

Tulare Irrigation District

SCADA System Modernization Project

Tulare County, California

APPLICATION SUBMITTED TO THE UNITED STATES BUREAU OF RECLAMATION FOR A
WATERSMART GRANTS: SMALL-SCALE WATER EFFICIENCY PROJECTS FOR FISCAL YEAR 2017

(Funding Opportunity No: BOR-DO-17-F011)



Tulare Irrigation District

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April 2017

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Technical Proposal and Evaluation Criteria

Executive Summary

Date: April 25, 2017
Applicant Name: Tulare Irrigation District
City: Tulare
County: Tulare County
State: California

Project Summary

The Tulare Irrigation District (District) proposes to pursue the Supervisory Control and Data Acquisition (SCADA) System Modernization Project to improve and expand its current system by converting existing District SCADA sites to a new web-based SCADA interface platform which will enhance the capability of the District to manage surface water supplies. Funds awarded through this grant combined with District funds will allow the District to upgrade its SCADA interface software from an older system (Lookout) to a modern system called the Ignition platform. Funds will also be used to implement new control and monitoring components beyond the existing system and the inclusion of remote hand-held SCADA monitoring tablets. The implementation of the Ignition platform will open new water management tools for the District including:

- a new modern web-based interface to better facilitate access of the system,
- real-time data acquisition and visualization both in the District office and in the field,
- data retention in standard data formats including storage and reporting, and
- increased security of the system from outside cyber threats.

Project Timeline

Because this project does not require any environmental review and/or design work, the District anticipates that this project will take approximately 8-9 months of intensive SCADA programming and computer work by our SCADA consultant and District staff. The District anticipates that work can begin once grant funds are available and the District has secured a contract with the U.S. Bureau of Reclamation (USBR).

Project Facilities

The proposed work will involve the migration of software and programming from our existing SCADA computer station to our District mainframe server, which is housed in the District Administration Office. The District will not conduct any work on any federal property or facilities.

Background Data

Geographic Location

The District was formed on September 21, 1889 as one of the first several irrigation districts formed under the Wright Act of 1887. The District provides service to approximately 65,000 acres within Tulare County, California and is situated in the southern San Joaquin Valley. The District is approximately 50 miles southeast of the City of Fresno and approximately 65 miles northwest of the City of Bakersfield. The City of Tulare is situated within the District and represents the largest urban community within the District boundary. Adjacent water agencies include the Kaweah Delta Water Conservation District, Corcoran Irrigation District, Kings County Water District and numerous private ditch companies. A location map for the District is included as **Figure 1**.

