WaterSMART

WATER AND ENERGY EFFICIENCY GRANTS FOR FY 2019

FOA BOR-DO-20-F001
FUNDING GROUP II

UTE INDIAN TRIBE WATER SYSTEM
WATER METER REPLACEMENT PROJECT

IN ASSOCIATION WITH:
UTE INDIAN TRIBE
UINTAH AND OURAY RESERVATION

FORT DUCHESNE, UINTAH COUNTY, UTAH

ELI CHAPOOSE ▪ DIRECTOR
UTE INDIAN TRIBE WATER SYSTEM
7723 SMALL LOOP ROAD
FORT DUCHESNE, UT 84026
(435)722-5176

GREG L. BUXTON, P.E.
PROJECT MANAGER
JONES & DEMILLE ENGINEERING, INC.
45 SOUTH 200 WEST (45-13)
ROOSEVELT, UTAH 84066
435.760.5844
GREG.B@JONESANDDEMILLE.COM

OCTOBER 3, 2019

TABLE OF CONTENTS

1. TECHNICAL PROPOSAL

1.1. EXECUTIVE SUMMARY

Start Date: April 1, 2020

Applicant: Ute Indian Tribe

Partners: Ute Tribe Water System Department, Town of Ballard Utah, Ouray Water District, Johnson Water District

Location: Towns Fort Duchesne, Town of Whiterocks, and other locations served by the Ute Tribe Water System as located within Uintah County, State of Utah

See other locations as noted below in background data.

Project Title: Ute Indian Tribe Water System – Cellular LTE Endpoint Water Meter Replacement Project

Project Summary: Aging water mains, associated water main breaks, unauthorized consumer points, and advanced consumer billing technology are of considerable concern and interest to the Ute Tribe Water System Department (UTWSD). Tracking the mentioned water losses expeditiously is a critical aspect of conserving water. Utilizing the latest in cellular LTE end point water metering technology is a huge asset to manage water losses in a variety of ways. The UTWSD realize the value in conserving water, therefore the UTWSD propose to replace all metered locations within their system. Each replaced meter will further be combined with Orion Cellular LTE endpoints. The cellular endpoints allow the UTWSD to receive real time data to identify unusual demands on the system consistent with water main breaks, service line breaks or continually running fixtures, and unauthorized consumer locations. Early detection of water main losses alert maintenance crews of necessary repairs and also identify points of unauthorized use. Further, this awareness will allow the UTWSD to alert consumers of potential private service line leaks, leaky toilets, or other fixtures left running.

Length of Time: 14 months

Completion Date: June 1, 2021

Federal Facility Location: Uintah & Ouray Indian Reservation

1.2. BACKGROUND DATA

As applicable, describe the source of water supply, the water rights involved, current water uses (e.g., agricultural, municipal, domestic, or industrial), thenumber of water users served, and the current and projected water demand. Also, identify potential shortfalls in water supply. If water is

primarily used for irrigation, describe major crops and total acres served. In addition, describe the applicant's water delivery system as appropriate. For agricultural systems, please include the miles of canals, miles of laterals, and existing irrigation improvements (e.g., type, miles, and acres). For municipal systems, please include the number of connections and/or number of water users served and any other relevant information describing the system. If the application includes hydropower or energy efficiency elements, describe existing energy sources and current energy uses. Identify any past working relationships with Reclamation. This should include the date(s), description of prior relationships with Reclamation, and a description of the projects.

The Ute Indian Tribe water system (UTWS) provides culinary water to the Ute Indian Tribe members and non-tribal member residents in northwestern Uintah County. The service area includes the communities of Whiterocks, Gusher, Fort Duchesne, Randlett, Ballard, Independence and Ouray. These areas are all primarily served by the Ute Tribe Water System. The Ute Tribe further provides culinary water via interconnection agreements with the Ballard Water & Sewer Improvement District, the Johnson Water Improvement District, and the Ouray Park Water Improvement District. Long distances between metered connections are typical, indicating long stretches of aging main lines are vulnerable to breaks. Common subzero winter temperature conditions furthermore have impacts on main lines and service lines susceptible to breaks.

The Ute Tribe Water System consists of approximately 456,076 ft. (86.38 miles) of Transmission and distribution mains.

The Whiterocks and Uriah Heap Springs provide culinary water to the Ute Tribe Water System and other previously noted water districts. Available data, taken from the (Whiterocks Spring and Uriah Heap Springs Evaluation – Dated April 2010)[1] - indicates the Whiterocks Spring infiltration gallery collects an average of approximately 400 gallons per minute (gpm) of which less than 100 gpm is generally taken into the treatment plant; the remainder is discharged in the Spring Ditch.

Additional data indicates the Uriah Heap Spring system collects about 1000 gpm to more than 5000 gpm (median discharge of about 1,900 gpm) of which 700 gpm is generally taken into the treatment plant; the remainder discharges to the Deep Creek Canal.[1]

The ultimate source and recharge of the Whiterocks and Uriah Heap springs is primarily infiltration from shallow groundwater sources. The groundwater is usually fresh because of recharge from fluctuating levels within rivers and streams, i.e. seasonal conditions. Recharge infiltration is a direct function of corresponding seasonal conditions further consistent with annual precipitation. Available flow data from the springs, Whiterocks River, and irrigation canals suggests a correlation between spring flows and surface waters. The data indicates the peak spring flow period coincide with the

introduction of water into the adjacent irrigation canal with a small lag period. Uriah Heap Spring discharge records loosely correlate with heavy irrigation seasons, although the correlation is not as direct as it is with Whiterocks Spring. It appears from the data the ultimate source of the water discharged is surface water bodies. Although travel times from protentional surface water bodies are unknown, the potential for contamination of the springs will likely increase as the area develops.[1]

The Ute Tribe Water System (UTWS) alone currently has approximately 1000 residential connections and 21 business connections. Remainder discharges from the Uriah Heap and Whiterocks Springs suggest these sources are currently adequate and demands are currently sustainable. As the system expands, the remainder discharges could possibly be a source for additional collection.

Staff at The Utah Division of Water Rights, Vernal Utah office, was recently inquired upon to verify water rights for the Uriah Heap and Whiterocks Springs. Information releases by staff at the Vernal office indicated the Ute Tribe has a water right of 3 cfs from the Uriah Heap Spring and 3 cfs from the Whiterocks Spring. Water Rights for the springs are further noted as record numbers 43-3070 and 43-3043. It should be noted these water rights are in excess of the current demand being placed on the Ute Tribe Water System.

The Ute Tribe's water rights have certainly had some background history of Reclamation Projects. The following information was taken from the "Chapter 5 – Assessment of Current Tribal Water Use and Projected Future Water Development, Dated December 2018.[2]

Between the early 1900s and the 1950s, several non-tribal water projects were planned and constructed by Reclamation and other water users to utilize the water resources of the Uinta Basin. In 1906 the Strawberry Valley Project, including Strawberry Reservoir at the west end of the Reservation, was developed to divert water out of the Uinta Basin west to the Wasatch Front for irrigation along the Spanish Fork River. Planning for the Moon Lake Project began by 1918, with the purpose of relieving severe water shortages on private lands along the Lake Fork River by diverting surplus water from the Duchesne River to Indian lands, designated to receive Lake Fork River reserved water rights. This made it possible for the Moon Lake Project's State water users to divert a like quantity of Indian reserved water in the Lake Fork River by exchange with the Moon Lake Project water users. The Moon Lake Project facilities include the Moon Lake storage reservoir on the Lake Fork River, the trans-basin Yellowstone Feeder Canal that diverts water from the Yellowstone River east to the Uinta River Basin, and the Midview Reservoir to store water from the Duchesne River for use in the lower Lake Fork Basin on the Indian reserved water rights lands. The Provo River Project was constructed in 1938 to divert water from the North Fork of the Duchesne River and convey it west through the Duchesne Tunnel to the Provo River on the Wasatch Front for irrigation and municipal uses. A much larger project aimed at transferring water out of the Colorado River Basin, including the Uinta Basin, to the Bonneville Basin and Wasatch Front was developed by Reclamation

and the State of Utah, known as the Central Utah Project (CUP). In 1956, the Colorado River Storage Project Act (70 Stat. 105) was passed by Congress and authorized the Bonneville, Upalco, Vernal, and Jensen Units (Initial Phase) of the CUP, see Figure 1.2.1 In 1968, Congress passed the Colorado River Basin Project Act, authorizing the Uintah Unit as a part of the Initial Phase of the CUP, and directing that a feasibility study be conducted for the Ute Indian Unit. These units were to have provided storage benefits to the Ute Indian Tribe and the UIIP. The Vernal and Jensen Units provide supplemental water outside the Reservation and were completed in 1962 and 1980, respectively. The Bonneville Unit was the largest and most extensive of the CUP units, diverting flows from Rock Creek and eight other Duchesne River tributaries within the A drop structure on the UIIP Dry Gulch Canal, circa 1930. Starvation Reservoir on the lower Strawberry River serves as a supplemental reservoir to preserve the water supply for irrigation water users on the Duchesne River, including the Ute Indian Tribe. Construction on the Bonneville Unit started in 1968 and is nearing completion with some of the final features now under construction. The Upalco Unit was intended to provide storage on the Lake Fork and Yellowstone Rivers for both tribal and other water users, and the Uintah Unit was intended to do the same on the Uinta and Whiterocks Rivers. The Ute Indian Unit was supposed to bring water from the Green River west to the Reservation to make up for the water the CUP diverted to the Wasatch Front. <u>However, due to the CUP's complex history, including escalating costs, new environmental requirements, and Congressional intervention to contain the costs of the CUP, the projects that would have benefited the Ute Indian Tribe were never constructed and benefits to the Tribe never materialized.</u>

