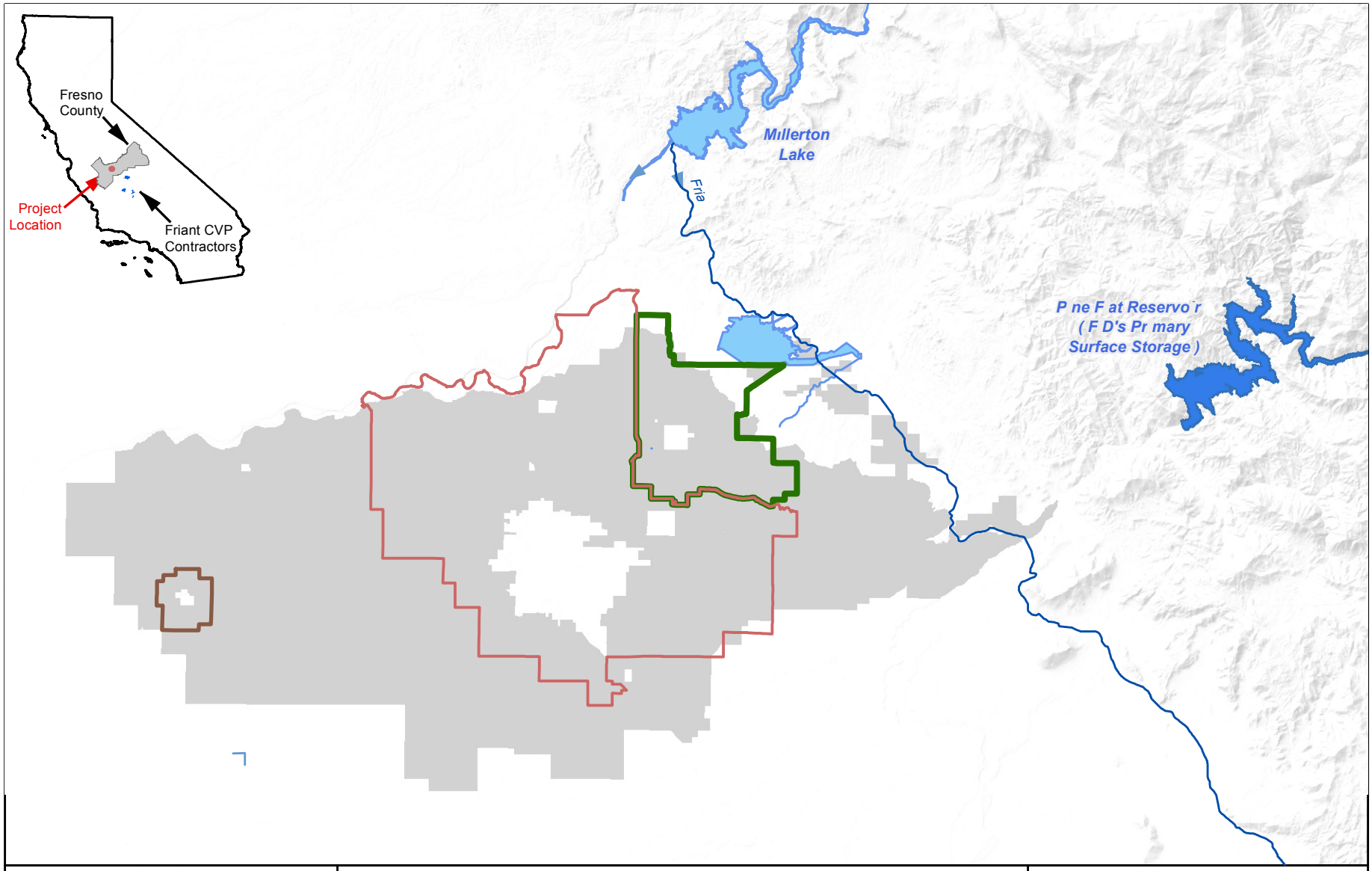
The District has maintained a good working relationship with Reclamation while implementing the projects, on schedule, funded by each of the grants received from Reclamation. In 2000, FID received a Water Conservation Field Services Grant for a Telemetry System Improvement Project. The project provided needed telemetry system improvements, including additional automated control at critical gate structures and additional monitoring sites. The improvements were constructed within the required timeframe, and have provided improved operational control.

1. In 2003, FID received a Water Conservation Field Services for the Study of Improved Water Measurement and Procedures. The project provided valuable study of possible improvements within FID, some of which were later implemented. The study was completed within the required timeframe.
2. In 2006, FID received a Water Conservation Field Services Grant for the Thompson Canal Headgate Improvement Project. The project included installation of an automated gate with remote telemetry control to provide needed operational control and conservation. The project was completed within the required timeframe.
3. In 2006, FID received a Water 2025 Challenge Grant for the Enterprise Canal at Fancher Creek Improvement Project. The project was a cooperative effort, funded by 5 local partners and the federal grant, that provided critical improvements for water conservation and re-routing of water to surface water treatment facilities. This project was completed ahead of schedule and within the projected budget.
4. In 2007, the District received a Water Conservation Field Services Grant for the Herndon Canal at Gould Extension Improvement Project. This project provided new control

facility to allow water from one major system to be diverted into another major canal for delivery to downstream demands and the District's Groundwater Banking Facility. This project was completed ahead of schedule and within the projected budget.

5. In 2010, the District received a WaterSMART Water and Energy Efficiency Challenge Grant for the Briggs Canal Improvement Project. The project included conveyance facility improvements including concrete lining and a new pipeline to convey and conserve available water supply, and improve conveyance to District operated recharge facilities. The project helps to reduce flooding by providing increased capacity to capture floodwater, and reduce regional water conflicts by providing increased capacity along a jointly operated system, and provide conveyance to allow the District to utilize water supply dedicated for maintaining fish habitat. The conveyance system improvements will include automation of canal gates with measuring devices that will be added to the District's SCADA system, as well as construction of a new pipeline to increase capacity. This project was completed on time and within the projected budget.

6. In 2014, the District received a WaterSMART Water and Energy Efficiency Grant for the Southwest Groundwater Banking Project. The project will develop a new 60 acre groundwater recharge basin as part of the District's Southwest Groundwater Banking Program. This project will enable the District to capture approximately 4,200 acre-feet per year in storm water at the new basin site and allow an additional 1,300 acre-feet of storm water to be conveyed to James Irrigation District to be stored in their existing recharge basin sites. The new recharge basin will be equipped with all needed turnouts and gauges and the conveyance capacity of two existing canals will be increased to carry the additional water. The captured storm water will be used to offset the amount of groundwater pumping required to supply downstream growers. Groundwater recharge is important in addressing the current overdraft in the area and will help provide for the sustainable management of surface and groundwater supplies. This project is still in progress.



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Fresno, CA 93711-6162
(559) 449-2700

Figure 1

FID Gould Canal-Friant-Kern Canal Intertie Project

Project Location and Vicinity

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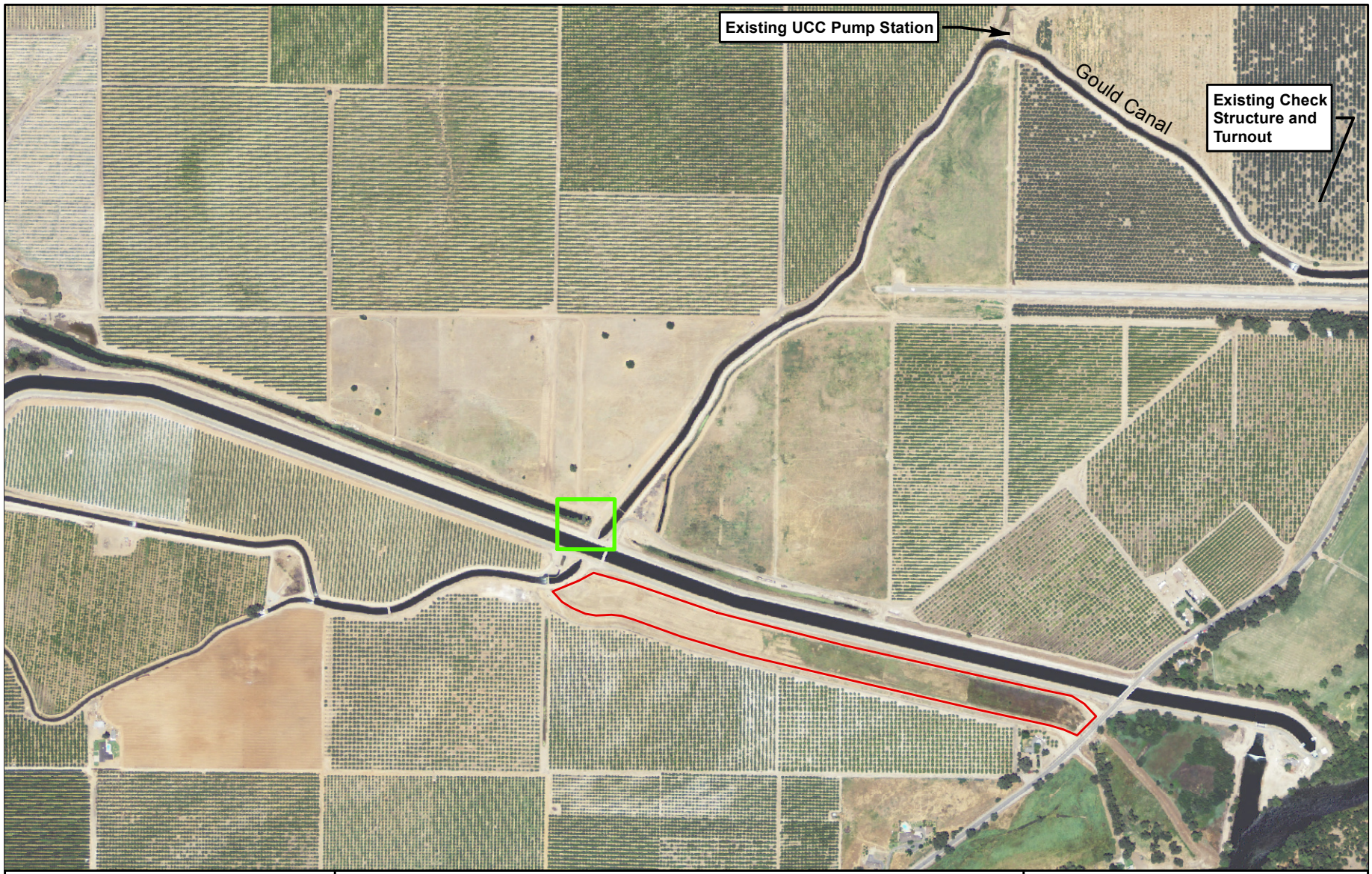