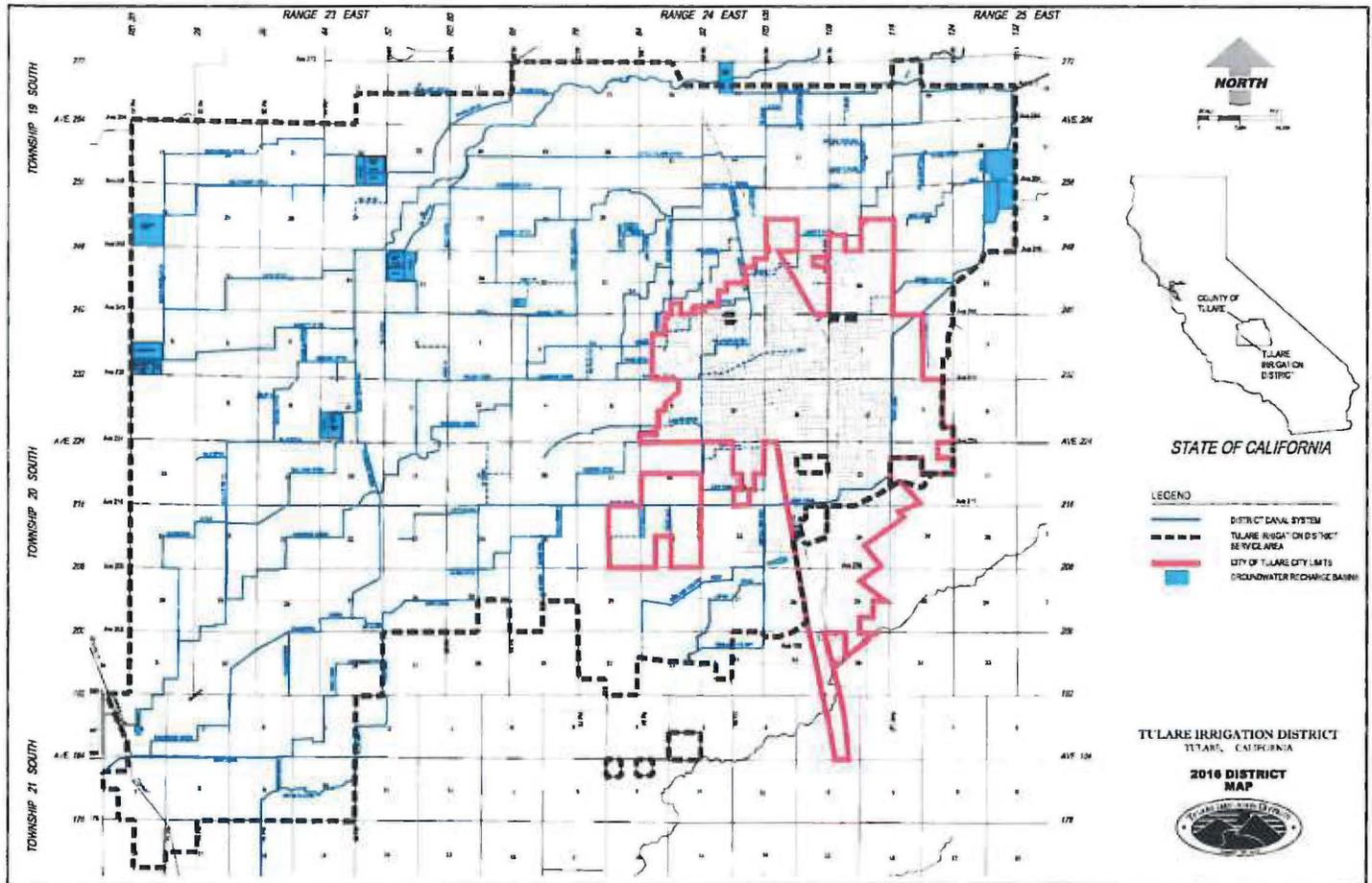


Figure 1. District Location Map

Water Supply and Demand

The Tulare Irrigation District is a Friant contractor with the U.S. Bureau of Reclamation (USBR) and holds surface water rights (pre-1914) on the Kaweah River. The District has a contract for 30,000 Acre-Feet (AF) of Class 1 water and 141,000 AF of Class 2 water from the CVP Friant Unit. The District also enters into annual contracts for Section 215 water (surplus CVP water). Combined, the District has an average annual surface water supply of approximately 163,000¹ AF to meet grower demand and, in years of excess, recharge deliveries.

In order to utilize the highly variable surface water supplies that the District receives, which can range widely from approximately 15,000 AF to 350,000 AF a year, the District has developed over time a conjunctive use system by which irrigation demands not fully met by surface water are met with landowner deep wells. Over the last several decades the District has observed a slow decline in groundwater elevations on the average of 24" per year, due to the heavy reliance that farmers have had to put on groundwater to meet crop consumption needs. The trend in groundwater levels has been both up and down largely as a function of wet and dry cycles; however, the long-term average trend has been downward. See **Figure 2** for a historical depth to groundwater chart showing the long-term downward trend of groundwater levels within the District. This downward trend is anticipated to continue and possibly increase due to various demands on groundwater in the area and due to the loss of water to the San Joaquin River Restoration Program (Restoration Program). The District estimates that an average of 20% of its CVP Friant supply will be redirected towards the

¹ Average annual surface water supply generated from data for the period from 1986 to 2011.

Restoration Program, which is anticipated, on average, to consist of approximately 2,000 AF of Class 1 water and 13,000 AF of Class 2 water annually².

