

TECHNICAL PROPOSAL UTE TRIBE WATER RESILIENCY: TARGET AREA F DEVELOPMENT PROJECT THE UTE TRIBE WATER SYSTEMS

**WATERSMART DROUGHT RESPONSE PROGRAM:
DROUGHT RESILIENCY PROJECTS FOR FISCAL YEAR 2024**

Prepared for:
DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION,
WATER RESOURCES AND PLANNING OFFICE



Submitted by:
UTE INDIAN TRIBE OF THE UINTAH AND OURAY RESERVATION

Prepared by:
Natural Resources Consulting Engineers, Inc.

131 Lincoln Avenue, Suite 300
Fort Collins, Colorado 80524
(970) 224-1851/FAX (970) 224-1885
Project Manager: Ryan McBride
rmcbride@nrce.com

November 6, 2023



Table of Contents

1.0	TECHNICAL PROPOSAL	3
1.1	Executive Summary	3
1.2	Project Location	4
1.3	Project Description.....	5
1.4	Performance Measures	10
1.5	Evaluation Criterion	10
1.5.1	Evaluation Criteria A-Project Benefits	10
1.5.2	Evaluation Criteria B-Planning and Preparedness	19
1.5.3	Evaluation Criteria C-Severity of Actual or Potential Drought or Water Scarcity Impacts to be Addressed by the Project.....	20
1.5.4	Evaluation Criteria D-Presidential and DOI Priorities	22
1.5.5	Evaluation Criteria E-Readiness to Proceed and Project Implementation.....	23
1.5.6	Evaluation Criteria F-Nexus to Reclamation.....	25
1.5.7	Evaluation Criteria G-Stakeholder Support for Proposed Project	25
2.0	PROJECT BUDGET	26
2.1	Funding Plan and Letters of Commitment	26
2.2	Budget Narrative	26
2.2.1	Personnel.....	26
2.2.2	Fringe Benefits.....	26
2.2.3	Travel	26
2.2.4	Equipment	26
2.2.5	Supplies.....	26
2.2.6	Contractual.....	26
2.2.7	Construction.....	27
2.2.8	Total Project Costs.....	28
2.2.9	Other	29
2.2.10	Indirect Costs	29
3.0	OTHER APPLICATION COMPONENTS	30
3.1	Environmental and Cultural Resources Compliance	30
3.2	Required Permits or Approvals	32
3.3	Overlap or Duplication of Effort Statement	32
3.4	Conflict of Interest Disclosure Statement	32
3.5	Uniform Audit Reporting Statement.....	32
3.6	SF-LLL: Disclosure of Lobbying Activity	32
3.7	Letters of Support.....	32
3.8	Official Resolution	33
3.9	OMB 4040-0013 Certification Regarding Lobbying.....	33
3.10	Letters of Funding Commitment.....	33
4.0	REFERENCES	34

1.0 TECHNICAL PROPOSAL

1.1 Executive Summary

Date:	November 7, 2023
Applicant Name:	Ute Indian Tribe of the Uintah and Ouray Reservation
City, County, State:	Ft. Duchesne, Uintah County, Utah
Applicant Category:	Category A, Federally Recognized Tribe
Project Title:	Ute Tribe Water Resiliency: Target Area F Development Project
Task Area:	Task Area D

The Ute Indian Tribe (Tribe) of the Uintah and Ouray Reservation (Reservation) is pleased to submit this request for funding to support drought resiliency projects. Under the Notice of Funding Opportunity (NOFO) R24AS000007 Requirements, the Tribe is a Category A federally recognized Tribe eligible applicant. The Tribe desires to make its drinking water supply more reliable and drought resilient by developing Tribal groundwater resources to supplement the springs that provide the Tribe's drinking water. The Tribe aspires to construct three new wells, a water treatment facility, a transmission pipeline, a 90,000-gallon water storage tank, and associated distribution pipeline (the Project).

The Tribe operates the Ute Tribe Water Systems (UTWS), which serves over 3,000 Tribal members. The UTWS is almost exclusively supplied by two shallow springs that are subject to variable productivity levels driven by local drought conditions. Decreases in the productivity of the spring collection systems have led to intermittent service and boil water notices issued by the EPA. Due to the ongoing drought conditions, the yield of the springs has been declining over the years. As a result of the decline in the spring yield, the Tribe has had difficulty supplying clean drinking water to Tribal members. During certain times of the year, when the yield of the springs is not enough to meet demand, the UTWS staff are forced to haul water to Tribal members. Some of the Tribal members have had cisterns installed at their homes to store water hauled to them by the UTWS staff. In addition to hauling water to Tribal members, the UTWS staff are forced to haul portable toilets to the affected Tribal members. The lack of water has also required some Tribal members to shower at the community center. The reduction in water has created a significant burden on Tribal members. The Tribal members have suffered and will continue to suffer as a result of the lack of clean drinking water.

To help alleviate the suffering of Tribal members, the Project will provide an estimated 168 acre-feet of water per year (AFY) through the addition of a drought resilient groundwater source. At peak supply, the project can supply a total of 493 AFY if pumping occurs year around. In addition, the Project will provide an additional 90,000 gallons of clean drinking water storage. Water from the Project will be treated at the source (chlorination) and pumped to the new water storage tank. Currently, the water system does not have an upstream storage reservoir, so it relies on a constant supply of water to the system. The new water storage tank will provide desperately needed water

storage high in the system. Without the new water storage tank, the Tribe will have to continue to rely on the springs that fluctuate throughout the year making it difficult for the Tribe to provide adequate drinking water to Tribal members.

The Project also proposes to enlarge a section of the distribution system pipeline that will make the additional water available to the entire distribution system. An 8-inch water main will be replaced with a 14-inch water main to relieve a bottle neck in the distribution system to ensure that enough treated water reaches Tribal members. According to the hydraulic model developed by the Tribe, with the larger 14-inch pipe, the available water flow will increase from an estimated 580 gpm to 990 gpm. The increased water flow will allow the Tribe to meet peak demand. The larger pipe will increase the pressure in the system from approximately 80 psi to 125 psi at this location. The higher pressures in the water system will provide better pressure to Tribal members homes and additional pressure for fire hydrants. In addition, velocities in the pipe will be reduced from 6-7 fps to 2-3 fps. The lower velocities in the pipe will minimize water loss in the pipe and reduce damage to the pipe and pipe fittings. In addition to improving the water flow and pressure in the distribution system, replacing the 8-inch pipe will help to improve the water quality, as this section of pipe is made of Asbestos Cement (AC) pipe. Exposure to asbestos through contaminated water can increase the likelihood of cancers such as mesothelioma and lung cancer as well as other serious conditions. Removing old AC pipes will provide Tribal members with cleaner drinking water and reduce the risk of series illness.

The Project will also provide a replacement supply of water for the current residents along Farm Creek Loop Road who are on private wells that go dry during these drought periods and have poor water quality. Due to the extended drought, water levels in this area have dropped resulting in wells going dry. As a result, Tribal members rely on water that is hauled to their homes. In addition to wells going dry, some of the wells have high levels of arsenic in the water. Drinking water that contains arsenic can increase the risk of cancer and other serious health effects.

In April 2021, the Ute Tribe Business Committee (UTBC) adopted the Water Infrastructure Rehabilitation and Development Plan (Plan) as a guidance document for planning infrastructure development and improvements for the UTWS (NRCE, 2021b). This Plan discussed the water issues facing the UTWS and provided recommendations on improvements and a cost estimate to make the necessary improvements. Developing the proposed well field in Target Area F to provide supplemental water to the UTWS was part of the Plan.

The Project will commence in October 2024 with work to secure the necessary environmental studies. Engineering design is planned to begin in October 2025 with construction bidding expected to begin in February 2026. Construction is planned to take place between June 2026 and August 2027. The Project should take 3 years to complete.

1.2 PROJECT LOCATION

The UTWS is located on the Reservation on Ute Tribal Trust Land. The Target Area F Groundwater Development project is located on the Reservation as shown in Figure 1. Target

Area F is located approximately 3.5 miles northwest of the town of Whiterocks, Utah, in the Uintah Special Meridian, Township 1 North, Range 1 West, Section 16, NE1/4, SE1/4. Latitude: 40.482264, Longitude: -109.992705

Water from the Whiterocks and Uriah Heeps water treatment plants is conveyed to lower portions of the UTWS through an 8-inch water main that will be upgraded to a 14-inch water main as part of the Project. The water main is located approximately 4 miles northwest of the town of Fort Duchesne, Utah as shown in Figure 1. The water main is located in the Uintah Special Meridian, Township 2S, Range 1E, Section 5, East ½ and Section 8, East ½. Latitude: 40.3311, Longitude: -109.9008.

1.3 PROJECT DESCRIPTION

The Tribe receives the majority of its water supply from the Whiterocks Spring Collection System (Whiterocks System) and the Uriah Heeps Spring Collection System (Uriah Heeps System). Water from the Whiterocks System is conveyed to the Whiterocks Water Treatment Plant (Whiterocks WTP) for treatment and then connected to the distribution system for use by Tribal members. Any surplus water from the Whiterocks WTP building is delivered to the Uriah Heeps Water Treatment Plant (Uriah Heeps WTP) as shown in Figure 1. During peak usage times of the year, the capacity of the Uriah Heeps Spring is not sufficient to meet demand, causing low pressure throughout the upper portions of the system.

The Tribe is interested in developing groundwater wells and associated facilities to provide culinary water to the Farm Creek Loop Road area (Figure 1), which is located northwest of the community of Whiterocks in Uintah County, Utah, as well as a supplemental water supply to the existing Whiterocks and Uriah Heeps water systems. Providing supplemental water to the Whiterocks water system will also provide additional water to the Uriah Heeps water systems as excess water treated at the Whiterocks WTP is conveyed to the Uriah Heeps WTP for use lower in the water system. The additional water will help the Tribe in meeting the water demand during times of low spring flow.