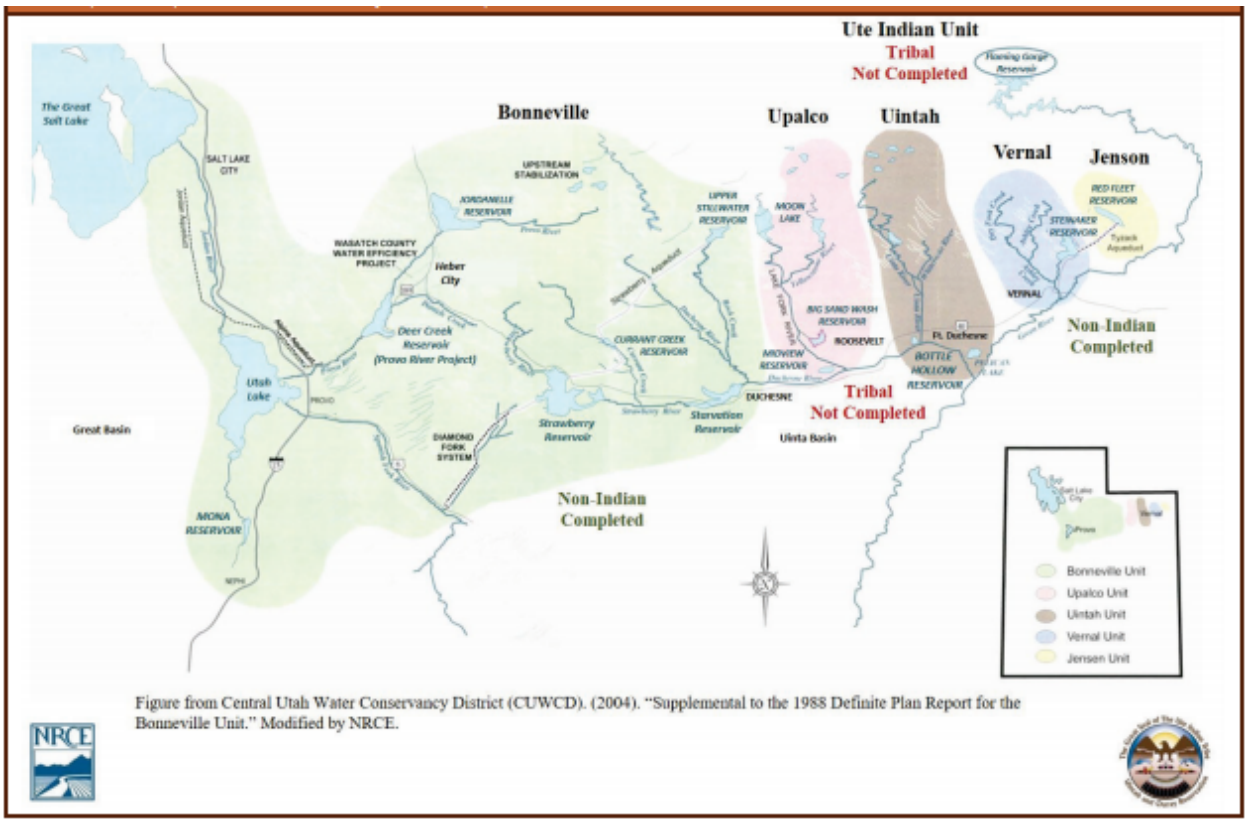


Figure from Central Utah Water Conservancy District (CUWCD). (2004). "Supplemental to the 1988 Definite Plan Report for the Bonneville Unit." Modified by NRCE.

Figure 1.2.1 (Whiterocks Spring and Uriah Heap Springs Evaluation – Dated April 2010)[1]

The planned CUP presented significant concerns related to the Ute Indian Tribe's Indian water rights claims as to whether sufficient water supplies existed to satisfy both the federal trust responsibility to the Tribe and the CUP's demands. The Ute Indian Tribe hired engineering consultant E.L. Decker to represent its interests in resolving the Tribe's water rights claims. In 1960, Decker produced a report quantifying the Ute Indian Tribe's historically irrigated and practicably irrigable acres (PIA) on the Reservation (with some subsequent revisions/corrections). The Decker Report, including the reserved water rights recognized in the 1923 federal decrees and water rights claims in the Green and White River Basins, established the Ute Indian Tribe's practicably irrigable lands totaling 129,331 acres, providing the basis for the Tribe's reserved water rights. Colorado River Basin Ten Tribes Partnership Tribal Water Study 5.1-10 Ute Indian Tribe of the Uintah and Ouray Reservation December 2018. *The Decker Report divided the irrigable lands into seven groups, with Group 1 lands comprised of the Ute Indian Tribe's decreed reserved water rights in the Lake Fork and Uinta River basins. In a data collection effort for the CUP, the Duchesne River Area Study Committee (Committee) published a 1962 report that concluded, among other items, "…that successful operation of the Bonneville and Duchesne segments of the CUP's initial phase will depend upon an agreement by the Indians to limit the irrigation of Indian owned and Indian water right land of about 20,700 acres." The Bonneville Unit could not have been constructed without the participation and support from the Ute Indian Tribe. E.L. Decker was a member of the Committee and recommended that the Ute Indian Tribe enter into an agreement with the federal government, represented by the BIA and Reclamation, and the Central Utah Water Conservancy District (CUWCD) to defer the development of 15,242 acres of Tribal irrigable land (a portion of the Group 5 lands in Decker's report). The formal agreement is commonly*

known as the 1965 Deferral Agreement. As a measure of good will and with certain conditions that would benefit the Ute Indian Tribe, the Tribe signed the 1965 Deferral Agreement. Under the 1965 Deferral Agreement, the Ute Indian Tribe agreed to defer its use of Tribal reserved water rights on 15,242 acres of land so that the federal government could certify to the United States Congress that it had an uncontested Indian reserved water right to support the request for funding of the Bonneville Unit of the CUP. In exchange, the United States promised future development of the Ute Indian Tribe's Indian reserved water rights under the CUP. The Ute Indian Tribe agreed to the Deferral Agreement with the understanding that all phases of the CUP would be diligently pursued in good faith to include satisfaction of the water development requirements of Groups 1-5 lands with Indian reserved water rights at the earliest possible date. In addition, the parties to the 1965 Deferral Agreement, subsequently approved by the State of Utah legislature, acknowledged, recognized, and confirmed the Ute Indian Tribe's Indian reserved water rights as described in the Decker Report, that is, for 129,331 acres.

Tribal Water Compact Efforts (1965 to Present) *The period after the Deferral Agreement can be characterized as featuring continued extensive development of non-tribal, State-based water uses through the CUP, while little progress was made on projects benefiting the Ute Indian Tribe. Definite plan reports and environmental impact statements were not issued for the Upalco and Uintah Units until 1979, and the projects continued to languish amid repeated financial analyses by Reclamation challenging their viability and poor dam site findings. Exploratory efforts continued on the Tribal CUP elements in the 1980s, but, ultimately, Reclamation determined that the Upalco Unit was unfeasible, and it was reformulated. The Ute Indian Unit was de-authorized in 1992. The State of Utah, the Ute Indian Tribe, and the United States entered into discussions in the late 1970s to complete the settlement of the Tribe's water rights claims through a Ute Indian Water Compact. Although a Ute Indian Water Compact was approved by the State Legislature in 1980 and by the Tribal membership in 1988, it never obtained the required Congressional approval and ratification. In 1992, the Reclamation Projects Authorization and Adjustment Act (P.L. 102-575) was passed, which included the Central Utah Project Completion Act (CUPCA), of which Title V, the Ute Indian Rights Settlement, was included. Congress revised the proposed 1980 Ute Indian Water Compact and created the "Revised Ute Indian Compact of 1990" for the purpose of, notably, transferring 113,378 AF of annual diversion of reserved water rights, most of the designated practicably irrigable lands, out of the Uinta Basin to the Green River. Also, notably, with this change, Congress required re-ratification of the Ute Indian Water Compact by both the Ute Indian Tribe and the State of Utah. To date, a final agreement of the Ute Indian Tribe's Indian reserved water rights and completion of comprehensive water rights settlement through a Ute Indian Water Compact has not occurred, and the parties have had continued negotiations on the terms of such a Compact. Today, the State of Utah has, by its own policy, fully appropriated its water rights in the Uinta Basin. The Ute Indian Tribe continues to put its available, federally-decreed natural flow water rights to use alongside the developed water infrastructure of State-based water users. The BIA regulates, enforces, manages, and supervises the distribution of the Tribal Indian reserved water rights under the UIIP. Non-UIIP irrigators have developed numerous off-stream storage facilities to impound seasonal flows, small-scale irrigation improvement projects have increased water carriage and application efficiency, and complex water exchange agreements have been put in place to allow users to share water throughout the Uinta Basin. Groundwater usage has become increasingly common, and industrial activities, such as oil and gas extraction, have increased regional water usage. The CUWCD and other local agencies still plan to utilize State water rights originating from the CUP to develop local water projects. Through all of*

this, the Ute Indian Tribe strives to assert its Indian reserved water rights and play a larger role in the administration of the resources of its homeland to ensure a better future for its members.[2]

1.3. PROJECT DESCRIPTION

1.3.1. PROJECT LOCATION:

Provide detailed information on the proposed project location or project area including a map showing the specific geographic location. For example, {project name} is located in {state and county} approximately {distance} miles {direction, e.g. northeast} of {nearest town}. The project latitude is 40°17'N} and longitude is {109°51'W} The Ute Tribe Water System (UTWS) provides culinary water to Ute Indian Tribe members and non-tribe members. The UTWS is located on the Uintah and Ouray Reservation (Reservation) in northeastern Utah, approximately 150 miles east of Salt Lake City, Utah. More specifically 7 miles east of Roosevelt, Utah. The Reservation lies within the drainage of the Upper Colorado River Basin. The reservation is located within a three-county area known as the "Uintah Basin". It is the second largest Indian Reservation in the United States and covers over 4.5 million acres. (See figure 1.3.1). Obviously the UTWS does not convey culinary water to the entire reservation.