**1922 - 2016 Depth to Groundwater
Tulare Irrigation District**

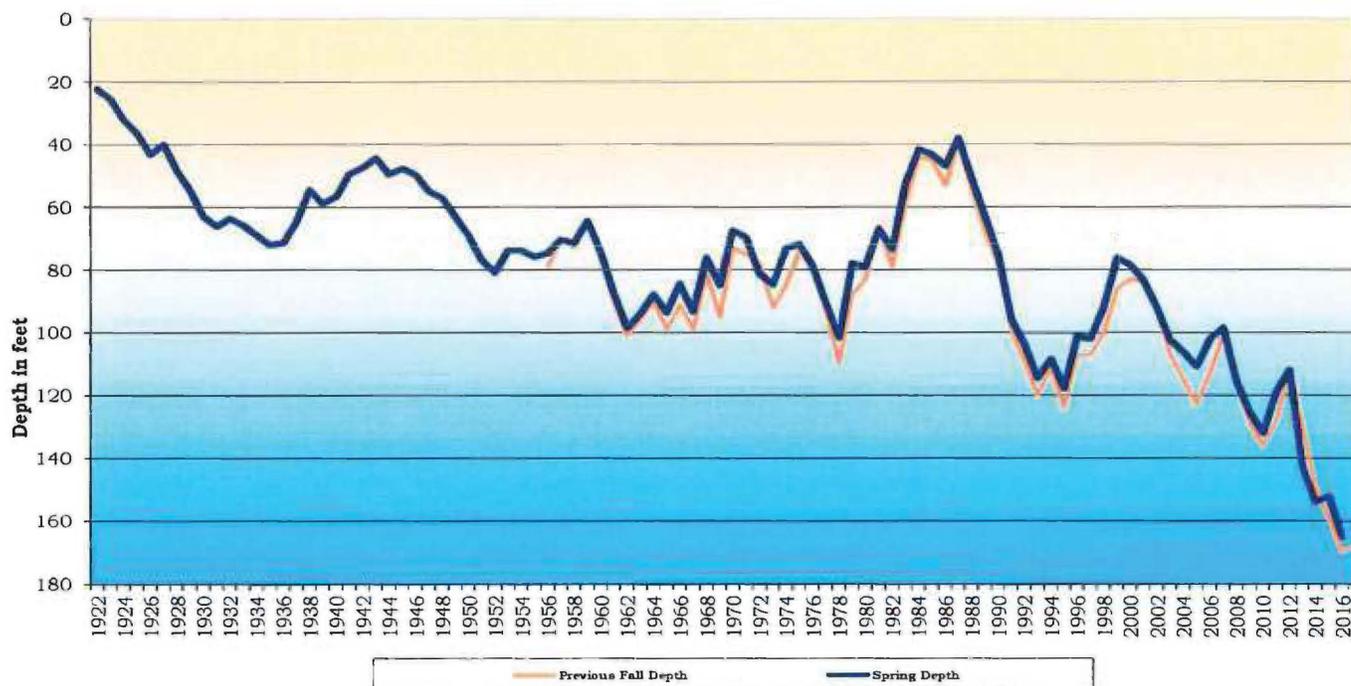


Figure 2. Historical Depth to Groundwater Readings for Tulare Irrigation District

The District delivers surface water to approximately 230 agricultural growers within the District growing a variety of agricultural commodities. The District does not serve any municipal, domestic or industrial uses within the Tulare area. The District utilizes approximately 300 miles of earthen canals and 30 miles of pipelines to deliver water to approximately 535 farm gate turnouts within the District. The District also utilizes approximately 1,300 acres of groundwater recharge ponds to carry out recharge activities. Please see **Figure 1** for a District Map showing the location of District canals, pipelines, aquifer recharge ponds, and other water-related facilities. The District also utilizes an extensive SCADA system to monitor and control key water management facilities within the District to facilitate efficient water management decisions.

The Growers within the District grow a variety of crops and the top five crops recorded during the 2016 crop survey are listed in **Table 1**. The District was once dominated by cotton; however, much of the District is now farmed to serve the large dairy industry in the Tulare area. Permanent crops such as pistachios, walnuts and almonds have also quickly gained popularity.

Table 1. List of Top 5 Crops Grown in Tulare Irrigation District

Crop	Acreage
Wheat	18,151
Field Corn	14,379
Alfalfa	11,097
Pistachios	7,676
Walnuts	4,832

² Based on analysis done by the District utilizing analyses prepared by the Friant Water Authority.

Bureau of Reclamation Working Relationship

The District has maintained a good working relationship with the USBR since the execution of its contract for a water supply from the Friant Unit of the CVP in 1949. In recent history (past 12 years) the District has also partnered with the USBR on several grant projects that have improved water conservation and water efficiency within the District. Below is a list of grants that the District has received:

- **Challenge Grant 2025 – FY 2005**
A \$300,000 grant to implement SCADA equipment within the District to improve water efficiency and conserve surface water. The project was completed on time and on budget.
- **Field Services Grant – FY 2007**
A \$50,000 grant to install an automated release facility from a regulation basin to improve water management and conserve water. The project was completed on time and on budget.
- **Field Services Grant – FY 2008**
A \$50,000 grant to install a ramp flume measurement station to control downstream water deliveries from an integrated regulation basin. The project was completed on time and under budget.
- **WaterSMART Grant – FY 2009**
A \$300,000 grant to construct Phase 1 of a recharge basin on the northeast side of the District. This was a partnership with the City of Tulare. The project was completed on time and under budget.
- **WaterSMART Grant – FY 2010**
A \$300,000 grant to construct Phase 2 and 3 of a recharge basin on the northeast side of the District. This was a partnership with the City of Tulare. The project was completed on time and under budget.
- **WaterSMART Grant – FY 2010**
A \$700,000 grant to construct a pipeline to deliver tertiary treated wastewater from the City of Visalia to the District. The project was completed on time and on budget.
- **Part III Grant – FY 2013**
A \$1.9 million grant to conduct several water supply studies and construct a recharge basin to address current and future losses of Friant CVP supplies to the San Joaquin River Settlement. The project is currently ongoing and is currently on schedule and on budget.

Project Description

The District began to implement a SCADA System in 2003 as a part of a water management system aimed at monitoring and managing surface water fluctuations caused by power generation and enhancement operations by the Kaweah River Power Authority and its Terminus Hydropower Plant. At the time the system was developed with an interface platform called Lookout, which was developed by National Instruments. Between 2003 and 2015 the District installed 16 different SCADA facilities throughout the District to monitor and/or control surface water management structures. Each of these facilities was integrated into the Lookout platform for monitoring at the District Administration Office. The Lookout platform has functioned as designed; however, with advancements in SCADA technology and the changes in water management strategies the District installed a newer platform in 2015 called Ignition, which was designed by Inductive Automation, as a part of a canal automation project.

Lookout was implemented at the District to allow for the visualization of monitoring sites and for the control of canal gates, pumps and other flow management equipment. The system has allowed for real-time data to inform water management decisions and automated controls that have yielded more flexibility in meeting grower demands and advancements in water conservation. Installed on a stand-alone computer, Lookout is currently running on a Windows XP operating system. Because Lookout is currently operating on a computer that no longer has support from Microsoft, the District is open to potential cyber threats that are not being addressed by Microsoft. Maintenance of the system is conducted by our SCADA consultant, Innovative

Controls. Innovative Controls has encountered problems with technical support from Lookout, which exposes the District to potential downtime while issues are being addressed. The District has also encountered various limitations in Lookout such as the inability to export monitoring data easily into a format that can be used by District staff and the inability to provide customized security access for field staff. Therefore, at this time the only District staff members that utilize the SCADA system are the District Watermaster, Engineering Technician and the Superintendent (on a limited basis).

In 2015 the District participated in a project to construct 5 control facilities on Packwood Creek, a channel that diverts water towards the District. These structures were automated check structures that maintain upstream water levels in an attempt to increase groundwater recharge during periods where excess wet year water is available. Through an extensive search, and in consultation with Innovative Controls, the District opted to implement the Ignition platform to monitor the Packwood Creek project rather than integrating it into the Lookout platform. The Ignition platform was established to monitor and control the Packwood Creek sites to overcome some of the limitations that were experienced while using the Lookout system. With the Ignition platform running one facility, the District wishes to pursue this grant to utilize Innovative Controls to migrate the other 16 facilities on the Lookout platform over to the Ignition platform and to implement enhanced real-time visualization of the District distribution system, including hand-held tablets for District staff to access the data being gathered by the SCADA system.

To implement the SCADA System Modernization Project, the District intends to execute a contract with Innovative Controls to convert each of the existing facilities from the stand-alone Lookout system to the server (web-based) Ignition platform that resides on the District mainframe server. The District also intends to add the following features while upgrading to the new Ignition platform:

- Monitoring sites will be programmed to output data into Microsoft Excel and Access formats for use in water management decisions.
- Select sites will be designed to produce an annual report of key data that will allow for observation and improvement in water management decisions.
- A large format screen will be installed in the District water operations department to monitor real-time District flows, levels and other data.
- 12 Microsoft Rugged Surface tablets will be purchased to be utilized by District ditchtenders and District staff to allow for real-time visualization of data.
- The system will be programmed such that it can be accessed remotely via remote computer, tablet, or cell phone with the appropriate security clearance and access permissions.