0 500 1,000 Feet

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Legend

Proposed Permanent Pump Station

Figure 2

FID Gould Canal-Friant-Kern Canal Intertie Project

Project Location

1/11/2016 : G:\Fresno ID - 1038\10381402-Gould FKC Pipeline\GIS\Map\Grant\location.mxd

3 . Technical Project Description

(A) Project Workplan

The project includes construction of a 200-cfs lift pump station to convey water from the Gould Canal to the Friant-Kern Canal. The following workplan has been developed to describe the work in detail, including specific activities that will be accomplished as a result of this project. Several of the tasks have been started and have been included in the description of work here to demonstrate that the District has committed to completion of all aspects of the project. FID plans to utilize consultants with specific expertise and experience on similar projects for preparation of environmental documents, surveying, design engineering, and construction administration. The major project tasks include the following:

Task 1 – Project Administration

This task includes the project administration associated with the grant administration. This task includes items such as meetings, coordination with Reclamation and other agencies, overall project coordination, preparation of quarterly reports, final project report and all other reporting obligations in accordance with the grant contract requirements.

Deliverables

- Meeting minutes, quarterly, draft and final reports, and other deliverables as required.

Task 2 - Surveying

This task includes surveying required to conduct a boundary and topographic survey of the proposed pump station site. The topographic survey will provide adequate topographic information for the P&P design team to complete design of the proposed pump station and pipeline. The boundary and topographic survey will include:

- Research and review deeds and record maps for the site and adjacent properties.
- Perform field survey to locate controlling government (section) corners, right of way monuments, and existing property corners.
- Resolve the boundary for the site.
- Perform topographic survey of the proposed site, collecting existing ground shots, above ground utilities and planimetric features.
- Draft topographic drawing to include ground features with a surface and boundary lines to be used by our in-house design team.

  Draft a legal description and exhibit for the License Agreement with USBR that will cover the area where facilities are constructed within the USBR Right-of-Way for the Friant Kern Canal.

Deliverables

- Legal descriptions and exhibits

Task 3 – Design Engineering

This task is included to perform the design engineering work for the pump station, pipeline, outfall to the Friant-Kern Canal and associated appurtenances. This task will include geotechnical analysis for structures and the pipeline, confirming the hydraulic calculations based on the design survey, structural design of the two structures, electrical engineering for the pump station power and SCADA, coordination of telemetry improvements with the District's integrator, opinion of probable project costs, and preparation of design plans, specifications, and bid documents. Design plans, specification documents, and the opinion of probable cost will be prepared and provided at the 50% and 90% design milestones and prior to release for bidding.

Deliverables

- Plans, Specifications and Opinion of Probable Costs at the 50%, 90% and prior to being issued for bidding.

Task 4 – Environmental Documentation

This Task includes the preparation of environmental documents for the Project pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). District staff and its consultants met with USBR staff on 12/15/15 to confirm the approach for preparation of environmental documents and continue to meet monthly to confirm project status. Based on the Project information to date, an Initial Study/Environmental Assessment (IS/EA) will be prepared which will presumably lead to a Mitigated Negative Declaration/Finding of No Significant Impact (MND/FONSI). As such, the following items are included under this Phase:

- Coordination with both District staff and USBR regarding project documentation and format.
- Preparation of an IS/EA supporting a MND/FONSI. The document will be prepared in accordance with current CEQA guidelines as well as USBR NEPA guidelines.
- As part of the IS/EA supporting the MND/FONSI the required biological resources evaluation will be completed to meet both state (CEQA) and federal (NEPA) requirements.
- USBR will initiate a Section 106 of the National Historic Preservation Act consultation. This task includes work by the District's consultant to provide the complete cultural resources analysis to meet both state (CEQA) and federal (NEPA) requirements.
- Preparation of an Administrative Draft IS/EA
- Preparation of a Draft IS/EA for public review
- Preparation of Notices including: Notice of Intent (NOI) and Notice of Completion (NOC).
- Response to comments
- Preparation of the Notice of Determination and submittal to Fresno County Clerk for mandatory posting.

Deliverables

- Administrative Draft IS/EA, Draft IS/EA, Response to Comments, Final EA/IS, and Notices: NOI, NOC and NOD

Task 5 – Permitting

This task includes assistance with preparation of the anticipated permits. Permits from the San Joaquin Valley Air Pollution Control District (Dust Control Plan), RWQCB (SWPPP), and USBR License may be needed. If determined that the SWPPP and DCP are needed, they will be prepared for conditional approval, and the construction contractor will be required to amend and finalize the plans as needed to facilitate their specific construction activities and schedule.

Deliverables

- If needed: Copy of SWPPP to include with Bid Documents, Copy of DCP to include with Bid Documents, and Submittals to USBR for Permit.

Task 6 – Construction Contracting

This task includes bidding, construction contract administration assistance, construction observation, concrete and soils testing, and construction staking.

Bidding

The District will conduct a competitive bid process to solicit bids from appropriately certified contractors for construction of the facilities in accordance with the plans and specifications. The project will be bid in accordance with all applicable District, state, and federal requirements for construction of this type of project. The Schedule of Bid Items for the contractor is anticipated to be similar to the bid items listed in the Preliminary Opinion of Probable Construction Cost included as Attachment F. Bid documents will be opened and the contract will be awarded to the lowest responsible bidder.

Contract Administration

The following tasks and duties will be performed by the District and its consultant:

- Coordinate with the Contractor to process paperwork associated with the construction Contract Documents, including: Notice-of-Award, Contract, Indemnity Agreement, Bonds, Insurance, Notice-to-Proceed, Construction Schedule, Submittals, Contract Change Orders, Shop Drawings, Record Drawings, and Notice-of-Completion;
- Prepare for and conduct pre-construction meeting with Contractor and sub-contractors.
- Processing of submittals and Requests for Information (RFIs)
- Preparation of monthly (or as needed) progress payments, and final retention release payment; and
- Record documents will be prepared after the completion of the Project's construction.

Deliverables

- Submittal review, change orders, RFI, pay requests, record drawings, and contract noticing

Construction Observation

The District's consultant will perform the following tasks and duties to observe the construction of the Project:

- Provide construction review for conformance to Contract Documents. Document construction review work by completing construction review reports, periodic progress reports for FID staff, and taking digital photos of critical phases of the work.
- Construction materials and soils testing will be performed by appropriately certified materials and testing laboratory consultant and its specialists. The materials testing consultant will provide technicians to observe earthwork activities, conduct compaction tests and record the results, and collect concrete samples. Concrete samples will be tested for compressive strength in accordance with ASTM C-39. Documentation of the testing results will be provided at the end of construction.

Deliverables

- Daily reports including photos and material test results

Construction Surveying

Construction staking will be performed at the request of the Contractor. As-built (Record) elevations of the completed facilities will be surveyed after completion of construction.

Task 7 – Construction

This task includes construction of all project improvements including labor, equipment and material costs. The selected contractor will be responsible for all site work and construction efforts under this task, including but not limited to construction of the pump station, pipeline, and outlet structure, installation of the pumps including all electrical and telemetry components, and operational startup performance and testing. A complete list of the requirements of the contractor will be identified in the project plans and specifications that will be completed under Task 3. The District will award all construction work associated with this project to one contractor who will be required to perform all activities identified in the plans and specifications.

Work products for this task include:

- All construction activities and a completed and operational facility

Task 8: Environmental Compliance/Mitigation/Enhancement

Preventative measures will be used during construction to minimize potential impacts. Those preventative measures are required of the contractor and included as part of the Construction activities described in Task 7 Construction. Preliminary biological investigations for the project indicate that the project is not anticipated to impact Federal of State protected species or natural communities. However, the Project could result in adverse impacts to certain federally and state-listed species if any of these species are present during construction. This task has been included to allow for mitigation of any potential disturbance or impacts to protected species or communities should they be encountered.

Deliverables: Monitoring requirements and mitigation (if necessary)

(B) Project Schedule

The duration of the project will be 17 months and will be complete in January 2017. A Gantt chart schedule for the project is included as Figure 3. The schedule shows the major tasks, milestones, and major deliverables. The schedule tasks are consistent with those used in the Work Plan and Budget. Several items for the project have already been started and the project is ready for implementation in accordance with the grant deadlines. FID continues to move forward with the project, and it is anticipated to be ready for the anticipated 2016 grant award. The schedule is based on the time required for completion of similar projects.