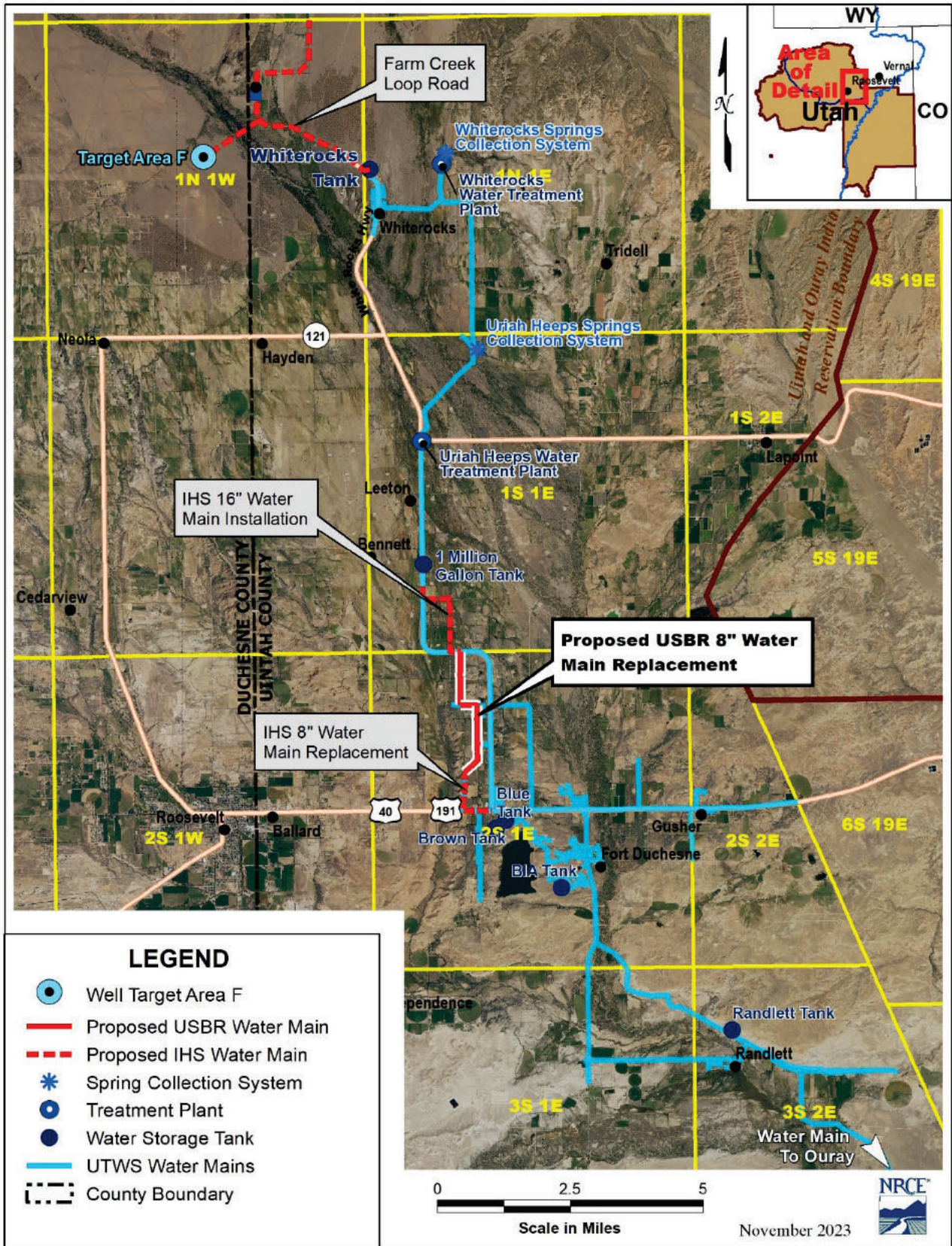


Figure 1: Ute Tribal Water System Overview Map

The Project also involves replacing an 8-inch water main with a 14-inch water main. This upgrade will enlarge 14,300 feet of water main and will ensure that enough water flow reaches the lower parts of the UTWS. According to the hydraulic model developed by the Tribe, with the larger 14-inch pipe, the available water flow will increase from an estimated 580 gpm to 990 gpm. The increased water flow will allow the Tribe to meet peak demand. The larger pipe will increase the pressure in the system from approximately 80 psi to 125 psi at this location. The higher pressures in the water system will provide better pressure to Tribal member homes and additional pressure for fire hydrants. In addition, velocities in the pipe will be reduced from 6-7 fps to 2-3 fps. The lower velocities will minimize water loss in the pipe and reduce damage to the pipe and pipe fittings. The Indian Health Services (IHS) plans to improve the segments of pipe above and below the section addressed in this Project. Upstream of the current project, the IHS will install a 16-inch water main. Downstream of the current project, the IHS will replace the existing 8-inch water main with a 14-inch water main (Figure 1). In addition to improving the water flow and pressure in the distribution system, replacing the 8-inch water main will help to improve the water quality, as this section of pipe is made of AC water main. Exposure to asbestos through contaminated water can increase the likelihood of cancers such as mesothelioma and lung cancer as well as other serious conditions. Removing old AC water main will provide Tribal members with cleaner drinking water and reduce the risk of serious illness. The cost to install the 14-inch water main includes the cost to safely remove and dispose of the 8-inch AC water main.

Investigations have confirmed the necessity for development of water supply near Farm Creek Loop Road and augmentation of the Whiterocks and Uriah Heeps water systems. Some of these private sources repeatedly run dry, while others have poor quality water with higher levels of arsenic in the water. Drinking water that contains arsenic can increase the risk of cancer and other serious health effects. The Uriah Heeps System has experienced pressure drops in the upper part of the system when capacity is not able to meet the water demand resulting in Tribal members homes running out of water. Tribal members have a right to clean, safe, affordable water in the home ensuring a minimum quality of life. To provide the necessary additional water, the Tribe proposes to drill three wells to provide the primary water source to the Farm Creek Loop Road area and a supplemental supply of water to the Whiterocks and Uriah Heeps water systems.

The Tribe investigated the possibility of developing Tribal groundwater resources starting in 2010 (EPIC 2011). Based on the results of the field investigations and literature review, utilizing natural springs to supply reliable culinary water to the Farm Creek Loop Road area is not feasible. Therefore, the Tribe conducted an investigation to evaluate the feasibility of development of groundwater wells to provide water to the Farm Creek Loop Road area, as well as supplemental supply to the existing Whiterocks and Uriah Heeps water systems. Multiple well development areas were identified and evaluated in the investigation.

The investigation identified seven alternative areas for well development (Areas A, B, C, D, E, F, and G). It considered Target Area A to be the most feasible area for well construction to supply water to residences along Farm Loop Road and to, at least partially, augment water supply to the

users of Whiterocks and Uriah Heeps Springs. The purpose of these additional well development areas is to further augment the water supply for the Whiterocks and Uriah Heeps systems.

Due to greater geologic uncertainty as well as higher estimated well construction and pipeline costs, Target Areas B, C, D, and E were found to be less feasible than Target Areas A, F, and G. The initial investigation found Target Area F to be a feasible alternative for supplemental water delivery to the Whiterocks system and potentially to the Uriah Heeps system as well. The investigation also determined Target Area G to be a feasible alternative for providing supplemental water to the Uriah Heeps system. Target Area G has lower capital costs compared to Target Area F, but has the downside of not providing water to the Whiterocks system.

Based on the results from the 2011 investigation, the Tribe further evaluated the potential to use Target Areas A, F, and G (Target Areas) to provide supplemental water to the UTWS. The Tribe conducted a geophysical investigation of the Target Areas. The geophysical investigation was completed in December 2020 and recommended several locations for drilling test wells in the Target Areas. The purpose of the test wells was to obtain an understanding of immediate aquifer properties and potential well yields and perform water quality testing to determine the suitability for culinary water supply. Drilling and testing of the wells for the selected four wells in the Target Areas was completed in June and July 2021. The results from the 2021 well pumping tests are found in Table 1.

Table 1: 2021 Target Area A, F, and G Well Pumping Results

Test Well	Drilling Depth (ft)	Flow Rate (gpm)
A1	77	10-20
A2	72	10-20
F	72	75-100*
G	60	75-100

*Based on well pumping test results and post pumping analysis

The Tribe ran a standard water quality analysis for each well, and the wells met the minimum standards that were tested. Test wells A1 and A2 only yielded approximately 10 to 20 gallons per minute (gpm). The low yield from a single well is not economical or a reliable supply as a public water supply. Therefore, Test Wells A1 and A2 were not recommended for further development. In Target Areas F and G, the saturated thickness of the alluvium, the grain size distribution, and the yield during well development were found to be favorable for development. Test Wells F and G are expected to yield 75 to 100 gpm. Due to the high quality of the water and the high estimated yield of each of the wells, Test Wells F and G were recommended for further development. Target Well F would provide water to the entire distribution system including Farm Creek Loop Road. Target Well G could provide supplemental water to the Uriah Heeps WTP. The Tribe is proposing that the funding to develop Target Area F come from this WaterSMART grant.

From April to June, the area located below the Uriah Heeps treatment plant, known as Indian Bench, experiences low pressure due to decreased production from the springs that supply the water systems. This decrease in spring production has occurred multiple times, most recently in 2021, when low pressure led to a boil water order being issued by the EPA Region 8. The Tribe has looked to supplemental groundwater supply to provide a reliable source of water when spring production decreases.

The groundwater development will involve the construction of three wells. The wells will be constructed using percussion or rotary-drilling machines and drilled to a depth of approximately 80 feet. The wells will be cased with steel surface casing from 2 feet above ground to 25 feet below ground, blank casing will be installed from 25 feet to 57 feet, and then well screen casing will be installed in the water producing zone of the well from 57 feet to 80 feet. Electricity will be brought to the site from a nearby power pole. The Tribe will need to have approximately 2.0 miles of electrical wire installed. A 5-horsepower submersible pump designed to pump 100 gpm will be installed in each of the three wells. An 8-inch-diameter water transmission line that is approximately 11,440 long will be installed to connect the three wells to a new water treatment plant. Treatment will consist of chlorination and corrosion control in the form of phosphoric acid addition, similar to the Whiterocks WTP and Uriah Heeps WTP processes.

