

TABLE OF CONTENTS

TECHNICAL PROPOSAL	
Section 1 - Executive Summary	Page 3
Section 2 - Background Data	Page 3
Section 3 - Project Location/ Project Location Map	Page 5
Section 4 - Technical Project Description	Page 6
EVALUATION CRITERIA	
Criterion A - Project Benefits	Page 7
Criterion B - Planning Efforts Supporting the Project	Page 7
Criterion C - Project Implementation	Page 9
Criterion D - Nexus to Reclamation	Page 9
Criterion E - DOI Priorities	Page 10
PROJECT BUDGET	
Section 1 - Funding Plan	Page 10
Section 2 - Budget Proposal	Page 10
Section 3 - Budget Narrative	Page 11
Environmental and Cultural Resources Compliance	Page 12
Required Permits or Approvals	Page 13
Official Resolution	Page 13
SAM Unique Identifier (supporting docs Appendix A)	Page 14
Letters of Project Support	Page 15

TECHNICAL PROPOSAL

Section 1 - Executive Summary

July 30, 2018

Contact: Raymond Cooper, Chair of the Board of Directors
Address: 9418-C Midway, Durham, California 95938
Butte County
Phone: (530) 343-1594
Webpage: None

The Durham Irrigation District is applying for \$75,000 in federal funding assistance from the United States Bureau of Reclamation's (USBR) WaterSMART Small-Scale Water Efficiency Projects Fiscal Year 2018, Funding Opportunity Announcement No. BOR-DO-18-F009.

Should the District be awarded these funds, they will leverage existing capital to cover the costs of installing supervisory control and data acquisition (SCADA) controls and metering on three groundwater wells that provide all of the domestic supply for the District, as well as 42 Automatic Meter Read (AMR) service connection meters. Because there is virtually no pumping volume data for the Durham portion of the defined subbasin, SCADA system installation will allow for water use quantification, minimize operational costs, provide data driven estimates on system losses, and provide useful information for prioritizing future funding for Phase II infrastructure improvements.

The District has recently done a complete system analysis and identified operational infrastructure upgrades as the highest priority for efficient use of resources and long-term sustainability of the basin. The project will supply many data gaps for the West Butte and Vina subbasins, which continues to experience long-term declining groundwater elevations, and builds upon conservation goals outlined in district and countywide planning efforts.

The project is proposed to be completed no later than one year following the funding award, likely by December 2019.

This proposed project is not located on a Federal facility.

Section 2 - Background Data

The unincorporated town of Durham is a historic farming community located in Butte County, roughly 90 miles north of Sacramento. The Durham Irrigation District was established in 1948 to provide domestic water supply to the unincorporated community of Durham and the surrounding area included within the service area boundary. The District is an independent special district (not part of any county or city) that operates under the direction of a three-member Board of Directors. The District has an estimated population of 1,442. They currently serve 459 customers on 544 parcels, however, the District is currently in the midst of updating their existing Sphere of Influence.

Over the past two years, the District has been working with NorthStar, a multi-disciplinary engineering, architecture, surveying, planning, and environmental consulting firm, via contract on a Sphere of Influence

update, a water rate study, and a Capital Improvement Plan. During these efforts, it has become apparent that the District cannot maximize operational efficiencies until it completes a substantial amount of work to upgrade infrastructure.