4 . Evaluation Criteria

(A) Evaluation Criterion A: Water Conservation

Subcriterion No. A.1: Quantifiable Water Savings

(i) Describe the amount of water saved. (AF/yr)
The District estimates that an estimated 10,000AF/yr will be saved by this project. The project will utilize water that is otherwise lost to the region. At 200 cfs pumping capacity, the project will have an annual capacity of approximately 146,000AF if it operated at all times. 10,000AF is believed to be a conservative estimate as the District's temporary pumping facility conveyed an average of 12,600AF/yr (19,251 AF in 2014 and 5,949 AF in 2015) utilizing a pumping facility that only had an 40 cfs capacity. The project is anticipated to divert flood water when available during wet years. During dry years, the project will also convey flood water that has been banked at one of the District's groundwater banking facilities. Flood water that is typically lost to region averages 184,993 AF/yr which far exceeds the expected average annual benefit of this project. This data can be found in Attachment B. At the specific project location, water from Holland Creek also enters the Gould Canal upstream of the project location. During certain periods when capacity in the Friant Kern Canal is available, this water could be diverted into the Friant Kern Canal with the proposed project.

Figure 3- FID Gould Canal-Friant-Kern Canal Intertie Project Schedule

	2015					2016												2017					
Task	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
1- Project Administration																							
2- Surveying																							
3- Design Engineering																							
50 % Plans and Specs									X														
90% Plans and Specs											X												
100% Plans and Specs												X											
4- Environmental Documentation																							
Draft IS/EA								X															
Final IS/EA										X													
NOD/FONSI											X												
5- Permitting Assistance																							
6- Construction Contraction																							
Bid Opening													X										
7-Construction Phase Services																							
8- Environmental Compliance/ Mitigation/Enhancement																							

(ii) What is the average annual acre-feet of water supply?

The District typically delivers about 500,000 acre-feet (average annual) of surface water from the Kings River and San Joaquin River through the Friant Division of the Central Valley Project (CVP).

(iii) Where is the water that will be conserved currently going?(e.g. back to the stream, spilled at the end of the ditch, seeping into the ground, etc.)

The water that will be conserved is water that is otherwise lost to the region during flood events. The excess floodwater can be classified into two categories:

1. Local floodwater near the project site, including water from the Holland Creek channel that enters into the Gould canal upstream of the Friant Kern Canal that currently floods the nearby lands or is conveyed to the Kings River then lost to the region, and
2. Kings River floodwater that is routed out of the region and lost to the region.

(iv) Where will the conserved water go?

The conserved water will be delivered to USBR Central Valley Project Friant Division Water Contractors, who gave up their CVP allocation for possible use for SJRRP, downstream of the Gould Canal on the FKC.

Subcriterion No. A.1(9): Other Project Type

(i) How have average annual water savings estimates been determined? This should include a detailed description of the rationale and methodologies used to develop the estimates. Please provide all relevant calculations, assumptions, and supporting data. Reference relevant studies or past project documentation that support water saving estimates.

The District estimates that an estimated 10,000AF/yr will be saved by this project. The project will utilize water that is otherwise lost to the region. At 200 cfs pumping capacity, the project will have an annual capacity of approximately 146,000AF if it operated at all times. 10,000AF is believed to be a conservative estimate as the District's temporary pumping facility conveyed an average of 12,600AF/yr (19,251 AF in 2014 and 5,949 AF in 2015) utilizing a pumping facility that only had an 40 cfs capacity. The project is anticipated to divert flood water when available during wet years. During dry years, the project will also convey flood water that has been banked at one of the District's groundwater banking facilities. Flood water that is typically lost to region averages 184,993 AF/yr which far exceeds the expected average annual benefit of this project. This data can be found in Attachment B. At the specific project location, water from Holland Creek also enters the Gould Canal upstream of the project location. During certain periods when capacity in the Friant Kern Canal is available, this water could be diverted into the Friant Kern Canal with the proposed project.

(ii) If new technologies or devices are proposed, how will the savings occur? Please provide detailed descriptions that will enable the reviewer to understand function and how savings occur.

The project will include new high efficiency lift pumps and will include a variable frequency drive (vfd) for precise control of flowrate. The discharge pipes will be equipped with flow meters that will monitor instantaneous flowrate and record total volume. Data from the flowmeters will be transmitted to the District office using a programmable logic controller (plc) and incorporated into the District's telemetry system.

(iii) How will actual water savings be verified upon completion of the project? Please explain the calculations and the analyses for this verification.

The amount of water conveyed through the pumping facility will be measured using flowmeters and the total volume will be recorded daily through the District's telemetry system, the totaled by month and year.

Subcriterion No. A.2 Percentage of Total Supply.

As noted, the project will conserve 10,000 AF/year that is typically lost to the region. Based on 500,000 acre-feet per year delivery of surface water by FID, this amounts to approximately 2% of FID's average annual water supply.

(B) Evaluation Criterion B: Energy-Water Nexus

Subcriterion No. B.2 Increasing Energy Efficiency in Water Management

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

a. Please provide sufficient detail supporting the calculation of any energy savings expected to result from water conservation improvements. If quantifiable energy savings are expected to result from water conservation improvements, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.

The most significant immediate energy efficiency impact for the project is that the pump station will provide water in lieu of Friant contractors having to utilize wells to pump groundwater to meet demands. Table 3 includes calculations of the energy use to provide 10,000 AF/year using the proposed project instead of pumping groundwater. The energy savings is estimated to be 2,563,099 kWh/year.

Table 3 Energy Savings Calculation

Annual Energy Use by Proposed Gould to FKC Pump Station	
Average Annual Water Conveyed through Facility (af)	10,000
Assumed Average Flowrate (cfs)	100
Assumed Operational Duration (Days)	50
Assumed Typical Pumping Lift (ft)	20
Pump Efficiency (%)	75
Motor Efficiency (%)	95
Input Power (kW)	237
Power Utilization (kWh)	284,789
Annual Energy Use if Equivalent Amount of Groundwater Pumped from Wells	
Offset GW Pumping (cfs)	100
Assumed Typical Well Pumping Lift for region (south valley contractors along FKC)	200
Pump Efficiency (%)	75
Motor Efficiency (%)	95
Input Power (kW)	2,373
Operational Duration (Days)	50
Power Utilization (kWh)	2,847,888
Energy	
Energy Use by Wells minus Energy Use by Project (kWh)	2,563,099

b. *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?*
The pumps being installed at the Gould Canal pump station will be a new efficient pumps and motors with a VFD. The current temporary pump station is 40 cfs and the proposed permanent pump station will be capable of 200 cfs. The proposed project will decrease the amount of groundwater being pumped by contractors (exchange partners) that receive water from the project by providing surface water in the FKC. The current requirements and types of lift and deep well pumps depend on the various Friant Contractors.

c. *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 estimates are from the reduced groundwater pumping of Friant Contractors located downstream on the FKC.

d. Does the calculation include the energy required to treat the water?
No. The energy required for treatment by Friant contractors taking water from the FKC for potable use will remain the same.

e. Will the project result in reduced vehicle miles driven, in turn reducing carbon emissions? Please provide supporting details and calculations. 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).
No.

(C) Evaluation Criterion C: Benefits to Endangered Species

1. What is the relationship of the species to water supply?

The San Joaquin River Restoration Program (SJRRP) is a direct result of a Settlement reached in September 2006 on an 18-year lawsuit to provide sufficient fish habitat in the San Joaquin River below Friant Dam near Fresno, California, by the U.S. Departments of the Interior and Commerce, the Natural Resources Defense Council (NRDC), and the Friant Water Users Authority (FWUA). The Settlement received Federal court approval in October 2006. The Fresno Irrigation District is a contractor for Friant Division water and a member of the Friant Water Authority.

The Settlement is based on two goals:

1) Restoration: To restore and maintain fish populations in "good condition" in the main stem of the San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish.
2) Water Management: To reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the Interim Flows and Restoration Flows provided for in the Settlement.

The project makes water available to Friant Contractors who gave up their CVP allocation that may be used for SJRRP.

2. What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?

This project creates opportunities for other Friant Contractors that have downstream intakes off the Friant-Kern Canal to exchange their CVP supplies for Kings River water stored in Pine Flat Reservoir. The water the Friant Contractors gave up from the CVP can be used for the SJRRP. Interested districts could also identify other partners and form agreements to exchange recaptured Restoration Flows in the California Aqueduct with

Kings River water, and the District could convey this water via the intertie down the Friant-Kern Canal.

The San Joaquin River Restoration includes two components: 1) Increased environmental flows; and 2) a water management component to mitigate impacts to historical San Joaquin River water users. Both are part of the river restoration settlement and both are necessary for successful restoration of the river. The extent is difficult to determine. Likewise, it is difficult to estimate the extent to which wildlife resource conservation practices discussed above would improve the status of species, but some benefits are likely.

3. *How is the species adversely affected by a Reclamation project?*
   The project will make water available to likely be used for SJRRP that would help restore fisheries in the area. More water is available because Friant Contractors gave up their CVP water allocation which may be used for SJRRP. The project would provide water for the Friant Contractors that gave up their CVP allocation.

4. *Is the species subject to a recovery plan or conservation plan under the ESA?*
   Yes, in the San Joaquin River Restoration Program.

5. *What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?*
   The project will provide ability to convey an estimated 10,000af/yr of water supply to the FKC. There is no reasonable way to determine the degree of improvement due to eco-system complexity, but some benefits are likely.