The migration of existing Lookout sites to the Ignition platform allows the District to modernize and better utilize the ongoing data that the SCADA system monitors. The Ignition system will be designed such that the data being monitored can be recorded, stored and backed up on the District mainframe server. Data that is currently being collected by the Lookout system is not being stored or backed up and is only viewable in a chart format. The Ignition data will be accessible in a typical Microsoft format such as Excel and/or Access, which will allow for analysis and reporting that can impact water management decisions. An example of exported data are the water levels in recharge basins. We anticipate that having the ability to export the water levels and calculating the percolation rates will allow the District to monitor the recharge capacity at each basin. As the District sees reductions in recharge capacity, it can implement measures to mitigate for losses in capacity such as removal of fine sediments that reduce groundwater percolation rates.

Beyond the ability to access data, the Ignition system will also provide annual reports on data that is monitored at each site. The Ignition platform will allow the District to develop reports that collect and summarize data on a fixed timeline that can be accessed to provide information on specific SCADA facilities.

Annual reporting will allow the District to provide statistics on water management decisions and to analyze water operations based upon year type. Diagnostic reports can also be developed to assist the District in making maintenance decisions and scheduling maintenance and/or repairs.

Lastly, the District intends to implement the utilization of a large format screen and field tablets for District Ditchtenders to allow for the visualization and distribution of water management data. Currently the District utilizes a stand-alone computer and monitor to access the SCADA system and access is limited only to the District Watermaster, Engineering Technician and Superintendent. Operations and the status of the District distribution system are coordinated between operators through the District Watermaster and through daily water meetings. The SCADA System Modernization Project intends to install a large format screen in the water operations room where District ditchtenders meet to provide a large visualization of the District distribution system and the status of levels, flows and facility parameters. The District also intends to utilize the tablets to allow Ditchtenders to have access to the Ignition system and the ability to see flows, levels and changes throughout the District distribution system. The tablets will be assigned specific clearances which will only allow the ditchtender to view information and not control facilities. Having the ability to see how the District distribution system is operating on a real-time basis will allow the system to operate faster and more efficiently.

Evaluation Criteria

E.1.1. Evaluation Criterion A—Planning Efforts Supporting the Project (35 points)

Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?

The District has pursued and promoted the implementation of SCADA equipment under the ongoing USBR Water Management Planning process and through the development of the Tulare Irrigation District System Optimization Review Study Report. These two documents were developed by the District to address the critical needs for water management improvements and the strategies for addressing the improvements. The last Tulare Irrigation District Water Management Plan (WMP) was developed and adopted by the District in 2012³. The WMP is part of an ongoing planning process that the District participates in as a USBR contractor for water supplies from the Friant Division of the CVP. The WMP is updated every 5 years and the last document was completed in 2012. Several of the Best Management Practices (BMPs) for agricultural contractors that are required to be addressed include the development and/or inclusion of SCADA equipment and software. Below is a discussion of each of the areas where SCADA equipment is included.

The construction of regulatory reservoirs is a BMP aimed at increasing the ability of the District to manage fluctuations in water levels within the District canal distribution system. To facilitate the monitoring and control of the regulatory basins the District has included and intends to pursue further implementation of SCADA monitoring and control equipment at regulatory reservoirs. The inclusion of the SCADA equipment allows the District to remotely monitor inflow, basin levels and outflow. The SCADA system under the Lookout platform can provide alarms in the event of emergencies and provide automated controls to facilitate constant flow or levels within the District distribution system.

The District provides surface water to water users based on an on-demand system with a 24-hour notice before delivery and shutoff. In most cases the Watermaster is able to start surface water to a water user sooner than 24 hours. The District has also embarked on an aggressive program of installing regulation basins

³ A copy of the Tulare Irrigation District Water Management Plan can be obtained at: <https://www.usbr.gov/mp/watershare/wcp.html>.

and specific SCADA equipment which allows the Watermaster to make faster changes within the District canal network and deliver water to water users on a quicker timeframe. The SCADA system also allows the canal network to stay closer to a balanced state and deliver a consistent supply of water to the water user resulting in a uniform irrigation and less excess tailwater.

The District has continued to pursue and implement several modernization projects that installed SCADA monitoring and control systems on specific canal and ditch systems within the District. The first System Modernization Project was completed in 2009 and yielded water system and conservation benefits. The District followed up with another project in 2012, which is still under construction. Under the WMP the District determined that the continued evaluation of new sites for SCADA monitoring and control that provide a positive cost/benefit analysis should be pursued.

The District was awarded a grant from the USBR to pursue a System Optimization Review, which culminated in a System Optimization Review Study Report (SOR). The SOR outlined District operations and through a strategic planning process established the priorities for District improvements in the near term and long term. Identified during the strategic planning process were the key District priorities, of which the expansion of the SCADA and canal structure controls was listed in the top 10 realistic implementation projects⁴. Also included in the SOR was the recognition that with the replacement, improvements or additional projects sought in the District, the inclusion of SCADA monitoring and control facilities was integral.

Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.

Through the various planning efforts the District has continued to pursue the implementation of SCADA monitoring and control projects to provide flexibility in managing surface water within the District. Whether SCADA facilities are proposed independently or as a part of a larger project, such as a recharge facility, the equipment is seen as a critical component to the water management capabilities of the District. The pursuit of this equipment has provided water savings, reduction in canal breaches, better ability to meet grower demand and better knowledge of the system on a real-time basis. The pursuit of this SCADA System Modernization Project is the continuance and enhancement of the progress already made within the District.

E.1.2. Evaluation Criterion B—Project Benefits (35 points)

What are the benefits to the applicant’s water supply delivery system?

The District believes there are several key benefits to the implementation of the SCADA Modernization Project. The benefits include:

- Movement of the existing unstable and outdated platform to a new Ignition platform which is supported by modern processing system.
- The new Ignition Platform resides on the District mainframe server and allows for the system to be centrally located, including the data.
- The data system within the Ignition platform is designed to interface with all current data systems making for easy analysis and record keeping.
- The Ignition platform will allow the District to utilize remote hand-held units for field staff giving them a better understanding of District distribution system at all times.
- The Ignition platform delivers the data to District staff in a real-time fashion to increase the speed and flexibility in the management of water supplies within the District distribution system.

⁴ Tulare Irrigation District System Optimization Review Study Report, Appendix E, Page 10.

- Data analysis and reporting will provide analytics that can assist the District in making better water management decisions and improving the maintenance and operation of the District SCADA system.

The ability to collect high quality data, produce analysis reports and see the system in real-time will allow the District to operate the distribution system more efficiently. This efficiency will be realized in better management of surface water, reduced spills, better irrigation delivery flexibility and improved maintenance practices.

Extent to which the proposed project improves overall water supply reliability

The District believes that the migration of existing SCADA facilities from the Lookout platform to the Ignition platform will provide water supply reliability benefits associated with improvements in water management capabilities. The ability to analyze data from monitoring and control facilities will provide guidance on how water management decisions yield specific outcomes. Adjustments to water management decisions can be impacted to improve water efficiency and water supply reliability.

The ability of District ditchtenders to have visualization of flows, levels and control facility status in real time is another key tool to ensuring that water management decisions support a reliable water supply to growers. Ditchtenders will be able to see the status of the District distribution system to inform their decision making as they manage surface water supplies to meet grower demand. They can also utilize the data to convey better information to growers when either providing water for irrigation or stopping irrigation service to growers.

The expected scope of positive impact from the proposed project (e.g., local, sub-basin, basin)

The District anticipates that the implementation of the SCADA System Modernization Grant will provide information that can be shared on the local and regional level regarding surface water operations. This information can hopefully be utilized to make better water management decisions and to maximize the beneficial use of surface water within the area.

Extent to which the proposed project will increase collaboration and information sharing among water managers in the region.

The District currently coordinates water operations with the Kaweah and St. Johns Rivers Association, the Kaweah Delta Water Conservation District, the Friant Water Authority, the City of Tulare and the City of Visalia. Based upon need, the District can and will provide access to the District Ignition SCADA system for specific monitoring and/or control needs. The District will also utilize the data and reporting components of the system to provide information to our partners regarding District surface water operations.

Any anticipated positive impacts/benefits to local sectors and economies (e.g., agriculture, environment, recreation, tourism)

The implementation of the SCADA System Modernization grant will provide better water management of the large District distribution system utilized to deliver water to growers within the District. By increasing the speed and availability of data collected by the SCADA system, growers will receive better service at their irrigation turnouts in the form of quicker and more reliable service. The collection of data also allows the District to provide data and analysis to the public to establish an understanding of how the District operates and maintains surface water deliveries to growers.

The ability to visualize the system will also help the District convey to growers, landowners and the public how our system operates. The District will be able to utilize the large office screen and the hand-held tablets to share the status of the system when interfacing with the public. Having real-time data to show can convey the complexities and uncertainties faced when making water management decisions. The visualization can also be

used to enforce the benefits associated with the SCADA facilities and their ability to monitor and control the District distribution system remotely.

E.1.3. Evaluation Criterion C—Project Implementation (15 points)

Describe the implementation plan for 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.