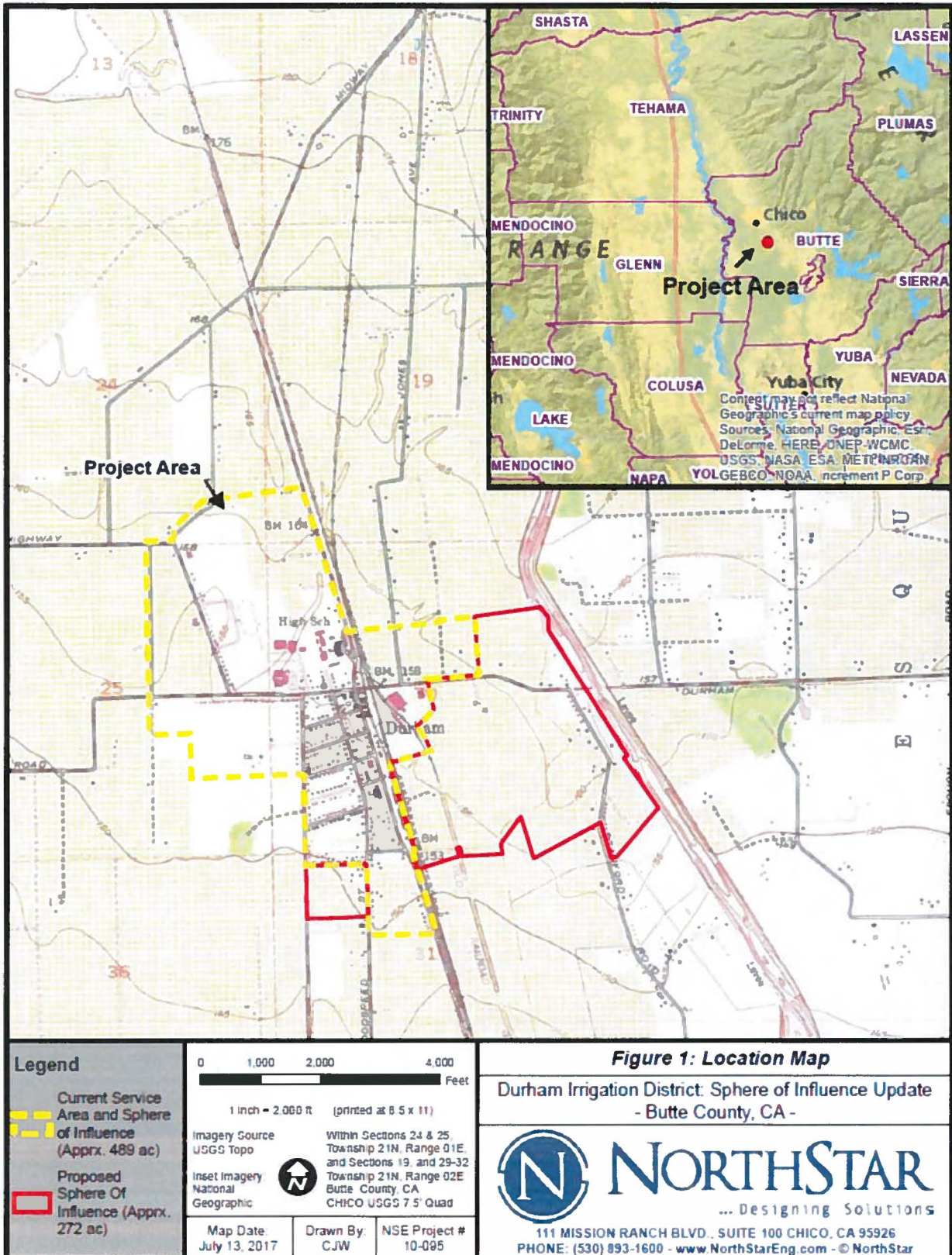
The District relies solely on groundwater for its supplies, which is pumped from its three wells directly into a conveyance system owned by the District. The District does not utilize any above-ground storage facilities. The maximum pumping capacity of the wells is estimated to be approximately 3.456 MGD (million gallons per day), however each well is not pumping continuously each day. In 2016, an estimated 157 MG (million gallons) was delivered, which equates to roughly 0.43 MGD delivered for the entire year. The District Operator has made and continues to make many improvements to the well pumps and in the timing of deliveries, thus avoiding pressure surges and line breaks. Portions of the District's domestic water infrastructure lack shut off valves and service in those areas must be interrupted to make repairs or new service connections thereto. In a typical water year, demand for water from the District peaks in the months of May through October during the height of the irrigation season. Although all of the service connections within the District are for domestic supply, many 1-5-acre ranchettes are being irrigated through these connections.

The conveyance infrastructure in the original central service area is approximately 50-75 years old, and of that, approximately 11,350 linear feet of pipeline and 256 service connections from the main to the meter require replacement. Due to budgetary constraints, the District operates with little overhead capital. The office does have a computer, fixtures and supplies related to a small office operation, but currently only has a bookkeeper on site two days a week. The District contracts with a Certified Drinking Water System Distribution Operator who provides his own vehicle and tools used on the job.

This District lies within the Durham sub-inventory unit, which has longstanding declining groundwater elevations. The 2017 Basin Management Objective Reportⁱ for the Durham/Dayton subinventory unit (located in portions of the West Butte and Vina subbasins) outlines the management goal of maintaining adequate and affordable irrigation supplies, while also assuring an adequate groundwater supply from the alluvial system for all domestic users. Although the three production wells utilized by the District did not see supply interruptions during the 2012-2015 drought period, groundwater levels in the sub inventory unit did decline enough that some individual homeowners experienced dropping pressures in their personal well, and many had to lower pumps or drill new deeper wells. Early 2017 brought significant increases to groundwater levels in the sub-unit (5-15 feet in monitoring wells), however, December 2017 was the third driest December in 30 years. Winter 2017 and Spring 2018 did not bring normal levels of seasonal rainfall which leads to concerns for adequacy of supply in the upcoming irrigation season. The County Water and Resource Conservation Department, tasked with overall County groundwater management, has long identified the problem of having no data available on pumping activity within this area. Obtaining accurate volumes of water used by the District will both quantify what is required to meet their customer demands, but also provide a baseline for County planning efforts to comply with the Sustainable Groundwater Management Act (SGMA). Although the District will still have close to 100 service connections without meters, installation of the 42 meters in the oldest portion of the District will help to more accurately identify water losses within the system. By being able to accurately quantify production and consumption, staff will be better able to identify sources of system losses and the District will be able to target further infrastructure upgrades.