(D) Evaluation Criterion D: Water Marketing

(i) Briefly describe any water marketing elements included in the proposed project.

a. *Estimated amount of water to be marketed*
   As previously described, the project will provide an estimated 10,000 AF/year (Average Annual).

b. *A detailed description of the mechanism through which water will be marketed (e.g. individual sale, contribution to an existing market, the creation of a new water market, or construction of a recharge facility)*
   The project creates a new market by developing a mechanism for FKC water and Kings River water to be exchanged. Friant Contractors that have intakes from the Friant-Kern Canal that are downstream of the proposed project will be able to exchange their CVP supplies for Kings River water stored in Pine Flat Reservoir. Interested districts could also identify other partners and form agreements to exchange recaptured Restoration Flows in the California Aqueduct with Kings River water, and Fresno ID could wheel this water via the

intertie down the Friant-Kern Canal.

c. *Number of users, types of water use, etc. in the water market*
The number of users will be variable but water will be sold to any of the Friant contractors as long as it is available. The Friant Contractors are comprised of domestic and agricultural users that total over 800,000 acres and have a total estimated demand of over 1,000,000 af/yr. Four communities along the FKC rely primarily on surface water for potable water and their demand is estimated to be approximately 2,800 af/yr. In 2014 FID delivered water to four communities that receive surface water from the FKC that is treated and delivered for potable use. The water was conveyed via a temporary pump station on the Gould Canal. The four cities include Lindsay, Orange Cove, Terra Bella, and Strathmore. The transferred water provided a critical water supply to the four cities that rely primarily on surface water. The temporary facility was also used in 2015 to convey water. This project will allow additional transfers between the Kings River System and the San Joaquin River System.

d. *A description of any legal issues pertaining to water marketing (e.g. restrictions under Reclamation law or contracts, individual project authorities, or State water laws)*
There are no known legal issues or limitations. Transfers or exchanges are subject to USBR/federal regulations for water exchanges.

e. *Estimated duration of the water market*
The market for water is anticipated to increase, especially considering San Joaquin River Restoration and increased restrictions on groundwater pumping within the State. Demand within the Friant system (the water market) is expected to continue well beyond the project life.

(E) Evaluation Criterion E: Other Contributions to Water Supply Sustainability

Subcriterion No. E.1: Addressing Adaptation Strategies in a WaterSMART Basin Study

The proposed project area falls under the Sacramento-San Joaquin Rivers WaterSMART Basin study. According to the USBR website this study is not yet completed. *This project is consistent with adaptation strategies identified in multiple Basin studies, such as those identified in the other Basin Studies. The adaptation strategies listed in other region completed studies are anticipated for this basin. Some of the adaptation strategies that this project is consistent with include:*

- Improve Operational Efficiency: This project fits well within this strategy. The construction of the pump station and outlet pipeline meets several of the criteria

associated with this strategy. Primarily the project will improve operational capabilities between the Kings river and CVP Friant system. The project will replace a smaller and less efficient temporary pumping facility by providing addition capacity and high efficiency equipment. The project will also free up some system capacity of the Fresno Irrigation District conveyance system, which currently receives floodwater upstream of the project site that it has to convey through its system.

- Increase Water Supply: The intent of this strategy is to in part promote conjunctive management and groundwater storage. The subject pump station project furthers the District's commitment to conjunctive management by optimizing the use of limited surface water supplies, makes more water available for intentional groundwater recharge projects, and improves surface water operating efficiencies.
- Enhance Water Conservation, Agricultural Conservation: Specifically this strategy has conservation measures that install gates and automation on irrigation canals and improving water measurement and accounting systems. This project includes automation of lift pump operation to maintain flow capacity and flow measurement technology to measure deliveries. The water that will be conserved by this project is water that is otherwise lost to the region during flood events.
- Identify opportunities to restore natural systems: The project makes water available to Friant Contractors who gave up their CVP allocation that may be used for SJRRP.

Subcriterion No. E .2: Expediting Future On-Farm Irrigation Improvements

This project is not an on-farm irrigation improvement project.

Subcriterion No. E.3: Other Water Supply Sustainability Benefits

- *Will the project make water available to alleviate water supply shortages resulting from drought?*
    - *Explain in detail the existing or recent drought conditions in the project area. Describe the impacts that are occurring now or are expected to occur as a result of drought conditions.*

      California's Water Year 2015 – overlapping with California's driest calendar year of 2014 -- was the third driest in 119 years of record, based on statewide precipitation. When Water Year 2015 ended on September 30, the state's reservoirs tracked by DWR collectively held only 48 percent of average storage for the date, or 28 percent of capacity. Cumulative reservoir storage on the same date in the deep drought year of 1977 was five million AF less, but California had 16 million fewer people in 1977. The area is in the fourth year of a historic drought that has led to a zero percent allocation within the Friant system. Along the Friant system, agricultural users were forced to rely on groundwater. However several Disadvantaged Communities (DACs) along the Friant system that rely solely on surface water for potable uses were forced to take extreme measures to delivery potable water within their systems. To provide supply, a

temporary pumping system was constructed at the proposed project location to convey Kings River water that was exchanged with banked CVP water into the FKC.

- *Describe the severity and duration of drought conditions in the project area.*
  California is in its fourth year of severe drought with Fresno County classified as having exceptional drought intensity. Friant Division Contractors have received a 0% allocation for the last two years. The table below shows the allocations during the last four years.

Table 4 Water Allocations

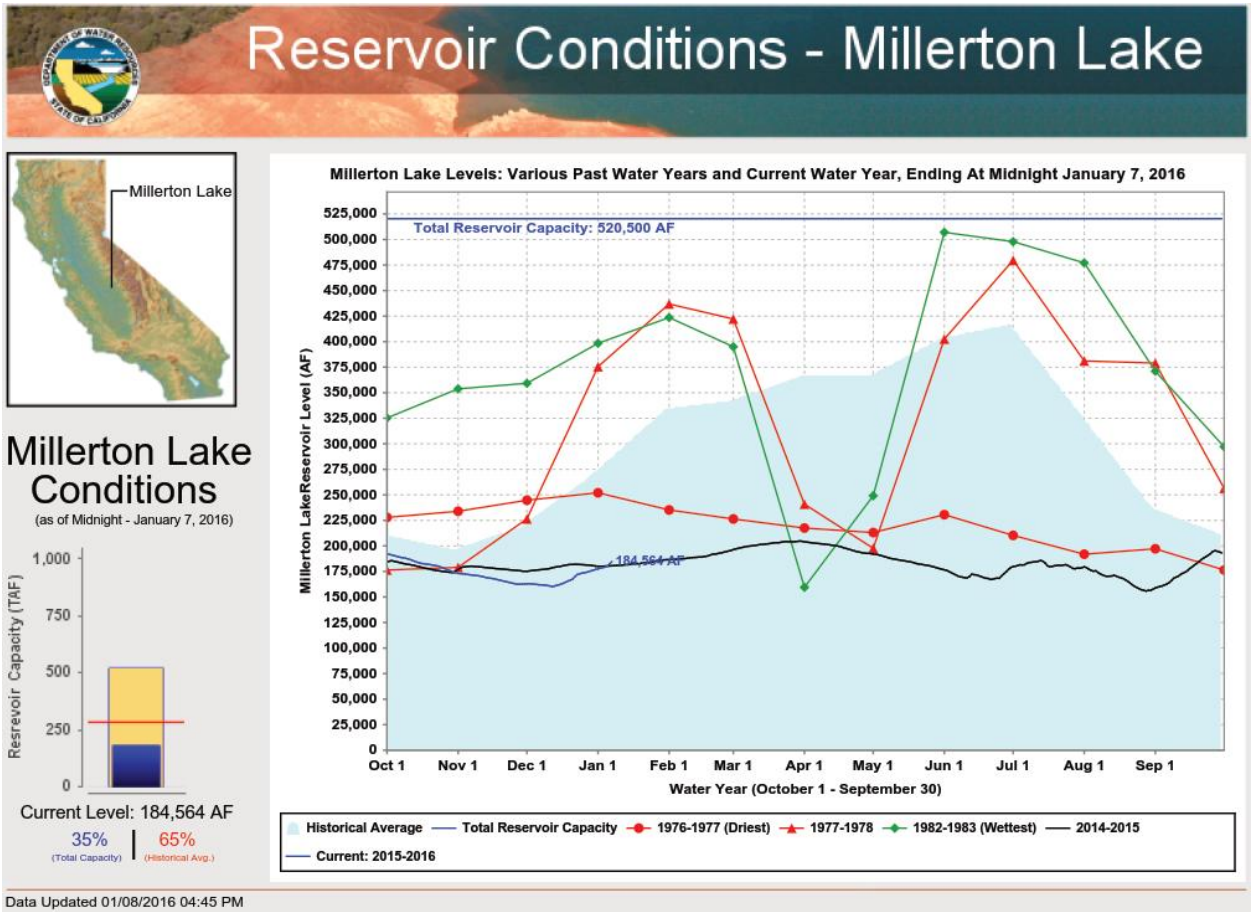
Water Year	Class I	Class II
2012	50%	0%
2013	62%	0%
2014	0%	0%
2015	0%	0%

- *Describe how the water source that is the focus of this project (river, aquifer, or other source of supply) is impacted by drought.*
  The Kings River system faces similar drought conditions, enduring the driest four year period on record. 2014-15 was the driest year on record with only 361,000 acre-feet of runoff. The water supply in the Kings River is commonly reported as a measure of 'Percent Hydrologic Year' (PHY). PHY represents the percent of river runoff compared to the long-term historical average. This reflects precipitation, snowpack, and river flow, and is directly related to the volume of water available to local water users. The PHY for the 2012, 2013, 2014 and 2015 Kings River water years is shown in the table below.

Table 5 Kings River Percent Hydrologic Year

Kings River Water Year	Percent Hydrologic Year
2011-2012	48%
2012-2013	40%
2013-2014	32%
2014-2015	21.5%

The graph below shows the current year in relation to average and other years.