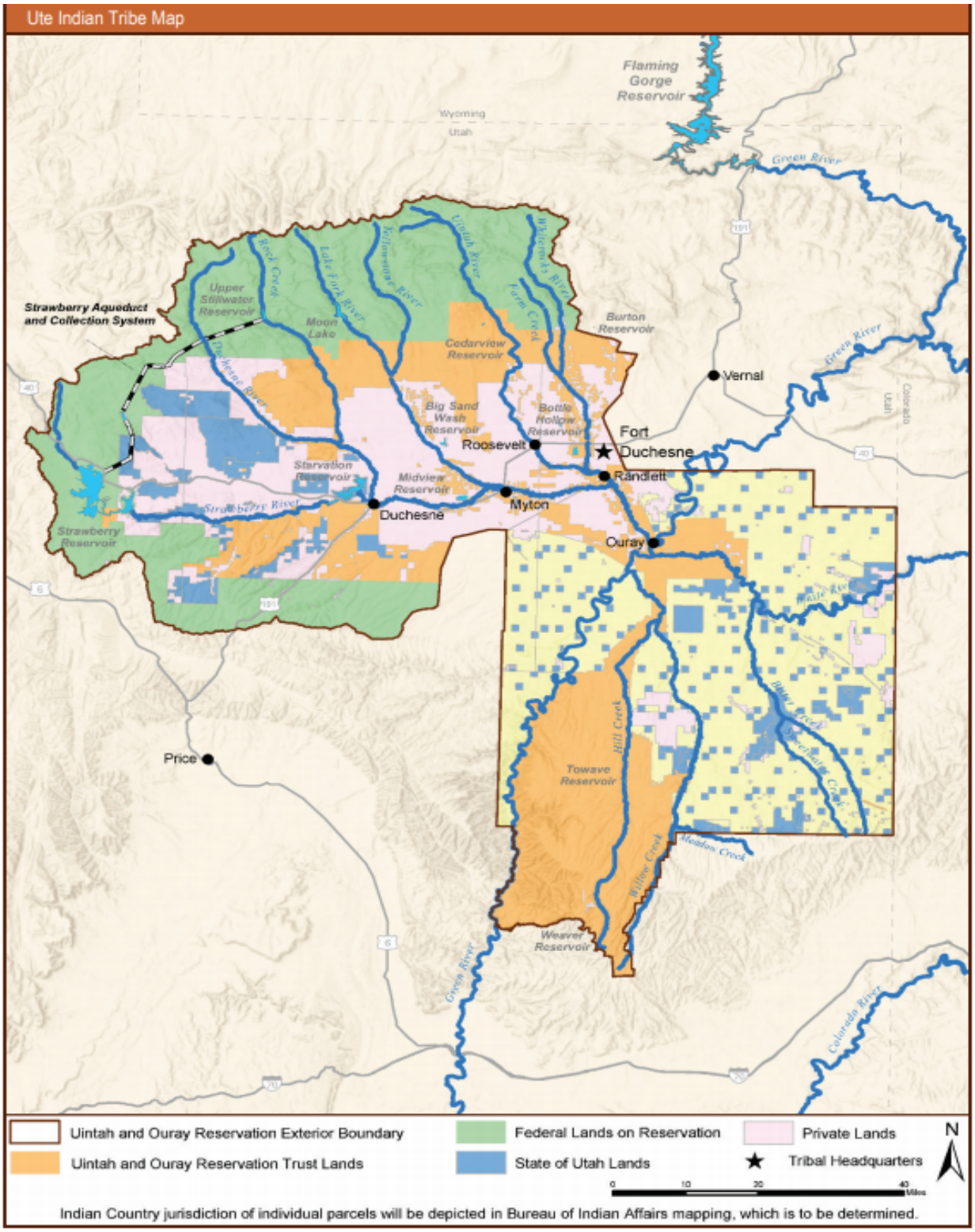
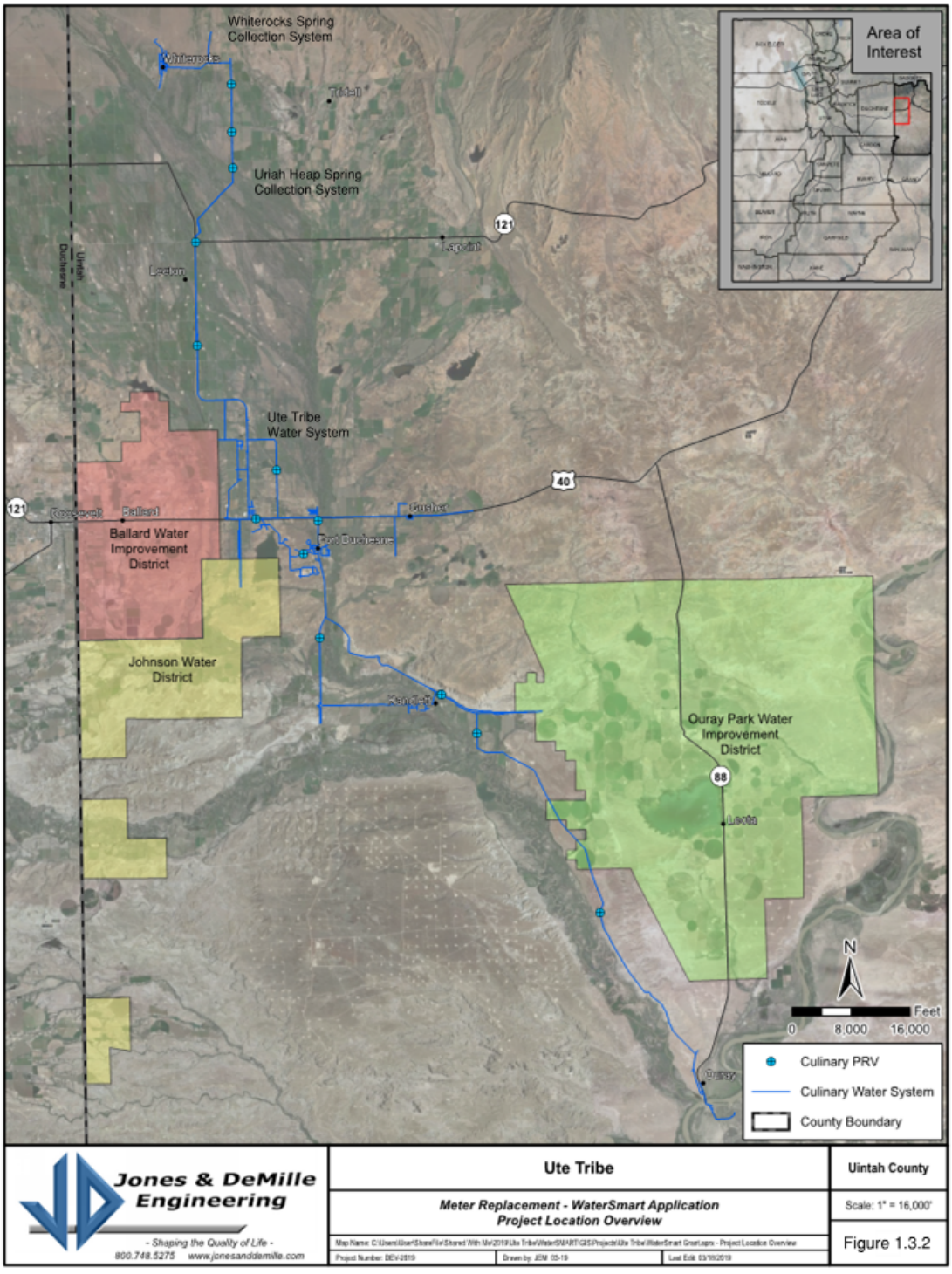

Ute Indian Tribe Map
Flaming Gorge Reservoir
Wyoming
Utah
Green River
Strawberry Aqueduct and Collection System
Upper Stillwater Reservoir
Moon Lake
Cedarview Reservoir
Burton Reservoir
Vernal
Big Sand Wash Reservoir
Bottle Hollow Reservoir
Fort Duchesne
Roosevelt
Randlett
Starvation Reservoir
Midview Reservoir
Myton
Duchesne
Strawberry River
Strawberry Reservoir
Ouray
Price
Towave Reservoir
Hill Creek
Willow Creek
Meadow Creek
Weaver Reservoir
Colorado River
Uintah and Ouray Reservation Exterior Boundary
Uintah and Ouray Reservation Trust Lands
Federal Lands on Reservation
State of Utah Lands
Private Lands
Tribal Headquarters
N
Indian Country jurisdiction of individual parcels will be depicted in Bureau of Indian Affairs mapping, which is to be determined.

Figure 1.3.1

More specifically, the UTWS service area includes the communities of Whiterocks, Gusher, Fort Duchesne, Randlett, and Ouray. The Ute Tribe further provides culinary water via interconnection agreements with the Ballard Water & Sewer Improvement District, the Johnson Water Improvement District, and the Ouray Park Water Improvement District. Further, the service area is located within Uintah County. See figure 1.3.2 for detailed information mapping of the Ute Tribe Water System.



The Ute Tribe Water Meter Replacement Project is located throughout the Ute Tribe Culinary Water System. Latitude and Longitude to the Town of Fort Duchesne is {40°17'N} and {109°51'W} respectfully.

1.3.2 TECHNICAL PROJECT DESCRIPTION

The technical project description should describe the work in detail, including specific activities that will be accomplished. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal. Please note, if the work for which you are requesting funding is a phase of a larger project, please only describe the work that is reflected in the budget and exclude description of other activities or components of the overall project.

Aging water mains and associated water main breaks and leaky consumer service lines are of considerable concern to the Ute Tribe Water System Department (UTWSD). Tracking system losses such as water main breaks, unauthorized use and leaky consumer points expeditiously is a critical aspect of conserving water. Utilizing the latest in water metering technology is a huge asset to identify system losses promptly. The UTWSD realize the value in conserving water, therefore the UTWSD propose to replace all metered locations within their system. Each replaced meter will further be combined with Orion Cellular LTE endpoints. The cellular endpoints allow the UTWSD, and consumers, to receive real time data, through BEACON AMA Software Suite and EyeOnWater Consumer Engagement Portal/Smartphone app, to identify unusual demands on the system. Unusual demands consistent with water main breaks and/or leaky consumer service lines are flagged after real time data is received via the software suite and smartphone apps. Early detection of system losses allow the UTWSD to alert consumers of potential private service line leaks, leaky toilets, or other fixtures left running.

Replacement of 1" and 2" residential and business water meters, which have cellular LTE endpoints require meter housing boxes with polymer lids. The tribes existing meter housing lids are cast-iron, which inhibit the transmission of cellular data. The proposed polymer lids would be designed to fit a standardized meter housing box. Retrofitting existing meter boxes would require modifications inconsistent from meter location to meter location. Therefore, retrofitting is impractical on a large scale for contractors to foresee complicated scenarios at each location. Standardizing meter boxes and meter sizes will further provide consistency for maintenance purposes; thus, allowing stocking of standard parts and predictability of site-specific replacement parts when needed. Promptly responding to leak points with known standardized parts and equipment is also a method of precipitously repairing unwanted leaks points.

It is in the UTWSD best interest to eliminate potential leak points whenever anticipated. It is a known fact, water conveyance from the Uriah Heap and Whiterocks springs is inherent to severe calcium and magnesium hardness characteristics. Copper pipe is highly susceptible to degradation from hard water. Therefore, it is in the best interest of the UTWSD to eliminate existing copper pipe whenever practical. It is anticipated 5 ft. of existing copper pipe will be replaced on each side of the

newly replaced 1-inch and 2-inch meters. Additionally, it is anticipated all aged brass compression fittings within the meter assembly will also be replaced.

It is anticipated vaults housing 4-inch to 16-inch meters will be field modified to accept a new polymer lid design. There are only 4 locations, in which modified vaults are anticipated. In the event the modifications exceed the anticipated unit prices, existing vaults will be replaced to accept the necessary polymer lids.

Cellular LTE endpoints will also be installed with the replacement of all 4-inch to 16-inch water main meters. These meters are located at interconnection locations with other water districts and entrance locations to treatment facilities. Cellular LTE endpoints will also allow the Interfacing of 4-inch to 16-inch meters with access to cloud-based BEACON AMA Software Suite and EyeOnWater smartphones apps. Interfacing with easy to use software will allow the UTWSD to monitor, in real time, demands at any meter within the system at any time.

1.4. EVALUATION CRITERIA

1.4.1 EVALUATION CRITERION A: QUANTIFIABLE WATER SAVINGS

*Up to **30 points** may be awarded for this criterion. This criterion prioritizes projects that will conserve water and improve water use efficiency by modernizing existing infrastructure. Points will be allocated based on the quantifiable water savings expected as a result of the project. Points will be allocated to give greater consideration to projects that are expected to result in more significant water savings.*

The purpose of the Ute Tribe Water System Meter Replacement Project is the first step towards the Ute Tribe Water System Department (UTWSD) goal to implement a Water Loss Control Program. A water loss control program can help water systems meet these challenges. Although it requires and investment in time and financial resources, management of water loss can be cost-effective if properly implemented.

The Ute Tribe water system infrastructure has been in service for decades and can be a significant source of water loss through leaks and breaks. In addition to leaks, water can be "lost" through unauthorized consumption, (theft), administrative errors, data handling errors and metering inaccuracies or failure.

The International Water Association (IWA) and the American Water Works Association (AWWA) have developed standard terminology and methods to assist water systems in tracking water losses and in performing water audits. The standard terminology includes the terms authorized consumption, real loss, apparent loss and non-revenue water that are used in this document.

