

WaterSMART

WATER AND ENERGY EFFICIENCY GRANTS FOR FY 2022

NO. R22AS00023
FUNDING GROUP II

UINTA RIVER BIFURCATION STRUCTURE
UINTAH WATER CONSERVANCY DISTRICT

VERNAL, UINTAH COUNTY, UTAH

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1.1. EXECUTIVE SUMMARY

Date: November 3, 2021

Applicant: Uintah Water Conservancy District (UWCD)

City, County, State: Vernal, Uintah, Utah

Category A or B: Category A

Partnering Stakeholders: Uintah & Ouray Indian Irrigation Project O&M Company, Dry Gulch Irrigation Company, Ouray Park Irrigation Company, Uinta River Irrigation Company, Uintah Independent Irrigation Company, T.N. Dodd Irrigation Company, Uinta and Whiterocks River Commission (UWRC), Roosevelt City, and additional shareholders

Project Title: Uinta River Bifurcation Structure (URBS)

Project Summary:

The Uinta River Bifurcation Structure project is a partnering effort between multiple irrigation companies served by the Uinta River system in the Uintah Basin of Northeastern Utah. UWCD is acting as the sponsor for the project, in association with the above-mentioned entities. The Uinta River Bifurcation Structure is operated by the Uinta River Commissioner with the primary purpose of regulating flows in the braided Uinta River to maintain sufficient flows in the east and west channels of the river. Irrigation companies rely on this structure to maintain water supply, diverting water to the east channel during irrigation months and providing winter storage water in the west channel during winter storage period. The dynamic nature of the Uinta River has proven a challenge for efficient water deliveries, especially during spring runoff. Proposed improvements of automated gates, telemetry, and flow measurement capabilities will allow efficiencies to be passed downstream. The Uinta River is a tributary of the Green River and Colorado River systems, with known endangered fish species and water shortfalls. Better managing this river system will benefit the 140,000 acre-feet delivered in this system and save an estimated 3,800 acre-feet, meeting the goals of this FOA. This project will greatly benefit irrigation deliveries on tribal lands of the Uintah & Ouray Ute Indian Reservation as well as a municipality.

This project was funded previously through WaterSMART as R16AP00092, and experienced delays due to Ute Ladies Tresses (ULT) flower and was unable to receive a favorable agreement and right-of-way from the Ute Tribe at an upstream location that was more advantageous to all parties involved. From the recommendations of Reclamation staff, the funding was returned and this application was planned with the revised scope and locations on the existing structure and a second supplemental structure upstream on private land. The tribal land structure has already received a Categorical Exclusion through the BIA and has no right-of-way issues. UWCD has also been proactive with the ULT process by completing T&E surveys in August of 2021. Discussions with the landowner who owns the property have commenced and a BIA Canal Act is in place which

will facilitate the right-of-way for this second structure. Both structures will work in tandem and provide the same benefits as the previous structure, plus some additional flood control and environmental benefits in a stretch of river that is important to the Ute Tribe.

Length of Time: 16 Months, including environmental tasks, design and construction

Completion Date: October 16, 2023

Federal Facility Location: N/A (Project will occur on private property and Tribal lands)

1.2. PROJECT LOCATION

The project is located 1.5 miles west of the town of White Rocks on the Uintah & Ouray Indian Reservation, in Uintah County, Utah. See Appendix C. For project location map.

1.3. TECHNICAL PROJECT DESCRIPTION

Provide a more comprehensive description of the technical aspects of your project, including the work to be accomplished and the approach to complete the work. This description should provide detailed information about the project including materials and equipment and the work to be conducted to complete the project. This section provides an opportunity for the applicant to provide a clear description of the technical nature of the project and to address any aspect of the project that reviewers may need additional information to understand.

With the URBS having been designed and reviewed through multiple agencies and even contractors, the design process can be streamlined. To reiterate the past history on this project, there had been a comprehensive design, specification, and permitting package put together for an upstream location that was later abandoned when the right-of-way process came to a stalemate between the BIA and Ute Tribe. This design addressed needs for the river and debris flows, the various stakeholders and seasonal water needs, as well as the location of the river where it first splits into the East and West Channels. The new proposal is to accomplish the same goals by placing a new structure at the old bifurcation location and install a second upstream structure in a location that has sufficient geometry and grade to allow high flows to be sent back to the East or original channel. The design will be very similar, but flows will be split between the two separate structures based on their location and diversions that require certain flows to be delivered. There is also an element of wildlife and tribal preference flows to maintain a healthy flow down the west channel, which this upstream structure can facilitate. The flood control issues that wouldn't have been resolved by just replacing the structure at the existing location can be handled with the channel cleaning from the west channel back to the east channel. The attached maps and diagrams in Appendix C.

The proposed project will include the following elements:

- Preliminary design and hydraulic analysis of URBS
- Analysis and selection of most cost-effective site for construction (upstream structure)
- Environmental surveys for Ute-Ladies Tresses, Biological Assessment, Wetland Delineation, cultural surveys, and other necessary NEPA work.
- Design of Structures, Flow Control, Flow Measurement, and Telemetry/ Automation
- Contractor selection and contracting

- Construction of project, dewatering, concrete construction, flow control gates installed, flow measurement structures and instruments, telemetry and automation of gates, power installation (likely solar), commissioning of all project elements.
- Erosion control and streambank stabilization, pole plantings and site restoration
- Access road restoration and improvements and existing structure demolition and stabilization included in project
- Monitoring of improvements and assessment of project goals and water conservation measures

The following list of objectives for the project include:

- Identify and tackle hurdles early on in the project (ROW, ULT, Funding)
- Install automated flow control gates in river and service channel
- Improve the river system’s ability to pass flood stage flows established in design criteria utilizing tandem structures with telemetry connecting their actions
- Stabilize channel and allow cobble to pass through structure without damages
- Increase efficiency in water deliveries to irrigators and storage
- Increase accuracy and timeliness of water deliveries through telemetry and gages
- Reduce required maintenance and operation costs for UWRC and partners

1.4. EVALUATION CRITERIA

The evaluation criteria portion of your application should thoroughly address each criterion and subcriterion in the order presented to assist in the complete and accurate evaluation of your proposal.

(See Section E.1. Technical Proposal: Evaluation Criteria for additional details, including a detailed description of each criterion and subcriterion and points associated with each.)

1.4.1. EVALUATION CRITERION A: QUANTIFIABLE WATER SAVINGS (28 POINTS)

Up to 28 points may be awarded for this criterion. This criterion prioritizes projects that will conserve water and improve water use efficiency, supporting the goals of E.O. 14008. 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.

1.4.1.1. DESCRIBE THE AMOUNT OF ESTIMATED 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.

Operational losses have been determined through observation and records from the river commissioner and irrigation company staff. Losses due to high runoff (diurnal patterns of flow in the river) being spilled down canals without reservoir storage have been estimated to be 3,800 acre-feet

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)?

If known, please explain how current losses are being used. For example, are current losses returning to the system for use by others? Are current losses entering an impaired groundwater table becoming unsuitable for future use?

Are there any known benefits associated with where the current losses are going? For example, is seepage water providing additional habitat for fish or animal species?

Water delivered through the UWRC comes from the Uinta and Whiterocks River drainages in the Uinta Mountains to irrigation companies on the east side of Duchesne County and western Uintah County. Storage deliveries are also provided to Ouray Park's Cottonwood, Bullock, and Brough reservoirs as well as Pelican Lake on the southern end of the system. Water lost in the system consists of over-deliveries to branches of the river that go past diversions on the west side, missing water users with water rights downstream on the east channel, eventually entering the Green River and Colorado River Systems. During high water and in cases of over-delivery, excess flows are spilled at the end of the irrigation canal systems and enter natural drainages and/or seep into the ground, contributing to increasing salinity for systems without liners or pipe. Because of the difficulty of operating the existing structure and lack of flow measurement and telemetry, water is managed poorly with under and over-deliveries to those on both channels of the *Uinta River*. The problem is expedited because of the small amount of storage on the system to provide a more consistent flow and longer availability of irrigation water. Water users rely on the bifurcation structure to effectively manage water flows for obtaining sufficient water for irrigation and storage on the southern end for Ouray Park Irrigation Company and Ute Tribal canals and reservoir.

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 (listed below) 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.*

Water savings calculations will be described throughout this application, with backup data included in Appendix D. A spreadsheet with raw data from each respective metering system for branches of the West channel can be made available upon request.

In summary, with direction and interviews with the UWRC and canal company staff and ditchriders, the diurnal pattern of flow during the summer months causes fluctuations in the river and the daily and hourly peaks of flow are not ideal for their systems. This results in over-deliveries, which either spread out down the canals by sending them through a series of diversions within the canal, or are spilled out the end of the canal. Hourly and daily averages were analyzed and used to identify and quantify spikes in the flow. There is also a seasonal spill of excess water that can cause flooding out the end of the West channel were it becomes the Bench Canal, with the overflow passing under the Whiterocks Highway. This quantity was determined with interviews from the UWRC and his observations on an annual basis.

1.4.1.4. ADDRESS THE FOLLOWING ACCORDING TO THE TYPE OF INFRASTRUCTURE IMPROVEMENT YOU ARE PROPOSING FOR FUNDING

*See Appendix A: **Benefit Quantification and Performance Measure Guidance** for additional guidance on quantifying water savings.*

(1) Canal Lining/Piping:

No pipe or canal liner is being proposed during the installation of this project.

(2) Municipal Metering:

No municipal metering aspect are expected with this project, although Roosevelt City has water rights in the UWRC system, they are metering presently through a well and a small amount for property owned by the City for secondary irrigation water.

(3) Irrigation Flow Measurement: Irrigation flow measurement improvements can provide water savings when improved measurement accuracy results in reduced spills and over-deliveries to irrigators. Applicants proposing municipal metering projects should address the following:

*(a) How have average annual water savings estimates been determined?
Please provide all relevant calculations, assumptions, and supporting data.*

Average annual water savings have been estimated based on data from canals on the west channel as well as UWRC flow records and experience of the river commissioner. Data was used from the website <http://www.duchesneriver.org/rivers/uinta-white-rocks/> with many of the major canals showing real time data and a history of flows entering each respective canal. This data was updated to reflect the last 4 to 5 years and as expected, with more aging and damage on the existing infrastructure, there is an increase in water saving potential.

(b) Have current operational losses been determined? If water savings are based on a reduction of spills, please provide support for the amount of water currently being lost to spills.

Operational losses have been determined through observation and records from the river commissioner and irrigation company staff. In discussions with the canal companies, the daily peaks and spikes in the system during the weeks of high runoff (diurnal patterns of flow in the river) are consistently spilled when sent down canals without reservoir storage. The Bench Canal and Uinta #1 canal dataset was used to find the daily average and then quantify the peaks above the average for a flow amount considered to be over-delivery water. The averages are conservative numbers, as the river commissioner and ditchriders often have to over-estimate the needed flow to make consistent deliveries during the fluctuating river supply. The URBS will allow the river commissioner to keep flows more stable and allow fluctuations to pass downstream on the east channel rather than the west channel that causes over-deliveries and spills in the system. The location at the Bench Canal diversion is considered a spill point, with excess water traveling under a county roadway culvert and south down a natural drainage channel, bypassing other critical diversions on the east channel of the Uinta River. This point was estimated to have an average of 40 cfs being spilled over a two-week period, and an average of 20 cfs spilled on weeks before and after this high water period. This water is not currently measured; however, an accurate measurement at the URBS will minimize spills.

(c) Are flows currently measured at proposed sites and if so, what is the accuracy of existing devices? How has the existing measurement accuracy been established?

Flows are currently measured at the existing structure using existing gate structures and the height of water passing through gates, both on the river radial gate and the two slide gates sending water to the west channel. Flow measurement at existing irrigation diversions benefiting from the URBS include SCADA and automated gates on the major diversions installed in conjunction with Reclamation-assisted flow measurement improvement projects beginning in 1997-98. Flows are monitored and data recorded at the following website:

<http://www.duchesneriver.org/rivers/uinta-white-rocks/> Accuracy has been established based on existing flumes and weirs and calibrated to telemetry by Reclamation, DCWCD, and UWRC staff.