- *Provide a detailed explanation of how the proposed WaterSMART Grant project will improve the reliability of water supplies during times of drought.*
  This project will improve the reliability of water supplies on the FKC by providing a mechanism for transferring water from the Kings River system to the FKC (San Joaquin River system). The project will utilize the flood water that is otherwise lost to the region and transfer that water (either directly or through excahange with groundwater banked supplies) to the FKC for Friant contractors downstream to utilize.

· *Will the project make water available to address a specific concern? For example:*
  - *Will the project directly address a heightened competition for finite water supplies and over-allocation (e.g., population growth)?*
    The project will directly address a heightened competition for a finite water supply, specifically within the Friant Unit of the CVP in which water supply contracts have been reduced to restore the San Joaquin River. This project will provide water to Friant Contractors who gave up their CVP allocation, where many of those domestic Friant Contractors are DACs and rely primarily on surface water.

- *Describe how the water source that is the focus of this project (river, aquifer, or other source of supply) is impacted by climate variation.*
  Within the San Joaquin River watershed, there is limited surface storage and climate change is expected to increase run-off earlier in the season likely encroaching on storage limitations.

- *Will the project help to address an issue that could potentially result in an interruption to the water supply if unresolved?*
  This project will help to provide a more reliable water supply for the Friant Contractors on the FKC. With more water being allocated to the SJRRP, there may be times where there is not much water available to Friant Contractors. This project will provide more water in the FKC for the Friant Contractors to utilize.

· *Will the project make additional water available for Indian tribes?*
No.

· *Will the project make water available for rural or economically disadvantaged communities?*
This project will make water available to rural or economically disadvantaged communities (DACs). Many of the domestic Friant Contractors who gave up their CVP allocations are DACs and rely primarily on surface water. One of the towns that received water from FID last year was Orange Cove. According to the 2009-13 Census data, the City's median household income is 43.9% of the statewide MHI ($26,799 and $61,094, respectively).

· *Does the project promote and encourage collaboration among parties?*
  - *Is there widespread support for the project?*
    There is support for the project as evidenced by the letters of support for the project (see Attachment D).

  - *What is the significance of the collaboration/support?*
    The project is well supported within the region as evidenced by the establishment of the temporary pumping system in 2014 that was utilized by USBR and the Friant contractors. The project will help lessen the tension related to reduced supplies associated with the SJRRP and drought conditions by transferring water from the Kings River System to the San Joaquin River System.

  - *Will the project help to prevent a water-related crisis or conflict?*
    Yes. The project will help to prevent conflict by providing an additional mechanism for water to be conveyed to the Friant system. Exchanged water or purchase of banked water conveyed to the Friant system will help alleviate shortfalls that have resulted from the SJRRP.

- *Is there frequently tension or litigation over water in the basin?*
  The San Joaquin River Restoration Program (SJRRP) is a direct result of a Settlement reached in September 2006 on an 18-year lawsuit to provide sufficient fish habitat in the San Joaquin River below Friant Dam near Fresno, California, by the U.S. Departments of the Interior and Commerce, the Natural Resources Defense Council (NRDC), and the Friant Water Users Authority (FWUA). The Settlement received Federal court approval in October 2006. The groundwater basins that the District and the Friant system overlay are critically overdrafted and the recent Sustainable Groundwater Management Act requires the region to meet sustainable standards. This legislation has and will increase tensions and demand for available supplies as groundwater extraction is reduced.

- *Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?*
  Yes, the project will provide a mechanism for additional water to be conveyed to the Friant Kern system, so potential exchange contractors that can capture/conserve water within their system will have additional supplies available to be conveyed via the proposed project.

· *Will the project increase awareness of water and/or energy conservation and efficiency efforts?*

- *Will the project serve as an example of water and/or energy conservation and efficiency within a community?*
  Yes. The project will provide an example for water conservation by providing a facility that can convey water conserved within the region utilizing high energy efficient pumping facilities that utilize less energy as compared to groundwater pumping or other water supply alternatives.

- *Will the project increase the capability of future water conservation or energy efficiency efforts for use by others?*
  Yes. Having a pumping facility with 200cfs capacity will encourage others in the region to conserve/capture more flood water in order to convey water through the proposed project. As noted, the project will have capacity of pumping more than 140,000af/yr, well above the prior year's actual pumping amounts and the conservatively estimated average annual amount assumed by the District. The facility will be a mechanism for other Kings and CVP Friant Division contractors to exchange supplies.

- *Does the project integrate water and energy components?*
  Yes, the project will utilize efficient low head lift pumps to convey water. Water deliveries and energy usage will be monitored.

(F) Evaluation Criterion F: Implementation and Results

Complete copies of the reports reference below are available upon request.

Subcriterion No. F.1 Project Planning:

Does the project have a Water Conservation Plan, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place? Does the project relate/have a nexus to an adaptation strategy developed as part of a WaterSMART Basin Study)? Please self-certify, or provide copies of these plans where appropriate to verify that such a plan is in place.

(i) Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, Systems Optimization Review, or other planning efforts done to determine the priority of this project in relation to other potential projects.

This project was ranked fifth overall as a priority project in USBR's Water management Goal Investment Strategy Final Report (March 2015) for the San Joaquin River Restoration Program (SJRRP). An excerpt from the Investment Strategy can be found in Attachment C, which shows the overall ranking table and has the project description. The Investment Strategy identifies projects that could reduce the impacts to the Friant Contractors from the release of San Joaquin River Restoration flows. This report developed, evaluated, and prioritized projects that would help achieve this goal.

(ii) Describe how the project conforms to and meets the goals of any applicable planning efforts, and identify any aspect of the project that implements a feature of an existing water plan(s).

The project meets the Investment Strategy goal of reducing impacts to Friant Contractors by transferring water from the Kings River to the FKC for Friant Contractors to utilize.

Subcriterion No. F.2 Readiness to Proceed

(i) Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

A detailed workplan listing each task required for implementation is included in the Technical Description, a corresponding project schedule is included as Attachment A and project budget is included in the Budget section of this application.

(ii) Explain any permits that will be required, along with the process for obtaining such permits. Identify and describe any engineering or design work performed specifically in support of the proposed project.

A detailed list of permits and their statuses is included in the Technical Description and Required Permits or Approvals sections.

Subcriterion No. F.3 Performance Measures

(i) Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (i.e., water saved, marketed, or better managed, or energy saved).

After completion of the project, the volume of water conveyed through the pump station from the Gould to the Friant Kern Canal will be measured by the flow meters included as part of the construction. FID will record the volumes and provide daily, monthly and annual totals of water delivered. Since the project is a new facility there is no comparison needed between pre and post construction conditions, so the total amount of water conveyed through the facility into the Friant Kern Canal will equal the total amount of water attributed as a benefit to the project.

Subcriterion No. F.4 Reasonableness of Costs

Please include information related to the total project cost, annual acre-feet conserved, energy capacity, or other project benefits and the expected life of the improvement(s).

The total project cost is based on the project feasibility report (assessment report) completed by the District's consulting engineer and District staff. The costs for construction were based on recent construction cost estimates obtained for similar work by the District and the District's consulting engineer. The cost estimate for all non-construction costs were based on an estimate of hours included in Attachment G and the District has entered into a contract for completion of these tasks at the shown cost. All time efforts were based on preparation of documents in accordance with District, local agency, state and federal requirements.

Construction materials will be included to maximize the project life of the facilities, including coating, materials, etc. that will prevent corrosion of submerged pipes.

The estimated project cost per acre-foot conserved over the life of the project is anticipated to be $8, as shown in the calculation below.

$$\frac{\$4{,}000{,}000}{10{,}000\ AF * 50\ years} = \$8\ per\ AF$$

Life expectancies are based on a combination of FID experience, manufacturer's information, and life expectancies listed for various facilities in Design and Operation of Farm Irrigation Systems, ASAE Monograph No. 3, 1981 (pg 58). The physical improvements to the project site are expected to have a life expectancy of 50 years.

The value of the energy conserved is estimated to be between $0.12 and $0.14 per kWh based on actual recent energy costs through Pacific Gas and Electric at the temporary pumping station. The total value of energy saved by the project is 2,563,099 kWh/year; using $0.12 per kWh, neglecting inflation costs or energy rate increases, using a 50-year project life yields a value of $15,378,594.

(G) Evaluation Criterion G: Additional Non-Federal Funding

The project includes non-Federal funding of 92.5%, well in excess of 50% of the project costs. FID will contribute the balance of the funding.

(H) Evaluation Criterion H: Connection to Reclamation Project Activities

(i) How is the proposed project connected to a Reclamation project activities?

This general project was identified as a Priority Project in the USBR's Water Management Goal Investment Strategy Report (March 2015) for the San Joaquin River Restoration Program (SJRRP). The final investment strategy for the SJRRP estimates a long term annual average deficit of 185,000 AF in the CVP Friant Division exists due to the requirement to provide Restoration Flows to the San Joaquin River. This deficit demonstrates the anticipated need for supplemental supplies to be available to Friant Contractors.

(ii) Does the applicant receive Reclamation project water?

FID currently holds a contract for 75,000 acre-feet of Class II San Joaquin River water that it receives from the Friant-Kern Canal. Class II water is not made available in below-normal years.

(iii) Is the project on Reclamation project lands or involving Reclamation facilities?

Yes, the project is located on Reclamation Lands and does involve Reclamation facilities (FKC). The project transfers water from the Gould Canal to the Friant-Kern Canal.

(iv) Is the project in the same basin as a Reclamation project or activity?

The project is in the San Joaquin Rivers water Basin. This basin is the subject of an on-going WaterSMART Basin study. Within this basin are the USBR Friant Dam and Friant-Kern Canal, which provide much of the surface water delivered to cities such as Orange Cove who rely heavily on surface water as their sole source of water.