Section 3 - Project Location/Project Location Map

The DID Phase I Water Efficiency Implementation Project is located in Butte County California, within and nearest to the town of Durham. The following map shows the location of Durham in Butte County, as well as the project area.



Section 4 - Technical Project Description

Because of the small size of the District, there has not historically been a need for management staff that would typically oversee daily operations and water efficiency planning. However, the current Board has decided to contract with NorthStar for part-time general management duties. NorthStar will focus initially on leveraging District funds to hire a new system Operator, make strategic upgrades to infrastructure that will maximize efficiencies of staff time and cash reserves as well as document more accurately water production and water consumption.

Durham Irrigation District is seeking Reclamation funds to leverage existing capital to improve overall efficiencies of the District. They seek to do this in two phases, primarily because they intend to install some metering equipment that will provide real-time data from which they will base their prioritizations of infrastructure modernization and improvements. Reclamation funds would be used for Phase I of their Water System Infrastructure Efficiency Project, during which the District will install SCADA controls and metering on their three groundwater production wells, (to include continuous aquifer monitoring), and install 42 Automatic Meter Read (AMR) at service connections which are currently not being metered.

The existing wells do not have any automated control equipment, therefore daily site visits by the operator are required to make sure the wells are operating correctly. The XiO Cloud SCADA® Control System is a completely automated solution that provides up-to-the-minute monitoring, complex control, and advanced alarming. By installing the XiO Cloud Based SCADA system at each well the Control System would notify the operator if there was a problem with the system. The operator will be able to remotely manage all three wells through the secure web-based user interface via cell phone or computer. Other benefits of the XiO system include recording of system data such as water quality measurements, flow measurements and aquifer monitoring. The XiO system has an unlimited historical data storage capacity allowing for easily accessible historical data. By installing a flow measuring system at each well, in conjunction with the conversion from flat rate services to metered services, the District can better understand its water use and the potential loss within the aging infrastructure.

State law requires all water providers to convert flat-rate water customers to metered services by 2025. The District currently has 141 flat rate water customers that need to be converted to a metered service to be in compliance with the State law. In addition, without meters it is difficult for the District to determine the actual water usage within the District and the potential water loss due to the aging infrastructure. If water saving measures are implemented within the District currently, there is no means to monitor overall usage to determine if the measures are effective. The reading of meters is a significant operational cost for the District that is then passed on to the consumer in their water rates. The conversion of the standard meters to an automatic meter reading system is a way to reduce the operational cost for the District, gain awareness of emergency water situations in real time, and a way to provide better customer service to their users.

Groundwater levels have declined over the past several years in specific areas, and long-term comparison of groundwater levels from the 1950s and 1960s with today's levels indicates a trend of declining groundwater levels in some areas of the West Butte and Vina subbasins, specifically in and around the Town of Durham. The West Butte Subbasin has been classified as a high priority through the 2018 SGMA Basin Prioritization process. SGMA requires water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their Groundwater Sustainability Plans (GSP). The District will be participating in the Butte County Water and Resource Conservation led GSP

planning process and will be better positioned to provide data on pumping impacts to groundwater elevations once each of the three production wells is outfitted to record flow measurements and aquifer monitoring.

EVALUATION CRITERIA

Criterion A - Project Benefits

If funded, Phase I of the project will modernize existing infrastructure and allow staff to identify and document irregular drops in water levels, increases in water use as well as more accurately compare water production to water consumption. Because of the large number of domestic connections within DID that are also providing landscape and hobby-farm irrigation to 1-5-acre ranchette style parcels, it would be extremely beneficial to quantify water use in this sub-inventory unit. In a basin solely dependent on groundwater, these improvements will help DID to not only have more control over system operations, but better document groundwater use and fluctuations, and ultimately enable the District to conserve and use water more efficiently.

DID is participating in the Butte County led Groundwater Sustainability Planning effort in order to comply with SGMA requirements. The 2016 Water Inventory & Analysis outlines the need to look for opportunities to verify and refine groundwater pumping estimates by obtaining pumping data from cooperative landowners. Following the installation of the automated equipment, the District will be well positioned to share information on operational activities in this high-priority designated basin as a means to help define sustainability and supply reliability.