(d) Provide detailed descriptions of all proposed flow measurement devices, including accuracy and the basis for the accuracy.

Proposed flow measurement devices include stilling wells with a stand pipe and lockable covers to house water level sensing devices tied to the proposed telemetry and SCADA system. It is proposed to have a gage on the main channel of the river and another on the diversion channel, allowing a measurement for water passing through diversion to remain in the east channel and the amount diverted to the west channel at both the upstream and downstream structures. A broad crested weir will be installed on the channel going to the west for accurate flow measurements. It is also proposed to install staff gages with appropriate markings and increments for the river and the diversion channel. Flow control gates will also have some level of measuring capability, with automation for remote operation. Accuracy will be within tolerances of the latest technology installed on the proposed structures.

(e) Will annual farm delivery volumes be reduced by more efficient and timely deliveries? If so, how has this reduction been estimated?

Water diverted for the UWCD system from the Uinta River will be more consistent with the proposed bifurcation structures such that the net benefit will be realized in the entire river system.

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

Using existing structure and gates to estimate flow rates and deliveries, records will be compared to new data gathered by the proposed structure and SCADA systems to document water deliveries and pass-through flows. Reports will be generated for a comparison and shared with those interested as well as posted online in a manner similar to and in conjunction with the Duchesne River system website: <http://www.duchesneriver.org/>

(4) Turf Removal:

Not applicable to this project.

(5) Smart Irrigation Controllers, Controllers with Rain Sensor Shutoff, Drip Irrigation, and High-Efficiency Nozzles:

Not applicable to this project.

(6) High-Efficiency Indoor Appliances and Fixtures:

Not applicable to this project.

(7) Commercial Cooling Systems:

Not applicable to this project

1.4.2. EVALUATION CRITERION B: RENEWABLE ENERGY (20 POINTS)

Up to 20 points may be awarded based on the extent to which the project increases the use of renewable energy or otherwise results in increased energy efficiency and reduced greenhouse gas emissions.

For projects that include constructing or installing renewable energy components, please respond to Subcriterion No. B.1: Implementing Renewable Energy Projects Related to Water Management and Delivery. If the project does not implement a renewable energy project but will increase energy efficiency, please respond to Subcriterion No. B.2. Increasing Energy Efficiency in Water Management. If the project has separate components that will result in both implementing a renewable energy project and increasing energy efficiency, an applicant may respond to both.

Note: an applicant may receive points under both Subcriteria No. B.1 and B.2 if the project consists of an energy efficiency component separate from the renewable energy component of the project. However, an applicant may receive no more than 20 points total under both Subcriteria No. B.1 and B.2.

1.4.2.1. SUBCRITERION NO. B.1: IMPLEMENTING RENEWABLE ENERGY PROJECTS RELATED TO WATER MANAGEMENT AND DELIVERY

Up to 20 points may be awarded for projects that include construction or installation of renewable energy components (e.g., hydroelectric units, solar- electric facilities, wind energy systems, or facilities that otherwise enable the use of renewable energy). Projects such as small-scale solar resulting in minimal energy savings or production will be considered under Subcriterion No. B.2.

Describe the amount of energy capacity. *For projects that implement renewable energy 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.*

The renewable energy systems included in this project include solar panels for level sensors, automated actuators, and data loggers. A typical panel that UWCD would utilize should have an average capacity of 300 watts. Specific power requirements will be analyzed during final design for components and loading.

Describe the amount of energy generated. *For projects that implement renewable energy 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. Please explain how the power generated as a result of this project will be used, including any existing or planned agreements and infrastructure.*

The power used in this project will be minor in some cases, with enough energy to operate sensors and SCADA system. Larger battery powered and solar charged setups for gate acutators will be utilized for automated and remote control. This information will provide the UWRC with flow data and allow them to make adjustments to the system.

Describe the status of a mothballed hydro plant. For projects that are brining mothballed hydropower capacity back online, please describe the following:

- (a) Clearly describe the work that will be accomplished through the WaterSMART Grant. Note: normal OM&R activities are not eligible for funding. The work being proposed must be an investment.*
- (b) Provide information about the capacity (in kilowatts) of the existing hydro system and the expected capacity once it is brough back on-line.*
- (c) Provide information about the duration that the hydro system has been offline and the reasons why it has been mothballed. Please include any regulatory reporting or filings (e.g., FERC filings) or other documentation regarding the system.*

N/A

Describe any other benefits of the renewable energy project. Please describe and provide sufficient detail on any additional benefits expected to result from the renewable energy project, including:

- (a) How the system will combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions*
- (b) Expected environmental benefits of the renewable energy system*
- (c) Any expected reduction in the use of energy currently supplied through a Reclamation project.*
- (d) Anticipated benefits to other sectors/entities.*
- (e) Expected water needs, if any, of the system.*

This project and telemetry that will be tied into will reduce the required amount of travel and time spent to adjust diversion gates and flows. With both diversion structures proposed to be regulated remotely there will be less power and fuel consumption to physically go and check things. Remote cameras may also be utilized to make observations and for security reasons.

1.4.2.2. SUBCRITERION NO. B.2: INCREASING ENERGY EFFICIENCY IN WATER MANAGEMENT

Up to 10 points may be awarded for projects that address energy demands and reduce greenhouse gas emissions by retrofitting equipment to increase energy efficiency and/or through water conservation improvements that result in reduced pumping or diversions.

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

(a) If quantifiable energy savings is expected to result from the project, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.

The project will directly benefit the river commissioner and associated irrigation companies required to maintain and visit the site. Automation, telemetry, and SCADA will reduce the number of trips that the UWRC is required to take by approximately 40 trips, averaging 40 miles per trip—using an IRS mileage rate of \$0.56 per mile results in an approximate annual savings of \$900 for mileage alone. Further, it is estimated that there are substantial savings resulting from more efficient and improved structures located in the proper locations to reduce the amount of time and resources required to bi-annually send heavy machinery and manpower into the river to move cobble rocks, manipulating the river due to inadequate control at the existing structure. Among those who have sent heavy equipment into the river include the Uintah & Ouray Indian Irrigation Project O&M Company, Dry Gulch Irrigation Company, Uintah Independent Irrigation Company, and Ouray Park Irrigation Company. Often, the action of one entity prior to high water is reversed during winter flows because of the unreliable river flows staying in the east or west channel, respectively. The primary reason for *having two separate* structures is to solve both of these shortfalls in their respective seasons *and in locations that right-of-way will be a hurdle as it was on the first funding attempt*. Based on numbers from discussions during board meetings, these entities expended several thousand dollars for this work at least every other year. Averaging the expenses per year, approximately \$12,000 every two years is expended in labor, heavy equipment operating rates, and associated fees. Often, equipment is on call during periods of high flow to move cobble rocks as they come down and plug existing structures, including the existing bifurcation structure, which is also an expense to be borne by the irrigation companies.

(b) How will the energy efficiency improvement combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions.

Less physical travel for adjustments due to increased demands will reduce required vehicle usage and therefore reduce greenhouse gas emissions. Having two structures to mitigate the need for heavy

equipment within a riparian area and expending fuel and creating additional emissions is another benefit of this project.

(c) If the project will result in reduced pumping, please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements and energy usage?

The URBS is situated in a location that provides gravity flow to avoid pumping water for water users in the system.

(d) Please indicate whether your energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.

Energy savings originate from the point of diversion for the existing structure, with additional savings coming from seasonal needs to expend funds and effort on the west channel and the cobble rock moving that has happened in the past.

(e) Does the calculation include any energy required to treat the water, if applicable?

Not applicable

(f) Will the project result in reduced vehicle miles driven, in turn reducing greenhouse gas emissions? Please provide supporting details and calculations.

The project will directly benefit the river commissioner and associated irrigation companies required to maintain and visit the site. Automation, telemetry, and SCADA will reduce the number of trips that the UWRC is required to take by approximately 40 trips, averaging 40 miles per trip—using an IRS mileage rate of \$0.56 per mile results in an approximate annual savings of \$900 for mileage alone.

(g) Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).

URBS and associated canal companies use gravity-fed systems with solar panel SCADA for flow control and measurement devices. The project will expand those solar components to connect the two structures and other telemetry in the area.

1.4.3. EVALUATION CRITERION C: SUSTAINABILITY BENEFITS (20 POINTS)

Up to 20 points may be awarded under this criterion. This criterion prioritizes projects that address a specific water and/or energy sustainability concern(s), including enhancing drought resilience, addressing the current and future impacts of climate change, and resolving water related conflicts in the region. In addition, this criterion is focused on the benefits associated with the project, including benefits to tribes, ecosystem benefits, and other benefits to water and/or energy supply sustainability.

1.4.3.1. ENHANCING DROUGHT RESILIENCY

In addition to the separate WaterSMART Environmental Water Resources Projects NOFO, this NOFO places a priority on projects that enhance drought resiliency, through this section and other sections above, consistent with the SECURE Water Act. Please provide information regarding how the project will enhance drought resilience by benefitting the water supply and ecosystem, including the following:

(a) Does the project seek to improve ecological resiliency to climate change?

The project improves ecological resiliency by more efficiently utilizing water that is diverted from the Uinta River and allows agricultural products to be grown in an otherwise desert region. The tandem structures will also allow a diverse flow of water and will not dry up any of the existing channels and in fact will maintain a steady flow through more river miles than the previous proposals. This is important to maintain existing trees and vegetation, which have high ecological value in the riparian areas of the Uinta River. With climate change necessitating better stewardship of water resources, this project is a high priority for UWCD and associated canal companies to continue their wise use of the water they are responsible for and the agricultural producers whom they serve.

(b) Will water remain in the system for longer periods of time? If so, provide details on current/future durations and any expected resulting benefits (e.g., maintaining water temperatures or water levels).

There will be water kept running through each of the current channels, with an additional channel created to send excess water from the west channel back to the east channel. With better flow management, water calculated as lost in the system out each of the canals and the overflow culvert at the Bench canal heading will be able to remain in the Uinta river, which will increase flows in the long run. This is an important aspect to this project for the Ute Tribe, as stated by their Fish & Wildlife biologists during reviews of the previous project.

(c) 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 or is subject to a recovery plan or conservation plan under the Endangered Species Act (ESA).

The primary species of interest for this project is the Ute Ladies Tresses (ULT) orchid, which has increased in population in this area as surveys have started in 2016. The biological opinion and assessment from the previous project is available upon request and plans/specifications were incorporated into the last project to protect and preserve potential and critical habitat. This will be a key component of the proposed action. This species is dependent upon water supply, and the proposed project will actually increase the length of river receiving water from the existing condition or previous proposals. The additional channel cleaning to transfer west channel flows to the east channel will provide additional habitat for future ULT occupancy. Many Reclamation projects within the Uintah Basin, such as the Steinaker Canal in Ashley Valley, have had ULT impacts with mitigation being required. This project is situated in a prime location to further mitigate the species habitat and a mitigation plan with design elements incorporating the ULT will provide additional benefits to the species.

The URBS lies within the Uinta River, an important tributary of the Duchesne and Green Rivers with 4 endangered fish species (bonytail, Colorado pikeminnow, humpback chub and razorback sucker) and 3 threatened species (bluehead sucker, flannelmouth sucker, and roundtail chub). Efficiency in the irrigation systems along the Uinta River will directly benefit these species, which have been adversely affected by a Reclamation project such as the Flaming Gorge Dam. See the location map in Appendix C.

(d) Please describe any other ecosystem benefits as a direct result of the project.

The natural resource concerns addressed by this project includes Fish and Wildlife - Threatened and Endangered Fish and Wildlife Species and will decrease the chances for the resource concern of inadequate water becoming an issue for these and many other species using the Uinta River riparian area. The ULT flower also has high potential in this area, with 711 plants found in the 2021 surveys. These plants thrive in areas with disturbance and with the current proposal, there will be more river length added to this portion of the drainage, which may provide additional habitat and water spreading for increasing populations.

(e) Will the project directly result in more efficient management of the water supply? For example, will the project provide greater flexibility to water managers, resulting in a more efficient use of water supplies?