(v) Will the proposed work contribute water to a basin where a Reclamation project is located?

The project will directly contribute a water supply to the Friant-Kern canal for other agencies (through water marketing) in the San Joaquin River Water Basin, where the USBR Friant Dam, Friant-Kern Canal and many other USBR facilities are located.

(vi) Will the project help Reclamation meet trust responsibilities to Tribes?

The project will provide a mechanism for additional water supplies to be made available to Friant contractors which is a primary goal of USBR and the San Joaquin River Restoration program, thereby helping USBR meet its obligations including the trust responsibilities to Tribes.

PERFORMANCE MEASURES

See Part 3 of Section F: Implementation and Results, for specific information on performance measures.

ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

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

The project will include excavation on the parcel for the pump station and to bury the pipeline from the pump station to the FKC. The impact of the project on the environment will be assessed in a California Environmental Quality Act Initial Study and NEPA Environmental Assessment prior to project initiation. If the biological and cultural surveys conducted during the CEQA/NEPA process find resources that will be impacted, mitigative and preventative measures will be employed. Details of these mitigation/preventative measures will be included in the CEQA/NEPA documents, and required of the contractor prior to and during construction. The dust generated during Project construction will only be temporary and nothing more than is normal for the agricultural fields in the vicinity. The following applicable mitigation measures will be implemented:

- Pre-construction biological and cultural surveys. If biological or cultural resources are discovered during construction, all construction activity in the project vicinity will cease and appropriate measures taken.
- All disturbed areas, including storage piles, which are not actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizers/suppressants, covered with a tarp or other similar cover, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions during construction using water or chemical stabilizer suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading cut and fill, and demolition activities during construction shall be effectively controlled of fugitive dust emissions utilizing application of water or pre-soaking.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from top of container shall be maintained.
- All operations shall limit, or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday.
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.

(ii) Are you aware of any species listed or proposed to be listed as a Federal endangered or threatened species, or designated Critical Habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

It is not anticipated that the Project would affect any endangered or threatened species near the Project. The site is adjacent to farmland and probably has limited habitat for special status species. A professional biologist has performed a reconnaissance level survey to look for signs of federal and state rare and endangered plant, animal, and vegetation types. No sensitive wildlife or plants were observed on the project site.

During construction, the following protection measures will be taken:

- Riparian and Streambed Habitats- The following preventive measures should be incorporated into the project.
    - Hab #1. Construction work in the Gould Canal should occur when the headgate is closed and the channel does not have flowing water.
- Nesting Birds and their Nests. -Nesting birds, their eggs, and their nests could potentially inhabit lands adjacent to and near the project site, and could be negatively impacted by construction of the project unless preventive measures are incorporated into the project. Nesting birds, their eggs, and their nests are protected by state and federal laws. To meet CDFW and USFWS requirements, the following preventive measures are proposed, incorporated into the project, and shall be implemented.
    - NB #1. Prior to any construction activities on the project site in the February thru August period, a preconstruction (one-day) survey shall be conducted by a qualified biologist for nesting birds on the project site. Results of the preconstruction survey shall be prepared in a letter and submitted to project engineer and FID prior to any construction activities.
    - NB #2. If any active nests are observed, the nests shall be designated as an Environmentally Sensitive Area and protected (while occupied) during the construction activities. The CDFW shall be consulted and avoidance measures, specific to each incident, shall be developed in cooperation with the project biologist.

(iii) Are there wetlands or other surface waters inside the project boundaries that potentially fall under Federal Clean Water Act jurisdiction as "Waters of the United States?" If so, please describe and estimate any impact the project will have.

No wetlands areas are known to be in the project area.

(iv) When was the water delivery system constructed?

Most of the District's delivery system was constructed in the late 1800s to deliver water from the Kings River to previously non-irrigated land in and around Fresno. The Fresno Irrigation District was formed in 1921.

The Friant-Kern Canal was completed in 1951.

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

The Project will result in modification to the Gould Canal to build the pump station. The Gould Canal was built in the 1800s. The Project will also result in modifications to Friant-Kern Canal, which was constructed in 1951. The modifications will be to construct new concrete outlet structure. Regular maintenance is performed on the Friant-Kern Canal by the Friant Water Users Authority. This reach of the Friant-Kern Canal is concrete lined and has had limited modification other than routine canal maintenance since the Canal was constructed.

(vi) Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

The Friant-Kern Canal is part of the CVP and is eligible for inclusion in the National Register of Historic Places (NRHP) but Project construction will not affect any of the characteristics of the canal that make it eligible for the NRHP. The Gould Canal was constructed in the late 1800s and has not been evaluated for inclusion in the NRHP; it will not be affected by the Project construction.

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

See note above.

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

The project will not have a disproportionately high or adverse effect on low income or minority populations. The Project will provide benefits to the Friant Contractors by providing an increased reliability in the water supply. Many of the domestic Friant Contractors are DACs and rely primarily on surface water.

The project will not have an adverse effect on low income or minority populations. The project will actually have a positive impact on the low income and minority populations in the area. The area is largely an agricultural area that relies almost solely on the

agricultural industry to drive the local economy. Water supply, as evidenced by the drought conditions in 2009, and current year drought, can have a devastating effect on the local economy and population. When there isn't enough water to irrigate crops, farmers don't plant crops, and do not need the labor, support, and materials associated with the crop production. This project will provide needed water supply, particularly in dry years. Many of the Friant Contractors downstream of the project, including the 4 towns that received water in 2014, rely primarily on surface water. In 2014, the areas did not have a backup water supply.

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

There are no known Indian sacred sites or tribal lands in the proposed project area; no adverse impacts to tribal lands are anticipated. As part of the environmental documentation process described in the workplan, a cultural specialist will review the site and cultural records.

(x) Will the project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

The 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.

REQUIRED PERMITS OR APPROVALS

Permits and approvals anticipated for the Project are discussed below. Both FID and their engineering consultant, Provost & Pritchard Consulting Group, have experience in securing these permits for other projects.

National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA). Environmental documents for the Project would be prepared for compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Based on the Project information to date, an Initial Study/Environmental Assessment (IS/EA) would be prepared which may lead to a Mitigated Negative Declaration/Finding of No Significant Impact (MND/FONSI).

Construction Document Approvals. The construction documents will be reviewed and signed by the FID, Friant Water Authority and USBR.

Indirect Source Review. The Project may need to prepare and submit an Air Impact Assessment to the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Dust Control Plan. Permits from the San Joaquin Valley Air Pollution Control District (Dust Control Plan) may be required if the project limits disturbed are over 5 acres. The current configuration is near that limit. May only need to submit a notice to construct.

Storm Water Pollution Prevention Plan. A Storm Water Pollution Prevention Plan may be needed for the project since there is a 1 acre disturbed area threshold. The Contractor will be required to prepare and submit the plan before construction. May only need to submit a waiver.

County of Fresno. County permits would be required for any electrical work.

USBR & FWA. A USBR License, and Friant Water Authority agreement are expected.

Warren Act Contract. A Warren Act Contract would be required with USBR if non-project water is being delivered in a USBR facility (FKC).

LETTERS OF PROJECT SUPPORT

The Project has received letters of support from the City of Orange Cove, Orange Cove Irrigation District, the Fresno County Department of Public Works and Planning, and the Fresno Metropolitan Flood Control District. (See Attachment D for copies of the letters).

OFFICIAL RESOLUTION

Attachment E includes the resolution authorizing the preparation of this application and funding for the District's cost share. This resolution was adopted at the December 15, 2015 Board meeting. The Board of Directors is comprised of local landowners, so the resolution will also represent support for the project from local farmers.

Attachment A- FID Gould Canal-Friant-Kern Canal Intertie Project Schedule

	2015					2016												2017					
Task	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**
1- Project Administration																							
2- Surveying																							
3- Design Engineering																							
50 % Plans and Specs									X														
90% Plans and Specs											X												
100% Plans and Specs												X											
4- Environmental Documentation																							
Draft IS/EA								X															
Final IS/EA										X													
NOD/FONSI											X												
5- Permitting Assistance																							
6- Construction Contraction																							
Bid Opening													X										
7-Construction Phase Services																							
8- Environmental Compliance/ Mitigation/Enhancement																							