Upon completion of the project, the District will realize the following improvement to the water system during Phase I of the Water System Infrastructure Efficiency Project:

- Staff will be able to readily identify and isolate sources of water loss to be addressed.
- Staff will no longer need to visually inspect the wells daily.
- The three wells can be operated more energy, time, and resource efficiently.
- 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's system.

The proposed project will have a positive impact on the core part of the District's system and will provide a planning and implementation template for future projects that can be implemented with an additional 100 of the District's service connections. The final costs and operational capacity of this project will allow DID to budget capital funding and staff resources more efficiently for implementation of SCADA and metering systems at the additional service connections.

Criterion B - Planning Efforts Supporting the Project

Because of the size of the District, the extent of planning efforts is what is outlined in the Municipal Services Review, the 2018 Capital Improvement Plan. However, the District has realized that participating in the development of Butte County planning documents as applicable has provided a cost-effective means to voice District and basin needs. Many of the County planning and resource management documents outline the need for obtaining scientific data through pumping and water use quantification in this area of the basin. The items included in the Phase I of the Water System Infrastructure Efficiency Project were prioritized by the District Board to complete first because there is currently no accurate data on system production, consumption or losses. Once these things can be quantified, additional infrastructure

improvements can be prioritized in Phase II of the project.

Butte County General Plan 2030, Water Resources Element

- **Goal W-2, Ensure an abundant and sustainable water supply to support all uses in Butte County.**
 - Policy W-P2.1 The County supports solutions to ensure the sustainability of community water supplies.
 - Policy W-P2.5 The expansion of public water systems to areas identified for future development on the General Plan land use map is encouraged.
- **Goal W-3, Effectively manage groundwater resources to ensure a long-term water supply for Butte County.**
 - Action W-A3.5 Continue to seek funding for and conduct scientific analysis of the costs and water supply impacts of increased groundwater pumping.
- **Goal W-4, Promote water conservation as an important part of a long-term and sustainable water supply.**
 - Policy W-P4.1 Agricultural and urban water use efficiency shall be promoted.
 - Policy W-P4.3 The County shall work with municipal and industrial water purveyors to implement water conservation policies and measures.
 - Action W-A4.2 Identify appropriate water use efficiency best management practices.

2016 Water Inventory & Analysis (WI&A)

- **7.1 Conclusions:** Groundwater level declines have been observed in some areas of the County over recent years and are likely driven mainly by drought conditions leading to reduced deep percolation (potential recharge) and increased groundwater pumping. Pumping estimates developed as part of the WI&A suggest that these groundwater level declines may be related more to reduced recharge, rather than increased pumping, though the frequent occurrence of dry and critically dry years in the past decade has resulted in increased pumping.
- **7.2 Recommendations and Next Steps:** Groundwater pumping for irrigation has generally been estimated based on estimates of crop irrigation requirements in areas known to rely on groundwater. DID will look for opportunities to verify and refine groundwater pumping estimates by obtaining pumping data from cooperative landowners.

2006 Water Resources Plan, Section 6 – Policy Recommendations

- **Increase Agricultural and Urban Water Use Efficiency**

The County recognizes that improved water use efficiency (WUE) can provide additional supply for future drought protection or other in-County beneficial uses. Many water providers already work to improve water use efficiency. The County will investigate implementation of improved agricultural and urban WUE measures including best management practices, efficient water management practices, or quantifiable objectives. The County will cooperate with the Butte County RCD, the NRCS, the UC Cooperative Extension, and CSU-Chico (University Farm) to implement this policy.
- **Identify areas where water use efficiency could improve and sponsor pilot projects to estimate the amount of potential water savings.**
- **Consult with urban and agricultural water suppliers to understand potential benefits and drawbacks of WUE measures.**

Criterion C - Project Implementation

Table 1: This table shows each of the major tasks associated with the DID Phase I Water System Infrastructure Efficiency Project.

Table 1

Project Scope Description	Expected Time of Completion
USBR contract agreement finalized	April 2019
Environmental Review	June 2019
Purchase of XiO SCADA equipment	August 2019
PFP for installation contractor	September 2019
Installation of AMR service meters	April 2020
Installation of wellhead meters	April 2020
Data Analysis upon project completion (to be used for Phase II)	October 2020

Major Milestones include:

- Completion of the XiO Cloud Based SCADA Controls and Metering
- Completion of Metering of Flat Rate Services
- Completion of data reduction and usage data for a six-month window

No permits will be required. No engineering or design work will be required, as all system assessments and pre-design work has been completed as a component of the CIP development. Environmental compliance estimate was developed by NorthStar environmental planning staff. Compliance costs have been discussed at a cursory level with the local Reclamation office.

Criterion D - Nexus to Reclamation

Is the proposed project connected to a Reclamation project or activity?

The project is not connected to a Reclamation project.