It is anticipated the meter replacement project will assist the UTWSD in identifying and/or correcting the following 3 types of losses:

1.) *Real Losses, also referred to as physical losses, are actual losses of water from the system and consist of leakage from transmission and distribution mains, leakage and overflows from the water system's storage tanks and leakage from service connections up to and including the meter.*
2.) *Apparent Losses, also referred to as commercial losses, occur when water that should be included as revenue generating water appears as a loss due to unauthorized actions or calculation error. Apparent losses consist of unauthorized consumption, customer metering inaccuracies, and systematic data handling errors in the meter reading and billing processes.*
3.) *Non-Revenue Water (NRW) is water that is not billed and no payment is received. It can be either authorized or result from apparent and real losses. Unbilled Authorized Consumption is a component of NRW and consists of unbilled metered consumption and unbilled un-metered consumption.*

3 Types of losses obtained from – EPA Audits and Water Loss Control For Public Water Systems[3]

Currently the UTWSD does not implement a water loss control program. The meter replacement project will provide the tools necessary for the UTWSD to address all 3 types of losses noted. Above.

<u>Real Loss Considerations</u> -

The UTWSD reported that in the past year 15 water main breaks where experienced and repaired within distribution and transmission mains. Distribution and transmission mains are typically larger and capable of delivering a demand in excess of 2500 gpm. Wintertime and late night/early morning hours are typical for most water main breaks due to colder freezing temperatures. Response times during these periods are frequently extensive due to lack of awareness and lack of reporting. In a 10 hour period, it is estimated a typical water main break can have real losses in excess of 5 acre ft. ***15 water main breaks in the UTWS annually can easily result in real losses in excess of 75 acre-ft./year***

<u>Apparent Losses Considerations</u> - Unauthorized consumption, customer metering inaccuracies, and systematic data handling errors in the meter reading and billing processes are all of great concern to the UTWSD.

Available data, taken from the (Epic Engineering Whiterocks Spring and Uriah Heap Springs Evaluation – Dated April 2010)[1] - In 2010, per the Epic Engineering Evaluation, the system demand was approximately 162 acre-ft/year on the Whiterocks Spring and approximately 1,129 acre-ft/year on the Uriah Heap Spring. Combined the Whiterocks and Uriah Heap Springs provide a total demand of 1,291 acre-ft/year to the UTWS. The Epic Engineering Evaluation further indicated in 2010 there was 930 service connections on the Ute Tribe Water System. At the time of this application, the UTWSD reports approximately 1020 Service connections or a 9.7% connection increase. Assuming the connection increase is proportional with the UTWS demand, a projected demand for 2020 indicates a total UTWS demand of approximately 1,416 acre-ft/year.

For preparation of this application, inquiries to the Johnson Water Improvement District, Ballard Water Improvement District, and Ouray Water Improvement District, indicates the following annual demands on the UTWS by the mentioned water districts:

Johnson Water Improvement District – 25 acre-ft/year
Ballard Water Improvement District – 345 acre-ft/year
Ouray Water Improvement District – 92 acre-ft/year

Subtracting the above Improvement District annual demands from the projected 2020 UTWS demand, implies the UTWS demand in 2020 is approximately 954 acre-ft/year.

It was reported by the UTWSD, for the purpose of this application, an estimated 40% of all meter readings are not accounted for due to older "sanded-in" meters. Therefore, 40% of the approximate 954 acre-ft/year demand is not being accounted for. ***This equates to an annual apparent loss in excess of 382 acre-ft/year.***

It should further be noted, replacement of existing older sanded-in meters, with the proposed Electronic Badger Meter, provides information—such as rate of flow and reverse flow indication—and data not typically available through traditional, mechanical meters and registers. Electronic metering eliminates measurement errors due to sand, suspended particles and pressure fluctuations. The meter is also ideal for non-potable, irrigation water applications or less than optimum water conditions where small particles exist.

Another source of water loss for the UTWSD is unauthorized theft of water. The UTWS is situate predominately within the heart of the Uintah Basins oil and gas extraction industry. It is a known fact throughout the Uintah Basin, water sources which are not monitored frequently are susceptible to unauthorized water consumption.

The UTWS covers many vast miles within a rural environment. Enforcement of unauthorized water system utilization is difficult in areas, which can be accessed by trucking companies, lured in to save money and time with dishonest intentions.

A typical water hauling tanker can be utilized for the unauthorized used of a water system to transport approximately 1,320 gallons per load. Oil and gas producing companies are frequently traversing various locations of the Ute Tribe Reservation daily. 48 loads stolen each day from the UTWS (2 loads per hour), is not unlikely. ***Therefore, unauthorized use of the UTWS could easily result in over 70 acre-ft/year.***

Totaling approximately 452 Acre-ft in Apparent Losses.

Metered locations with Cellular LTE endpoints will be useful in identifying locations where unauthorized consumption is a problem. Once realized it is anticipated monitoring/surveillance of remote locations, indicating unauthorized use, will be increased with video, metering activity and/or even law enforcement efforts.

<u>Non-Revenue Water Considerations</u> -

An expansive system with over 87 miles of distribution and main lines is a difficult system to manage for a variety of reasons. Unbilled authorized consumption from the UTWS is one of those reasons.

It is a well known fact the UTWSD's billing practices are lackadaisical due to the cumbersome of reading meters and manually inputting associated data into billing software applications. This is due to an expansive system, requiring an infinite number of hours to accomplish this task. Customer metering is currently accomplished by lifting meter box lids and manually recording metered use. As a result, a significant amount of revenue, if not all revenue, is lost due to lack of billing efforts. The extent of this problem is not definitively known, but it is a common topic of conversation among various UTWS consumers that their bills are usually dismissed by the UTWSD. This is due to infrequent billing practices, which catch the consumer unaware after several months of not receiving a bill. Once the bill is received, the consumer is usually annoyed by the magnitude of the bill. The consumer then confronts the UTWSD and the bill is typically dismissed.

This practice could account for the loss of potentially 100% of the revenue, which should be realized by the UTWSD. ***When these practices are considered as "Non-Revenue Water," the water losses incurred by the UTWD could be equivalent to the systems total demand, or 954 acre-ft/year.***

Installation of meters with cellular LTE endpoints will eliminate the need for manually read and transferred data. Real time flow data will be transferred seamlessly via. cellular LTE endpoints to the BEACON AMA Software Suite. Accurate billing data will be greatly simplified allowing the UTWSD to generate invoices accurately and expeditiously. Further, this seamless transfer of data will greatly enhance the UTWSD to generate revenue, not currently being received, from monthly water usage fees.

Quantifiable Water Savings Summary -

Considering the standard terminology of water losses defined by IWA and AWWA the UTWSD is experiencing water losses somewhere in the magnitude as defined below:

Real Losses	*75 acre-ft/year*	
Apparent Losses (Sanded in Meters)	*382 acre-ft/year*	
Apparent Losses (Theft)	*70 acre-ft/year*	
	572 acre-ft/year	***Total Real & Apparent Losses***
Non-Revenue Water Losses	***954 acre-ft/year***	

In summary, the UTWSD is losing between 572 and 954 acre-ft/year. Installation of Badger Meters with associate cellular LTE end points and BEACON AMA Software Suite and EyeOnWater smartphones apps, will be the first stem in developing a water loss program to resolve these problems.

1.4.1.1. DESCRIBE THE AMOUNT OF WATER SAVINGS

For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project. Please include a specific quantifiable water savings estimate; do not include a range of potential water savings.

The Non-Revenue Water Losses of 954 acre-ft/year is the total anticipated quantifiable water savings estimate. This estimate was explained in section 1.4.1 above.

1.4.1.2. DESCRIBE CURRENT LOSSES

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

Seeping into the ground.

1.4.1.3. DESCRIBE THE SUPPORT/DOCUMENTATION OF ESTIMATED WATER SAVINGS

Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations. Note: projects that do not provide sufficient supporting detail/calculations may not receive credit under this section. Please be sure to consider the questions associated with your project type when determining the estimated water savings, along with the necessary support needed for a full review of your proposal. In addition, please note that the use of visual observations alone to calculate water savings, without additional documentation/data, are not sufficient to receive credit under this section. Further, the water savings must be the result of reducing or eliminating a current, ongoing loss, not the result of an expected future loss.

See section 1.4.1 above for supporting calculations of water savings. A summary of section 1.4.1 is shown below:

Quantifiable Water Savings Summary -

Considering the standard terminology of water losses defined by IWA and AWWA the UTWSD is experiencing water losses somewhere in the magnitude as defined below:

Real Losses	*75 acre-ft/year*	
Apparent Losses (Sanded in Meters)	*382 acre-ft/year*	
Apparent Losses (Theft)	*70 acre-ft/year*	
	572 acre-ft/year	***Total Real & Apparent Losses***
Non-Revenue Water Losses	***954 acre-ft/year***	

1.4.1.4. SAVINGS FOR CANAL LINING/PIPING PROJECTS

Please address the following questions according to the type of project you propose for funding.

(1) Canal Lining/Piping: Not applicable

(2) Municipal Metering:

a.) How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions and supporting data.

Water savings will be realized as the water loss control program is implemented.

As noted in section 1.4.1 above, It is anticipated the meter replacement project will assist the UTWSD in identifying and/or correcting the following 3 types of losses:

1.) *Real Losses, also referred to as physical losses, are actual losses of water from the system and consist of leakage from transmission and distribution mains, leakage and overflows from the water system's storage tanks and leakage from service connections up to and including the meter.*
2.) *Apparent Losses, also referred to as commercial losses, occur when water that should be included as revenue generating water appears as a loss due to unauthorized actions or calculation error. Apparent losses consist of unauthorized consumption, customer metering inaccuracies, and systematic data handling errors in the meter reading and billing processes.*
3.) *Non-Revenue Water (NRW) is water that is not billed and no payment is received. It can be either authorized or result from apparent and real losses. Unbilled Authorized Consumption is a component of NRW and consists of unbilled metered consumption and unbilled un-metered consumption.*

Supporting data and calculations are included in section 1.4.1 above.

b.) How have current distribution system losses and/or the potential for reductions in water use by individual users been determined?

Once a reliable meter reading program and associated billing practice is implemented, users will be responsible to pay monthly use bills, which are associated with gallons used. The change in responsibility of paying monthly use bills will highly encourage consumers to be conservative.

c.) For installing individual water user meters, refer to studies in the region or in the applicant's service area that are relevant to water use patterns and the potential or reducing such use. In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.

Once a reliable meter reading program and associated billing is implemented, users will be awakened with monthly bills. Monthly billing will highly encourage consumers to be conservative.

d.) If installing distribution main meters will result in conserved water, please provide support for this determination (including, but not limited to leakage studies, previous leakage reduction

projects, etc.). Please provide details underlying any assumptions being made in support of water savings estimates (e.g., how leakage will be reduced one identified with improved meter data.

New distribution main meters will be installed at 4 locations, which interconnect the UTWS with the Johnson Water Improvement District, the Ballard Water Improvement District and the Ouray Park Water Improvement District. These interconnected districts will be allowed access to the EyeOnWater Consumer Engagement Portal/Smartphone app. Not only will the UTWSD personnel be alerted to water main breaks, but the interconnected districts will be alerted as well. Distribution main breaks will be repaired quicker as a result. Quicker repairs mean savings in water losses.

e.) What type (manufacturer and model) of devices will be installed and what quantity of each?