The treated water will leave the new water treatment and be sent to a new 90,000-gallon water storage tank. The 90,000-gallon storage tank is sufficient to provide enough water storage for the approximately 20 connections with a 2-day supply of water and extra water for fire flow and supplemental flow to the Whiterocks and Uriah Heeps systems. It was assumed that each connection along Farm Creek Loop Road would use on average 400 gallons per day (gpd), and fire flow was calculated at 500 gpm for a duration of 1 hour.

Water from the 90,000-gallon water tank will then flow by gravity through approximately 17,000 feet of water main to the existing Whiterocks tank. The Whiterocks tank will require some rehabilitation to accommodate flow from the new tank. The rehabilitation will take place in 2024 and will be funded through outside sources. New service lines will be installed at each of the 20 homes to connect the homes to the newly constructed water main. A conceptual drawing of the proposed Target Area F Project can be found in Figure 2.

As part of the project, the Tribe will hire a design engineer to take the project through the design process by producing 10%, 60%, and 100% final design drawings. Specifications for the project will also be produced. Public meetings will be held to provide an opportunity for the Tribal community and local residents to comment on the project. Feedback from the public meetings will be incorporated into the project. Precautions will be taken to minimize disruptions to the local residents.

To complete the necessary improvements to the UTWS water supply, the Tribe anticipates having three separate contracts to complete the proposed work. The anticipated contracts are outlined below:

1. Contract for the construction of three water supply wells and pumps.
2. Contract for the 8-inch and 14-inch water main installation and connection, water treatment facility construction, service line connections, and other miscellaneous controls and valves.
3. Contract for the purchase and installation of the 90,000-gallon water storage tank.

The Tribe will obtain all necessary permits for the project. The Tribe anticipates obtaining permits/approvals from the EPA, US Army Corps of Engineers (USACE), IHS, and state and county authorities. The project will also be reviewed by various Tribal departments to ensure that Tribal cultural resources are protected. More information on permitting will be provided in subsequent sections.

All material and construction labor needed to complete the proposed improvements will be secured through competitive bid process. It is anticipated that the construction Projects will utilize the traditional design/bid/build process. If any other procurement method is used, the Tribe will seek approval from the USBR.

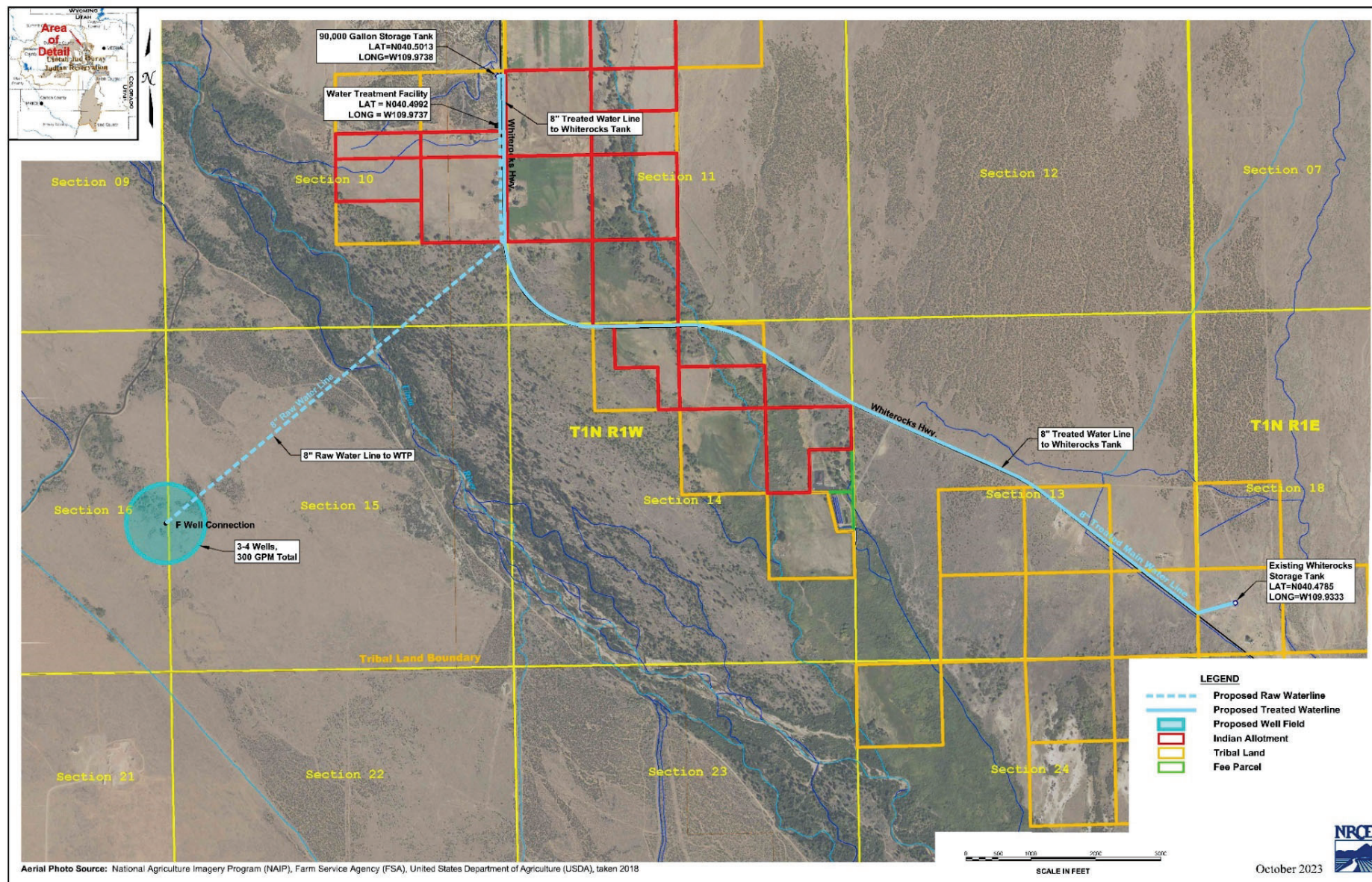


Figure 2: Target Area F Ground Water Development Map

1.4 PERFORMANCE MEASURES

The proposed project will enable the UTWS to sustainably improve its water supply flow and reliability. The specific anticipated benefits and their related methods for measuring performance are detailed in Table 2.

Table 2: Project Benefits and Performance Measures

Benefit Type	Description	Method of Performance Measurement
Water Supply	The new well field will provide a reliable source of water to the Farm Creek Loop Road area as well as a supplemental source of water during drought conditions.	Flow metering will be installed at the well field. The flow measurement instrumentation will include a totalizer function to record the total volume pumped. Readings will be linked to SCADA.
Supply Reliability/ Drought Resiliency	The new well field will provide supplemental water supply to the UTWS during periods when the productivity of the current spring systems decline because of drought conditions.	Instrumentation will be installed at the spring collection systems to record the total volume of flow produced by each spring. The spring flow will be compared with the flows from the wells to determine frequency and amount of water from the wells necessary to maintain service during low flow conditions.
Sustainability	The well field is located in the Uintah River alluvial aquifer. The aquifer will be recharged by the Uintah River to provide new water supply over time.	The existing test wells at Target Areas F and G will be converted to monitoring wells. Groundwater level monitoring instrumentation will be installed, and groundwater elevations will be recorded to determine if groundwater levels are declining.

1.5 EVALUATION CRITERION

1.5.1 Evaluation Criteria A-Project Benefits

1.5.1.1 Adds to Available Water Supplies

Provide a detailed description of the community that the project will serve.

The applicant's community is designated as a disadvantaged community because it is a federally recognized Tribe. In addition, census tract 49047940201, Uintah County, Utah, in which most of the Tribal members reside, is identified as low income by the CEJST methodology (Table 3). Uintah County and 41% of its neighbors are also identified as disadvantaged. In addition, Uintah County is classified as disadvantaged by exceeding the 90th percentile for unemployment and

asthma among adults. The county also ranks high in several other categories monitored by the CEJST (Table 4).

Table 3: Census Tract Data for Uintah County, Utah

Census Tract:	49047940201	
County, State	Uintah, Utah	
Population	5,481	
Burden Thresholds	Percentile	Threshold
Low Income	78 th	>65 th
Asthma	94 th	>90 th
Abandoned Mine	Yes	Presence of one or more abandoned mine land within the tract
Unemployment	92 nd	>90 th

Table 4: Climate and Economic Justice Screening Tool Data for Census Tract 49047940201, Uintah County, Utah (categories exceeding the 60th percentile)

Category of Burden	Percentile
Expected agricultural loss rate (Natural Hazards Risk Index)	69
Share of properties at risk of fire in 30 years	84
Energy burden	77
DOT Travel Barriers Score	61
Current asthma among adults aged greater than or equal to 18 years	94
Diagnosed diabetes among adults aged greater than or equal to 18 years	77
Coronary heart disease among adults aged greater than or equal to 18 years	72
Low life expectancy	64
Low median household income as a percent of area median income	63
Unemployment (percent)	92
Percent of individuals below 200% Federal Poverty Line	72
Percent of individuals <100% Federal Poverty Line	73
Percent individuals age 25 or over with less than high school degree	81

Demonstrate that the primary purpose of the proposed project is to provide domestic water supplies to communities or households that do not have reliable access to domestic water supplies.

This project will provide a domestic water supply for the UTWS, which supplies water to the residents of the Uintah and Ouray Reservation as well as three consecutive connections. The UTWS receives its water supply from the Uriah Heeps Spring and Whiterocks Spring water collection systems. Both systems are primarily supplied by subsurface spring collection systems. During dry years, the productivity of the spring systems declines. From April to June, the area located below the Uriah Heeps treatment plant, known as Indian Bench, can experience low pressure due to decreased production from the springs. The decline has occurred multiple times, most recently in 2021, when low pressure led to a boil water order being issued by the EPA Region 8. An example of a recent boil order can be found in Attachment A. As a result of the drop in the

water yield of the springs, the UTWS staff are forced to haul drinking water and portable toilets to the affected Tribal members. The lack of water has also required some Tribal members to shower at the community center.