The URBS diverts water for water users in eastern Duchesne County and western Uintah County from the Uinta River (see attached project location map). Efficiencies in the delivery of irrigation water to water users holding water rights on the East and West channels of the Uinta River system benefit the

entire system and increase flow in the Uinta River *system wide*. Currently, UWRC must divert as much water as possible to deliver water to producers, livestock and maintain irrigation storage in reservoirs during the winter months. With greater efficiency in delivery and measurement of water in the Uinta and Whiterocks systems, less water will be required to be re-directed at the diversion because of more accurate delivery, thus allowing more flows below the URBS diversions on the Uinta River.

1.4.3.2. ADDRESSING A SPECIFIC WATER AND/OR ENERGY SUSTAINABILITY CONCERN(S)

Will the project address a specific sustainability concern? Please address the following:

(a) Explain and provide detail of the specific issue(s) in the area that is impacting water sustainability, such as shortages due to drought and/or climate change, increased demand or reduced deliveries.

Water sustainability issues for the area are coming from shortages due to drought and any other change or reason for less precipitation, less snowpack during winter months, and increased pressure on agriculture for economically viable products despite growing costs of fuel, materials, and chemicals as well as increased demand upon certain products and services. The Ute Tribe is also experiencing loss in wildlife and aquatic habitat with the prolonged drought, which will be an important element for the project as much of the area is Tribal Lands.

(b) Explain and provide detail of the specific issue(s) in the area that is impacting energy sustainability, such as reliance on fossil fuels, pollution, or interruptions in service.

Growth in rural Utah is being experienced in this area of the Uintah Basin and the local economy and energy industry is feeling the burdens of growth and also shortages from water, both for secondary and municipal needs. The Durigan well which ties to this project through Roosevelt City's part of the system has had increased interest from other entities needing additional water. The Ute Tribe is affected by the lack of flows through their springs and keeping more water in the riparian areas and recharge zones is a benefit to their supply as well.

(c) Please describe how the project will directly address the concern(s) stated above. For example, if experiencing shortages due to drought or climate change, how will the project directly address and confront the shortages?

Keeping more water within the river system and minimizing over-deliveries is important for these concerns. Measured flows to the irrigation companies, primarily the tribal water rights, will then translate into more water within the river system. With telemetry, automated actuators to adjust gates, and flow measurement devices, it will make quick and easy adjustments to mitigate losses in the system.

(d) Please address where any conserved water as a result of the project 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.

Conserved water in this project's case will remain in the river channel itself, being utilized by wildlife and aquatic resources. Furthermore, additional irrigation users who often do not have the ability to divert their water right due to these operational losses will have more opportunity downstream. The UWRC has stewardship over allocations and diversions have priority based on water right, but overall there will be more river length with higher average flows due to trimming off excess flows. Also, flood flows will allow high flows to stay in the natural channel and again make more of a difference downstream where there are facilities to manage and also draw from them.

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

The mechanism will lie within the diversion structures themselves, with radial gates on the river channel and a check structure such that water will pass down the channel on its way to the East channel of the Uinta River. This will be monitored by the telemetry in place for the UWRC to manage and distribute to each respective canal company or leave in the natural channel.

(f) Indicate the quantity of conserved water that will be used for the intended purpose(s).

The quantity of water to be used or saved for the intended purpose is 3,800 acre feet.

1.4.3.3. OTHER PROJECT BENEFITS

Please provide a detailed explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:

(1) Combating the Climate Crisis: E.O. 14008: Tackling the Climate Crisis at Home and Abroad, focuses on increasing resilience to climate change and supporting climate resilient development. For additional information on the impacts of climate change throughout the western United States, see:

<https://www.usbr.gov/climate/secure/docs/2021secure/2021SECUREREport.pdf>

Please describe how the project will address climate change, including the following:

(a) Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.

The impacts of climate change in the Uintah Basin are primarily evident in water supply and drought. This directly correlates with the amount of water available for agriculture, which is also a crisis waiting to happen. Conservation of the precious water resource in the Uinta River system is of top priority for all stakeholders involved, and making operational changes and improvements, and infrastructure upgrades is an essential part of their mission. Installation of the bifurcation structure will help better manage and operate their system and reduce and eliminate spills and fluctuations is of great importance. Better water stewardship and reliable deliveries will allow crop yields to increase and may offset the drought with diligent metering, measurements, and awareness.

(b) Does this proposed project strengthen water supply sustainability to increase resilience to climate change?

This proposed project is all about water supply sustainability for the system and its water users. Being resilient to drought requires an ample and consistent irrigation supply and an efficiently operated river system with appropriate and well placed diversions will be a step in the right direction. Without the project, there will be challenges in getting a consistent flow and eliminating over-deliveries. There have also been an increase in flash flooding or high intensity, short duration rainstorms which causes peaks that can be better managed in the natural drainage system. The current design plans for this and makes it possible to pass those flows without manually moving rocks or operating gates or machinery.

(c) Will the proposed project establish and utilize a renewable energy source?

The proposed project will establish and maintain a small-scale solar system with the implementation of SCADA. The remote nature of the site is very conducive to solar as a renewable energy source. Solar power will also be utilized for the gate actuators that raise and lower the gates for both the canal and river sides.

(d) Will the project result in lower greenhouse gas emissions?

The project will result in lower greenhouse gas emissions by reducing the time, travel, and equipment currently being spent by the UWRC and associated irrigation companies to both monitor the existing structure or channel situation and also moving rocks and cleaning channels with heavy equipment annually, often at the expense of the other channel's group of irrigators.

(2) Disadvantaged or Underserved Communities: E.O. 14008 and E.O. 13985 support environmental and economic justice by investing in underserved and disadvantaged communities and addressing the climate-related impacts to these communities, including impacts to public health, safety, and economic opportunities. Please describe how the project supports these Executive Orders, including:

(a) Does the proposed project directly serve and/or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety through water quality improvements, new water supplies, new renewable energy sources, or economic growth opportunities.

Several rural communities will also benefit from increased reliability and water delivery in the system and directly from URBS efficiencies. Farmers and Ranchers who rely on the water made available through the UWRC system are experiencing an economic downturn in the Uintah Basin. Currently, energy development and the Uintah Basin region are experiencing a severe economic downturn with a severe reduction in production and, therefore, revenues and funding for projects, businesses, and communities. Though not directly related in other areas of the country, this region is suffering from an economic drought that affects all parties as a drought for water would. At this point, many of the landowners, farmers, ranchers, and tribal members are experiencing economic challenges due to the downturn in the economy as a whole.

Another element of the project that serves the disadvantaged community along the Uinta River between Whiterocks and Ft. Duchesne is the flood control that this will provide. Flooding problems as a result of the west channel not having any control will be eliminated with the upstream structure in this tandem setup. Frank Arrowchis, a well known tribal member, has a home along the Whiterocks Highway and continually gets flooded out due to peaks in runoff getting through the west channel in one of the upstream braids. Without the second structure, this will continue.

(b) If the proposed project is providing benefits to a disadvantaged community, provide sufficient information to demonstrate that the community meets the disadvantaged community definition in Section 1015 of the Cooperative Watershed Act, which is defined as a community with an annual median household income that is less than 100 percent of the statewide annual median household income for the State, or the applicable state criteria for determining disadvantaged status.

According to Data USA, the Median household income of Whiterocks area on the Ute Indian Tribe was \$28,125 USD, which is 100% below the US median income of \$65,712. The Ft Duchesne area further downstream is a little better at \$37,143 per household.

(c) If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.

The Whiterocks area that this project directly affects is an underserved community, with lower income and a high percentage of desolate homes and vacant buildings, likely some in a brownfield status. Some of the area along the river has flooding problems and are similar in demographics and appearances as Whiterocks community.

(4) Tribal Benefits: *The Department of the Interior is committed to strengthening tribal sovereignty and the fulfillment of Federal Tribal trust responsibilities. The President’s memorandum “Tribal Consultation and Strengthening Nation-to-Nation Relationships” asserts the importance of honoring the Federal government’s commitments to Tribal Nations. Please address the following, if applicable:*

(a) Does the proposed project directly serve and/or benefit a Tribe? Will the project increase water supply sustainability for an Indian Tribe? Will the project provide renewable energy for an Indian Tribe?

This project will benefit approximately 27,000 acres of irrigated land with Ute Tribe water rights. Approximately 65% of the water used and managed through the URBS goes to tribal water appropriations. This project will greatly benefit the operation of the tribal canals and therefore allow them a more consistent supply to fill their duty needs and allow later appropriations water in a timely and accurate manner. The Ute Tribe and the Uintah & Ouray Indian Irrigation Project O&M Company is a very important partner in the funding and success of this project.

(b) Does the proposed project directly support tribal resilience to climate change and drought impacts or provide other tribal benefits such as improved public health and safety through water quality improvements, new water supplies, or economic growth opportunities?

This project directly supports the tribal resilience to drought impacts as it serves three major canals that deliver tribal water rights and irrigated lands within the tribal boundary. The second tribal benefit is flood control, as stated previously, the west channel is not meant to receive high runoff water. A third benefit is in the fish and wildlife habitat this project will maintain and enhance, by still meeting the goals of the water usage but keeping consistency through the channels and even adding another consistent channel to the braided system.

(4) Other Benefits: *Will the project address water and/or energy sustainability in other ways not described above? For example:*

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

This project increases efficiency and improves water stewardship in the Uinta River, which is a tributary of the Green River and Colorado River systems, which is currently one of the most critical interstate river systems for the Lower Colorado states. Increased water savings on this system allows more flows into an already critically low and stressed river system. Because of this project's close ties to the Ute Tribe and their water rights, this is critical for their economic sovereignty.

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

The two main sectors that this project benefits are agricultural and environmental. The agricultural community will benefit from steady flows being diverted from the Uinta River. The Uinta River and its tributaries will benefit from this project by receiving more consistent flow, increasing aquatic and riparian habitat.

(c) Will the project benefit a larger initiative to address sustainability?

This project follows several initiatives of the State of Utah, including the Utah Watershed Restoration Initiative and the Utah Water Resources mission to Plan, Conserve, Develop, and Protect Utah's Water Resources. It also benefits Colorado River initiatives like the Water & Tribes Initiative by responsibly using water and increasing efficiency in the upper Basin States.

Furthermore, the UWCD has a Water Management and Conservation Plan that guides their purpose, issues, and goals. One of which to be the Water Consultant role within Uintah County and to assist other water entities in accomplishing their water related responsibilities. This plan can be found here: https://www.uintahwater.org/sites/g/files/vyhlf1341/f/uploads/2013_wmcp.pdf

Several of the western branches of canals from the West channel lie within the Duchesne County Water Conservancy District also, which has a district policy statement that aligns with the project goals also: It is the District's policy to develop and conserve water supplies for the benefit of its inhabitants through the most cost effective and environmentally prudent methods. The water supplies shall be developed for any and all beneficial uses consistent with the mission and statutory authority of the District. In furtherance of this policy, water rights shall be acquired by any lawful means and used for any lawful beneficial use, including with limitation, irrigation, municipal, industrial, hydropower generation and instream flows. (U.C. 17A-2-1401)

(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 project will definitely help prevent further water-related issues and conflicts, especially pertaining to river access and movement of cobble rock seasonally so that different branches of the river get water at storage times and irrigation times. This has become an especially sore spot with the Ute Tribe and

non-tribal companies, where technically the Ute Tribe can deny access to the river, not to mention the environmental permitting process that should be happening but is not. There is frequent tension about this subject and also water control, which is one reason the last project location did not work out due to Right-of-way and language brought into the agreement from the Ute Tribal Business Committee's attorneys that prohibited the BIA to sign the documents for the final agreement. The current proposal will allow all parties to be protected in the manner that was intended, that the river commissioner can allocate water based on the duty schedule, which is included in the Appendix D.

1.4.4. EVALUATION CRITERION 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 NOFO. 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?*

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

Many of the project lands in the URBS service area have utilized the NRCS funding for upgrades. While this project doesn't change pressures or flow rates, other than regulating fluctuations, it will provide a better managed water system which will promote conservation and improvements downstream.

- 2) *Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement.*
 - 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*
 - b) *Will the proposed WaterSMART Project complement the on-farm project by maximizing efficiency in the area? If so, how?*

This project will provide stability of flows delivered which will stabilize the subsequent canals and ditches downstream, allowing better use of on-farm irrigation equipment and maximizing efficiency in water placement on irrigated lands.