Does the applicant receive Reclamation project water?

The applicant does not receive Reclamation project water.

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

The project is not located on Reclamation lands, nor does it involve any Reclamation facilities.

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

The project is adjacent to, but not within, the Sacramento River Division of the Central Valley Project.

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

The project will not contribute water to a Reclamation basin at this time.

Will the project benefit any tribe(s)?

The project will not provide any direct benefit to tribe(s).

Criterion E - DOI Priorities

The existing wells do not have any automated control equipment, therefore daily site visits by the operator are required to make sure the wells are operating correctly. The XiO Cloud SCADA® Control System is a completely modernized solution that provides up-to-the-minute automated monitoring, complex control, and advanced alarming. Benefits of the XiO system include recording of system data such as water quality measurements, flow measurements, and aquifer monitoring. The XiO system has an unlimited historical data storage capacity allowing for easily accessible historical data. By installing a flow measuring system at each well, in conjunction with the conversion from flat rate services to metered services, the District can better understand how to best manage its water use, including decreasing water loss within the aging infrastructure and identifying water quality issues within the system.

PROJECT BUDGET

Section 1 - Funding Plan

DID will fund any costs for the above outlined Project above and beyond the amount funded by the federal government with revenue from water rates, and/or capital improvement reserves.

Table 2

FUNDING SOURCES		FUNDING AMOUNT
Non-Federal Entities		
Recipient Capital Improvement Reserves		\$81,640
Non-Federal Subtotal		\$81,640
Other Federal Entities		
None		\$0
Other Federal Subtotal		\$0
Requested Reclamation Funding		\$75,000
TOTAL Project Funding		\$156,640

Section 2 - Budget Proposal

Table 3

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity	TOTAL
	\$/Unit	Quantity	Type	COST
Salaries and Wages				\$0
Fringe Benefits				\$0
Travel				\$0
Equipment				\$0
Supplies/Material				\$0

XiO Cloud Based SCADA Controls & Metering	\$39,000	1	LS	\$39,000
Data Reduction/Usage Analysis	\$15,000	1	LS	\$15,000
Metering of Flat Rate Service	\$1,500	42	EA	\$63,000
Contractual/Construction				
Contracted NorthStar Engineering	\$12,200	1	LS	\$12,200
Contracted System Installation	\$19,140	1	LS	\$19,140
Environmental and Cultural Resources Compliance				
Reclamation Project review	\$500	1	LS	\$500
NorthStar EA report prep	\$7,800	1	LS	\$7,800
TOTAL DIRECT COSTS				\$156,640
Indirect Costs				
				\$0
TOTAL ESTIMATED PROJECT COSTS				\$156,640

Section 3 - Budget Narrative

Salaries and Wages

DID is not including salaries or wages in the budget proposal.

Fringe Benefits

DID is not including fringe benefits in the budget proposal.

Travel

DID is not requesting reimbursement for travel costs for this project.

Equipment

DID is not requesting any equipment costs.

Supplies and Material

DID intends to purchase XiO Cloud Based SCADA Controls and metering to assist with system automation, aquifer monitoring for three production wells and 42 AMR service meters.

Contractual/Construction

DID will contract with NorthStar for engineering and preparation of bid documents. A contractor will be hired for all SCADA and metering equipment installation.

Environmental and Regulatory Compliance Costs

DID does not anticipate requirements for any significant Environmental Assessment or reporting. However, the budget does include an estimate for NorthStar to provide a site walk and report, along with roughly 3% of the total project budget for Reclamation compliance review.

Environmental and Cultural Resources Compliance

Will the proposed project impact the surrounding environment? 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 minor impacts that could be created during construction of the Project will be mitigated with best management practices. There will be no earth disturbing activities associated with the Project.

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

It is not anticipated that any species would be negatively affected by any activities associated with the proposed Project.

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

There are no wetlands or other surface waters that potentially fall under CWA jurisdiction inside the project boundaries.

When was the water delivery system constructed?

The majority of the DID conveyance system was constructed in the 1940's and 1950's.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)?

The proposed project will not result in any modifications to any features of an irrigation system.

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

There are no buildings or features in the project area listed or eligible for listing on the National register of Historic Places.

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

There are no known archeological sites in the proposed project area.

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

The proposed project will not adversely effect, but provide a benefit to any low income or minority populations within the project area.

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

The proposed project will not limit access or use of any ceremonial Indian sacred sites or cause other impact on tribal lands.

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

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

Required Permits or Approvals

There are no required permits anticipated for this project.