In addition to providing a supplemental supply of water to the Whiterocks and Uriah Heeps spring collection systems, the project will also provide clean drinking water to approximately 20 Tribal households that rely on shallow individual wells or developed springs for water supply. Some of these private sources repeatedly run dry while others produce poor quality water. Some of the wells have arsenic in the water and is not safe for Tribal members to drink. This project will provide these Tribal members with a safe reliable source of clean drinking water.

Describe the need for the domestic water supply project including any prominent public health and safety concerns, interruptions in supply or other reasons that the community does not currently have reliable access to domestic water supplies.

The water system does not currently have an upstream storage reservoir, so it relies on a constant supply of water to the system. Unfortunately, due to the ongoing drought, the water levels in the springs have declined causing lower pressures in the distribution system. Low pressure events pose serious health risks to the community as positive pressure in the distribution system is the main line of defense in preventing contaminated water from entering the distribution system. The Project will also provide a replacement supply of water for the current residents along Farm Creek Loop Road who are on private wells that go dry during these drought periods and have poor water quality. Due to the extended drought, water levels in this area have dropped resulting in wells going dry. As a result, Tribal members rely on water that is hauled to their homes. In addition to wells going dry, some of the wells have high levels of arsenic in the water. Drinking water that contains arsenic can increase the risk of cancer and other serious health effects.

The community needs a reliable source of water supply that is not subject to climate variability. With the continued trend of increasingly frequent, severe, and prolonged droughts (Bureau of Reclamation, 2021), the UTWS will face these conditions more frequently. The addition of a groundwater source to the water supply portfolio would give the UTWS the ability to provide safe water with a high degree of reliability. The UTWS would be able to focus on operations and maintenance rather than the emergency response activities due to boil water orders. This would also relieve the burden on the residents who have to boil water or shower at the community center.

Explain how the proposed project will increase reliable access to domestic water supplies. Provide this quantity in acre-feet per year the average annual benefit that the domestic water supply project will provide. How many people is it estimated to serve? How were these estimates calculated (average benefit and population)?

The proposed project will provide a reliable source of water to the Tribe that does not fluctuate throughout the year. The groundwater will be available to supplement the spring water when the spring yield declines. It will also provide a reliable source of water to the Tribe in the future as the spring yield continues to decline due to drought conditions and climate change. During the last few decades, the available supply of the Whiterocks Spring and Uriah Heeps Spring has been gradually decreasing due to low recharge, primarily caused by climate change and higher

groundwater withdrawal due to increased demand. The project will increase reliable access to domestic water supplies by augmenting the total water supply capacity by an estimated 168 AFY. At peak supply, the project can supply a total of 493 AFY if pumping occurs year around. This amount was calculated by providing the residents of Farm Creek Loop Road with 400 gallons per day per connection and 432,000 gallons per day to supplement the Whiterocks and Uriah Heeps spring collection systems for 4 months during the time of year when spring yield declines. At peak supply, the project can supply a total of 493 AFY if pumping occurs year around. More importantly, the project will provide an alternative source of water that is not supplied by the spring systems on which the UTWS currently relies, and does not suffer decreased productivity during drought conditions. The Project will serve an estimated population of 4,312, not including the consecutive systems (Table 5). Approximately 3,000 members of the Ute Indian Tribe of the Uintah and Ouray Reservation will be served by the Project.

Table 5: Population served by Ute Tribe Water Systems

Service Area	Population Served
Uriah Heeps	3,500
Whiterocks	812
Total	4,312

The population served was obtained from the EPA records for the Uriah Heeps and Whiterocks water systems.

How many years will the project continue to provide benefits?

Components of the project have service lives that range from 15-100 years. With regular maintenance and upkeep, the project can provide service in perpetuity. The main components of the project are the well field, water mains, water treatment plant, water storage tank, and the transmission line that connects the well field to the water treatment plant. The service life of the transmission line is estimated to be 80-100 years. The wells can be expected to produce water as long as the groundwater aquifer is recharged. Pumps are expected to be replaced approximately every 15-25 years. The water treatment plant and tank are expected to last 40-50 years.

What is the estimated capacity of the new well(s), and how was the estimate calculated?

The estimated total capacity of the project is 300 gpm or 3 wells with a capacity of 100 gpm each. As described in the project description, the capacity estimation was based on a geophysical survey and pumping tests conducted in 2021.

How much water do you plan to extract through the well(s), and how does this fit within and comply [with] state or local laws, ordinances, or other groundwater governance structures applicable to the area?

The project is expected to extract 168 AFY. However, at peak supply, the project can supply a total of 493 AFY if pumping occurs year around. The wells will be drilled to a depth of approximately 80 feet. At this depth, the wells will be extracting water from the alluvial aquifer of the Uintah River. In 1923, two federal district court decrees were issued to the Tribe that provided

water for irrigation and permitted year-round diversion of water for domestic, culinary, and stock watering uses in the Lake Fork River and Uintah River basins. The decrees were issued with an October 1861 priority date, so the Tribe's water rights are senior to other water users in the area.

Will the well be used as a primary supply or supplemental supply when there is a lack of surface supplies?

The Tribe currently receives most of its water supply from the Whiterocks and Uriah Heeps springs. The new wells are intended to be used as supplemental supply when the yield of the existing springs decreases in productivity during drought conditions. The new wells will be the primary supply of water to the residents that live on Farm Creek Loop Road who currently lack access to reliable, clean drinking water.

Does the applicant participate in an active recharge program contributing to groundwater sustainability?

The Tribe is keenly aware that it needs to actively be involved in a recharge program and has requested funds to undertake the necessary activities. As a result, the Tribe received funding to conduct a spring collection system expansion study. The study will provide recommendations for expanding the spring collection systems. The study will also look at options to maintain levels of the aquifer through direct recharge or maintaining flood irrigation upgradient of the spring collection systems.

Provide information documenting that proposed well(s) will not adversely impact the aquifer it/they are pumping from (overdraft or land subsidence).

The proposed wells will be withdrawing water from the surficial alluvium aquifer which is charged directly from rainfall and is in direct connection with Uintah River. Preliminary geophysical and groundwater studies were completed (Collier Geophysics, 2020; NRCE, 2021a). The purpose of these studies was to determine the optimal site for drilling groundwater wells and the aquifer sustainable yield.

Figure 3 shows the results of the geophysical survey conducted by Collier Geophysics Inc. in 2020 and the results of the pumping tests conducted by NRCE in 2021. The studies show that the alluvial aquifer in Target Area F is an adequate source of groundwater. Figure 4 shows the result of the hydraulic groundwater model to estimate the drawdown that will result from long-term pumping of 300 gpm from three wells. The model shows that the steady state drawdown will be 23.5 feet in the vicinity of the wells and becomes almost zero closer to the river (1 mile away from the pumping center).

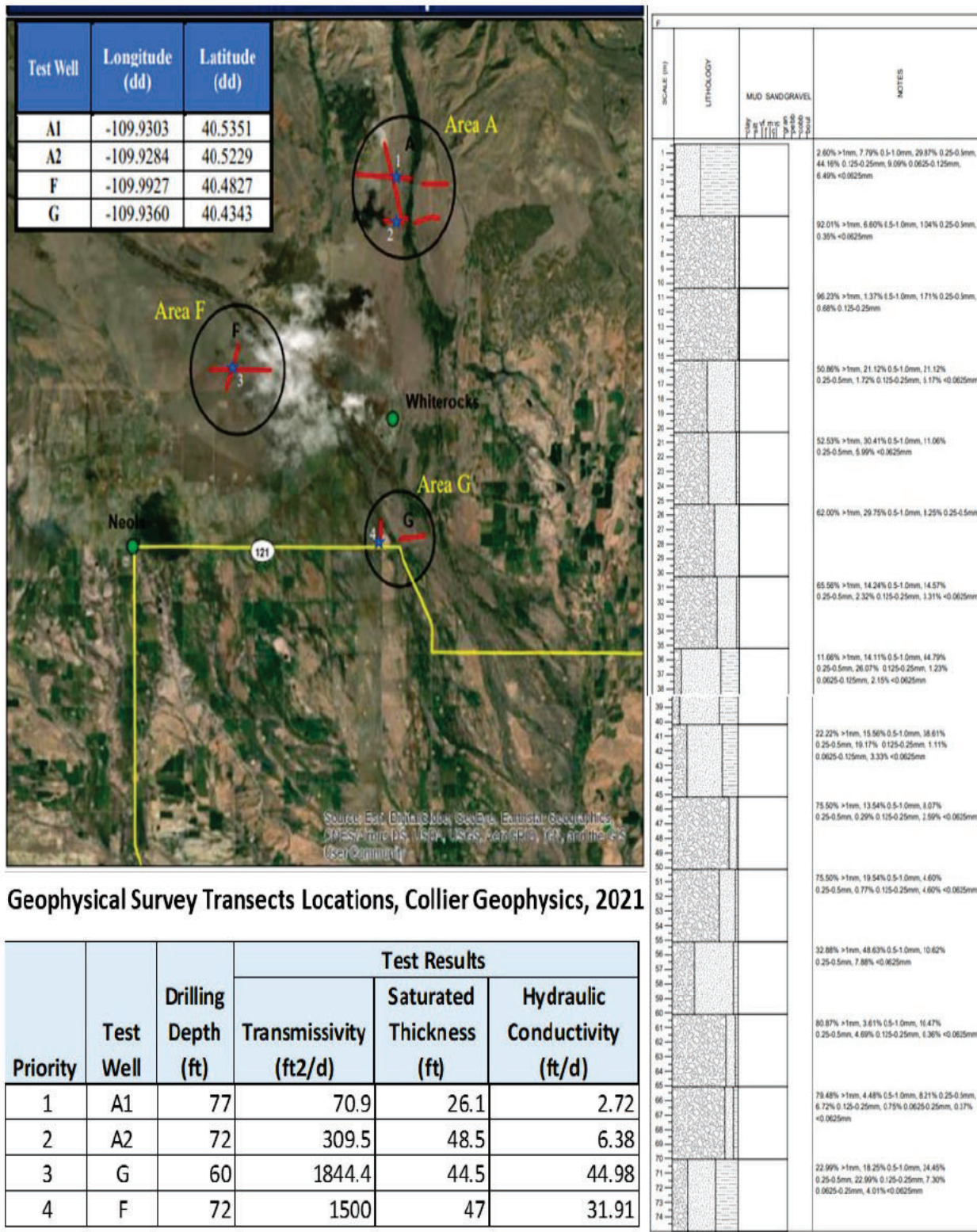


Figure 3: Well testing data collected during 2020-2021. The project will be located in Target Area F.