Mobilization @ 3%	1	LS
Traffic Control	1	LS
1" Badger E-Series Ultrasonic Flow Meter w/6' Nicor Connector, Engineered Polymer Body	1000	Each
CAR 00202002 20x36 MTR Box B/W PLST 0020-36 Body B-W 2 MSHL 24 Base (1" meter box)	1000	Each
24x36 MTR Box (2" meter box)	28	Each
Meter Canister Polymer Lid	1000	Each
DL B-5021-Ri IMP 21 MTR FLT Ring – Meter Flat Ring – Import – (23-1/2x20-1/4x19-12)	1000	Each
Ford B11-444W-NL 1 Curb Stop FIP PW Padlock Wing	1000	Each
Apollo 61LF-105-01 1 BRZ LF THD Spring Ball Cone Check Valve RPTFE - Bronze Thread - Lead Free	1000	Each
4" Badger E-Series Ultrasonic Flow Meter w/25' Nicor Connector, Stainless Steel Body	3	Each
2" Badger E-Series Ultrasonic Flow Meter w/25' Nicor Connector, Stainless Steel Body	28	Each
6" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor Wire	5	Each
8" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor Wire	5	Each
16" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor Wire	1	Each
4" to 16" Meter Vault - Polymer Lid adaptation	4	Each
1" HDPE pipe C.T.S.	10000	Ft
2" HDPE pipe C.T.S.	300	Ft
Compression connections existing copper to 1" HDPE	2000	Each
Orion Cellular LTE Endpoint w/6" Nicor Connector	1021	Each
BEACON AMA software suite & EyeOnWater consumer engagement portal & Smartphone apps	1	Each

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

By creating a simplistic accurate metering and billing program, consumers will use less water because they are being billed monthly, which is not happening under the existing meter program.

An accurate metering and billing program will also be verified as revenue is realized from a consistent billing practice.

The UTWSD and consumers will be aware of unusual demands and alerting maintenance crews to breaks quicker. Quicker repairs mean water savings.

(3) Irrigation Flow Measurement: Not applicable

(4) Turf Removal: Not applicable

(5) Smart Irrigation Controllers and High-Efficiency Nozzles: Not applicable

1.4.6 EVALUATION CRITERIA B: WATER SUPPLY RELIABILITY

Up to 18 points may be awarded under this criterion. This criterion prioritizes projects that address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflicts in the region.

Please address how the project will increase water supply reliability. Proposals that will address more significant water supply shortfalls benefitting multiple sectors and multiple water users, will be prioritized. General water supply reliability benefits (e.g. proposals that will increase resiliency to drought) will also be considered. Please provide sufficient explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:

(1) Will the project address a specific water reliability concern? Please address the following:

a.) Explain and provide detail of the specific issue(s) in the area that is impacting water reliability, such as shortages due to drought, increased demand, or reduced deliveries. Will the project directly address a heightened competition for finite water supplies and over-allocation (e.g., population growth)?

The Ute Indian Tribe has a 3 cfs water right at the Whiterocks Spring, and a 3 cfs water right at the Uriah Heap Spring. The Ute Tribe water rights are currently adequate to sale water to the adjoining districts, i.e. the Johnson Water District, the Ouray Park Water District, and the Ballard Water District. The population and associated demands are growing within all the mentioned water districts. As additional demands are imposed upon the UTWS,- the Johnson, Ouray, and Ballard districts, could be in a vulnerable situation.

At some point the Ute Tribe water rights will become inadequate due to the increased demands. At that point in time, the Ute Tribe may have the ability to discontinue selling water to the adjoining districts. It is a known fact the Ballard Water District does not own any water rights. The Ballard Water District is 100% dependent upon the purchase of water from the Ute Tribe. The Johnson and Ouray Park districts may have water rights, but if the Ute Tribe discontinues selling water the Johnson and Ouray Districts may have in-adequate water rights to deliver demands as well.

Implementation of a water loss control program will prolong the adequacy of the Ute Tribe water rights. Prolonging the adequacy of the said water rights highly benefits the Ute Tribe, Johnson Water District, Ouray Park District, and the Ballard Water District. <u>A water district with no water, is not a water district!</u>

b.) Describe how the project will address the water reliability concern: In your response, please address where the conserved water will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.

Left in the river system

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

Additional water system main lines and service lines will be utilized to put the conserved water to the intended use.

d.) Indicate the quantity of conserved water that will be used for the intended purpose.

954 acre-ft/year.

(2) Will the project make water available to achieve multiple benefits or to benefit multiple water users? Yes, Consider the following:

a.) Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)? Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please describe the relationship of the species to the water supply, and whether the species is adversely affected by a reclamation project. Will the project benefit a larger initiative to address water reliability?

Yes, residents within the vast area served by the UTWS, the Johnson Water District, the Ouray Park Water District, and Ballard Water District all utilize on-site waste water disposal systems. On-site disposal systems aid the recharge of ground water. Recharging of ground water reduces river and stream ground infiltration. Rivers and streams benefit

all species (e.g., federally threatened or endangered, all federally recognized candidate species, all state listed species, and all species of particular recreational, or economic importance.)

b.) Will the project benefit Indian Tribes?

Yes, the Ute Indian Tribe

c.) Will the project benefit rural or economically disadvantaged communities?

Yes, Whiterocks, Fort Duchesne, Randlett, Gusher and Ouray are all disadvantaged communities.

d.) Describe how the project will help to achieve these multiple benefits. In your response, please address where the conserved will go and where it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.

Conserved water will be conveyed to the consumer through pipes. Discharged from consumer to ground water via on-site septic systems. Groundwater supports recharging of rivers and streams which will reduce diversions, which will address shortages that impact diversions. Recharged rivers and streams make water available to various species, and irrigation.

(3) Does the project promote and encourage collaboration among parties in a way that helps increase the reliability of the water supply?

Yes

a.) Is there widespread support for the project?

Yes

b.) What is the significance of the collaboration/support?

Highly significant

c.) Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?

Yes, other interconnected districts such as Johnson Water District, Ouray Park District, and Ballard Water District.

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

The Ute Indian Tribe has a 3 cfs water right at the Whiterocks Spring, and a 3 cfs water right at the Uriah Heap Spring. The Ute Tribe water rights are currently adequate to sale water to the adjoining districts, i.e. the Johnson Water District, the Ouray Park Water District, and the Ballard Water District. The population and associated demands are growing within all the mentioned water districts. As additional demands are imposed

upon the UTWS,- the Johnson, Ouray, and Ballard districts, could be in a vulnerable situation.

At some point the Ute Tribe water rights will become inadequate due to the increased demands. At that point in time, the Ute Tribe may have the ability to discontinue selling water to the adjoining districts. It is a known fact the Ballard Water District does not own any water rights. The Ballard Water District is 100% dependent upon the purchase of water from the Ute Tribe. The Johnson and Ouray Park districts may have water rights, but if the Ute Tribe discontinues selling water the Johnson and Ouray Districts may have in-adequate water rights to deliver demands as well.

Implementation of a water loss control program will prolong the adequacy of the Ute Tribe water rights. Prolonging the adequacy of the said water rights highly benefits the Ute Tribe, Johnson Water District, Ouray Park District, and the Ballard Water District. <u>A water district with no water, is not a water district!</u>

e.) Describe the roles of any partners in the process. Please attach any relevant supporting documents.

See support letters Appendix A

f.) Will the project address water supply reliability in other ways not described above?

Yes

1.4.7 EVALUATION CRITERIA C: IMPLEMENTING HYDROPOWER

*Up to **18 points** may be awarded for this criterion. This criterion prioritizes projects that will install new hydropower capacity in order to utilize our natural resources to ensure energy is available to meet our security and economic needs.*

If the proposed project includes construction or installation of a hydropower system, please address the following: *Not Applicable*

(1) Describe the amount of energy capacity. For projects that implement hydropower systems, state the estimated amount of capacity (in kilowatts) of the system. Please provide sufficient detail supporting the stated estimate, including all calculations in support of the estimate.

Not Applicable

(2) Describe the amount of energy generated. For projects that implement hydropower systems, state the estimated amount of energy that the system will generate (in kilowatt hours per year). Please provide sufficient detail supporting the stated estimate, including all calculations in support of the estimate.

Not Applicable

(3) Describe any other benefits of the hydro power project

Not Applicable

(a) Please describe and provide sufficient detail on any additional benefits expected to result from the hydropower project, including:

Not Applicable

(b) Any expected reduction in the use of energy currently supplied through a reclamation project:

Not Applicable

(c) Anticipated benefits to other sectors/entities.

Real time data available to interconnected districts

1.4.8 EVALUATION CRITERIA D: COMPLEMENTING ON-FARM IRRIGATION IMPROVEMENTS

*Up to **10 points** may be awarded for projects that describe in detail how they will **complement on-farm irrigation improvements** eligible for NRCS financial or technical assistance.*

Note: Scoring under this criterion is based on an overall assessment of the extent to which the WaterSMART Grant project will complement ongoing or future on-farm improvements. Applicants should describe any proposal made to NRCS, or any plans to seek assistance from NRCS in the future, and how an NRCS-assisted activity would complement the WaterSMART Grant project. Financial assistance through the Environmental Quality Incentives Program (EQIP) is the most commonly used program by which NRCS helps producers implement improvements to irrigation systems, but NRCS does have additional technical or financial assistance programs that may be available. Applicants may receive maximum points under this criterion by providing the information described in the bullet points below. **Applicants are not required to have assurances of NRCS assistance by the application deadline to be awarded the maximum number of points under this sub-criterion.** Reclamation may contact applicants during the review process to gather additional information about pending applications for NRCS assistance if necessary.

Please note: on-farm improvements themselves are not eligible activities for funding under this FOA. This criterion is intended to focus on how the WaterSMART Grant project will complement ongoing or future on-farm improvements. NRCS will have a separate application process for the on-farm components of selected projects that may be undertaken in the future, separate of the WaterSMART Grant project.

If the proposed project will complement an on-farm improvement eligible for NRCS assistance, please address the following:

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

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

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

Not Applicable

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

Not Applicable

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

Not Applicable

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

Not Applicable

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

Not Applicable

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

Not Applicable

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

Not Applicable

a.) Estimate the potential on-farm water savings that could result in acre-feet per year. Include support or backup documentation for any calculations or assumptions.

Not Applicable

Note: On-farm water conservation improvements that complement the water delivery improvement projects selected through this FOA may be considered for NRCS funding and technical assistance to the extent that such assistance is available. For more information, including application deadlines and a description of available funding, please contact your local NRCS office. See the NRCS website for office contact information.

1.4.9 EVALUATION CRITERIA E: DEPARTMENT OF THE INTERIOR PRIORITIES

*Up to **10 points** may be awarded based on the extent that the proposal demonstrates that the project supports the Department of the Interior priorities. Please address those priorities that are applicable to your project. It is not necessary to address priorities that are not applicable to your project. A project will not necessarily receive more points simply because multiple priorities are*

addressed. Points will be allocated based on the degree to which the project supports one or more of the priorities listed, and whether the connection to the priority(ies) is well supported in the proposal.