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

Many of the over-deliveries are happening on the on-farm level or at the end of the ditches. That portion of the savings amounted to approximately 1,900 acre-feet. See supporting backup in Appendix D.

- 4) *Please provide a map of your water service area boundaries. If your project is selected for funding under this NOFO, this information will help NRCS identify the irrigated lands that may be approved for NRCS funding and technical assistance to complement funded WaterSMART projects.*

Note: On-farm water conservation improvements that complement the water delivery improvement projects selected through this NOFO 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, www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/states/.

See project location map with rough delineation of influence area of this river commissioner-led project. (Appendix C)

1.4.5. EVALUATION CRITERION E: PLANNING AND IMPLEMENTATION (8 POINTS)

Up to 8 points may be awarded for these subcriteria.

1.4.5.1 SUBCRITERION E.1 – PROJECT PLANNING

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

(1) Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place? Does the project address an adaptation strategy identified in a completed WaterSMART Basin Study? Please self-certify or provide copies of these plans where appropriate to verify that such a plan is in place. Including a specific excerpt or a link to the planning document may also be considered where appropriate.

Provide the following information regarding project planning:

- (a) Identify any district-wide, or system-wide, planning that provides support for the proposed project. This could include a Water Conservation Plan, SOR, Drought Contingency Plan or other planning efforts done to determine the priority of this project in relation to other potential projects.*
- (b) 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).*
- (c) If applicable, provide a detailed description of how a project is addressing an adaptation strategy specifically identified in a completed WaterSMART Basin Study or Water Management Options Pilot (e.g., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes)*

This project lies within the Colorado River Basin, which was recently studied by Reclamation with a Water Supply and Demand Study in 2012. This area within the Uintah Basin was identified as an area needing additional water savings to meet long term water needs. Collaboration with the UWCD is also essential for the success of planning in the region, and future master planning efforts are already underway for a water master plan update for Uintah County. Duchesne County has also completed water planning studies that incorporate water supply from the Uinta River. Moon Lake Water Users Association is also an entity that collaborates with several of the companies involved in this project and has the following objectives pertaining to their water user's area:

- **Improve delivery time and reduce operation and maintenance.** By installing the proposed improvements and finding an alternative location for the diversion, annual maintenance activities will be greatly decreased. The URBS and the channels of the Uinta River at this location has had a history of maintenance needs and expenses.
- **Decrease water losses to producers.** The estimated savings of 3,500 acre-feet of water per year will be realized due to the reduction in over-deliveries, fluctuation of the west channel, and spilling at the end of the system due to un-timely and inaccurate flow diversions.
- **Reduce salinity in water to producers and other downstream users.** Reducing over-deliveries by automation and more accurate flow control and measurement will decrease salinity entering the Colorado River tributaries. The ground water and local soil conditions have a large amount of salt, which is carried with the water as it runs over land or seeps through groundwater, thus becoming a pollutant to the irrigated acres and the downstream users.

The UWCD has a Water Management and Conservation Plan that guides their purpose, issues, and goals. One of which to be the Water Consultant role within Uintah County and to assist other water entities in accomplishing their water related responsibilities. This plan can be found here:

https://www.uintahwater.org/sites/g/files/vyhlf1341/f/uploads/2013_wmcp.pdf

The Bureau of Indian Affairs has also identified this structure as a needed improvement for the tribal operations in this region and it has been on the capital improvement list for the Uinta and Ouray Indian Irrigation Project O&M Company and BIA staff. As all parties collaborate and make this planned project a reality, it will meet the goals of the past planning efforts and water conservation projects.

1.4.5.2 SUBCRITERION E.2 – 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. Please note, if your project is selected, responses provided in this section will be used to develop the scope of work that will be included in the financial assistance agreement.

Applications that include a detailed project implementation 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) *Identify and provide a summary description of the major tasks necessary to complete the project. Note: please do not repeat the more detailed technical project description provided in Section 1.3; this section should focus on a summary of the major tasks to be accomplished as part of the project.*

Phase Number	Milestone/Phase
-	-
1	Concept Design, Topographic Survey, & ULT Surveys
2	Funding (WaterSMART) & Stakeholder Coordination
3	Final Design & Environmental Permitting
4	Contractor Procurement & Final Approvals from BOR
5	Access Roadway & Clearing, SWPPP, ULT Mitigation
6	Dewatering and Structural Excavation
7	Concrete Diversion Structure Construction
8	Gate Installation & Site Construction, Riprap
9	Telemetry and Commissioning of Structures
10	Final Walkthrough and Reporting

The above task list includes some work recently completed to have information for the funding application as well as establish feasibility of the new proposed location and design of the project. Design from the past project will be utilized as much as possible. Stakeholder coordination has been ongoing since 2016 and there is strong support for this new alternative, with momentum gaining every day. Once funding is obtained, there will be a kickoff meeting to move forward with the project and pick back up on the environmental permitting process, with wetland delineations and cultural survey of the upstream location. The Construction tasks will depend on the contractor, but generally they will likely clear and grub the areas, then start excavation to remove cobble and establish a dewatering plan, prior to placing SWPP and environmental silt fencing of course. It is assumed that winter months will be too cold for construction budget to handle cold-weather concrete and this project can likely be worked on during irrigation with the proper planning. Final

construction acceptance visit and walkthrough will then allow final reporting and payments to be made.

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

The proposed project has several key elements pertaining to environmental clearances and site design and analysis that are ready to proceed immediately once weather permits. The permits assumed to be required include cultural clearance through SHPO, biological assessment and surveys for potential Ute Ladies Tresses habitat, as well as surveys for actual plants in August-September (which UWCD has already done in 2021). Additional wetlands and waters of the US determinations will be necessary as well as a Stream Alteration Permit from the State of Utah.

The great news is that in a previous stakeholder meeting prior to this application, the BIA has already produced the Categorical Exclusion which allows the construction of one of the structures on Tribal land at the existing location, which will clear two hurdles of ROW and NEPA for half of the project. The remaining upstream structure is on private land, with the ROW process starting on that concurrent with the funding submittal. See Appendix E for CatEx.

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

Previous project had a 90% design for the upstream location for a single large structure. Once ROW was determined to be at a standstill, the UWCD authorized JDE to do surveys on this other location and worked with Reclamation to investigate the best path forward. The topo survey revealed that with two separate structures, the same goals could be met and discussions have begun with the private landowner who owns the property on the newest upstream structure location, with the go-ahead already granted for the downstream structure. There has also been a full ULT survey completed in August of 2021 to get a head start with the ULT habitat and plant locations to help shape the future design of that structure on private land.

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

No new policies are required, the original agreements for construction and O&M of the structure still apply and will continue to take further shape as final designs and contract amounts come. It is also important to note that the structure will not be owned or operated by the UWCD, but the agreements are in place to have the BIA own the structure, and the UWRC to operate it, with the UIIP being the O&M caretaker. The split in project funding has been modified to go off of acreage served instead of water usage, which is illustrated in the Appendix A attachments.

(e) Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: complete environmental and cultural compliance; mobilization; begin construction/installation; construction/installation (50% complete); and construction/installation (100% complete).

See Appendix A for a full schedule. Table below shows major tasks and milestones in tabular format.

Phase Number	Milestone/Phase	Start Date	End Date
-	-	date	date
1	Concept Design, Topographic Survey, & ULT Surveys	8/1/2021	10/1/2021
2	Funding (WaterSMART) & Stakeholder Coordination	10/1/2021	6/1/2022
3	Final Design & Environmental Permitting	7/1/2022	3/1/2023
4	Contractor Procurement & Final Approvals from BOR	3/1/2023	4/1/2023
5	Access Roadway & Clearing, SWPPP, ULT Mitigation	4/1/2023	7/1/2023
6	Dewatering and Structural Excavation	7/1/2023	7/16/2023
7	Concrete Diversion Structure Construction	7/16/2023	9/14/2023
8	Gate Installation & Site Construction, Riprap	9/14/2023	10/1/2023
9	Telemetry and Commissioning of Structures	9/24/2023	10/9/2023
10	Final Walkthrough and Reporting	10/9/2023	10/16/2023

1.4.6 EVALUATION CRITERION F: COLLABORATION (6 POINTS)

Up to **6 points** may be awarded for projects that promote and encourage collaboration among parties in a way that helps increase the sustainability of the water supply.

Please describe how the project promotes and encourages collaboration. Consider the following:

(a) Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project. What is the extent of their involvement in the process?

There is widespread support of the project, although it has taken a long road to get to where we are today. There has already been approximately \$173,000 paid towards the project from six different irrigation companies, along with the support of the UWCD in funding the application efforts, the ULT surveys, and investigating solutions after the first ROW attempt. There have been several meetings at each stage of this process with UWCD and JDE representatives attending evening board meetings and likely donating many hours without billing the project or the stakeholders.

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

It has become the project that never ends in many ways, but with recent momentum, there is a great deal of support and leaders are getting behind this new alternative, as is the BIA and UIIP. See the list of entities on the tables in the cost share sheet for perspective to just how many acres and people are behind this project. We have made significant effort to be ready for this opportunity to do it right this time and clear the hurdles before we get too far down the road.

(c) will this project increase the possibility/likelihood of future water conservation improvements by other water users?

The great byproduct of a project like this is that there will be great collaboration moving forward, as many of the irrigation companies have sat across the table from each other and realized each of their individual needs and challenges. There is a high likelihood of future improvements to follow this pattern of partnering and collaboration to get great things done within available budgets.

(d) Please attach any relevant supporting documents (e.g., letters of support or memorandum of understanding).

This project will be considered a huge success not only for its water managing improvements, but the improvements in past attempts to partner on water conservation and irrigation infrastructure between the tribal entities and the private irrigation companies. This project, if successfully funded and completed despite past challenges, will be a poster child for future work and collaboration between companies and tribal entities. It is difficult to describe the great significance this endeavor has based on past attempts and failure to effectively partner and leverage funding from tribal sources and private/federal entities. The evidence of collaboration can be found in the variety of Letters of Commitment to the project as included in Appendix B.

Historically, there has been conflict in the actions of entities relying on the west channel to supply water during irrigation season and those on the east channel needing more supply to meet critical flows necessary to fill their reservoirs. This project will greatly improve working relationships and trust by providing an effective and operable diversion that will be included in the website showing real time data on the flow rates being diverted and passed down each channel. Information in real time will prevent accusation and bad feelings between entities. Frequent tension is definitely felt with the present operation. For example, when water is seen spilling at the Bench canal heading, other water users are quick to call and complain to the river commissioner who must then run to adjust the gates on the bifurcation structure or turn out water to another entity. This project will allow the UWRC greater control to eliminate or greatly minimize spills that are seen as waste by many water users. Rock shoving matches from the past will be replaced with inquiries to the website to see what is actually coming down each channel of the river rather than jumping to conclusions that the other guys is stealing water and sending it down the wrong channel.

The future possibility of water conservation projects is very evident and has already commenced. The URBS is actually one of the last structures that will be receiving Reclamation funding for telemetry and automation. At its current location, it will only be partially effective and therefore the alternative location will provide further reliability for those currently upstream of the existing structure. This improvement will also allow operators to manage their water differently, by being more conservation minded and not having to be liberal with the amounts they divert because of the increased consistency of flows coming down the west channel.

1.4.7 EVALUATION CRITERION G – ADDITIONAL NON-FEDERAL FUNDING (4 POINTS)

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:

Non-Federal Funding

Total Project Cost

\$822,750/\$1,572,750 = 52% is non-Federally funded.

1.4.8 EVALUATION CRITERION H – NEXUS TO RECLAMATION (4 POINTS)

Up to 4 points may be awarded if the proposed project is connected to a Reclamation project or Reclamation activity. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.

Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. Please consider the following:

(a) Does the applicant have a water service, repayment, or O&M contract with Reclamation?

The UWCD has multiple contracts with Reclamation through the Steinkaker Dam and Steinkaker Service Canal and associated projects. The Uinta River is also connected to other past WaterSMART projects, as are the irrigation companies who have worked with UWCD and DCWCD in both counties to do projects. The funding has been greatly appreciated.

(b) If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?