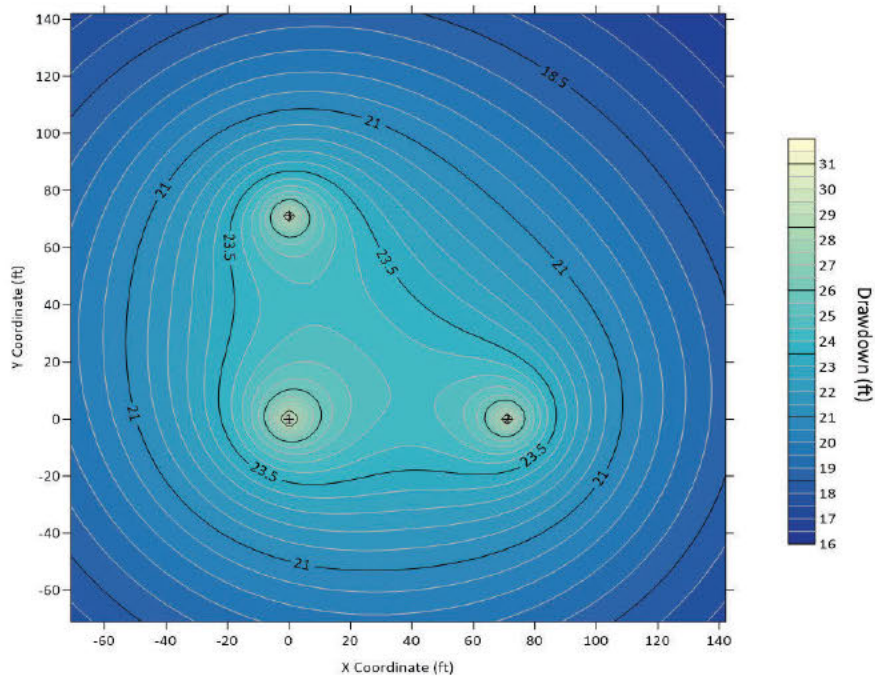


Figure 4: Steady State Drawdown Resulting from 3-Wells Operation (100 GPM Each, 70 ft Spacing)

Describe the groundwater monitoring plan that will be undertaken and the associated monitoring triggers for mitigation actions. Describe how the mitigation actions will respond to or help avoid any significant adverse impacts to third parties that occur due to groundwater pumping.

The groundwater monitoring plan will include the conversion of the existing test wells at Target Areas A, F, and G into groundwater monitoring wells. These wells will be used to monitor the groundwater level in the proximity of the three production wells. The monitoring instrumentation will be integrated into the control system at the on-site treatment facility and connected to the UTWS SCADA system. The estimate of the well capacity was based on a constant head test, and thus no drawdown of the aquifer is planned or intended. Because this is an unconfined aquifer, no land subsidence is expected.

As mentioned previously, the drawdown at 1 mile from the well is almost zero. According to the Utah Division of Water Rights, there are no producing wells within a 1-mile radius of the proposed well location, so the Tribe does not anticipate that any third-party water users will be impacted by the Project.

1.5.1.2 Environmental & Other Benefits

1. Climate Change

In addition to drought resiliency measures, does the proposed project include other natural hazard risk reductions for hazards such as wildfires or floods?

The project does not include other natural hazard risk reductions for hazards such as wildfires or floods. However, the project will provide additional water storage that the Tribe can use for fighting nearby wildfires.

Will the proposed project establish and use a renewable energy source?

Currently, the proposed project does not include the establishment of a renewable energy source. However, the Tribe will explore options for future integration of renewable energy to power the well's pumping systems, such as solar or wind energy, to enhance the project's sustainability and reduce its carbon footprint.

Will the proposed project reduce greenhouse gas emissions by sequestering carbon in soils, grasses, trees, and other vegetation?

The proposed project is not designed to sequester carbon directly in soils, grasses, trees, or other vegetation. Its primary function is to provide a sustainable water source for the community. However, by enabling more efficient water use and reducing the need for energy intensive emergency response activities during drought periods, it may contribute indirectly to lower greenhouse gas emissions.

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

The proposed project is a component of sustainable infrastructure, enhancing community climate resilience by providing a reliable water source during drought conditions exacerbated by climate change. While it does not include traditional green infrastructure elements, it is designed with sustainability in mind, using energy-efficient pumping technology and responsible water management practices to reduce environmental impact.

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

The proposed project does not directly target air or water pollution reduction. Its primary goal is to secure a sustainable water supply. However, it indirectly supports pollution mitigation by reducing the need for energy-intensive activities such as water hauling or boiling. This will also reduce the production of waste from bottled water use during drought periods.

Does the proposed project have a conservation or management component that will promote healthy lands and soils or serve to protect water supplies and its associated uses?

Yes, the proposed project incorporates a conservation component focused on the sustainable management of the alluvial aquifer that is the source of the groundwater. The Tribe will implement a continuous monitoring system to track water levels and ensure that extraction does not surpass the aquifer's recharge rate. This preventive measure is key to promoting healthy lands and soils,

as it helps maintain the natural hydrological balance, thus serving to protect the community's water supplies and associated land uses.

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

The proposed project will contribute to climate change resiliency by enhancing the reliability and sustainability of the UTWS water supply system. By adding groundwater wells, the project diversifies the water supply sources, reducing the dependency on the current spring sources. These springs are closely tied to surface water flows and therefore can be highly vulnerable to the impacts of climate change. These impacts from climate change result in more frequent and prolonged droughts. Groundwater generally offers a more reliable source during these periods.

The supplemental wells can be operated in a way that complements the springs and allows for adaptive management of water resources. During times of abundant spring supply, the groundwater well can be used minimally, allowing for aquifer recharge. The well is located in an alluvial aquifer that has a higher recharge rate than deep aquifers and is less vulnerable to over-extraction.

2. Environmental Benefits

Does the project seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit wildlife, fisheries, or habitats? Do these benefits support an endangered or threatened species?

This project will include a habitat conservation plan to minimize potential impacts on local ecosystems during the construction and operation of the well. Regular environmental monitoring will ensure that groundwater extraction does not adversely affect surface water levels, with adaptive management strategies ready to mitigate any unintended consequences. The Tribe will collaborate with local ecologists and wildlife experts to monitor the project's impact on the ecosystem and make adjustments as needed to support the resilience of local habitats.

What are the types and quantities of environmental benefits provided, such as the types of species and the numbers benefited, acreage of habitat improved, restored, or protected, or the amount of additional stream flow added? How were these benefits calculated?

The project primarily focuses on securing a reliable water supply for the community and does not directly address species protection or yield measurable increases in streamflow for ecological benefits. However, it promotes environmental stewardship by reducing reliance on the shallow springs, which indirectly conserves local ecosystems. The project's indirect ecological benefits include avoidance of over-extraction during critical low-flow periods, which can be vital for maintaining the ecological balance. While quantifiable benefits to specific habitats or species are not the focus, the initiative upholds a commitment to sustainability and environmental responsibility by implementing energy efficient technologies and sustainable water management practices.

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

The proposed project is not directly linked to species conservation but supports ecological balance by reducing water scarcity stressors. While it will not directly change species listing likelihoods, it aids in creating a more stable environment, potentially mitigating indirect pressures on local species.

3. Other Benefits

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

No.

Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)? Describe the associated sector benefits.

The UTWS provides domestic water to the members of the Ute Indian Tribe who live on the Uintah and Ouray Reservation. The UTWS also provides water to Tribal and non-Tribal commercial and industrial users. The UTWS also has four consecutive connections that purchase water to provide water for municipal supply, three of which are currently being used. All of these sectors will benefit from the increased reliability provided by this project.

Will the project benefit a larger initiative to address sustainability?

The project is part of the Tribe's desire to advance its long-term water plan. Part of that plan involves providing adequate drinking water to its Tribal members. By developing supplemental water supplies, the Tribe can continue to provide water to its Tribal members in the future.

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

The Project will provide supplemental water to the Whiterocks and Uriah Heeps water systems during times of drought and low spring flow. The supplemental water will prevent the Tribe from having a water crisis by ensuring that the Tribe has a reliable source of water if the springs yield declines.

1.5.2 Evaluation Criteria B-Planning and Preparedness

Describe any prior planning efforts related to the proposed project.

In 2011, the Tribe performed an analysis on providing water supply to the Farm Creek Loop Road area (Epic, 2011), which included analyzing the potential for the current site known as Target Area F to provide additional and supplemental water supply. This study noted that private wells for homeowners in the Farm Creek Loop Road area periodically run dry and produce poor quality water. In 2020, the Tribe continued the water supply planning and hired Natural Resources Consulting Engineers, Inc. (NRCE) to perform a study of four potential well sites within Tribal lands. NRCE delivered a final report of the 2020 pumping tests findings to the UTBC in September 2021 (NRCE, 2021a). This report contained records of the test well drilling, pumping tests, and water quality analysis. Target Area F was identified as one of the candidate areas that could provide additional flow to benefit the UTWS.