1. Creating a conservation stewardship legacy second only to Teddy Roosevelt.
    a. Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;
    Yes, Best management practices will be deployed.
    b. Examine land use planning processes and land use designations that govern public use and access;
    The Ute Tribe Water System is so vast, connections to the system encourages coordination with the public water system between, Tribal Members, Non-Tribal Members, other water districts and governing public lands.
    c. Revise and streamline the environmental and regulatory review process while maintaining environmental standards;
    Yes, anticipated Categorical Exclusion
    d. Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;
    Yes, the Ute Indian Tribe works closely with the Bureau of Indian Affairs (BIA) Indian Health service in regard to master planning water distribution and storage, the BIA Transportation Department to master plan transportation projects throughout the Uintah and Ouray Reservation. Water resources are an integral part of delivering water to transportation and water distribution construction projects.

    e. Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;
    The Ute Indian Tribe as are all native American tribes, stewards of the land. It is essential for all indigenous people to care for mother earth and mother earth will care for them in return. Stewardship of all lands public and private are major concerns for all indigenous people. Water resources are an integral part of delivering water to game guzzlers particularly during drought conditions.
    f. Identify and implement initiatives to expand access to DOI lands for hunting and fishing;
    The Ute Indian Tribe provides hunting guide services, on Indian trust lands, for various creations of mother earth; including: Buffalo, Deer, Elk, Rocky Mountain Big Horn Sheep, Moose, Antelope, and other species. The Ute Indian Tribe offers yearly fishing and boating permits on many water bodies located within Indian trust lands. Water resources are an integral part of delivering water to game guzzlers particularly during drought conditions to ensure Tribal members and Non-Tribal Members are assured ideal hunting and fishing conditions.

g. Shift the balance towards providing greater public access to public lands over restrictions to access.

Again, the Ute Indian Tribe provides hunting guide services, on Indian trust lands, for various creations of mother earth; including: Buffalo, Deer, Elk, Rocky Mountain Big Horn Sheep, Moose, Antelope, and other species. The Ute Indian Tribe offers yearly fishing and boating permits, which water resources are key to success on many water bodies located within Indian trust lands.

2. Utilizing our natural resources
   a. Ensure American Energy is available to meet our security and economic needs;

      Indigenous people are stewards of the earth and always promote environmentally sound decisions in the continual development of American Energy needs.
   b. Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications;

      The Ute Indian Tribe is a proponent of oil and gas exploration on Indian Trust Lands. This includes allowing non-tribally owned companies access to public lands for this purpose.
   c. Refocus timber programs to embrace the entire 'healthy forests' lifecycle;

      Yes
   d. Manage competition for grazing resources.

      Yes
3. Restoring trust with local communities
   a. Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;

      Yes, interconnections with the Ute Tribe Water System fosters positive relationships with not tribal members.
   b. Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.

      Yes, the Ute Indian Irrigation Project is and association of Tribal and non-tribal members, which encourages coordination across tribal boundaries in many instances.
4. Striking a regulatory balance
   a. Reduce the administrative and regulatory burden imposed on U.S. industry and the public; Yes
   b. Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.

      Yes, this is a natural idiosyncrasy of indigenous people to protect mother earth, who will in turn provide for and protect the indigenous people.
5. Modernizing our infrastructure

a. Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure;

Yes, the proposed water control program will ensure an adequate potable supply to the Ute Tribe owned recently constructed correctional facility in a partner ship with the Department of Justice. Further, roads across Indian trust lands are typically owned and maintained by the U.S. Bureau of Indian Affairs Road department; water is a necessary component of roadway construction.

b. Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs.

Yes, the Ute Indian Tribe is currently a proponent of the proposed rail road into the Uintah Basin. Water resources will be crucial for the construction of embankments associated with the rail construction.

c. Prioritize DOI infrastructure needs to highlight:

i. Construction of infrastructure;

Ute Tribe storage reservoirs and dams.

ii. Cyclical maintenance;

Ute Tribe storage reservoirs, dams and conveyance systems.

iii. Deferred maintenance.

DOI roadway construction is ongoing.

1.4.10 EVALUATION CRITERION F: IMPLEMENTATION AND RESULTS

*Up to **6 points** may be awarded for these subcriteria.*

1.4.1.5. SUBCRITERION NO. F.1: PROJECT PLANNING

Points may be awarded for proposals with planning efforts that provide support for the proposed project.

***Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place?** Please self-certify, or provide copies of these plans where appropriate to verify that such a plan is in place.*

Provide the following information regarding project planning:

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

The Indian health Service has ongoing mapping and water system modeling of the Ute Tribe Water System. The modeling is consistent with identified future water main replacement, upsizing, redundancy needs, and fire flow availability.

(2) 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 Indian Health Service has ongoing mapping and water system modeling of the Ute Tribe Water System. The water meter replacement project is the beginning of the UTWSD's water control program. Incorporating the data provided by metered cellular LTE endpoints, the UTWSD will gain better understanding of their system allowing for better educated decisions in furthering their water control program.

1.4.1.6. SUBCRITERION NO. F.2: PERFORMANCE MEASURES

Points may be awarded based upon the description and development of performance measures to quantify actual project benefits upon completion of the project.

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

Water savings will be realized as the water loss control program is implemented. The goal is to implement a water loss control program capable of saving 954 acre-ft, as previously calculated in (1.4.1 Evaluation Criterion A: Quantifiable Water Savings).

There will also be quantifiable data for flow metering after installation of all Cellular LTE Endpoints are installed with corresponding meters. At that time flows can be compared to pre- and post-project conditions as well as water delivered to consumers and an increase of yield per share due to efficiency and individual metering.

All Water and Energy Efficiency Grant applicants are required to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with Water and Energy Efficiency Grant recipients describing the performance measure and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. If information regarding project benefits is not available immediately upon completion of the project, the financial assistance agreement may be modified to remain open until such information is available and until a Final Report is submitted. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of Water and Energy efficiency Grants.

It is proposed to provide bi-annual reports to the reclamation on improvements made in water consumer billing practices, and increased efficiencies for main line and service line repairs. Further proposed is a comparisons of water usage per meter on an annual basis. It is anticipated the water control program will quickly illustrate reduced usage at each meter due to a new level of prudence in regard to water use and the associated billing rates. Further, a system which promotes and maintains revenue from water consumption generates income for self-funded improvement projects.

Note: Program funding may be used to install necessary equipment to monitor progress. However, program funding may not be used to measure performance after project construction is complete (these costs are considered normal operation and maintenance costs and are the responsibility of the applicant).

1.4.1.7. SUBCRITERION NO. F.3: READINESS TO PROCEED

Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement.

Applicants that describe a detailed plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

(a) 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.

- Engineering Plans/specifications & Contract Documents Start Date: April 1, 2020
- Engineering Plans/specifications & Cont. Docs. Completion Date: May 1, 2020
- Purchase Order/Collection of Owner Provided Materials for Benefit of Ute Tribe Tax Consequences: May 1, 2020
- Public Notice and Solicitation of Contractors: May 1, 2020
- Notice of Contractor Award: May 22, 2020
- Notice to Contractor to Proceed: May 23, 2020
- Completion Date Project Close-out June 1, 2021

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

1.) UTERO and Access Permit Uintah & Ouray Indian Reservation

2.) Ute Tribe Business License

3.) Environmental Clearance – Categorical Exclusion

Minor cultural and environmental clearances are assumed. The majority of the existing meters and PRVs are located in previously disturbed, upland locations within existing utility/transportation rights-of-way. It is assumed that there would not be impacts to

waters of the U.S., and no permitting would be required with the Utah Division of Water Rights and the U.S. Army Corps of Engineers. It is assumed that the level of required NEPA would be a Categorical Exclusion. If the project is funded, the construction contractor may be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit an NOI to the Utah Division of Water Quality to gain coverage under the Utah Construction General Permit.

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

Pre-Construction - Primarily meter installation details and specifications
- *Update Pre-Construction Engineers Estimate*
- *Contract Documents and Special Provisions*
- *Contractor procurement/bidding assistance*

Construction
- *Quality Management/Quality Assurance*
- *Construction Inspection*
- *Construction Contract Administration*

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

None

6.) *Describe how the environmental compliance estimate was developed. Has the compliance cost been discussed with the local Reclamation office?*

Staff at the local Bureau of Reclamation office were briefly consulted regarding the development of environmental project costs. Environmental costs are included in the project budget in Appendix B. Approximately four percent (4%) of the total budget was allocated to environmental costs, including environmental coordination with agencies, possible environmental surveys, and the amount anticipated for Reclamation's review of the environmental compliance documentation. See Appendix B for project budget.

1.4.14 EVALUATION CRITERON G: NEXUS TO RECLAMATION PROJECT ACTIVITIES

*Up to **4 points** may be awarded if the proposed project is in a basin with connections to Reclamation project activities. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.*

7.) *Is the proposed project connected to Reclamation project activities? If so, how? Please consider the following:*

a. *Does the applicant receive Reclamation project water?* ***Yes***

b. *Is the project on reclamation project lands or involving Reclamation facilities?* No

c. *Is the project in the same basin as a Reclamation project or Activity?* Yes, the Ute Tribe is involved in continual negotiations with the B.O.R.

d. *Will the proposed work contribute water to a basin where a Reclamation project is located?* Yes, Uintah Basin.

e. *Will the project benefit any tribe(s)?* Yes, the Ute Indian Tribe – Uintah & Ouray Reservation

1.4.15 EVALUATION CRITERON H: ADDITIONAL NON-FEDERAL FUNDING

*Up to **4 points** may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided using the following calculation:*

$$\frac{Non-Feder \quad Funding}{Tot \quad Project\ Cost} = \frac{\$837{,}900.00}{\$1{,}675{,}800.00} = 50\%$$

2. PROJECT BUDGET – SEE FOA

2.1. LETTERS OF COMMITMENT

*Project funding provided by a source other than the applicant shall be supported with letters of commitment from these additional sources. This is a **mandatory requirement.** Letters of commitment shall identify the following elements:*

- *The amount of funding commitment*
- *The date the funds will be available to the applicant*
- *Any time constraints on the availability of funds*
- *Any other contingencies associated with the funding commitment*

Commitment letters from third party funding sources should be submitted with your project application. If commitment letters are not available at the time of the application submission, please provide a timeline for submission of all commitment letters. Cost-share funding from sources outside the applicant's organization (e.g., loans or state grants), should be secured and available to the applicant prior to award.

Reclamation will not make funds available for an award under this FOA until the recipient has secured non-Federal cost share. Reclamation will execute a financial assistance agreement once non-Federal funding has been secured or Reclamation determines that there is sufficient evidence and likelihood that non-Federal funds will be available to the applicant subsequent to executing the agreement.

Note: applicants proposing a Funding Group II project are not required to have non-Federal cost share funding secured for the entire project at the time of award. Funding Group II applicants must demonstrate sufficient evidence that non-Federal cost-share for the first year of the project will be

available by the start of that phase and must describe a plan and schedule for securing non- Federal funding for subsequent years of the project. ***The Ute Indian Tribe anticipates funding 50% of this project with Revitalization Funds. The money is available and ready for the Ute Tribes use.***

2.2. FUNDING PLAN

The funding plan must include all project costs, as follows:

- *How you will make your contribution to the cost-share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).*

The total project cost is $1,675,800. The Ute Indian Tribe is in process of applying for funding from the State of Utah Revitalization fund, which may provide $837,900 towards the Ute Indian Tribe Water System – Water Meter Replacement Project. If the Revitalization funding is not acquired, the Ute Indian Tribe will fund the $837,900 portion of the project. If the $837,900 WaterSMART grant requested by this application is not approved, the project may not be further developed and the UTWSD will continue to experience future water system losses, which will never be realized due to non-implementation of a water control program.