Task 1 – Lookout SCADA Assessment (Week 1 to 2)

The District SCADA consultant (Innovative Controls) will assess the existing features and components included in the existing SCADA system housed at the District Office. This process will also include working with the District Staff (Watermaster, Engineering Technician, Engineer and Superintendent) to determine what additional features need to be added to the SCADA system when migrated to the Ignition platform.

Task 2 – Migration of SCADA System to Ignition Platform (Week 3 to 27)

Innovative Controls will begin programming the existing sites into the Ignition platform. This will also include frequent discussions with District staff to ensure the programming is accomplishing the required tasks and to ensure that the system will function as required. During this task the District Staff shall also establish the security clearances for those who will have access to the SCADA system. Some staff will be limited to viewing the system, while others will have full or limited controls to adjust facilities in the field.

Task 3 – Implementation of Ignition SCADA Platform (Week 28 to 32)

During this task Innovative Controls will bring the new Ignition SCADA platform with all of the District SCADA facilities to life on the District mainframe server. The District anticipates several weeks of debugging and ensuring the system is working as designed.

Task 4 – Field Tablet Implementation (Week 28-33)

During this task the District will secure 12 Microsoft Windows Tablets for utilization with the newly implemented Ignition SCADA platform. Each Tablet will be assigned to a specific District staff member and be programmed with the specific security clearance established in Task 2. The District will hold training sessions with District staff to train them on how to utilize and work with the Tablets and the Ignition SCADA platform.

Task 5 – Administration (Week 1-33)

The District Engineer will provide administration for the project, which will include record keeping, accounting of financial transactions and any reporting to the USBR. See Figure 3 for a detailed schedule of the tasks. Week 1 is assumed to be the first week after the execution of a grant contract with USBR.

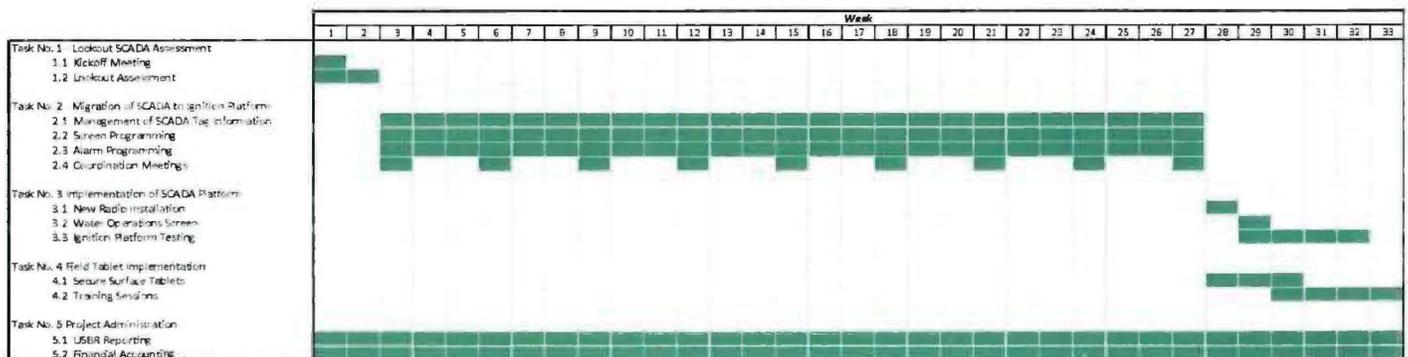


Figure 3. Project Schedule

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

The District does not anticipate any permit requirements as this project does not include any construction activities and/or any new SCADA facilities.

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

The District anticipates that Innovative Controls will need to design/program our existing SCADA facilities into the new Ignition platform; however we do not anticipate any engineering or design work required to facilitate any construction activities.

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

The District does not anticipate any new policies or administrative actions required to implement this project. The District will be implementing the utilization of tablets for water management activities. This is anticipated to require some limited training and instruction for District staff.

E.1.4. Evaluation Criterion D—Nexus to Reclamation (15 points)

Will the project help Reclamation meet trust responsibilities to any tribe(s)?

This project will not help Reclamation meet trust responsibilities to any tribes.

Does the applicant receive Reclamation project water?

The District receives surface water supplies from the Friant Division of the Central Valley Project. The District has a Friant Contract for Class I and Class II supplies, which are utilized to support the conjunctive operations of the District.

Is the project on Reclamation project lands or involving Reclamation facilities?

The SCADA Modernization Project is located on property owned or operated by the District. The project does not take place on any Reclamation lands or facilities; however, the Project is within the place of use for the CVP.