The UWCD has association with Reclamation through the Steinaker and Red Fleet projects, Central Utah Project and many other endeavors in the Ashley Valley and Uinta Basin, along with the Green River system.

(c) Will the proposed work benefit a Reclamation project area or activity?

The proposed project is within the Central Utah Project and associated with Reclamation project areas of reservoirs in Northeastern Utah as well as the Green River system with Reclamations many activities there in the Uintah Basin and the Green River region.

(d) Is the applicant a Tribe?

UWCD is not a Tribe, however the project is specifically tied to the Ute Tribe and the water rights have a majority of Tribal water benefits.

1.5. PERFORMANCE MEASURES

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.

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).

The performance measure for the URBS will be the measurement of delivered water to the west and east channels and the comparison to previous years of the amount being delivered to irrigators on the west channel and the amount passing through the USGS gage near Randlett. Similar to the inflow/outflow method for estimating seepage losses in a canal, a comparison for operational losses will be possible comparing similar water years with data from the improved system. Fortunately, the available data for the major canal companies and the Uinta River has been recorded and logged in the database accessible online (<http://www.duchesneriver.org/>). The percentage of water diverted to the total supply will be evidence of the water savings staying in the river. Other locations, such as the Bench Canal's overflow structure are also future locations that a data logger is recommended to be installed for an accurate, documented measure of operational loss. A direct performance measure will also include the real time data being accessible on the Duchesne River and Tributaries website for the Bifurcation Structure for all water users to access and observe flow rates.

Another formula that will deduce water savings is noted in the Performance Measures No. A.4:

$$\text{Savings} = (\text{Spillage without project}) - (\text{Spillage with project}).$$

A non-technical performance measure that is important to the UWCD, UWRC and the associated irrigation companies is to have this project successfully built and funded together with the Uintah Indian Irrigation Project O&M Company representing Ute Tribal water. Success will be measured by the working relationship and successful completion of the project with all parties at the table participating in the design process, funding, and construction for the project.

2. PROJECT BUDGET

2.1. FUNDING PLAN AND LETTERS OF COMMITMENT

Describe how the non-Federal share of project costs will be obtained. Reclamation will use this information in making a determination of financial capability.

*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.

Please identify the sources of the non-Federal cost share contribution for the project, including:

- *Any monetary contributions by the applicant towards the cost-share requirement and source of funds (e.g., reserve account, tax revenue, and/or assessments)*
- *Any costs that will be contributed by the applicant*
- *Any third party in-kind costs (i.e., goods and services provided by a third party)*
- *Any cash requested or received from other non-Federal entities.*
- *Any pending funding requests (i.e. grants or loans) that have not yet been approved and explain how the project will be affected if such funding is denied.*

In addition, please identify whether the budget proposal includes any project costs that have been or may be incurred prior to award. For each cost, describe:

- *The project expenditure and amount*
- *The date of cost incurrence*
- *How the expenditure benefits the Project*

The funding plan for the UWCD on this project hinges upon a successful funding application through the WaterSMART program. The funds required for the non-federal cost share are directly from the Uinta River water users group and some may require their own financing to be able to cover the project repayment. UWCD will work out the specific terms and rates once final bid and contract numbers are available. Some companies have already paid a substantial amount, and the UIIP has already set aside more than their portion necessary. See attached Cost Share sheet in Appendix A for actual funds set aside and in the bank at this time. Some companies will likely explore options to finance their amounts through the Utah Board of Water Resources with a low interest loan, with a 20 year term or asking a lump sum payment from their own shareholders. The major users have all signed letters of commitment, which have also been attached in Appendix B.

2.2. BUDGET PROPOSAL

The total project cost (Total Project Cost), is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party contributions, that are necessary to complete the project.

Table 1. – Total Project Cost Table

SOURCE	AMOUNT	% of Total
Costs to be reimbursed with the requested Federal Funding (WaterSMART)	\$750,000	48%
Costs to be paid by the applicant	\$822,750	52%
Value of third-party contributions	\$0	--
Total Project Costs	\$1,572,750	100%

The budget proposal should include detailed information on the categories listed below and must clearly identify all items of cost, including those that will be contributed as non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from Reclamation, and any requested pre-award costs. Unit costs must be provided for all budget items including the cost of services or other work to be provided by consultants and contractors. Applicants are strongly encouraged to review the procurement standards for Federal awards found at 2 CFR §200.317 through §200.327 before developing their budget proposal.

If you have any questions regarding your budget proposal or eligible costs, please contact the grants management specialist identified in Section G. Agency Contacts.

It is also strongly advised that applicants use the budget proposal format shown in 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. It is not necessary to include separate columns indicating which cost is being contributed as non-Federal cost share or which costs will be reimbursed with Federal funds.

Note: The costs of preparing bids, proposals, or applications on potential Federal and non-Federal awards or projects, including the development of data

necessary to support the non-Federal entity's application are not eligible project costs and should not be included in the budget proposal (2 CFR §200.460).

See attached cost estimate with breakdowns of each item of work and budget in Appendix A.

2.3. 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. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsection. Costs, including the valuation of third-party in-kind contributions, must comply with all applicable cost principles contained in 2 CFR §200, available at the Electronic Code of Federal Regulations (www.ecfr.gov).

2.3.1. SALARIES AND WAGES

Indicate the Project Manager and other key personnel by name and title. The Project Manager must be an employee or board member of the applicant. Other personnel should be indicated by title alone. For all positions, indicate salaries and wages, estimated hours or percent of time, and rate of compensation. The labor rates must identify the direct labor rate separate from the fringe rate or fringe cost for each category. All labor estimates must be allocated to specific tasks as outlined in the applicant's technical project description. Labor rates and proposed hours shall be displayed for each task.

The budget proposal and narrative should include estimated hours for compliance with reporting requirements, including final project and evaluation. Please see Section F.3. Reporting Requirements and Distribution for information on types and frequency of reports required.

Generally, salaries of administrative and/or clerical personnel will be included as a portion of the stated indirect costs. If these salaries can be adequately documented as direct costs, they should be included in this section; however, a justification should be included in the budget narrative.

See Contractual rates and title page for key personnel on the project. The salaries and/or reimbursements of UWCD or other support staff are not included in this budget nor are they anticipated to be a part of it.

2.3.2. FRINGE BENEFITS

Identify the rates/amounts, what costs are included in this category, and the basis of the rate computations. Federally approved rate agreements are acceptable for compliance with this item.

All fringe benefits are fixed rates for billing through engineering and construction contracts.

2.3.3. TRAVEL

Include the purpose of each anticipated trip, destination, number of persons traveling, length of stay, and all travel costs including airfare (basis for rate used), per diem, lodging, and miscellaneous travel expenses. For local travel, include mileage and rate of compensation.

Travel costs will be part of the contracted portion of the project. It is likely that the scope of this project will utilize local consultants and contractors so that travel costs are minimal.

2.3.4. EQUIPMENT

If equipment will be purchased, itemize all equipment valued at or greater than \$5,000. For each item, identify why it is needed for the completion of the Project and how the equipment was priced. Note: if the value is less than \$5,000, the item should be included under materials and supplies.

If equipment is being rented, specify the number of hours and the hourly rate. Local rental rates are only accepted for equipment actually being rented or leased.

If the applicant intends to use their own equipment for the purposes of the project, the proposed usage rates should fall within the equipment usage rates outlined by the United States Army Corps of Engineers (USACE) within their Construction Equipment Ownership and Operating Expense Schedule (EQ 1110-1-8) at www.publications.usace.army.mil/USACE-Publications/Engineer-Pamphlets/u43545q/313131302D312D38.

Note: If the equipment will be furnished and installed under a construction contract, the equipment should be included in the construction contract cost estimate.

Equipment will be part of the contracted portion of the project.

2.3.5. MATERIAL AND SUPPLIES

Itemize supplies by major category, unit price, quantity, and purpose, such as whether the items are needed for office use, research, or construction. Identify how these costs were estimated (i.e., quotes, engineering estimates, or other

methodology). Note: If the materials/supplies will be furnished and installed under a contract, the equipment should be included in the construction contract cost estimate.

Material and Supplies will be part of the contracted portion of the project.

2.3.6. CONTRACTUAL

Identify all work that will be accomplished by consultants or contractors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. For each proposed contract, identify the procurement method that will be used to select the consultant or contractor and the basis for selection.

An engineering consultant will be contracted, through the UWCD procurement process to perform the design, environmental permitting tasks, and construction engineering for this project. JDE has assisted in the preparation of the application and a budgetary estimate of time and rates anticipated for the civil and construction engineering scope of the project. The consultant will prepare bid packages for the project. The environmental consultant will provide the appropriate permitting and surveys for the project, along with coordination with USFWS for ULT flower along with the BIA. The consultant team will monitor progress during construction to provide quality assurance with plans and specifications. The table below includes the design and construction engineering laborer classifications, billing rates, and estimated number of hours. See Appendix A for a breakdown of construction items and tasks, which will be utilized for bidding purposes for construction contractors, with a price-based selection for qualified contractors to perform the work.

Table 1. Civil Design & Construction Engineering Hours & Rates for Bifurcation Structure

Role/Position	Rate	Hours	Total
Senior Project Manager	\$165.00	140	\$23,100.00
Project Engineer	\$125.00	260	\$32,500.00
Graduate Engineer	\$105.00	360	\$37,800.00
CAD Technician	\$100.00	405	\$40,500.00
Professional Land Surveyor	\$140.00	25	\$3,500.00
Survey Technician	\$90.00	40	\$3,600.00
Administrative Assistant	\$75.00	80	\$6,000.00
Construction Observation Technician	\$100.00	800	\$80,000.00
Total		2,110	\$227,000.00

2.3.7. THIRD-PARTY IN-KIND CONTRIBUTIONS

Identify all work that will be accomplished by third-party contributors, including a breakdown of all tasks to be completed, and a detailed budget estimate of time,

rates, supplies, and materials that will be required for each task. Third-party in-kind contributions, including contracts, must comply with all applicable administrative and cost principles criteria, established in 2 CFR Part 200, available at www.ecfr.gov, and all other requirements of this NOFO.

The UWCD will collect funds from the various irrigation companies to pay for the project, and meetings have been held all along this funding journey, starting from commitments in 2016 and also payments in 2017 through 2020 that are being held for the project. There is potential that the BIA will directly hire and pay for the environmental consultant to do some of the work, however, at this time it is anticipated that UWCD will take the lead on that portion of the work. Note that the cost estimate may reflect the BIA option, but the \$30,000 and \$8,000 is included for environmental already in the budget.

2.3.8. ENVIRONMENTAL AND REGULATORY COMPLIANCE COSTS

Prior to awarding financial assistance, Reclamation must first ensure compliance with Federal environmental and cultural resources laws and other regulations (“environmental compliance”). Every project funded under this program will have environmental compliance activities undertaken by Reclamation and the recipient. Depending on the potential impacts of the project, Reclamation may be able to complete its compliance activities without additional cost to the recipient. Where environmental or cultural resources compliance requires significant participation by Reclamation, costs incurred by Reclamation will be added as a line item to the budget during development of the financial assistance agreement and cost shared accordingly (i.e., withheld from the Federal award amount). Any costs to the recipient associated with compliance will be identified during the process of developing a final project budget for inclusion in the financial assistance agreement.

Environmental costs are estimated and have a total of \$38,000, it is also understood that Reclamation may require a portion of the grant funds to work through NEPA. It is also noted that the BIA has already submitted a Categorical Exclusion that is included in Appendix E.

There has already been a Ute Ladies Tresses (ULT) survey completed in August of 2021 for the new locations of the upstream structure and a substantial buffer for the area for construction purposes, dewatering and future channel realignment. This has been included in Appendix F.

2.3.9. OTHER EXPENSES

Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and why it is necessary. No profit or fee will be allowed.

None anticipated

2.3.10. INDIRECT COSTS

Indirect costs are costs incurred by the applicant for a common or joint purpose that benefit more than one activity of the organization and are not readily assignable to the activities specifically benefitted without undue effort. Costs that are normally treated as indirect costs include, but are not limited to, administrative salaries and fringe benefits associated with overall financial and organizational administration, operation and maintenance costs for facilities and equipment, and payroll and procurement services. If indirect costs will be incurred, identify the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable cost principles for the applicant's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.