- *Describe any costs incurred before the anticipated Project start date that you seek to include as project costs. For each cost, identify:*
  - *The project expenditure and amount*
  - *Whether the expenditure is or will be in the form of in-kind services or donations*
  - *The date of cost incurrence*

Description	Quantity	Units	Units Cost	Total
Traffic Control	1	LS	$ 20,000.00	$ 20,000.00
1" Badger E-Series Ultrasonic Flow Meter w/6' Nicor Connector, Engineered Polymer Body	1000	Each	$ 190.96	$ 190,960.00
CAR 00202002 20x36 MTR Box B/W PLST 0020-36 Body B-W 2 MSHL 24 Base (1" meter box)	1000	Each	$ 166.25	$ 166,251.00
24x36 MTR Box (2" meter box)	28	Each	$ 210.00	$ 5,880.00
Meter Canister Polymer Lid	1000	Each	$ 70.00	$ 70,000.00
DL B-5021-Ri IMP 21 MTR FLT Ring – Meter Flat Ring – Import – (23-1/2x20-1/4x19-12)	1000	Each	$ 49.33	$ 49,330.00
Ford B11-444W-NL 1 Curb Stop FIP PW Padlock Wing	1000	Each	$ 93.12	$ 93,120.00
Apollo 61LF-105-01 1 BRZ LF THD Spring Ball Cone Check Valve RPTFE - Bronze Thread - Lead Free	1000	Each	$ 57.67	$ 57,670.00
4" Badger E-Series Ultrasonic Flow Meter w/25' Nicor Connector, Stainless Steel Body	3	Each	$ 2,570.00	$ 7,710.00
2" Badger E-Series Ultrasonic Flow Meter w/25' Nicor Connector, Stainless Steel Body	28	Each	$ 758.56	$ 21,239.68
6" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor Wire	5	Each	$ 2,878.00	$ 14,390.00
8" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor Wire	5	Each	$ 3,320.00	$ 16,600.00

16" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor Wire	1	Each	$ 6,585.00	$ 6,585.00
4" to 16" Meter Vault - Polymer Lid adaptation	4	Each	$ 1,000.00	$ 4,000.00
1" HDPE pipe C.T.S.	10000	Ft	$ 0.45	$ 4,500.00
2" HDPE pipe C.T.S.	300	Ft	$ 0.90	$ 270.00
Compression connections existing copper to 1" HDPE	2000	Each	$ 10.00	$ 20,000.00
Orion Cellular LTE Endpoint w/6" Nicor Connector	1021	Each	$ 128.10	$ 130,790.10
BEACON AMA software suite & EyeOnWater consumer engagement portal & Smartphone apps	1	Lump	$ 3,000.00	$ 3,000.00
			Grand Total	**$ 882,295.78**

- *How the expenditure benefits the Project*

It is anticipated the above items and associated costs will be purchased directly by the Ute Indian Tribe, utilizing Revitalization Funds to utilize State of Utah Tax exemption. The purchase will be made in-kind.

Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment.

No funding has been officially awarded to the Ute Indian Tribe (UIT) at this time, it is assumed that UIT will fund their portion of the project through application to the State of Utah Revitalization Fund.

Describe any funding requested or received from other Federal partners. Note: other sources of Federal funding may not be counted towards the required cost share unless otherwise allowed by statute. *None*

Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied.

The UIT is in process for funding through the State of Utah Revitalization Fund in the amount of $837,900. This application has not been officially awarded by the agency yet. If this funding is denied, the UIT would need to provide the additional funds to complete the project. The project would still be pursued by the UIT, although direct purchase of the above itemized materials would be put on hold until further budget is known and bids are received or this WaterSMART grant application is funded.

2.3.1 NON-FEDERAL AND FEDERAL FUNDING SOURCES

Please include the following chart (Table 1) to summarize all funding sources. Denote in-kind contributions with an asterisk (*).

Table 1. Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	FUNDING AMOUNT
Non-Federal Entities	
1. Applicant – State of Utah Revitalization Fund	
Non-Federal Subtotal	$837,900
Other Federal Entities	
1. WaterSMART	$837,900
Total Project Funding	$1,675,800

2.3. BUDGET PROPOSAL

The budget proposal should include detailed information on the categories listed below and must clearly identify all project costs. Unit costs shall be provided for all budget items including the cost of work to be provided by contractors. The budget proposal should also include any in-kind contributions of goods and services provided to complete the Project. It is strongly advised that applicants use the budget proposal format shown below on Table 2 or a similar format that provides this information. If selected for award, successful applicants must submit detailed supporting documentation for all budgeted costs.

Note: Budget proposals must not include post-construction monitoring costs. Applicants are required to identify a performance measure to quantify water savings; however, the costs for post-construction monitoring are classified as normal OM&R costs and are not eligible for reimbursement.

2.4. BUDGET NARRATIVE

Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal. Include the value of in-kind contributions or donations of goods and services and sources of funds provided to complete the project. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsections. Costs, including the valuation of in-kind contributions and donations, must comply with the applicable cost principles contained in 2 CFR Part §200, available at the Electronic Code of Federal Regulations (www.ecfr.gov).

Table 2. Design Engineering Hours & Rates

Role/Position	Rate	Hours	Total
Senior Project Manager	$145.00	12	$1,740.00
Senior Project Manager	$145.00	77	$11,165.00
Project Manager	$115.00	50	$5,750.00
Project Engineer	$110.00	100	$11,000.00
Graduate Engineer	$90.00	90	$8,100.00
Senior CAD Designer	$90.00	60	$5,400.00
CAD Technician	$65.00	60	$3,900.00
Construction Engineering Technician	$80.00	25	$2,000.00
Professional Land Surveyor	$115.00	4	$460.00
Survey Office Technician	$105.00	30	$3,150.00
Survey	$125.00	30	$3,750.00
Administrative Assistant	$55.00	41	$2,255.00
Total		**512**	**$58,670.00**

A contractor will be procured to perform the construction tasks on the project.

Reclamation Water SMART Grant	**$837,900**
State of Utah Revitalization Funds	**$837,900**
TOTAL FUNDING	**$1,675,800**

3. ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

So that Reclamation can assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants must respond to the following list of questions focusing on the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and National Historic Preservation Act (NHPA) requirements. Note: Applicants proposing a Funding Group II project must address the environmental and cultural resources compliance questions for their entire project, not just the first 1-year phase.

Note, if mitigation is required to lessen environmental impacts, the applicant may, at Reclamation's discretion, be required to report on progress and completion of these commitments. Reclamation will coordinate with the applicant to establish reporting requirements and intervals accordingly.

Under no circumstances may an applicant begin any ground-disturbing activities (including grading, clearing, and other preliminary activities) on a project before environmental compliance is complete and Reclamation explicitly authorizes work to proceed. This pertains to all components of the proposed project, including those that are part of the applicant's non-Federal cost-share. Reclamation will provide a successful applicant with information once environmental compliance is complete. An applicant that proceeds before environmental compliance is complete may risk forfeiting Reclamation funding under this FOA.

If you have any questions regarding NEPA, ESA, CWA and/or NHPA requirements, please contact your local Reclamation office, www.usbr.gov/main/offices.html.

3.1. ENVIRONMENTAL QUESTIONS

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

Minor cultural and environmental clearances are assumed. The majority of the existing meters and PRVs are located in previously disturbed, upland locations within existing utility/transportation rights-of-way. It is assumed that there would not be impacts to waters of the U.S., and no permitting would be required with the Utah Division of Water Rights and the U.S. Army Corps of Engineers. It is assumed that the level of required NEPA would be a Categorical Exclusion. If the project is funded, the construction contractor may be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit an NOI to the Utah Division of Water Quality to gain coverage under the Utah Construction General Permit.

Describe how the environmental compliance estimate was developed. Has the compliance cost been discussed with the local Reclamation office?

The project can begin immediately upon execution of any grant agreement. Engineering design would commence as soon as agreements are in place. Environmental evaluation and easement acquisition will also start in the fall of 2019 as soon as our limits of disturbance are identified and before weather conditions can

impede the necessary environmental surveys. Once the design and environmental surveys are complete, the NEPA analysis would begin and project plans and specifications will be reviewed by the appropriate agencies for approval before a contractor is procured. All easements will be in place and environmental compliance would be complete before construction begins during the fall of 2019. Depending on the severity of winter, construction could be completed by fall 2020. If the contractor was forced to stop construction in the winter due to extreme cold temperatures and the project was not complete by April 2021, construction would begin again during the fall of 2021 and would be completed by spring 2022. Upon project completion, final reporting and performance measures will be completed and submitted. for the proposed schedule with major tasks and dates.

Staff at the local Bureau of Reclamation office were briefly consulted regarding the development of environmental project costs. Environmental costs were developed by Jones and DeMille Engineering (JDE) environmental staff after reviewing the locations and scope of the proposed projects. The USFWS IPaC system was accessed on 3-18-2019, and the following species were identified as potentially occurring within the project area: Canada lynx, yellow-billed cuckoo, Mexican spotted owl, bonytail chub, Colorado pikeminnow, humpback chub, razorback sucker, Pariette cactus, Uinta Basin hookless cactus, and Ute ladies'-tresses (ULT). The project is located near designated critical habitats for fish species. Due to the nature of the project impacts, no impact to threatened or endangered species is expected.

The project area may contain jurisdictional wetlands and may require an aquatic resources delineation. It is assumed that no permitting with the U.S. Army Corps of Engineers would be required. A cultural resource survey may be needed; however, it is unclear as to whether mitigation would be required for impacts to cultural resources. The environmental budget assumes that no cultural mitigation would be required for the project and no waters permitting would be required. It is assumed that the level of NEPA analysis required for the project would be a Categorical Exclusion.

Environmental and Regulatory Compliance Costs

Staff at the local Bureau of Reclamation office were briefly consulted regarding the development of environmental project costs. Environmental costs are included in the project budget in Appendix B. Approximately four percent (4%) of the total budget was allocated to environmental costs, including environmental coordination with agencies, possible environmental surveys, and the amount anticipated for Reclamation's review of the environmental compliance documentation. See Appendix B for project budget.

4. REQUIRED PERMITS OR APPROVALS

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.

Applicants proposing renewable energy components to Federal facilities should note that some power projects may require FERC permitting or a Reclamation Lease of Power Privilege. To complete a renewable energy project within the time frame required of this FOA, it is recommended that an applicant has commenced the necessary permitting process prior to applying. To discuss questions related to projects that propose renewable energy development, please contact the Program Coordinator listed in Section G, Agency Contacts.

Note that improvements to Federal facilities that are implemented through any project awarded funding through this FOA must comply with additional requirements. The Federal government will continue to hold title to the Federal facility and any improvement that is integral to the existing operations of that facility. Please see P.L. 111-11, Section 9504(a)(3)(B). Reclamation may also require additional reviews and approvals prior to award to ensure that any necessary easements, land use authorizations, or special permits can be approved consistent with the requirements of 43 CFR §429, and that the development will not impact or impair project operations or efficiency.