Official Resolution

**RESOLUTION 2018-01
OF
THE BOARD OF DIRECTORS OF
DURHAM IRRIGATION DISTRICT
COMMITTING THE DISTRICT TO FINANCIAL AND LEGAL OBLIGATIONS ASSOCIATED WITH RECEIPT OF
FINANCIAL ASSISTANCE ASSOCIATED WITH AN AWARD UNDER THE FUNDING OPPORTUNITY
ANNOUNCEMENT NO.BOR-DO-18-F009.**

The Board of Directors of Durham Irrigation District does hereby resolve as follows:

WHEREAS, through WaterSMART, the United States Bureau of Reclamation (Reclamation) leverages Federal and non-Federal funding to work cooperatively with states, tribes, and local entities as they plan for and implement actions to increase water supply reliability through investments in existing infrastructure and attention to local water conflicts; and

WHEREAS, through Small-Scale Water Efficiency Projects, Reclamation provides assistance to states, tribes, irrigation districts, water districts, and other entities with water or power delivery authority to undertake specific small-scale water efficiency projects that have been prioritized through planning efforts led by the applicant; and,

WHEREAS, Small-Scale Water Efficiency Projects are a component of Reclamation's WaterSMART Grants Program, and through working together with their stakeholders, WaterSMART provides support for the Department of the Interior's (DOI) priorities, including the following:

- Creating a conservation stewardship legacy
- Utilizing our natural resources
- Restoring trust with local communities
- Striking a regulatory balance
- Modernizing our infrastructure

WHEREAS, Durham Irrigation District is beginning the process of comprehensive water conservation and efficiency planning efforts as a result of several years of declining groundwater elevations in the sub-inventory unit that supplies the District production wells, and

WHEREAS, several Butte County planning and resource management documents outline the need for obtaining scientific data through pumping and water use quantification in this area of the basin, and

WHEREAS, the Board does see an opportunity to fund installation of wellhead production meters and customer meters for the remainder of the unmetered service connections in order to improve water conservation and efficiencies in delivery while also supporting DOI priorities, and

WHEREAS, the Board having reviewed the project application and agreeing to provide funding and/or in-kind contributions specified in the funding plan does legally authorize its chairman to enter into a funding agreement with Reclamation; and,

NOW, THEREFORE, BE IT RESOLVED, by the Durham Irrigation District as follows:

1. The above recitals are true and correct and are adopted by the Board of Directors as findings;

2. The Board Chairman Raymond Cooper, is hereby authorized and directed to file the application for the WaterSMART Small-Scale Water Efficiency Projects for FY 2018 by the submittal date of July 31, 2018.

Resolution No. 2018-01

PASSED, APPROVED and ADOPTED by vote of the Board of Directors of Durham Irrigation District this 2nd day of July 2018.

AYES: COOPER, PHILLIPS, DOYLE

NOES: NONE

ABSTAIN: NONE

ABSENT: NONE



Raymond Cooper, Chair and President
Durham Irrigation District Board of Directors

Unique Entity Identifier and System for Award Management

NYWD has registered in the System for Award Management (SAM), but is still in Submitted status until all external validations are complete. Please see Appendix A for the email confirmation of registry submission required notarized letter submitted to activate SAM Entity Registration.

file:///S:/Projects/CIVIL/2010/10-095%20Durham%20Irrigation%20District/DID_USBR%20grant/DurhamBMO.pdf



Water and Resource Conservation

Paul Gosselin, Director

308 Nelson Avenue
Oroville, California 95965

T: 530.538.4343
F: 530.538.3807

buttecounty.net/waterresourceconservation
bcwater@buttecounty.net

July 26, 2018

David G. Murillo
Regional Director, Mid-Pacific Region
United States Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

Josh German
Program Manager, WaterSMART Grants
United States Bureau of Reclamation
PO Box 25007
Denver, CO 80225

RE: WaterSMART Small-Scale Water Efficiency Projects for FY 2018: Durham Irrigation District

Dear Mr. Murillo and Mr. German,

The Butte County Department of Water and Resource Conservation offers its support for the Durham Irrigation District's (DID) WaterSMART project. The Butte County Department of Water and Resource Conservation was formed on July 1, 1999 following many years implementing programs to protect Butte County water resources. The Department has been the lead agency in coordinated water management in the region, and for more than 25 years, the sustainability of groundwater elevations in the Durham sub-inventory unit have been a priority focus of the Department.

Beginning in the early 1990s, Butte County instituted a comprehensive program to monitor and analyze groundwater conditions. Key components include groundwater elevation measurements, land subsidence monitoring, groundwater recharge investigations and development of water budgets. The County has utilized and maintained an integrated groundwater model for planning and analysis (i.e., Butte Basin Groundwater Model). The Butte County Board of Supervisors recognized that the management and protection of water resources is contingent upon having adequate baseline scientific information and analytical tools to assess current conditions and various scenarios. Butte County produced a robust suite of water resource data that accounts for baseline demand, water resource availability, groundwater recharge and analysis of changed circumstances. Some of the recent efforts include the Lower Tuscan Aquifer Investigation (2013), Stable Isotope Recharge Investigation (2017), Water Inventory and Analysis (2016) and the update of the Butte Basin Groundwater Model (2016). In 2017, the County participated in a state coordinated effort to conduct a GPS based subsidence survey in the Sacramento Valley region.