*Any non-Federal entity that does not have a current negotiated (including provisional) rate, except for those non-Federal entities described in appendix VII to 2 CFR §200, paragraph D.1., may elect to charge a *de minimis* rate of 10% of modified total direct costs (MTDC) which may be used indefinitely. For further information on MTDC, refer to 2 CFR §200.68 available at www.ecfr.gov.*

*If the applicant does not have a federally approved indirect cost rate agreement and is proposing a rate greater than the *de minimis* 10 percent rate, include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from the Department's Interior Business Center, Office of Indirect Cost Services, at www.doi.gov/ibc/services/finance/indirect-cost-services.*

Not included.

3. 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.

Note that the improvements to Federal facilities that implemented through any project awarded funding through this NOFO 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)(D). 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 Section §429, and that the development will not impact or impair project operations or efficiency.

The Existing old bifurcation structure location has now been cleared for work through the BIA process and Categorical Exclusion is attached in Appendix E. There had also been surveys for ULT in that area since 2016, with no suitable habitat (mostly cobble rock) and that portion is also clear to move forward. A stream alteration permit may be required dependent on BIA decision.

Permits anticipated for the upstream structure include an amendment or potentially new Biological Opinion from the US Fish & Wildlife Service for the Upstream Structure location, in response to the final design and impact areas to ULT habitat and individuals. A stream alteration permit and potential Army Corp permit is also anticipated to some degree, with the critical path item being the ULT, which is being mitigated by an early survey in 2021 and UWCD will plan on having a second survey scheduled for 2022 as designs are finalized.

4. LETTERS OF SUPPORT AND LETTERS OF PARTNERSHIP

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. Letters of support received after the application deadline for this NOFO will not be considered in the evaluation of the proposed project.

Category B applicants must include a letter from the Category A partner, stating that they are acting in partnership with the applicant and agree to the submittal and content of the proposal (see Section C.1. Eligible Applicants). Letters of Partnership must be received by the application deadline for this NOFO—otherwise the applicant will be considered ineligible, and the proposed project will not be evaluated.

On October 26th, and many individual board and district meetings prior, a stakeholder meeting was held by UWCD with all the major stakeholders in the project. Four of the largest users signed a letter of support and commitment to pay the portion of funding up to the lowest Grant amount anticipated. Since the applicant is UWCD as a Category A, with individual companies routing funding for reimbursement through them, it is anticipated that UWCD will directly contract with the BOR for the project and will continue to coordinate and share costs with those entities involved. See Appendix B.

5. OFFICIAL RESOLUTIONS

Include an official resolution adopted by the applicant's board of directors or governing body, or, for State government entities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under this NOFO, 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 to bor-sha-fafoa@usbr.gov up to 30 days after the application deadline.

The UWCD meets on a monthly basis, with their first meeting to be held on November 16th and since their October meeting was prior to the Stakeholder meeting on October 26th, it is anticipated that a new Official Resolution will be reviewed and signed at the November meeting. A copy will promptly be sent on as directed within 30 days of application.

**OFFICIAL RESOLUTION
OF THE
UINTAH WATER CONSERVANCY DISTRICT**

RESOLUTION # 1

WHEREAS, the United States Department of the Interior, Bureau of Reclamation has announced the *WaterSMART Water and Energy Efficiency Grants* in order to prevent water supply crises and ease conflict in the western United States, and


WHEREAS, the United States Department of the Interior, Bureau of Reclamation has requested proposals from eligible entities to be included in the WaterSMART Program, and

WHEREAS, the Uintah Water Conservancy District (UWCD) has need for funding to complete an irrigation project that will upgrade a diversion structure so that water can be better managed, conserved and efficiently delivered to the water users.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Uintah Water Conservancy District agrees and verifies that:

1. The application has been reviewed and supports the application submitted;
2. The UWCD is capable of providing the amount of funding as specified in the funding plan;
3. If selected for a WaterSMART Grant, the applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement; and
4. The Company Official signing this document has the legal authority to enter into this agreement.

DATED: January 12, 2016

SIGNED: 
NAME: William Merkley
TITLE: Chairman, UWCD

ATTEST: 
General Manager

APPENDIX A. PROJECT BUDGET AND SCHEDULE

CONCEPT OPINION OF PROBABLE COST					
	ITEM	QUANTITY	UNIT	UNIT PRICE	COST
1	Mobilization (5%)	1	Lump	\$ 70,000	\$ 70,000
2	River Rerouting & Site Dewatering	1	Lump	\$ 20,000	\$ 20,000
3	Remove Existing Structure	1	Lump	\$ 10,000	\$ 10,000
4	10'x8' Radial Gates on Main Channel	2	Each	\$ 50,000	\$ 100,000
5	Canal Radial Gates (Three 8'x5' Gates Concept)	3	Each	\$ 40,000	\$ 120,000
6	Concrete Diversion Structure w/Appurtenances @ Existing Location	1	Lump	\$ 350,000	\$ 350,000
7	Concrete Stilling Basin & Weir Structure w/ Appurtenances @ Existing Location	1	Lump	\$ 120,000	\$ 120,000
8	Concrete Diversion Structure w/Appurtenances @ Uinta River Irr. Co Diversion Area	1	Lump	\$ 200,000	\$ 200,000
9	Electrical & Telemetry	1	Lump	\$ 25,000	\$ 25,000
10	Automatic Gate Actuators (45% of costs pre-paid, noted reduction)	5	Each	\$ 9,000	\$ 45,000
11	Compacted Embankment	2000	CY	\$ 7	\$ 14,000
12	Riprap Channel Armoring Type 1	500	CY	\$ 75	\$ 37,500
13	Access Roads Maintenance and Final Grading	1	Lump	\$ 15,000	\$ 15,000
14	Imported Granular Borrow	1000	CY	\$ 20	\$ 20,000
15	Imported Untreated Base Course	250	Ton	\$ 25	\$ 6,250
16	Willow Plantings (Toe of Bank Armor)	500	Each	\$ 5	\$ 2,500
17	Pole Plantings & Misc Mitigation Measures	500	Each	\$ 5	\$ 2,500
18	Construction Staking	1	Lump	\$ 8,000	\$ 8,000
	Construction Contingency - 10%	1	Lump	\$ 140,000	\$ 140,000
TOTAL PROBABLE CONSTRUCTION COST (2021)					\$ 1,305,750
ENGINEERING AND LEGAL PROFESSIONAL SERVICES					
0	Concept Design for New Plan, Agreements, BIA Coord. & Startup Costs (from 2016-21)	1	Lump	\$ 15,000	\$ 15,000
1	Preconstruction Engineering, Survey, Contractor Procurement	1	Lump	\$ 120,000	\$ 120,000
2	Permitting (Coordination for NEPA support, as needed basis)	80	Hour	\$ 100	\$ 8,000
3	Construction Administration	800	Hour	\$ 100	\$ 80,000
4	Legal & Right-of-Way Coordination (Survey descriptions of access road, structure)	40	Hour	\$ 100	\$ 4,000
Engineering and Legal Professional Services Subtotal					\$ 227,000
ADMINISTRATIVE (IN-KIND) SERVICES					
1	Permitting (NEPA compliance) (BIA lead agency, CatEX for Existing, New will req NEPA)	1	Lump	\$ 30,000	\$ 30,000
2	Legal & Right-of-Way Coordination (Private Land, Existing Structure covered)	1	Lump	\$ 10,000	\$ 10,000
3					
Administrative "In Kind" Services Subtotal					\$ 40,000
TOTAL PROBABLE PROJECT COST					\$ 1,572,750

Proposed Funding

***Funding Group II

WaterSMART Grant (FG II)	\$	750,000
Irrigation Companies	\$	822,750

Uintah Water Conservancy District
 Uinta River Bifurcation Structures
 November 3, 2021

PROPOSED COST SHARE SPLIT (DRAFT)

(To Be Verified)

APPROPRIATOR	WATER USAGE (2005-14 COMBINED)		Acreage Summary (to be Verified)		COST SHARE w/\$500K GRANT		2017 Payment to UWCD	2022 Balance Estimated*
	TOTAL	PERCENT	TOTAL	PERCENT	TOTAL	PERCENT		
UIIP (including McKee/Ute Tribe)	911,497.60	65.79%	15,518.40	41.64%	\$ 345,500.00	41.64%	\$ 88,156.00	\$ 257,344.00
DRY GULCH	217,037.22	15.67%	5,133.00	13.77%	\$ 114,280.00	13.77%	\$ 20,993.00	\$ 93,287.00
OURAY PARK (OPIC)	188,172.57	13.58%	9,800.00	26.30%	\$ 218,190.00	26.30%	\$ 58,200.00	\$ 159,990.00
MOFFAT (URIC)	28,049.49	2.02%	1,750.00	4.70%	\$ 38,960.00	4.70%	\$ 2,713.00	\$ 36,247.00
INDEPENDENT	22,431.99	1.62%	3,406.31	9.14%	\$ 75,840.00	9.14%	\$ 2,169.00	\$ 73,671.00
T. N. DODD	11,786.75	0.85%		0.00%	\$ -	0.00%		\$ -
DURIGAN (ROOSEVELT CITY)	1,889.89	0.14%	119.00	0.32%	\$ 2,650.00	0.32%	\$ 770.00	\$ 1,880.00
KEITH BASTIAN (ALLRED/COLTHORP)	1,678.73	0.12%	219.80	0.59%	\$ 4,890.00	0.59%		\$ 4,890.00
HOWARD HORROCKS (KIEL)	890.34	0.06%	119.00	0.32%	\$ 2,650.00	0.32%		\$ 2,650.00
BIG SIX	757.20	0.05%	875.00	2.35%	\$ 19,480.00	2.35%		\$ 19,480.00
HOWARD HORROCKS (COLTHORP)	602.46	0.04%	79.80	0.21%	\$ 1,780.00	0.21%		\$ 1,780.00
KEITH BASTIAN (KIEL)	295.70	0.02%	40.00	0.11%	\$ 890.00	0.11%		\$ 890.00
SCOTT	218.32	0.02%	54.60	0.15%	\$ 1,220.00	0.15%		\$ 1,220.00
HALL AND LEE	159.17	0.01%	154.00	0.41%	\$ 3,430.00	0.41%		\$ 3,430.00
TOTALS	1385467.43	100%	37,268.91	100%	\$ 829,760.00	100%	\$ 173,001.00	\$ 656,759.00

TOTAL PROBABLE PROJECT COST \$ 1,572,750

TOTAL GRANT (BOR WATERSMART - w/REDUCTION) \$ 743,000

REMAINDER TO BE FUNDED BY WATER USERS \$ 829,750

* Note that actual costs after construction bid will be determined and balances adjusted accordingly;

Project Costs to date have increased due to presence of endangered flower, Ute Ladies Tresses (ULT) discovered during BIA NEPA work, costs reflect permitting through US Fish & Wildlife service and Army Corps of Engineers;

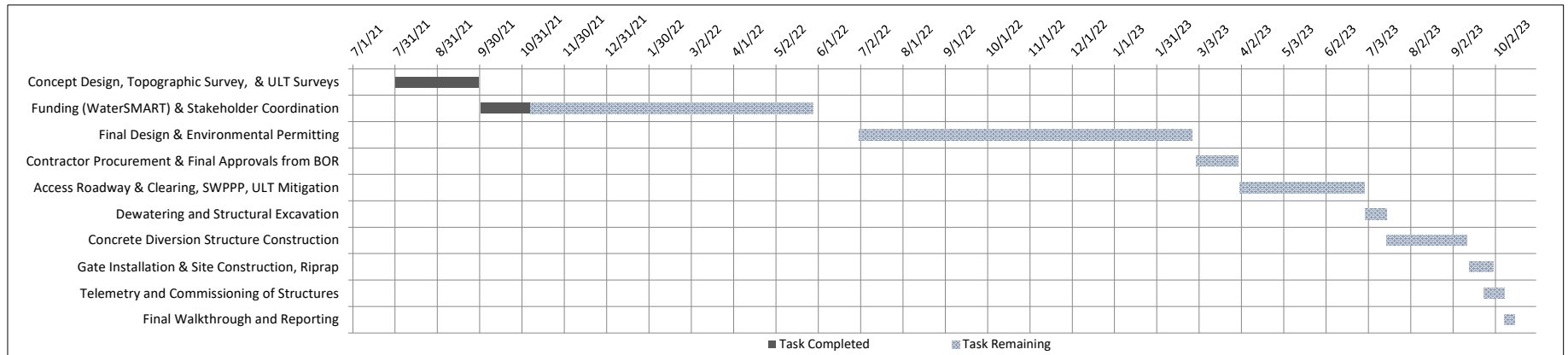
Also increases due to construction material increases from 2016 (steel rebar increases, radial gates) and earthwork for new site.