Kings River Flood Release to San Joaquin River

Monthly Discharge in Acre-Feet at James Bypass Gaging Station

Data from annual KRWA Watermaster Reports

Water Year	Water Year % of Avg.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL
1954 - 1955	66%	0	0	0	0	0	0	0	0	0	0	0	0	0
1955 - 1956	153%	0	0	3,681	468	57,672	29,384	0	0	0	0	0	0	91,205
1956 - 1957	74%	0	0	0	0	0	0	0	0	0	0	0	0	0
1957 - 1958	150%	0	0	0	0	0	958	27,241	93,363	90,610	625	0	0	212,797
1958 - 1959	48%	0	0	0	0	0	0	0	0	0	0	0	0	0
1959 - 1960	42%	0	0	0	0	0	0	0	0	0	0	0	0	0
1960 - 1961	34%	0	0	0	0	0	0	0	0	0	0	0	0	0
1961 - 1962	112%	0	0	0	0	0	0	0	0	0	0	0	0	0
1962 - 1963	114%	0	0	0	0	0	0	0	0	0	0	0	0	0
1963 - 1964	54%	0	0	0	0	0	0	0	0	0	0	0	0	0
1964 - 1965	118%	0	0	0	0	0	0	0	0	0	0	0	0	0
1965 - 1966	71%	0	0	0	0	0	0	0	0	0	0	0	0	0
1966 - 1967	198%	0	0	2,884	0	0	0	48,657	194,665	149,853	88,811	0	0	484,870
1967 - 1968	50%	0	0	0	0	0	0	0	0	0	0	0	0	0
1968 - 1969	258%	0	0	0	38,510	184,090	285,920	278,860	302,640	318,170	132,580	10,570	0	1,551,340
1969 - 1970	78%	0	0	1,370	53,320	4,780	2,700	0	0	0	0	0	0	62,170
1970 - 1971	69%	0	0	0	0	0	0	0	0	0	0	0	0	0
1971 - 1972	51%	0	0	0	0	0	0	0	0	0	0	0	0	0
1972 - 1973	125%	0	0	0	0	0	0	0	0	139	0	0	0	139
1973 - 1974	123%	0	0	0	93	0	0	18,340	19,940	47,980	0	0	0	86,353
1974 - 1975	93%	0	0	0	0	0	0	0	0	0	0	0	0	0
1975 - 1976	32%	0	0	0	0	0	0	0	0	0	0	0	0	0
1976 - 1977	23%	0	0	0	0	0	0	0	0	0	0	0	0	0
1977 - 1978	203%	0	0	0	0	6,670	94,810	198,670	202,040	48,820	176	0	0	551,186
1978 - 1979	102%	0	0	0	0	397	218	640	9,430	730	337	0	0	11,752
1979 - 1980	179%	0	0	0	57,150	86,990	252,370	77,650	70,020	12,230	23,170	0	0	579,580
1980 - 1981	61%	0	0	0	0	0	0	0	0	0	0	0	0	0
1981 - 1982	183%	0	0	0	0	0	0	157,860	213,240	62,480	19,160	8	0	452,748
1982 - 1983	263%	0	91,790	224,340	218,320	260,350	319,270	301,490	303,280	292,440	183,520	66,190	48,290	2,309,280
1983 - 1984	116%	105,920	140,620	135,320	185,000	900	650	200	0	0	0	0	0	568,610
1984 - 1985	74%	0	0	0	0	0	0	0	0	0	0	0	0	0
1985 - 1986	192%	0	0	0	0	10,584	211,518	215,285	139,539	90,824	0	0	0	667,750
1986 - 1987	46%	0	0	0	1,347	0	0	0	0	0	0	0	0	1,347
1987 - 1988	49%	0	0	0	0	0	0	0	0	0	0	0	0	0
1988 - 1989	53%	0	0	0	0	0	0	0	0	0	0	0	0	0
1989 - 1990	40%	0	0	0	0	0	0	0	0	0	0	0	0	0
1990 - 1991	63%	0	0	0	0	0	0	0	0	0	0	0	0	0
1991 - 1992	41%	0	0	0	0	0	0	0	0	0	0	0	0	0
1992 - 1993	150%	0	0	0	0	0	0	0	0	0	0	0	0	0
1993 - 1994	51%	0	0	0	0	0	0	0	0	0	0	0	0	0
1994 - 1995	203%	0	0	0	0	0	32,644	158,918	228,382	87,044	77,364	2,158	0	586,510
1995 - 1996	123%	0	0	0	0	0	6,637	0	67,441	464	0	0	0	74,542
1996 - 1997	156%	0	0	5,080	169,558	223,588	38,887	0	0	0	0	0	0	437,113
1997 - 1998	182%	0	0	0	494	6,179	65,325	212,350	278,273	266,025	157,807	0	0	986,453
1998 - 1999	74%	0	3,501	16,542	0	0	0	0	0	0	0	0	0	20,043
1999 - 2000	90%	0	0	0	0	0	0	0	0	0	0	0	0	0
2000 - 2001	59%	0	0	0	0	0	0	0	0	0	0	0	0	0
2001 - 2002	67%	0	0	0	0	0	0	0	0	0	0	0	0	0
2002 - 2003	84%	0	0	0	0	0	0	0	0	0	0	0	0	0
2003 - 2004	62%	0	0	0	0	0	0	0	0	0	0	0	0	0
2004 - 2005	149%	0	0	0	0	0	0	0	48,545	14,648	0	0	0	63,193
2005 - 2006	173%	0	0	0	0	0	0	186,228	256,443	169,468	0	0	0	612,139
2006 - 2007	40%	0	0	0	0	0	0	0	0	0	0	0	0	0
2007 - 2008	71%	0	0	0	0	0	0	0	0	0	0	0	0	0
2008 - 2009	79%	0	0	0	0	0	0	0	0	0	0	0	0	0
2009 - 2010	121%	0	0	0	0	0	0	0	0	0	0	0	0	0
2010 - 2011	195%	0	0	1,845	18,597	0	27,689	216,926	78,823	101,332	58,247	0	0	503,459
2011 - 2012	48%	0	0	0	0	0	0	0	0	0	0	0	0	0
2012 - 2013	41%	0	0	0	0	0	0	0	0	0	0	0	0	0
Total - AF		105,920	235,911	391,062	742,857	842,200	1,368,980	2,099,315	2,506,064	1,753,257	741,797	78,926	48,290	10,914,579
Average - AF	102%	1,795	3,998	6,628	12,591	14,275	23,203	35,582	42,476	29,716	12,573	1,338	818	184,993
Years when flood occurred		1	3	8	11	11	15	15	16	17	11	4	1	23
Years of record		59	59	59	59	59	59	59	59	59	59	59	59	59
Occurrance percentage		1.7%	5.1%	13.6%	18.6%	18.6%	25.4%	25.4%	27.1%	28.8%	18.6%	6.8%	1.7%	39.0%
Years with zero flow		58	56	51	48	48	44	44	43	42	48	55	58	36
Without 72-73, 82-83 and 83-84														
Years when flood occurred		0	1	6	9	9	13	13	15	15	10	3	0	20
Years of record		56	56	56	56	56	56	56	56	56	56	56	56	56
Occurrance percentage		0.0%	1.8%	10.7%	16.1%	16.1%	23.2%	23.2%	26.8%	26.8%	17.9%	5.4%	0.0%	35.7%
Years with zero flow		56	55	50	47	47	43	43	41	41	46	53	56	36
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	TOTAL

1.3 Project ID 227 – Fresno Groundwater Recharge Facility

This recharge facility project will allow the City of Fresno (City) to increase its ability to more efficiently use available surface water (surplus flows from the Kings River, San Joaquin River, and Eastside Streams) and recharge its groundwater basin. The City's Groundwater Recharge Facility is expected to be 60 to 120 acres, and will 1) capture and recharge surplus flows for future use, and 2) serve as a detention basin to provide operational flexibility to the City for routing surface and flood waters within the area's extensive network of canals. The banked groundwater would be extracted at existing and nearby City wells downgradient of the recharge basin. The City has performed regional groundwater banking studies to evaluate potential facility locations and appropriate recharge technologies. Project implementation is dependent on identifying willing sellers of land suitable for groundwater recharge operations.

1.4 Project ID 232 – Gould Canal – Friant-Kern Canal Permanent Intertie

In addition to CVP supplies, Fresno ID has rights to the Kings River, which is stored in Pine Flat Reservoir and conveyed to Fresno ID via the Gould Canal. Fresno ID's Gould Canal – Friant-Kern Canal Permanent Intertie project involves construction of gravity-run 200 cfs capacity pipelines that will connect the Gould Canal with the Friant-Kern Canal, allowing diversion of Kings River water into the Friant-Kern Canal. This project creates opportunities for other Friant Contractors that have downstream intakes off the Friant-Kern Canal to exchange their CVP supplies for Kings River water stored in Pine Flat Reservoir. Fresno ID could either directly use the exchanged CVP water or store it for future use via groundwater recharge. Interested districts could also identify other partners and form agreements to exchange recaptured Restoration Flows in the California Aqueduct with Kings River water, and Fresno ID could wheel this water via the intertie down the Friant-Kern Canal. A temporary pump installation facilitated similar exchanges between Kings River water and unreleased Restoration Flows in 2014.

1.5 Project ID 305 – Orange Cove Irrigation District In-District In-Lieu Groundwater Management

Orange Cove ID serves both M&I customers and agricultural landowners growing predominately permanent crops. CVP Class 1 water is Orange Cove ID's only surface water supply, and private landowners additionally pump groundwater from the Kings River groundwater subbasin. The southern portion of the district west of the Friant-Kern Canal overlies reliable groundwater resources, but groundwater access in the remaining areas of Orange Cove ID is limited and unreliable, especially in drier years. Historically, the district has not used its entire CVP water allocations, because landowners with reliable groundwater have foregone portions of their allocated surface water deliveries in favor of cheaper groundwater. With this project, Orange Cove ID would provide landowners with financial incentives to decrease surface water costs during wet years so

January 14, 2016

Adam Claes, Special Projects Coordinator
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Subject: Endorsement of Fresno Irrigation District's WaterSMART Grant Application

Dear Mr. Claes:

The City of Orange Cove supports the Fresno Irrigation District in their pursuit of a WaterSMART Grant, which will aid in funding the construction of a pump station and conveyance pipeline from the Fresno Irrigation District's Gould Canal to the Bureau of Reclamation's, Central Valley Project, Friant-Kern Canal. There are several benefits realized from the construction of this pipeline, such as: increasing water supply reliability by providing a mechanism for water transfer between the Kings River and Friant-Kern Canal Systems, providing additional flood protection, and facilitating the exchange of recaptured CVP Friant Division water supplies with Kings River water supplies to support the recirculation element of the San Joaquin River Restoration Program (SJRRP). This project was the fifth highest overall ranked project included in the SJRRP Water Management Investment Strategy Final Report of March 2015.