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

The SCADA System Modernization Project is located in the Tulare Lake Groundwater Basin in the Kaweah Subbasin. The Friant-Kern Canal traverses these basins to supply surface water to agricultural and municipal users.

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

The Friant Division of the CVP extends from Fresno County southerly to Kern County. Sections of the Friant-Kern Canal and its service area lie within Tulare County. The water that will be better managed by the SCADA Modernization Project will be located within the Tulare Irrigation District service area, which lies within with the Friant Division service area. Therefore the District believes that the water better managed by this Project will contribute to a basin where Reclamation project is located.

Environmental and Cultural Resources Compliance

The SCADA Modernization Grant includes the installation of software and implementation of digital tablets, which does not require any construction or physical modification of facilities. Therefore the District does not anticipate any impacts to the surrounding environment, cultural resources, protected or endangered species, District facilities, communities (including low income), buildings or wetlands. The District was formed in 1889,

which from a historical perspective means that some of the features in the District can be over a century old. Based on previous analyses the District has found that although many District facilities are old, they do not retain any historical significance. The District has also not encountered any archeological sites within the District.

Required Permits or Approvals

The District does not anticipate the need for any permits or approvals given the SCADA Modernization Project does not include any construction activities.

Official Resolution

Resolution No. 17-03 is attached to this grant application and was approved on February 20, 2017.

Project Budget

The District proposes the costs of the SCADA System Modernization Project that are not being requested under this grant application will be contributed from various District sources. The following District sources will be utilized:

- In-kind labor costs associated with specific employees who will be working on the Project. Further detail is provided in the Budget Proposal and Budget Narrative.
- The District proposes to include the recent costs associated with acquiring the Ignition platform as an in-kind contribution.
- Funds from District reserves to cover the cost-share associated with specific materials required to carry out the grant.

The District can provide a set of audited financial statements to the Bureau of Reclamation upon request to verify and detail the funds on hand to the District.

The District has not incurred any costs for the SCADA Modernization Project to date and anticipates that the Project will begin once funding is awarded and made available. The District has not sought any other federal, state or other funding for this Project at this time. In the event other funding becomes available, other than federal funding, the District will notify the Bureau of Reclamation immediately. Presented in **Table 2** is a summary of the funding requested and supplied as a part of the Project.

Table 2. Funding Sources for Enhancement Project

FUNDING SOURCES	AMOUNT
Non Federal Entities	
1. Tulare Irrigation District	\$75,762.40
Other Federal Entities	
1. N/A	\$0.00
REQUESTED RECLAMATION FUNDING	\$73,150.00

TULARE IRRIGATION DISTRICT

RESOLUTION NO. 17-03

WHEREAS, the Tulare Irrigation District (District) proposes to upgrade its existing Supervisory Control and Data Acquisition (SCADA) system, migration of existing SCADA sites to the new SCADA system, and the provision for hand-held field units to monitor the SCADA system, said improvements being named the SCADA System Modernization Project (Project); and

WHEREAS, the Board of Directors of the District support the Project and the operational efficiencies afforded thereby; and

WHEREAS, the District desires to apply for and secure funds that may be made available thereto from the U.S. Bureau of Reclamation (USBR) from its WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2017 (Grant Program) for said Project; and

WHEREAS, said Project will consist of migrating existing SCADA monitoring sites to the new SCADA system, updating the existing computer software for migrated sites to the new SCADA system, and the purchase and implementation of hand-held SCADA monitoring units, all of which can be installed and made operational within the time frame as may be determined by USBR; and

WHEREAS, the District pledges to cooperate with USBR in meeting deadlines established thereby for the purpose of entering into a Cooperative Agreement therewith.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Tulare Irrigation District that it (a) has reviewed and supports the proposed Project and (b) that the District has in its possession sufficient funds and can furnish in-kind contributions to fulfill its funding requirements as identified in the Project Funding Plan.

BE IT FURTHER RESOLVED that, if selected by USBR for a grant from the Grant Program, the President of the District is hereby authorized to execute a Cooperative Agreement therewith and the District shall cooperate with USBR to insure timely execution of said Agreement.

THE FOREGOING RESOLUTION WAS PASSED AND ADOPTED upon motion of Director Martin, seconded by Director Thomas, at a special meeting of the Board of Directors of the Tulare Irrigation District held on this 20th day of February, 2017 by the following vote:

Ayes: Directors Bixler, Borges, Martin and Thomas

Noes: None

Abstain: None

Absent: Director Rogers

ATTEST:



David G. Bixler, President