In April 2021, the UTBC adopted the Water Infrastructure Rehabilitation and Development Plan (Plan) as a guidance document for planning infrastructure development and improvements for the

UTWS (NRCE, 2021b). This Plan discussed the water issues facing the UTWS and provided recommendations on improvements and a cost estimate to make the necessary improvements. Developing Target Area F to provide supplemental water to the UTWS was part of the Plan.

Was the plan developed through a collaborative process?

The Plan was developed through input received from Farm Creek Loop Road residents and UTWS staff. The Tribe also received input from the IHS on developing the Plan and which Projects to prioritize. The Plan included collaboration with different Tribal departments, including the UTWS and the UTBC.

If the plan was prepared by an entity other than the applicant describe whether and how the applicant was involved in the development of the plan. If the applicant was not involved in the development, explain why.

The UTBC desired to make improvements to the UTWS and directed NRCE to prepare the Plan. The Tribe was directly involved in the development of the Plan and provided data, insight, and recommendations on improvements. The UTBC approved the Plan and directed NRCE to implement the improvements outlined in the Plan.

If the referenced plan was not developed collaboratively, please explain why. For example, the planning effort is focused on a very small area or concerns internal to the applicant.

The Plan focused on improvements to the UTWS. Therefore, collaboration with other water, land, or agricultural groups was not necessary.

Does the plan include elements of drought planning? If so, please describe.

The Plan outlined proposed groundwater resources that could be developed to provide the UTWS with supplemental water supplies. The current drought has caused the water yield of the Tribe's springs to decline. Therefore, the Plan provided recommendations on how to provide supplemental water to the UTWS and how to plan for future droughts.

1.5.3 Evaluation Criteria C-Severity of Actual or Potential Drought or Water Scarcity Impacts to be Addressed by the Project

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

The Reservation is primarily located in Uintah and Duchesne Counties, Utah. Duchesne County has received an emergency drought designation by the US Secretary of Agriculture every year since 2012. Uintah County has received an emergency drought designation every year except one since 2012 (USDA, n.d.). Drought conditions have caused the water levels in the spring collection systems to decline and as a result, yields have been decreasing. From April to June, the area located below the Uriah Heaps treatment plant, known as Indian Bench, experiences low pressure due to decreased production from the springs that supply the water system. The decline has occurred multiple times, most recently in 2021, when low pressure led to a boil water order being issued by the EPA Region 8.

Drought conditions have been pervasive in the area. Of the 24 years from 2000-2023, some portion of Uintah County has been classified as drought condition D0 ('Abnormally Dry') based on the

Standardized Precipitation Index, or drier for 23 of those years. Some portion of Uintah County has been classified as drought condition D3 or drier for 15 of those years (NIDIS, n.d.).

Describe any projected increases to the severity or duration of drought or water scarcity in the project area resulting from changes to water supply availability and climate change.

According to the 2021 USBR Water Reliability in the West – SECURE Water Act Report (Reclamation, 2021), drought conditions in the U.S. West are projected to increase in duration, severity, and frequency compared to droughts of the past. The Utah Department of Health echoes this finding in their Climate Change and Public Health Report (State of Utah, 2012). The long-term annual average precipitation for the Fort Duchesne area is only 6.39 inches (WRCC, n.d.), which is below the statewide average of 13 inches. The community is located in an already dry region, and any exacerbation of drought conditions is already taking place and based on the past we expect there will be significant impacts.

What are the ongoing or potential drought or water scarcity impacts to specific sectors in the project area if no action is taken and how severe are those impacts?

The community currently does not have an alternative water source available. The main water supply is provided by two springs located approximately 3.9 miles from each other. These springs are both subject to the same hydrological conditions, and a drought will decrease the productivity of both springs. The systems have experienced past low-flow conditions that have led to low pressure throughout the system that has resulted in the EPA issuing a boil water notice for portions of the service area. There existed a water quality concern for the community as the residents experience interruptions to their service requiring emergency response actions. This situation also places a strain on the UTWS, which must respond by delivering bottled water or hauling water to fill cisterns.

If no action is taken, the community will continue to face significant water scarcity impacts especially during drought conditions. The lack of adequate water supply during droughts has led to historically low-pressure issues, triggering EPA-mandated boil water orders to safeguard public health. To date these interruptions have been limited to localized areas due to low pressure in the system as the productivity of the springs has fallen. If the flow from the springs were to further decrease or if the spring collection system were to become compromised, this could impact larger areas within the community and have a far greater impact. The homeowners in the Farm Creek Loop Road area are currently using private wells that periodically run dry. These users do not have an additional source of water; water must be hauled to the sites when their wells stop producing. The ongoing water scarcity undermines business operations and discourages new investments, impairing the community's economic stability. The trajectory of these impacts is expected to worsen, as climate change intensifies drought conditions, underscoring the critical need for the project's drought resilience measures.

Whether there are ongoing or potential environmental impacts.

The reduced spring flow could potentially lead to degradation of habitats that rely on consistent moisture levels, including wetlands and riparian zones. A decline in water availability from the

springs can negatively affect plant and animal species that depend on this water source, potentially leading to reduced biodiversity. With the die-off of vegetation due to decreased water availability, soil erosion can increase, leading to the loss of topsoil and destabilization of land, which can exacerbate the effects of flooding when rains do come.

Whether there are local or economic losses associated with current water conditions that are ongoing, occurred in the past, or could occur in the future (e.g., business, agriculture, reduced real estate values).

The UTWS incurs expenses related to providing bottled water to the residents and hauling water to fill tanks when the flow from the springs drops causing low pressure within the system. The community faces losses related to time and expense related to acquiring clean drinking water during these periods as bottled water or boiled water must be used in place of tap water. The affected regions have been historically localized to small areas near the upper portion of the distribution system. The community could face significant losses if production from the spring system drops further, and water must be supplied to greater numbers of residents over a larger portion of the system.

Commercial businesses rely on the UTWS to provide them with clean drinking water. If the yield of the springs continues to decline, the UTWS might not be able to provide the needed water. Without the water, the businesses would need to close, limit capacity, or suspend operations. This impact would result in economic loss for the Tribe. Looking forward, without a sustainable alternative water source, these economic challenges are likely to escalate, reflecting the growing severity and frequency of drought conditions driven by climate change.

Whether there are other water-related impacts not identified above (e.g., tensions over water that could result in a water-related crisis or conflict).

Ongoing water scarcity has the potential to exacerbate social tensions within the community. As drought reduces the spring water supply, competition for this limited resource can lead to disputes among residents and businesses. Such conflicts can undermine community unity and may escalate to require resolution through legal or governmental channels. The persistent uncertainty surrounding water availability can also affect mental health and the collective well-being of the community. In the extreme case, if the water scarcity continues without a reliable alternative solution, it could precipitate a local water crisis, with long-term repercussions for the social fabric of the area.

1.5.4 Evaluation Criteria D-Presidential and DOI Priorities

1.5.4.1 Disadvantaged or Underserved Communities

Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool to identify the disadvantaged communities that will benefit from your project.

The Ute Indian Tribe is a federally recognized Tribe.

If applicable, describe how the proposed project will serve or benefit a disadvantaged or underserved community, identified using the tool described above.

The project will provide multiple benefits, including improving public health and safety, adding a new water supply, increasing system reliability, and providing critical diversity in the water supply portfolio. The project will benefit public health and safety by adding a reliable supplemental source of water to be used during drought conditions, which will avoid the low-pressure conditions in the distribution system that result in boil water notices. The Project will add a new supplemental supply in the form of a groundwater well that draws from a nearby alluvial aquifer. Also, the Project will diversify the water supply portfolio by providing a supply source that is not as sensitive to climate variation and drought as the current spring supplies. The Project will also improve public health by replacing the 8-inch water main that contains asbestos. In addition, the Project will provide a clean source of drinking water to residents that live on Farm Creek Loop Road as some of their wells have higher levels of arsenic.

1.5.4.2 Tribal Benefits

Does the proposed project directly serve and/or benefit a Tribe?

The proposed project will directly serve and benefit the Ute Indian Tribe, which is a federally recognized Tribe. The water system currently serves approximately 3,000 Tribal members. The supplemental water supply would ensure that Tribal members have clean drinking water now and in the future.

Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?

Yes, because the Tribe is a federally recognized Tribe located in the Colorado River Basin, the USBR has the responsibility to protect and support the Tribe in the use of its Indian Reserved water rights. This Project will allow the Tribe to further develop its water rights as outlined in the 1923 decrees.

1.5.5 Evaluation Criteria E-Readiness to Proceed and Project Implementation

Describe the implementation plan of the proposed project.

According to the NOFO, the anticipated award date is October 31, 2024. The Project schedule was developed assuming an October 31, 2024 award date. The Project schedule will be adjusted as necessary depending upon the award date. The Project will consist of four main stages: environmental permitting, engineering design, bidding, and construction. The Tribe will conduct project management throughout the process. The Tribe has developed conceptual drawings for the Project. However, final engineering design will be part of the Project. The environmental permitting and right-of-way (ROW) permitting is anticipated to take 1 year and will occur from October 2024 through September 2025. The findings from the environmental review will be incorporated into the engineering design, which will take place from October 2025 to January 2026. Once the engineering design has been finalized, the Project will go through the bidding process from February 2026 through May 2026. Construction for the Project is anticipated to occur from July 2026 through August 2027. The project schedule can be found in Table 6. The

Project will involve the construction of three wells, installation of a water transmission line, construction of a water treatment plant and water tank, and the upgrading of a water main.

Table 6: Project Schedule

	2024			2025									2026									2027															
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Task 1: Project Management																																					
Task 2: Environmental/ROW Permitting																																					
Task 3: Engineering Design																																					
Task 4: Construction Bidding																																					
Task 5: Construction and Well Drilling																																					
Semi-Annual and Final Reporting																																					

Describe any permits or approvals that will be required.