The City of Orange Cove recognizes the importance of investing in water management and conservation projects, and the critical role they play in strengthening water supply reliability. The City of Orange Cove is confident this project will provide an immediate benefit to the Fresno Irrigation District and aid the entire region by optimizing available resources and providing a reliable water supply, especially in dry years. A project such as this one is essential to ensuring there is a sustainable and viable long-term water supply for the Central Valley. The City of Orange Cove strongly encourages the Bureau of Reclamation to provide funding to the Fresno Irrigation District for this project.

Sincerely,

Victor P. Lopez, Mayor
City of Orange Cove

ORANGE COVE IRRIGATION DISTRICT

1130 PARK BOULEVARD – P.O. BOX 308
ORANGE COVE, CALIFORNIA 93646
Phone: (559) 626-4461
Fax: (559) 626-4463
Webpage: OrangeCoveID.org

January 11, 2016

Adam Claes, Special Projects Coordinator
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Subject: Endorsement of Fresno Irrigation District's WaterSMART Grant Application

Dear Mr. Claes:

The Orange Cove Irrigation District supports the Fresno Irrigation District in their pursuit of a WaterSMART Grant, which will aid in funding the construction of a pump station and conveyance pipeline from the Fresno Irrigation District's Gould Canal to the Bureau of Reclamation's, Central Valley Project, Friant-Kern Canal. There are several benefits realized from the construction of this pipeline, such as: increasing water supply reliability by providing a mechanism for water transfer between the Kings River and Friant-Kern Canal Systems, providing additional flood protection, and facilitating the exchange of recaptured CVP Friant Division water supplies with Kings River water supplies to support the recirculation element of the San Joaquin River Restoration Program (SJRRP). This project was the fifth highest overall ranked project included in the SJRRP Water Management Investment Strategy Final Report of March 2015.

The Orange Cove Irrigation District recognizes the importance of investing in water management and conservation projects, and the critical role they play in strengthening water supply reliability. The Orange Cove Irrigation District is confident this project will provide an immediate benefit to the Fresno Irrigation District and aid the entire region by optimizing available resources and providing a reliable water supply, especially in dry years. A project such as this one is essential to ensuring there is a sustainable and viable long-term water supply for the Central Valley. The Orange Cove Irrigation District strongly encourages the Bureau of Reclamation to provide funding to the Fresno Irrigation District for this project.

Sincerely,

Engineer-Manager
Orange Cove Irrigation District

County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING
ALAN WEAVER, DIRECTOR

January 13, 2016

Adam Claes, Special Projects Coordinator
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Subject: Endorsement of Fresno Irrigation District's WaterSMART Grant Application

Dear Mr. Claes:

The Fresno County Department of Public Works and Planning supports the Fresno Irrigation District in their pursuit of a WaterSMART Grant, which will aid in funding the construction of a pump station and conveyance pipeline from the Fresno Irrigation District's Gould Canal to the Bureau of Reclamation's, Central Valley Project, Friant-Kern Canal. There are several benefits realized from the construction of this pipeline, such as: increasing water supply reliability by providing a mechanism for water transfer between the Kings River and Friant-Kern Canal Systems, providing additional flood protection, and facilitating the exchange of recaptured CVP Friant Division water supplies with Kings River water supplies to support the recirculation element of the San Joaquin River Restoration Program (SJRRP). This project was the fifth highest overall ranked project included in the SJRRP Water Management Investment Strategy Final Report of March 2015.

The Fresno County Department of Public Works and Planning recognizes the importance of investing in water management and conservation projects, and the critical role they play in strengthening water supply reliability. The Fresno County Department of Public Works and Planning is confident this project will provide an immediate benefit to the Fresno Irrigation District and aid the entire region by optimizing available resources and providing a reliable water supply, especially in dry years. A project such as this one is essential to ensuring there is a sustainable and viable long-term water supply for the Central Valley. The Department of Public Works and Planning strongly encourages the Bureau of Reclamation to provide funding to the Fresno Irrigation District for this project.

Sincerely,

Alan Weaver, Director
Department of Public Works and Planning

cc: Bernard Jimenez, Deputy Director of Planning

ADMINISTRATION
2220 Tulare Street, Sixth Floor / Fresno, California 93721 / Phone (559) 600-4078 / FAX (559) 600-4548
The County of Fresno is an Equal Opportunity Employer

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

File 170.511

January 15, 2016

Adam Claes, Special Projects Coordinator
Fresno Irrigation District
2907 S. Maple Avenue
Fresno, CA 93725

Dear Mr. Claes,

Endorsement of Fresno Irrigation District's WaterSMART Grant Application

The Fresno Metropolitan Flood Control District (District) supports the Fresno Irrigation District in their pursuit of a WaterSMART Grant, which will aid in funding the construction of a pump station and conveyance pipeline from the Fresno Irrigation District's Gould Canal to the Bureau of Reclamation's, Central Valley Project, Friant-Kern Canal. There are several benefits realized from the construction of this pipeline, such as: increasing water supply reliability by providing a mechanism for water transfer between the Kings River and Friant-Kern Canal Systems, providing additional flood protection, and facilitating the exchange of recaptured CVP Friant Division water supplies with Kings River water supplies to support the recirculation element of the San Joaquin River Restoration Program (SJRRP). This project was the fifth highest overall ranked project included in the SJRRP Water Management Investment Strategy Final Report of March 2015.

The District recognizes the importance of investing in water management and conservation projects, and the critical role they play in strengthening water supply reliability. The District is confident this project will provide an immediate benefit to the Fresno Irrigation District and aid the entire region by optimizing available resources and providing a reliable water supply, especially in dry years. A project such as this one is essential to ensuring there is a sustainable and viable long-term water supply for the Central Valley. The District strongly encourages the Bureau of Reclamation to provide funding to the Fresno Irrigation District for this project.

Very Truly Yours,

Alan Hofmann
General Manager-Secretary

AH/sy

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RESOLUTION NO. 2015-14

RESOLUTION OF THE BOARD OF DIRECTORS OF THE FRESNO IRRIGATION DISTRICT

FOR A GRANT FROM THE UNITED STATES BUREAU OF RECLAMATION WATERSMART: WATER AND ENERGY EFFICIENCY GRANTS FOR FY 2016

WHEREAS, the United States Bureau of Reclamation has made grants of three-hundred thousand to one-million ($300,000 to 1,000,000) available for water and energy related projects through the WaterSMART: Water and Energy Efficiency Grants program; and

WHEREAS, the District desires to prepare and submit a grant application for the Gould Canal – Friant-Kern Canal Intertie Project; and

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

WHEREAS, the District supports a proposed application being submitted and will review the proposed application being submitted for the Gould Canal – Friant-Kern Canal Intertie Project;

WHEREAS, the District has the capability to provide the amount of funding specified in the funding plan;

WHEREAS, the District understands the importance of meeting the grant deadlines, and the importance of spending grant monies and their cost share as soon as feasible to help stimulate the economy;

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

THEREFORE, BE IT RESOLVED by the Board of Directors of the Fresno Irrigation District that:

1. The Board of Directors and authorized staff support a proposed application being submitted and will review the application being submitted by this District under the United States Bureau of Reclamation WaterSMART: Water and Energy Efficiency Grants FY 2016,
2. The Fresno Irrigation District is capable of providing the required funding and any in-kind contributions specified in the funding plan included in the application,
3. The General Manager and Assistant General Manager of the District is hereby authorized and directed to prepare the necessary data, sign, and file such application with the United States Bureau of Reclamation, and if selected are authorized to enter into an agreement with the United States Bureau of Reclamation, and

4. If selected for a WaterSMART: Water and Energy Efficiency Grant, the applicant will work with the United States Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

The above recitals are all true and correct.

PASSED, APPROVED AND ADOPTED THIS 15th day of December, 2015.

By: _____
Ryan Jacobsen, President

I, GARY R. SERRATO, 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. 2015-14 (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 15th day of December Two Thousand Fifteen, and that the Board adopted the Resolution by the following vote:

	Aye	Nay	Absent	Abstain
President Jacobsen	✓			
Vice President Prieto, Jr.	✓			
Director Porter	✓			
Director Beberian	✓			
Director Woolf	✓			

_____
Gary R. Serrato, Secretary

ATTACHMENTS FORM

Instructions: On this form, you will attach the various files that make up your grant application. Please consult with the appropriate Agency Guidelines for more information about each needed file. Please remember that any files you attach must be in the document format and named as specified in the Guidelines.

Important: Please attach your files in the proper sequence. See the appropriate Agency Guidelines for details.

1) Please attach Attachment 1	1234-2016 WaterSMART Grant Ap	Add Attachment	Delete Attachment	View Attachment
2) Please attach Attachment 2		Add Attachment	Delete Attachment	View Attachment
3) Please attach Attachment 3		Add Attachment	Delete Attachment	View Attachment
4) Please attach Attachment 4		Add Attachment	Delete Attachment	View Attachment
5) Please attach Attachment 5		Add Attachment	Delete Attachment	View Attachment
6) Please attach Attachment 6		Add Attachment	Delete Attachment	View Attachment
7) Please attach Attachment 7		Add Attachment	Delete Attachment	View Attachment
8) Please attach Attachment 8		Add Attachment	Delete Attachment	View Attachment
9) Please attach Attachment 9		Add Attachment	Delete Attachment	View Attachment
10) Please attach Attachment 10		Add Attachment	Delete Attachment	View Attachment
11) Please attach Attachment 11		Add Attachment	Delete Attachment	View Attachment
12) Please attach Attachment 12		Add Attachment	Delete Attachment	View Attachment
13) Please attach Attachment 13		Add Attachment	Delete Attachment	View Attachment
14) Please attach Attachment 14		Add Attachment	Delete Attachment	View Attachment
15) Please attach Attachment 15		Add Attachment	Delete Attachment	View Attachment