It is assumed that the level of NEPA analysis required for the project would be a Categorical Exclusion. It is anticipated that the project would not impact jurisdictional waters of the U.S. and would not require permitting with the U.S. Army Corps of Engineers. If the project is funded, the construction contractor may be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit an NOI to the Utah Division of Water Quality to gain coverage under the Utah Construction General Permit.

5. LETTERS OF SUPPORT

Please include letters from interested stakeholders supporting the proposed project. To ensure your proposal is accurately reviewed, please attach all letters of support/ partnership letters as an appendix. (Note: this will not count against the application page limit.) ***Letters of support received after the application deadline for this FOA will not be considered in the evaluation of the proposal.***

Letters of support are included in Appendix A.

6. OFFICIAL RESOLUTIONS

Include an official resolution adopted by the applicant's board of directors or governing body, or, for state government entities, a signed statement from an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under this FOA, verifying:

- *The identity of the official with legal authority to enter into an agreement*
- *The board of directors, governing body, or appropriate official who has reviewed and supports the application submitted*
- *The capability of the applicant to provide the amount of funding and/or in- kind contributions specified in the funding plan*
- *That the applicant will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement*

***An official resolution meeting the requirements set forth above is mandatory**. If the applicant is unable to submit the official resolution by the application deadline because of the timing of board meetings or other justifiable reasons, the official resolution may be submitted up to 30 days after the application deadline.*

See approved Ute Indian Tribe (Business Committee) resolution follows on the next page.

19 - 168

Resolution No. _____

Uintah and Ouray Agency

Fort Duchesne, Utah

WHEREAS, The Ute Indian Tribal Business Committee ("Business Committee") of the Ute Indian Tribe of the Uintah and Ouray Reservation ("Tribe") is empowered by Article VI, Section 1 (f) and I (g) of the Constitution and By-Laws of the Uintah and Ouray Indian Reservation, and

WHEREAS, the Tribal Business Committee is charged with regulation of environmental and health issues of the "Tribe" and see that projects can be properly addressed and administered, and

WHEREAS, the U.S. Department of Interior, Bureau of Reclamation, has funding to through a Water SMART Water and Energy Efficiency Grant to prevent water supply crisis and ease conflict in the western region of the United States, and

WHEREAS, the Water SMART is requesting submission of proposals from eligible entities to participate in the program, and

WHEREAS, the Tribe is need of funding to assist in the replacement of culinary water meters that will enhance and upgrade the system into a transmission and distribution system, and

WHEREAS, the Water SMART funding will provide for installation of metering and cellular LTE endpoints for better monitoring of conservation, measured and efficiently delivered to the tribal membership.

NOW, THEREFORE, BE IT RESOLVED BY THE UINTAH AND OURAY INDIAN TRIBAL BUSINESS COMMITTEE OF THE UINTAH AND OURAY INDIAN RESERVATION THAT authorizes the submission of the Water SMART Grant Program in the amount of $1,7 million of which 50% will be required as match to this grant project.

BE IT FINALLY RESOLVED, the Chairman or in his absence the Vice Chairman of the Business Committee is authorized to sign all/any documentation as required by the Department of Interior, Bureau of Reclamation Water SMART Program for execution of this project and funding requirements.

Resolution No. _____

Uintah and Ouray Agency

Fort Duchesne, Utah

Luke Duncan, Chairman

Tony L. Small, Vice-Chairman

Ronald J. Wopsock, Member

Sal Wopsock, Member

Edred Secakuku, Member

Shaun Chapoose, Member

CERTIFICATION

I, hereby certify that the above Resolution was adopted by the Uintah and Ouray Tribal Business Committee under authority of the Constitution and By-Laws of the Ute Indian Tribe at a duly called meeting held in Fort Duchesne, Utah, on the 3 day of June, 2019, at which time a quorum was present and voted 6 FOR, 0 AGAINST, 0 ABSTAINING, and 0 ABSENT.

Business Committee, Secretary

APPENDIX A. LETTERS OF SUPPORT AND COMMITMENT

BALLARD WATER & SEWER IMPROVEMENT DISTRICT

2381 E. 1000 S.
Ballard, UT 84066
Phone: (435) 722-3393
Email: ballcity@ubtanet.com

March 15, 2019

To: WaterSMART Grant Administrator

From: Ballard Water & Sewer Improvement District

Subject: Ute Tribe Water System – Water Meter Replacement Project

The Ballard Water & Sewer Improvement District (BWSID) strongly understands the value of conserving water. As a down stream consumer of the Ute Tribe Water System (UTWS), we at the BWSID are in support of the proposed UTWS – Meter Replacement Project.

As a down stream consumer we understand the value of real time demand/flow data. The advantages of a cellular based water metering program and the early detection of water main breaks will provide a distinct advantage to the BWSID.

We at the BWSID applaud the Ute Tribe in their efforts to identify leaks within the Tribe's system. We further acknowledge the value received by the BWSID from real time demands monitored by a cellular based interconnection from the UTWS.

Chairman Mark Reidhead
Ballard Water & Sewer Improvement District

3/15/2019
Date

JOHNSON WATER DISTRICT

3748 W Highway 87
Roosevelt, UT 84066
Phone (435) 722-2620

Date: March 13, 2019

To: WaterSMART Grant Administrator

Subject: Ute Tribe Water System – Water Meter Replacement Project

The Johnson Water Improvement District (JWID) strongly understands the value of conserving water. As a down stream consumer of the Ute Tribe Water System (UTWS), we at the JWID are enthusiastic in support of the proposed UTWS - Meter Replacement Project.

As a down stream consumer we understand the value of real time demand/flow data. The advantages of a cellular based water metering program and the early detection of water main breaks will provide a distinct advantage to the JWID.

We at the JWID applaud the Ute Tribe in their efforts to identify leaks within the Tribe's system. We further acknowledge the value received by the JWID from real time demands monitored by a cellular based cross connection from the UTWS.

Sincerely,

Dick Taylor

Dickson Taylor
Manager
Johnson Water Improvement District

OURAY PARK WATER IMPROVEMENT DISTRICT

HC 69 Box 127
Randlett, Ut 84063
435-545-2415

Date: March 13, 2019

To: WaterSMART Grant Administrator

From: Ouray Park Water Improvement District

Subject: Ute Tribe Water System – Water Meter Replacement Project

The Ouray Park Water Improvement District (OPWID) strongly understands the value of conserving water. As a down stream consumer of the Ute Tribe Water System (UTWS), we at the OPWID are enthusiastic in support of the proposed UTWS - Meter Replacement Project.

As a down stream consumer we understand the value of real time demand/flow data. The advantages of a cellular based water metering program and the early detection of water main breaks will provide a distinct advantage to the OPWID.

We at the OPWID applaud the Ute Tribe in their efforts to identify leaks within the Tribe's system. We further acknowledge the value received by the OPWID from real time demands monitored by a cellular based interconnection from the UTWS.

APPENDIX B. PROJECT BUDGET

Client: Ute Indian Tribe WaterSMART Grant
Project Name: Water Meter Replacement Project
Date: March 13, 2019

Pre-Design Engineers Estimate

Item	Description	Quantity	Units	Units Cost	Total
1	Mobilization @ 3%	1	LS	$ 40,700.00	$ 40,700.00
2	Traffic Control	1	LS	$ 20,000.00	$ 20,000.00
3	1" Badger E-Series Ultrasonic Flow Meter w/6' Nicor Connector, Engineered Polymer Body	1000	Each	$ 190.96	$ 190,960.00
4	CAR 00202002 20x36 MTR Box B/W PLST 0020-36 Body B-W 2 MSHL 24 Base (1" meter box)	1000	Each	$ 166.25	$ 166,251.00
5	24x36 MTR Box (2" meter box)	28	Each	$ 210.00	$ 5,880.00
6	Meter Canister Polymer Lid	1000	Each	$ 70.00	$ 70,000.00
7	DL B-5021-Ri IMP 21 MTR FLT Ring – Meter Flat Ring – Import – (23-1/2x20-1/4x19-12)	1000	Each	$ 49.33	$ 49,330.00
8	Ford B11-444W-NL 1 Curb Stop FIP PW Padlock Wing	1000	Each	$ 93.12	$ 93,120.00
9	Apollo 61LF-105-01 1 BRZ LF THD Spring Ball Cone Check Valve RPTFE - Bronze Thread - Lead Free	1000	Each	$ 57.67	$ 57,670.00
10	4" Badger E-Series Ultrasonic Flow Meter w/25' Nicor Connector, Stainless Steel Body	3	Each	$ 2,570.00	$ 7,710.00
11	2" Badger E-Series Ultrasonic Flow Meter w/25' Nicor Connector, Stainless Steel Body	28	Each	$ 758.56	$ 21,239.68
12	6" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor	5	Each	$ 2,878.00	$ 14,390.00
13	8" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor	5	Each	$ 3,320.00	$ 16,600.00
14	16" Badger Model M-2000 Electromagnetic Flow Meter w/Remote Mount Amp. 30' Cable Scada Out 25' Nicor	1	Each	$ 6,585.00	$ 6,585.00
15	4" to 16" Meter Vault - Polymer Lid adaptation	4	Each	$ 1,000.00	$ 4,000.00
16	1" HDPE pipe C.T.S.	10000	Ft	$ 0.45	$ 4,500.00
17	2" HDPE pipe C.T.S.	300	Ft	$ 0.90	$ 270.00
18	Compression connections existing copper to 1" HDPE	2000	Each	$ 10.00	$ 20,000.00
19	1" Meter Assembly Installation	1000	Each	$ 300.00	$ 300,000.00
20	2" Meter Assembly Installation	7	Each	$ 300.00	$ 2,100.00
21	4" Meter Assembly Installation	3	Each	$ 300.00	$ 900.00
22	6" Meter Assembly Installation	5	Each	$ 300.00	$ 1,500.00
23	8" Meter Assembly Installation	5	Each	$ 400.00	$ 2,000.00
24	16" Meter Assembly Installation	1	Each	$ 800.00	$ 800.00
25	Orion Cellular LTE Endpoint w/6" Nicor Connector	1021	Each	$ 128.10	$ 130,790.10
26	GIS System	1	Lump	$ 15,000.00	$ 15,000.00
27	GPS Survey of Meters	1	Lump	$ 15,000.00	$ 15,000.00
28	BEACON AMA software suite & EyeOnWater consumerj engagement portal & Smartphone apps	1	Lump	$ 3,000.00	$ 3,000.00
29	Environmental Review - Categorical Exclusion	1	Lump	$ 60,000.00	$ 60,000.00
30	Contingencies (+/- 10%)	1	Lump	$ 146,600.00	$ 146,600.00
				Subtotal	$ 1,466,895.78
	Contractor UTERO Tax @ 2%	1	Lump		$ 29,337.92
	Pre-Construction Engineering @ 4%	1	Lump		$ 58,675.83
	Construction Engineering @ 8%	1	Lump		$ 117,351.66
	Engineering UTERO Tax @ 2%	1	Lump		$ 3,520.55
				Grand Total	**$ 1,675,781.74**