Federal

The EPA does not require any permits for the construction activities proposed in this Project with respect to the public water system and the associated facilities as these activities fall under the jurisdiction of tribal regulations. The Project will be submitted to the EPA and the USACE for review under Section 404 of the Clean Water Act and may be subject to required permits if dredge and fill activities discharge into water bodies, though this is not expected. The Project will also be submitted to the IHS for review and comment.

Tribal Permits

Cultural Resources

The Tribe has a Tribal Historic Preservation Officer (THPO). The Project will be submitted to the THPO for review and comment. The THPO will be closely involved in the Project to ensure that areas of cultural or historic significance are protected.

UTERO

All subcontractors working under this grant will be required to contact the Ute Tribe Employment Rights Office (UTERO) to obtain a UTERO license. The purpose of the UTERO office is to promote the self-sufficiency of the Tribe, its members, and families and address the employment needs of other Indian residents of the Uintah and Ouray Reservation.

Business License

All persons engaging in business activities within the Reservation are required to apply for and purchase a Business License appropriate to the type and term of their business activity. As part of the business license, an access permit must also be obtained. Anyone caught on the Reservation without an access permit may be fined and escorted off the Reservation. All subcontractors who perform work as part of this grant will be required to obtain a Business License and access permit.

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

In 2011, the Tribe performed an engineering analysis on providing water supply to the Farm Creek Loop Road area (EPIC, 2011). The analysis included studying the potential for Target Area F to

provide additional and supplemental water supply to the UTWS. In 2020, the Tribe continued the water supply planning by performing a study of four potential well sites within Tribal lands. Target Area F was identified as one of the candidate areas that could provide sufficient flow to benefit the UTWS (NRCE, 2021a). In April 2021, the UTBC developed and adopted the Water Infrastructure Rehabilitation and Development Plan as a guidance document for planning infrastructure development and improvements for the UTWS (NRCE, 2021b). Developing Target Area F was discussed in the Plan as an option to provide supplemental water to the UTWS.

Describe any land purchases that must occur before the project can be implemented.

All the land where the project will be implemented is located on Tribal land. Therefore, no land purchase will be necessary to implement the project.

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

The project will require additional Tribal budget and resources but should not require new policies or administrative actions aside from the administrative actions needed to approve the project.

1.5.6 Evaluation Criteria F-Nexus to Reclamation

The Ute Indian Tribe is a federally recognized Tribe.

1.5.7 Evaluation Criteria G-Stakeholder Support for Proposed Project

Describe the level of stakeholder support for the proposed project. Are letters of support from stakeholders provided?

Ballard, Johnson, and Ouray Park Water Improvement Districts have supported making improvements to the UTWS. Letters of support for the proposed project from Ballard and Johnson Water Improvement Districts are included in Attachment B.

Explain whether the project is supported by a diverse set of stakeholders, as appropriate, given the types of interested stakeholders within the project area and the scale, type, and complexity of the proposed project.

The project is limited in scope and would only affect those entities that receive water from the UTWS. In addition to the Tribe, the three water improvement districts that receive water from the UTWS will benefit from these improvements to the UTWS, and the Tribe was able to obtain letters of support from two water improvement districts before the application deadline. Improvements made to the UTWS will also benefit the commercial and industrial entities that rely on water supplied by the UTWS.

2.0 PROJECT BUDGET

2.1 FUNDING PLAN AND LETTERS OF COMMITMENT

A summary of the funding sources can be found in Table 7. The Tribe is committed to funding the Tribes share of the Project and has funded multiple engineering studies in preparation for this Project.

Table 7: Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
1. Ute Indian Tribe	
2.	
3.	
Requested Reclamation Funding	

2.2 BUDGET NARRATIVE

2.2.1 Personnel

Project implementation will primarily be conducted by specialized contractors whose costs are further detailed below. The Tribe will not seek reimbursement for staff time spent on the Project, such as project management activities, as such time would fall under normal staff activity.

2.2.2 Fringe Benefits

Fringe benefits are not included.

2.2.3 Travel

Travel to the project site is considered a part of normal staff activity, and no reimbursement or match for staff travel is being sought. Consultant costs for travel are accounted for under contractual costs.

2.2.4 Equipment

The purchase of the treatment systems and any related equipment will be included in the construction contract, and related costs are accounted for under the construction cost estimate.

2.2.5 Supplies

No materials or supplies are anticipated to be purchased for this Project.

2.2.6 Contractual

An engineering consultant will be hired to assist with the project management, environmental permitting, engineering design, and construction oversight. The Tribe's legal counsel will assist with any legal matters. The Tribe proposes hiring NRCE to provide the engineering services needed for the project. NRCE has had a long-standing and successful relationship with the Tribe for over 12 years.

NRCE has experience in water supply planning, engineering design, project management, and construction oversight. The engineering services/legal work is estimated to cost [REDACTED] as shown in Table 8.

Table 8: Engineering Consultant and Legal Costs

[illegible]

2.2.7 Construction

2.2.7.1 Equipment Use

Equipment use is included in the construction material costs below (Table 9).

2.2.7.2 Construction materials

The cost to construct three water supply wells and pumps, the 8-inch and 14-inch water main installation and connection, service line connections, the water treatment facility, and the purchase and installation of the 90,000-gallon water storage tank, is [REDACTED].

Table 9: Construction Material Costs

Item	Quantity	Unit Cost	Cost
3 wells (300 GPM, 100 ft depth)	3	[REDACTED]	[REDACTED]
8-inch water main	28400	[REDACTED]	[REDACTED]
14-inch water main	14300	[REDACTED]	[REDACTED]
Water treatment facility	1	[REDACTED]	[REDACTED]
90,000 gallon water storage tank	1	[REDACTED]	[REDACTED]
Service line connections	20	[REDACTED]	[REDACTED]
Utilities	1	[REDACTED]	[REDACTED]
Sub Total			[REDACTED]
Contingency 15%			[REDACTED]
Total			[REDACTED]

2.2.8 Total Project Costs

The total cost to complete the project is [REDACTED] (Table 10). This amount includes a [REDACTED] 15% construction contingency to allow for unforeseen expenses.

Table 10: Total Project Expenses

Item	Quantity	Unit Cost	Cost
3 wells (300 GPM, 100 ft depth)	3		
8-inch water main	28,400		
14-inch water main	14,300		
Water treatment facility	1		
90,000 gallon water storage tank	1		
Service line connections	20		
Utilities	1		
Sub Total			
Contingency 15%			
Total			
Environmental permitting/engineering services	1		
Administration/legal fees	1		
Total			

2.2.9 Other

No other expenses are included.

2.2.10 Indirect Costs

No indirect costs are included.

3.0 OTHER APPLICATION COMPONENTS

3.1 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

This section contains responses to the questions contained in section H.1 of the NOFO.

Question 1: Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)?

This project will have minimal effect on the air and water quality, as well as animal habitat. The expected earth-disturbing work in this project is mainly involved in the trenching required to install new water utility piping. The disturbed areas will be revegetated as necessary to prevent the growth of invasive species. As necessary, dust suppression measures will be taken to ensure that dust does not impact air quality. The Project will have minimal impact to Tribal lands.

Question 2: Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

According to the US Fish and Wildlife website Information for Planning and Consolation (IPaC), the Western Yellow-Billed Cuckoo is a threatened bird on the Reservation, and four fish that are either endangered or threatened have also been identified in rivers that pass through the Reservation. NRCE will correspond with the Tribe's Fish and Wildlife Department to ensure that the Yellow-Billed Cuckoo population is not impacted. In 2016, the Tribe developed a conservation strategy to protect the Western Yellow-Billed Cuckoo. The species has been observed breeding, nesting, and foraging on riparian and wetland areas on Tribal lands within the Reservation. The Tribe will follow the strategies in the document to ensure that the habitat is protected. The preferred alternative is to bore under the Uintah River. Little to no work is expected to be done in the river, so no endangered or threatened fish will be impacted. Any impact to wetlands will be minimal.

Question 3: Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

According to the National Wetlands Inventory Database, the pipeline will cross some wetlands (Figure 5). However, the disturbance to wetlands will be minimized. The wetland boundary will be surveyed and located to ensure that no fill material is placed on top of wetlands. The area is anticipated to be temporarily disturbed during construction but will be restored once construction is complete. Any disturbed areas will be reseeded with a native wetland seed mix.

Question 4: When was the water delivery system constructed?

The original water distribution network, about 80% of the system today, was built in the 1950s and 1960s. Expansions and connections to the system have increased since the 1980s.

Question 5: Will the proposed project result in any modification of or effects to individual features of an irrigation system.

The project will not result in any modification or effects to individual features of an irrigation system.

Question 6: Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

There are no known archeological sites or buildings eligible for listing on the National Register of Historic Places in the vicinity of the project. The THPO will be contacted about, review, and provide comments on the Project, and said comments will be incorporated into the Project.

3.2 REQUIRED PERMITS OR APPROVALS

All work will be done according to local building codes and Tribal and federal regulations. The following permits and/or approvals are anticipated for the project.

- Environmental Protection Agency approval
- US Army Corps of Engineers 404 Permit
- Indian Health Services approval
- Tribal Fish and Wildlife Department approval
- Tribes Historic Preservation Officer approval

3.3 OVERLAP OR DUPLICATION OF EFFORT STATEMENT

There is no overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel. This proposal does not duplicate any proposal or project that has been or will be submitted for funding consideration to any other potential funding source.

3.4 CONFLICT OF INTEREST DISCLOSURE STATEMENT

There is no actual or potential conflict of interest at the time of submission.

3.5 UNIFORM AUDIT REPORTING STATEMENT

The Tribe does not have the FY 23 Uniform Audit Report completed yet. However, the FY 22 Uniform Audi Report should be available on the Federal Audit Clearinghouse website. Ute Tribe EIN: 87-0210648

3.6 SF-LLL: DISCLOSURE OF LOBBYING ACTIVITY

The grant funds will not be used for lobbying activities.

3.7 LETTERS OF SUPPORT

Letters of support from the Ballard and Johnson Water Improvement Districts is included in the application as Attachment B.