Now in 2022 Application, two separate structures are being proposed; functionality will be similar and meet needs of both channels and seasons.

2017 Payments were based on 2016 Cost Estimate;

Project Schedule - Uinta River Bifurcation Structure

Phase Number	Milestone/Phase	Start Date	End Date	Percent Complete	Task Duration	Task Completed	Task Remaining	Notes
				%y	daysy	daysy	daysy	
-	-	datey	datey					-
1	Concept Design, Topographic Survey, & ULT Surveys	8/1/2021	10/1/2021	100%	60	60	0	
2	Funding (WaterSMART) & Stakeholder Coordination	10/1/2021	6/1/2022	15%	240	36	204	
3	Final Design & Environmental Permitting	7/1/2022	3/1/2023	0%	240	0	240	
4	Contractor Procurement & Final Approvals from BOR	3/1/2023	4/1/2023	0%	30	0	30	
5	Access Roadway & Clearing, SWPPP, ULT Mitigation	4/1/2023	7/1/2023	0%	90	0	90	
6	Dewatering and Structural Excavation	7/1/2023	7/16/2023	0%	15	0	15	
7	Concrete Diversion Structure Construction	7/16/2023	9/14/2023	0%	58	0	58	
8	Gate Installation & Site Construction, Riprap	9/14/2023	10/1/2023	0%	17	0	17	
9	Telemetry and Commissioning of Structures	9/24/2023	10/9/2023	0%	15	0	15	
10	Final Walkthrough and Reporting	10/9/2023	10/16/2023	0%	7	0	7	



UINTA DISTRIBUTION

R#	Appl. #	Cert. #	Appropriator	Priority Date	Flow	Storage	Use	Canal	Source	Irrig. Ac.
					cfs	af				
1-3006	355b	1173	Indian Irrigation Serv.	01/01/1861	2.29		IRR	Daniels Ditch	Uinta River	151.00
1-3012	357a	1233	Indian Irrigation Serv.	01/01/1861	6.13		IRR	Colorado Park Canal	Uinta River	425.14
1-433	355a	1172	Indian Irrigation Serv.	01/01/1861	3.50		IRR	Big Six Canal	Uinta River	244.71
1-497	358	1235	Indian Irrigation Serv.	01/01/1861	52.76		IRR	Uintah & Bench Canal	Uinta River	6286.31
1-3011	357	1300	Indian Irrigation Serv.	01/01/1861	68.80		IRR	School/Whiterocks	Uinta/Whiterocks Rivers	4820.35
-3010	356b	1208	Indian Irrigation Serv.	01/01/1861	1.00		IRR	Ditch A	Uinta River	73.47
-3009	356a	1212	Indian Irrigation Serv.	01/01/1861	6.15		IRR	Ditch B,C,D	Uinta River	448.71
-3008	356	1211	Indian Irrigation Serv.	01/01/1861	135.35		IRR	Uintah Canal	Uinta River	9374.62
-3007	355c	1174	Indian Irrigation Serv.	01/01/1861	2.02		IRR	Bench Canal	Uinta River	141.61
-3016	383a	1177	Indian Irrigation Serv.	01/01/1861	1.00		MUN	Henry Jim Ditch	Uinta River (Randlett)	
-3005	355	1232	Indian Irrigation Serv.	01/01/1861	23.98		IRR	Duncan/School/FarmC	Whiterocks River	1678.85
-4	354	1234	Indian Irrigation Serv.	01/01/1861	101.90		IRR	Deep Cr/Tabby White	Uinta River	7130.98
-3017	388	1233	Indian Irrigation Serv.	01/01/1861	28.77		IRR	Henry Jim/Wissiuip	Uinta/Duchesne Rivers	1938.11
-3	383	1219	Indian Irrigation Serv.	01/01/1861	13.32		IRR	Uintah/Bench/Ft. Duch	Uinta River	920.94
-3018	388a	1224	Indian Irrigation Serv.	01/01/1861	9.70		IRR	Uintah/Bench Canals	Uinta River	6308.61
-3019	388b	1176	Indian Irrigation Serv.	01/01/1861	11.50		IRR	Uintah Can./Harms Dt	Uinta River	827.88
-3002	314	1261	Uintah Rv. Irrig. Co.	04/19/1905	25.00		IRR	Moffat Canal	Uinta River	2043.55
-8799	358	a2111	Roosevelt City Corp	06/15/1905	0.2444	89.1	MUN	(Change)Uinta Rv	(to) UGW's	
3033	513	118	United States of Amer	07/26/1905	1.86		IRR	Earth Dam	Uinta River	85.16
3034	515	12C	Bureau Indian Affairs	09/16/1905	0.85		MUN	Wooden Box	Uinta River	
3035	546	185	Roosevelt City Corp	09/27/1905	1.70		MUN	Durigan Ditch	Uinta River/4 wells	
3037	623	2171	Dry Gulch Irrigation C	10/21/1905	170.17		IRR	Uintah Canal & #1	Uinta River	12373.12
3038	623a	2084	Dry Gulch Irrigation C	10/21/1905	26.77		IRR	Uintah #1/Bench	Uinta River	2006.31
3039	623a1	2083	Dry Gulch Irrigation C	10/21/1905	46.50		IRR	Uintah #1 Canal	Uinta River	3339.66
3040	623b	2172	Dry Gulch Irrigation C	10/21/1905	60.00		IRR/DOM	Uintah Canal	Uinta River	4199.05
3041	627	2081	Dry Gulch Irrigation C	10/24/1905	21.33		IRR	Uintah #1 Canal	Uinta River	1546.88
3042	644	1738	Whiterocks Irrigation	10/31/1905	50.00	10509.63	IRR	WR/Ouray Valley Can	Whiterocks River	3503.21
3045	719a	273	H. B. Lloyd	12/09/1905	2.33		IRR	Uintah Independent	Uinta River	160.00
3046	727	2245	Dry Gulch Irrigation C	12/15/1905	44.00		IRR	Uintah/Uintah #1 Can	Uinta River	3078.75
3047	727a	2068	Dry Gulch Irrigation C	12/15/1905	4.80		IRR	Indian Bench Canal	Uinta River	335.87
3048	727c	1677	Morehouse, et al	12/15/1905	14.00		IRR	T&N Dodd Canal	Uinta River	979.57
3051	759	368	Cook and Gunn	01/08/1906	3.43		IRR	Big Six Canal	Uinta River	232.81
3052	759a	538	John Cook	01/08/1906	2.27		IRR/DOM	Uintah Independent	Uinta River	160.00
3053	769	1739	Whiterocks Irrigation	01/16/1906	32.95	6925.35	IRR	WR/Ouray Valley Can	Uinta River	2308.45
3058	904	211	Weyland Webb	05/15/1906	2.44		IRR	Ditch	Whiterocks River	171.48
3057	903	1303	Taylor and McKee's	05/18/1906	2.14		IRR	Henry Jim Canal	Uinta River	150.00
3059	1079	175	John A. Olsen	10/04/1906	1.43		IRR/DOM	Uintah Independent	Uinta River	100.00
3063	1135	291	Henry P. Olsen	11/30/1906	1.20		IRR	Uintah Independent	Uinta River	72.71
3064	1149	1260	Uintah Indep Ditch Co	12/13/1906	5.80		IRR/DOM	Uintah Independent	Uinta River	407.00
3066	1419	5677	Board of Water Res	06/14/1907	48.00		IRR	Ouray Park Canal	Uinta River	3038.00
3067	1576	1416	Pullen/Rasmussen	09/10/1907	4.57		IRR/DOM	Big Six Canal	Uinta River	320.00
30404	1813	294	George Q. Allred	03/30/1908	1.43		IRR	Ditch	Uinta River	100.00

UINTA DISTRIBUTION

R#	Appl. #	Cert. #	Appropriator	Priority Date	Flow cfs	Storage af	Use	Canal	Source	Irrig. Ac.
503	1947	1740	Whiterocks Irrigation	07/11/1908	8.93	2013.48	IRR	Whiterocks/Ouray Val	Whiterocks River	671.16
1405	586	621	Keith Bastian	08/18/1908	0.57		IRR	Ditch	Uinta River	38.41
1406	586	621	Howard Horrocks	08/18/1908	1.70		IRR	Ditch	Uinta River	112.61
245	2043		Ouray Park Irr. Co.	08/22/1908	42.00		IRR/DOM	Ouray Park Canal	Uinta River	9554.25
3080	2234	982	John J. Nielson	01/22/1909	2.28		IRR/DOM	Uintah Independent	Uinta River	160.00
3083	2544	1372	Uintah Indep Ditch Co	06/05/1909	9.20		IRR/DOM	Uintah Independent	Uinta River	648.58
10655	1947a	1740	Tridell/Lapointe W/D	07/11/1909	0.7836		MUN	WR/Ouray Valley Can	Whiterocks River	
3085	2704	275	Wilkerson/Forsyth	09/24/1909	4.05		IRR	Marimon Ditch	Whiterocks River	283.41
3090	3007	815	Hattie Kinyon Estate	02/18/1910	2.50		IRR	Big Six Canal	Uinta River	160.01
3091	3008	1522	Oaks/Peterson et al	02/18/1910	8.77		IRR/DOM	Uintah Independent	Uinta River	614.21
3093	3062	2261	Board of Water Res	03/11/1910	42.00		IRR	Canal	Uinta River	2840.61
7	3319	416	Wilkerson et al	06/21/1910	1.00		IRR	Marimon Ditch	Whiterocks River	68.71
3072	1852	1537	T&N Dodd Irrigation	02/05/1912	10.00		IRR/DOM	T&N Dodd Canal	Uinta River	700.00
3	4929	1535	T&N Dodd Irrigation	11/25/1912	2.68		IRR/DOM	T&N Dodd Canal	Uinta River	187.39
3060	1094a	176	Les O'Driscoll	12/16/1912	2.30		IRR/DOM	Big Six Canal	Uinta River	156.48
1402	5508	630	Keith Bastian	11/10/1913	0.57		IRR	Uintah Independent	Uinta River	78.51
1403	5508	630	Keith Bastian	11/10/1913	0.57		IRR	Uintah Independent	Uinta River	71.01
1407	5508	630	Howard Horrocks	11/10/1913	0.57		IRR	Uintah Independent	Uinta River	80.00
1149	5508	630	Keith Bastian	11/10/1913	0.57		IRR/DOM	Uintah Independent	Uinta River	78.51
1401	5508	630	Howard Horrocks	11/10/1913	0.57		IRR	Uintah Independent	Uinta River	80.00
504	6485	5997	Whiterocks Irrigation	12/27/1915		3268	IRR	Whiterocks River	Paradise Park Reservoir	6205.81
8706	6695a	1136	Garth Anderton	04/10/1916	0.15		IRR/DOM	John Hall's Ditch	Uinta River	10.34
8708	6695c	1136	Garth Anderton	04/10/1916	0.19		IRR/DOM	John Hall's Ditch	Uinta River	13.33
3146	6695	1136	Blue Diamond Oil	04/10/1916	1.68		IRR/DOM	John Hall's Ditch	Uinta River	117.61
8707	6695b	1136	George C. Allred	04/10/1916	0.19		IRR/DOM	John Hall's Ditch	Uinta River	13.33
512	6902	6366	Whiterocks Irrigation	08/17/1916		1000	IRR	Whiterocks/Ouray Val	Chepeta Lake/WR River	6203.81
3156	7210	1550	Uintah Indep Ditch Co	03/19/1917	2.14		IRR	Uintah Independent	Uinta River	160.00
3171	7420	1026	Schulthes, et al	07/30/1917	0.70		IRR	Ditch	Whiterocks River	57.55
3156	7729	1292	Uintah Indep Ditch Co	05/13/1918	3.57		IRR/DOM	Uintah Independent	Uinta River	250.00
3177	7797	2163	Uintah Power & Light	07/12/1918	28.32		POWER	Dam, Headgate & Can	Uinta River	
3160	7839	1807a	Dry Gulch Irrigation C	08/22/1918		500	IRR	Lower Chain Lake	Uinta River	499.35
3169	7840	2144	Dry Gulch Irrigation C	08/22/1918		500	IRR	Upper Chain Lake	Uinta River	1667.32
3173	8021	1282	Uintah Indep Ditch Co	03/08/1919	4.57		IRR	Uintah Independent	Uinta River	320.00
3175	8223	1754	Dry Gulch Irrigation C	07/31/1919		216	IRR	Crescent Lake	Uinta River	216.00
3176	8224	2146	Dry Gulch Irrigation C	07/31/1919		750	IRR	Fox Lake	Uinta River	866.21
507	8287	6369	Whiterocks Irrigation	09/15/1919		110	IRR	Whiterocks/Ouray Val	Wigwam Lake	6203.81
506	8286	6368	Whiterocks Irrigation	09/15/1919		72	IRR	Whiterocks/Ouray Val	Papoose Lake	6203.81
505	8285	6367	Whiterocks Irrigation	09/15/1919		90	IRR	Whiterocks/Ouray Val	Moccasin Lake	6205.81
3179	8327	2170	Dry Gulch Irrigation C	10/08/1919		330	IRR	Lower Chain Lake	Uinta River	1318.14
3188	9103		Dry Gulch Irrigation C	08/03/1922		1000	IRR	Atwood Lake	Uinta River	11221.45
3187	9102		Board of Water Res	08/03/1922		4250	IRR	WR/Cliff/Cleve/Queant	Whiterocks River	28544.00
3195	9522	1699	Uintah Indep Ditch Co	05/27/1924	5.06		IRR	Uintah Independent	Uinta River	353.81