With the advent of the Sustainable Groundwater Management Act (SGMA), we recognized that our current baseline and analytical tools were not sufficient. Monitoring and modeling in the basin

will be relied upon to inform policy decisions for the sustainable management of the basin. Therefore, improvements to estimates of water use to better inform the characterization of groundwater conditions and water budgets is more important than ever to support sustainable management of the basin and development of appropriate projects and actions. Evaluating data gaps and assumptions in our current monitoring network and modeling work is a crucial first step in Groundwater Sustainability Plan development.

DID provides domestic water supply and lies within the Durham Sub-Inventory Unit of what is currently the West Butte and East Butte Subbasins. This sub-inventory unit has experienced declining groundwater levels consistently over the last two decades. The concerns over the future of the water supply for domestic and agricultural uses has been well documented in multiple Butte County planning and resource management documents. Better defining water use with measured data for domestic water use will enhance groundwater modeling tools and characterization of water use impacts on groundwater conditions. This is critical for successful sustainable management of the basin.

We support DID's efforts to seek all appropriate funding opportunities to leverage existing capital for the purposes of implementing water use efficiency planning and conservation projects to better manage the groundwater resource it depends on. The Department is pleased to provide support for the efforts of DID to assist the County efforts to quantify production capabilities and usage in this high priority basin by promoting infrastructure improvements and modernizations. We highly recommend that the DID WaterSMART project be funded.

Sincerely,

A handwritten signature in blue ink, appearing to read "Paul Gosselin". The signature is fluid and cursive, with the first name "Paul" being more prominent than the last name "Gosselin".

Paul Gosselin, Director

APPENDIX A

SAM.gov Supporting Documentation

Kristen McKillop

From: notification@sam.gov
Sent: Thursday, July 26, 2018 10:41 AM
To: Kristen McKillop
Subject: CONFIRMATION: Registration Submitted for Durham Irrigation District Inc / 802359034 in the U.S. Government's System for Award Management (SAM)

This email was sent by an automated administrator. Please do not reply to this message.

Dear Kristen McKillop,

You successfully submitted the entity registration for Durham Irrigation District Inc / 802359034 in the U.S. Government's System for Award Management (SAM). This registration record will remain in Submitted status until all external validations are complete. What happens next?

1. If you provided a Taxpayer Identification Number (TIN), the Internal Revenue Service (IRS) will conduct a validation of your TIN and Taxpayer Name. This step can take two business days. You will get an email from @sam.gov when that review is complete.
2. Your registration will then be sent to the Defense Logistics Agency (DLA) Commercial and Government Entity (CAGE) Code system for assignment or validation of your CAGE Code. This step averages two business days, but the DLA CAGE team can take up to ten business days, or longer, in peak periods. You will get an email from @sam.gov when that review is complete.
3. If the DLA CAGE team has any questions, they will contact the individual you listed as the Government Business Point of Contact (POC) via email. The email will come from an @dla.mil address. Please tell your Government Business POC to respond right away to any requests from an @dla.mil email. If a timely response is not received, your registration will be returned to SAM and your registration status changed to Work in Progress. You will have to resubmit and provide the requested information to DLA CAGE to continue.
4. You will get an email from @sam.gov when your registration passes these external validations and becomes Active. While you are waiting, use the Check Status tab in the SAM main navigation bar to see where your registration is in the review process.
5. If you have not previously submitted a notarized letter formally designating the Entity Administrator for your entity, you must do so now. Use the instructions at: https://www.fsd.gov/answer.do?sysparm_kbid=d2e67885db0d5f00b3257d321f96194b&sysparm_search=kb0013183
6. Mail the original, signed notarized letter to the following address. Failure to do so within 30 days of activation may result in the registration no longer being active.

FEDERAL SERVICE DESK
ATTN: SAM.GOV REGISTRATION PROCESSING
460 INDUSTRIAL BLVD
LONDON KY 40741-7285

If you submitted a federal entity registration, you are not required to provide a notarized letter.

Remember, this process is entirely FREE to you. It is FREE to register and maintain your registration in SAM. It is FREE to

get help with your registration. Contact our supporting Federal Service Desk at www.fsd.gov, or by telephone at 866-606-8220 (toll free) or 334-206-7828 (internationally), for FREE help.