3.8 OFFICIAL RESOLUTION

The UTBC is committed to making improvements to the UTWS. An official resolution from the UTBC committing to the project is included as Attachment C. Once awarded, the UTBC will enter into a cooperative agreement with the USBR. The resolution includes the following required elements:

- 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
- That the Tribe will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

3.9 OMB 4040-0013 CERTIFICATION REGARDING LOBBYING

The grant funds will not be used for lobbying activities.

3.10 LETTERS OF FUNDING COMMITMENT

When the Tribe is awarded the grant funding, the Tribe will submit a letter of commitment to the USBR. The letter of commitment will include the following elements:

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

4.0 REFERENCES

- Collier Geophysics. (2020). FINAL REPORT - Farm Loop Road, Whiterocks, and Uriah Heap Water Improvement Project - Geophysical Investigation.
- Epic Engineering [Epic]. (2011). Farm Loop Road, Whiterocks & Uriah Heap Water Feasibility Study.
- National Integrated Drought Information System [NIDIS]. (n.d.) “U.S. Gridded Standardized Precipitation Index (SPI) from ClimGrid-Monthly | Drought.Gov.” Drought.Gov. <https://www.drought.gov/data-maps-tools/us-gridded-standardized-precipitation-index-spi-nclimgrid-monthly>.
- Natural Resources Consulting Engineers, Inc. [NRCE]. (2021a). Report of Well Drilling, Completion, and Testing of Test Wells A1, A1, F, and G.
- Natural Resources Consulting Engineers, Inc. [NRCE]. (2021b). Water Infrastructure Rehabilitation and Development Plan: Prepared for: Ute Indian Tribe of the Uintah and Ouray Reservation.
- Reclamation (Bureau of Reclamation) (2021). Water Reliability in the West - 2021 SECURE Water Act Report. Prepared for the United States Congress. Bureau of Reclamation, Water Resources and Planning Office. Denver, Colorado
- State of Utah (2012). Climate Change and Public Health. Division of Disease Control and Prevention. https://health.utah.gov/enviroepi/healthyhomes/epht/ClimateChange_UEPH_TN.pdf (Accessed October 9, 2023)
- U.S. Department of Agriculture [USDA]. (n.d.). “Disaster Designation Information.” Accessed October 9, 2023. <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/disaster-designation-information/index>.
- Western Regional Climate Center [WRCC]. (n.d.). “FT DUCHESNE, UTAH - Climate Summary.” Accessed October 9, 2023. <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ut2996>.

DRINKING WATER WARNING

The Uriah Heeps 084990002 water system lost pressure in the distribution system

BOIL YOUR WATER FOR THREE MINUTES BEFORE USING

The upper portion of the Uriah Heeps (084990002) water system experienced low pressure/ water outages starting on on April 10, 2021 and is ongoing. Ute Tribe Water Systems was made aware on April 13, 2021. This is due to current drought conditions in the area, impacting the output of the Uriah Heeps springs. This led to a loss of pressure in the upper part of the distribution system, which may cause backpressure, backsiphonage, or a net movement of water from outside the pipe to the inside through cracks, breaks, or joints in the distribution system that are common in all water systems. Such a system failure carries with it a high potential that fecal contamination or other disease-causing organisms could enter the distribution system. These conditions may pose an imminent and substantial health endangerment to persons served by the system.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a rolling boil for at least (3) three minutes, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water. ALL STORED WATER, DRINK OR ICE MADE RECENTLY FROM THIS SUPPLY SHALL BE DISCARDED.
- *Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly and people with severely compromised immune systems.*
- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

What happened? What is being done?

The drought will likely continue through the summer. The Water Systems staff are working on bringing on alternative sources of water to supplement the system. Currently, you can obtain cases of bottled water by calling Water Systems. WS staff are also working on arranging showers at the community gyms.

We will inform you when you no longer need to boil your water. For more information, please contact **Water Systems** at **722-5176** or **at 988 South 7500 Street East in Fort Duchesne.**

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by Ute Tribe Water Systems

Water System ID#: 084990002

Date distributed: 04/13/2021

Attachment B: Letters of Support



October 12, 2023

US Bureau of Reclamation
Denver Federal Center
Building 67, Room 152
6th Ave & Kipling Street
Denver, CO 80225

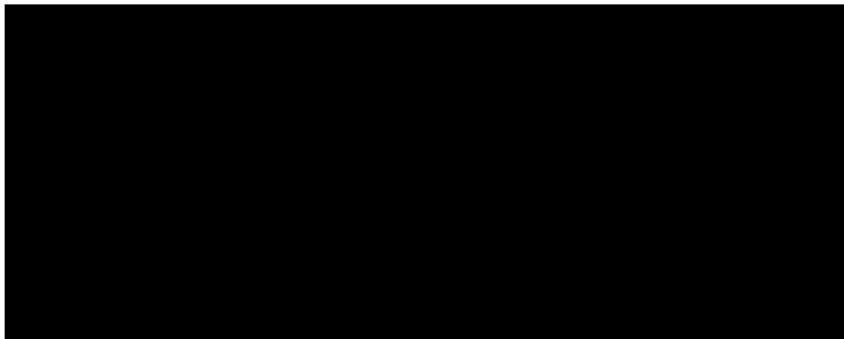
Re: Letter of Support for the Ute Tribal Water System Improvements

To Whom It May Concern:

The Ute Indian Tribe (Tribe) provides culinary water to over 3,000 Tribal members on the Uintah and Ouray Reservation (Reservation) and three water improvement districts through the Ute Tribe Water System (UTWS). Due to lack of funding and investment, UTWS has deteriorated and needs critical improvements and upgrades. The Tribe has the desire to invest in the water supply and distribution infrastructure on the Reservation. In April 2021, the Tribe prepared a comprehensive water infrastructure rehabilitation and development plan (Plan) that identified the critical needs of the Tribe's existing water supply and distribution system. The Plan identified the need to develop its groundwater resources. The Tribe plans to drill three municipal wells to provide water to residents in the Farm Creek Loop Road area and supplemental water to the Whiterocks and Uriah Heaps water systems. This is a major capital improvement project that currently presents a significant financial hurdle to the Tribe. Therefore, the Tribe is requesting funds from the US Bureau of Reclamation (USBR) to make these improvements to the UTWS.

This letter is to confirm that Ballard City is in support of the Tribe's Water SMART Drought Resiliency proposal. The economic impact of the project will be felt immediately by Tribal members as well as long-term. The benefits include better health, economic growth, and time savings associated with having access to a clean reliable water source.

On behalf of Ballard City and Ballard Water Improvement District, we thank you for the opportunity to work with the USBR on making improvements to the culinary water supply and distribution system on the Reservation.





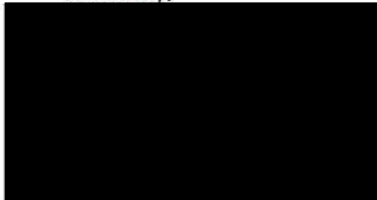
To Whom it may concern,

Johnson Water Improvement District (JWID) knows the difficulties with having good sources of water. Johnson Water's beginning was fraught with challenges with wells and getting enough quality water to its customers. We wholeheartedly support The Tribe's plan to create more water sources to improve the lives of Farm Creek Loop, Whiterocks, and Uriah Heeps water users.

We applaud the Ute Tribe in their zeal to improve the lives of those they serve. Its this kind of long term planning and action that will create prosperity in the future.

On Behalf of Johnson Water Improvement District, We support the Tribe's improvements. We all have a responsibility to safeguard our infrastructure and provide the best service we can. The Tribe is being responsible stewards by adding these wells to their system.

Sincerely,



Manager

Johnson Water Improvement District

**UINTAH AND OURAY
TRIBAL BUSINESS COMMITTEE**

Resolution No. ____

WHEREAS: The Ute 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 1(g) of the Constitution and By-Laws of the Uintah and Ouray Reservation; and

WHEREAS: The Business Committee is charged with regulation of health issues of the Tribe and see that projects are properly addressed and administered; and

WHEREAS: The Ute Indian Tribe has the availability to assist in providing services to the membership of the Ute Indian Tribe through the U.S. Department of Interior, Bureau of Indian Affairs, Bureau of Reclamation, Water Resources and Planning Office, WaterSmart Drought Response Program: Drought Resiliency Projects for Fiscal Year 2024; and

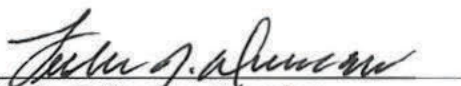
WHEREAS: The funding available is to assist the Tribe in making the water supply more reliable and drought resilient by developing Tribal groundwater resources to supplement the springs that provide the Tribe's drinking water; and

WHEREAS:

NOW, THEREFORE, BE IT RESOLVED:

BE IT FINALLY RESOLVED: That the Business Committee hereby authorizes and approves the Chairman or, in his absence, the Vice-Chairman, to execute any and all documents as may be necessary and appropriate to carry out the terms, conditions and intent of this Resolution.


Julius T. Murray, III, Chairman


Luke J. Duncan, Member

ABSENT
Christopher L. Tabbee, Vice-Chairman

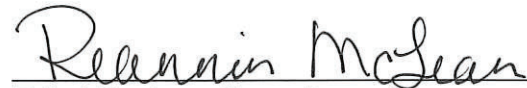

Emmett R. Duncan, Sr., Member


Mike Natchees, Member


Cleveland Murray, Member

CERTIFICATION

I HEREBY CERTIFY THAT THE FOREGOING Resolution was adopted by the Tribal Business Committee of the Ute Indian Tribe of the Uintah and Ouray Reservation pursuant to the Constitution and By-Laws of the Ute Indian Tribe of the Uintah and Ouray Reservation at a duly called meeting in Fort Duchesne, Utah, on the 31st day of October, 2023, at which time a quorum was present and votes 5 for, 0 against, 0 abstaining and 1 absent.


Tribal Business Committee - Secretary
Ute Indian Tribe, Uintah & Ouray Reservation