In addition, if you are located in the U.S. and its outlying areas, you can also get FREE support from your local Procurement Technical Assistance Center (PTAC), an official resource for government contracting assistance. Go to <http://www.aptac-us.org/> to find your closest PTAC.

Thank you,
The System for Award Management (SAM) Administrator
<https://www.sam.gov/portal/public/SAM>

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July 24, 2018

Federal Services Desk
ATTN: SAM.GOV Registration Processing
460 Industrial Boulevard
London, KY 40741-7285
UNITED STATES OF AMERICA

SUBJECT: Information Required to Activate SAM Entity Registration

Purpose of Letter

The purpose of this letter is to formally appoint an Entity Administrator for each named Entity and to attest to the accuracy of the information contained in the entity registration.

Designation of Entity Administrator

I, **Raymond Cooper, Chair of the Board of Directors**, the below signed individual, hereby confirm that the appointed Entity Administrator is an authorized officer, agent, or representative of the Entity. This letter authorizes the appointed Entity Administrator to manage the Entity's registration record, its associated users, and their roles to the Entity, in the System for Award Management (SAM).

Entity Covered by this Letter

DUNS® Number: 802359034
Legal Business Name: Durham Irrigation District Inc
Physical Address: 9418-C Midway, Durham, CA 95938

Entity Administrator Contact Information

Full Name: Kristen McKillop
Phone Number: 530-893-1600
Email Address: kmckillop@northstareng.com

**The Entity Administrator must have an individual user account in SAM associated with the email address listed.*

Account Administration Preference

Self-Administration Confirmation: For the purpose of registering with the United States Government through the online System for Award Management (SAM), I do not authorize any third party to act on behalf of the Entity listed above. I have checked the box to the left of this paragraph to indicate that the designated Entity Administrator is not a third-party agent.

Attestation

I, the below-signed, attest to the following:

- All information contained in this letter is complete and accurate.
- The designated Entity Administrator listed above has an individual SAM User Account created with the email address provided in this letter.
- The banking information provided for Electronic Funds Transfer on the Financial Information Page in the SAM.gov registration for the Entity above is correct and accurate.

Respectfully,



Raymond Cooper, Chair of the Board
rcooper@buttecounty.net
Durham Irrigation District, Inc.
PO Box 98
Durham, CA 95938

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Butte)
On July 25, 2018 before me, Jennifer G. Goff, Notary Public
Date Here Insert Name and Title of the Officer
personally appeared Raymond Cooper
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature Jennifer G. Goff
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

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Partner — Limited General

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Other: _____

Signer Is Representing: _____

Signer's Name: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

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State of California)
County of Butte)

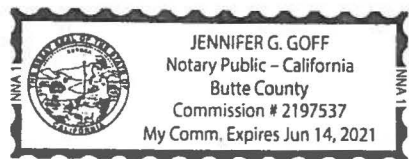
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 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

Signer's Name: _____
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

Kristen McKillop

From: Teresa Enos-Wakefield
Sent: Friday, July 27, 2018 12:18 PM
To: Kristen McKillop
Subject: FW: FedEx Shipment 772815368604 Delivered

Teresa Enos-Wakefield
Director of Business Operations

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Chico, CA 95926
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Sent: Thursday, July 26, 2018 8:32 AM
To: Teresa Enos-Wakefield <Tenoswakefield@northstareng.com>
Subject: FedEx Shipment 772815368604 Delivered

Your package has been delivered

Tracking # 772815368604

Ship date:
Wed, 7/25/2018

Kristen McKillop
NorthStar
CHICO, CA 95926
US



Delivery date:
Thu, 7/26/2018 11:23
am

SAM.GOV Registration
Processing
Federal Services Desk
460 INDUSTRIAL BLVD
LONDON, KY 40741
US



Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number: [772815368604](https://www.fedex.com/track/772815368604)

Status: Delivered: 07/26/2018 11:23
AM Signed for By:
B.MASTERS

Reference: 10-095

Signed for by: B.MASTERS

Delivery location: LONDON, KY

Delivered to: Receptionist/Front Desk

Service type: FedEx Priority Overnight®

Packaging type: FedEx® Envelope

Number of pieces: 1

Weight: 0.50 lb.

Special handling/Services: Deliver Weekday

Standard transit: 7/26/2018 by 12:00 pm

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All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

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Small-Scale Water Efficiency Projects for FY 2018
Funding Opportunity Announcement No. BOR-DO-18-F009



Durham Irrigation District
Water System Infrastructure Efficiency Project, Phase I

Applicant Information: Durham Irrigation District
9418-C Midway/PO Box 98
Durham, CA 95938

Project Manager: Kristen McKillop
Senior Planner, NorthStar
111 Mission Ranch Blvd, Suite 100
Chico, CA 95926
kmckillop@northstareng.com
(530) 893-1600