UINTA DISTRIBUTION

WR#	Appl. #	Cert. #	Appropriator	Priority Date	Flow cfs	Storage af	Use	Canal	Source	Irrig. Ac.
43-3180	8328	2085	Dry Gulch Irrigation C	03/24/1926		20	IRR	Upper Chain Lake	Uinta River	40.00
43-3205	10111a		Ouray Park Irr. Co.	01/24/1927	95.00		IRR	WR/Ouray Valley Can	Whiterocks River	4368.00
43-3204	10111		Ouray Park Irr. Co.	01/24/1927	95.00		IRR	WR/Ouray Valley Can	Whiterocks River	8119.15
43-3194	9510	1743	Ephraim Rasmussen	04/04/1929	0.57		IRR/DOM	Deep Creek Canal	Uinta River	40.00
43-5	10705		Dry Gulch Irrigation C	07/13/1929		1500	IRR	Lake Atwood	Uinta River	3171.65
43-3197	9670		Ouray Park Irr. Co.	02/16/1933		10000	IRR	Brough/Pelican Lakes	Whiterocks River	8000.00
43-3198	9670a		Ouray Park Irr. Co.	02/16/1933		10000	IRR	Brough/Pel/Cottonwoo	Uinta River	8000.00
43-3217	11423		Ouray Park Irr. Co.	08/05/1933		2005	IRR	WR/Ouray Valley Can	Cliff/Whiterocks Lakes	Supplem
43-3215	11930		Ouray Park Irr. Co.	01/27/1936		2500	IRR	Ouray Park Canal	Uinta Rv/Pelican Lake	Supplem
43-508	13548	6370	Whiterocks Irrigation	04/16/1940		1000	IRR	Whiterocks/Ouray Val	Chepeta Lake	6203.81
43-509	13998	6371	Whiterocks Irrigation	12/31/1940		441.62	IRR	Whiterocks/Ouray Val	Chepeta Lake	6203.81
43-3302	17168	5418	First Security Bank	01/07/1946	0.53		IRR	Diversion Point #2	Uinta River	6.00
43-3302	17168	5418	First Security Bank	01/07/1946	9.48		IRR	Diversion Point #1	Uinta River	514.00
43-3311	17259		Moon Lake Electric	02/06/1946	56.48		POWER		Uinta River	
43-2509	18384		Tridell/Lapoint WID	08/22/1947	1.00		STOCK/DOM		Whiterocks River	
43-720	11550		Ouray Park Irr. Co.	12/06/1948	10.00	1300	IRR	Deep Creek	Bullock/Cottonwood Res.	4368.00
43-2502	8330		Dry Gulch Irrigation C	04/30/1956		1000	IRR	Uintah No. 1 Canal	Uinta River/Montez Cr. Re	1634.65
43-511	31881		Whiterocks Irrigation	04/21/1960		3000	IRR	Canal	Whiterocks River	7459.81
43-3610	32943		Uintah Rv. Irrig. Co.	04/14/1981	5.00		IRR/DOM	Cottonwood Reservoir	Uinta River	2043.55
43-3720	35504		Whiterocks Irrigation	08/08/1983	5.00		IRR/ST/MUN	WR/Ouray Valley Can	Whiterocks River	6841.56
43-3811	36603		Moon Lake WU Assn	12/07/1964	100.00	2500	IRR	Uintah #1 Canal	Uinta River	Supplem
43-3812	36604		Board of Water Res	12/07/1964	250.00	5000	IRR	Cedarview Canal	Uinta River/Browns Draw	8000.00
43-3813	36605		Moon Lake WU Assn	12/07/1964	100.00	2500	IRR	Uintah Canal	Uinta River/Unnamed Res	3000.00
43-3819	36626		Whiterocks Irrigation	12/22/1964		4460	IRR/ST/DOM	WR/Ouray Valley Can	Whiterocks River	Supplem
43-10300	65493		USDA Forest Service	06/28/1991	0.5		FISH CULTUR	Canal System back to	Uinta River	

APPENDIX B. LETTERS OF SUPPORT

October 26, 2021

Funding Application Review Committee
Bureau of Reclamation

RE: Uinta River Bifurcation Structures – Letter of Support

To Whom it May Concern:


The irrigation companies represented below are submitting this letter to show support for the proposed Uinta River Bifurcation Structures project being submitted for funding assistance. The structures planned for installation are an important part of the Uinta River system and the water users who irrigate from it. Previous funding was secured to rehabilitate the old structure and move its location upstream, however, right-of-way and legal hurdles were unable to be negotiated and a new plan has been developed. The existing structure will be replaced in-place and a Categorical Exclusion has already been obtained through the BIA for that part of the project. A second upstream structure located on private property will be installed to work in tandem with the bifurcation structure to accomplish the needs of water users on the system. The upstream structure will allow for better flood control down the West channel, provide a measured amount of flow over the Independent heading and a popular stretch of river for Tribal members, and provide for winter flow diverted back to the East channel.

The total cost estimate for the project is \$1,572,750. There are two alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity, which we respectfully request financial assistance to finish this project. The following commitments are being proposed:

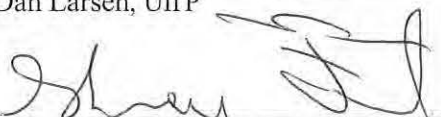
- Cost share of up to **\$1,077,750** to be divided between water users;
- Currently **\$130,802** is being held in an account by UWCD towards the project.
- Remaining funds to be available by time of construction and as early as Fall 2022.
- There are no contingencies or constraints on the availability of funding or the commitment of these funds.

We appreciate the opportunity to partner with Uintah Water Conservancy District (UWCD) and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact UWCD with further updates and any other required information. We look forward to hearing about the results of the grant application.


Sincerely,



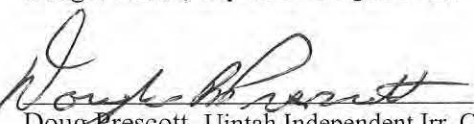
Dan Larsen, UIIP



Shane Frost, Ouray Park Irrigation Company



Rodger Ames, Dry Gulch Irrigation Co.



Doug Prescott, Uintah Independent Irr. Co.

Big Six Ditch

December 22, 2015

RECEIVED DEC 23 2015

Gawain Snow, General Manager
Uintah Water Conservancy District
78 West 3325 North
Vernal Utah 84078

RE: Uinta River Bifurcation Structure Replacement – Letter of Commitment

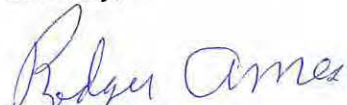
Mr. Snow:

The Dry Gulch Irrigation Company is submitting this letter to show support for the proposed Uinta River Bifurcation Structure Replacement project being submitted for funding assistance. The structure is an important part of the Uinta River system and the water users who irrigate from it. The total cost estimate for the project is \$854,000. There are two alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity. The following commitment is proposed for our company proportionate to the average percentage of water usage:

- Cost share of up to **\$88,670.00**
- Funds to be available by time of construction and as early as July 2016.
- There are no contingencies or constraints on the availability of funding or the commitment of these funds.
- We request further information and coordination as the project commences and the funding scenario is finalized.

We appreciate the opportunity to partner with Uintah Water Conservancy District and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact us with further updates and any other required information. We look forward to hearing about the results of the grant application.

Sincerely,



Rodger Ames
Chairman
Dry Gulch Irrigation Company

December 22, 2015

Gawain Snow, General Manager
Uintah Water Conservancy District
78 West 3325 North
Vernal, Utah 84078

RE: Uinta River Bifurcation Structure Replacement - Letter of Commitment


Mr. Snow

The Uinta Independent Irrigation Company is submitting this letter to show support for the proposed Uinta River Bifurcation Structure Replacement project being submitted for funding assistance. The structure is an important part of the Uinta River system and the water users who irrigate from it. The total cost estimated for the project is \$854,000. There are two alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity. The following commitment is proposed for our company proportionate to the average percentage of water usage:

- Cost share of up to **\$9,160.00**
- Funds to be available by time of construction and as early as July 2016
- There are no co contingencies or constraints on the availability of the funding or of the commitment of these funds.
- We request further information and coordination as the project commences and the funding scenario is finalized.
- We would be more supportive if there was an option of looking at a site upstream to increase dependability.

We appreciate the opportunity to partner with Uintah Water Conservancy District and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact us with further updated and any other required information. We look forward to hearing about the results of the grant application.

Sincerely,


Doug Prescott, President
Uinta Independent Irrigation Company

Ouray Park Irrigation Company, Inc.
P.O. Box 395
Roosevelt, Utah 84066

January 12, 2016

Gawain Snow, General Manager
Uintah Water Conservancy District
78 West 3325 North
Vernal Utah 84078

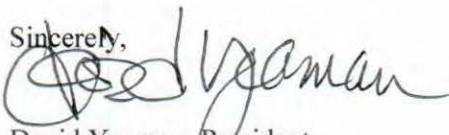
RE: Uinta River Bifurcation Structure Replacement – Letter of Commitment

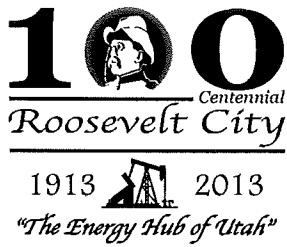
Mr. Snow:

The Board of Directors of Ouray Park Irrigation Company approved the submitting of this letter to show our support for the proposed Uinta River Bifurcation Structure Replacement project being submitted for funding assistance. We believe that if properly located on the river, the structure will be an important part of the Uinta River system and the water users who irrigate from it. We understand that the total cost estimate for the project is \$854,000 and that there are two proposed alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity. We understand that our company's proposed commitment is proportionate to the average percentage of water usage during the irrigation season as follows:

- Location designation
- Funds to be available by time of construction and as early as July 2016.
- There are no contingencies or constraints on the availability of funding or the commitment of these funds.
- We request further information and coordination as the project commences and the funding scenario is finalized.

We appreciate the opportunity to partner with Uintah Water Conservancy District and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact us with further updates and any other required information. We look forward to hearing about the results of the grant application.

Sincerely,

David Yeaman, President
Ouray Park Irrigation Company



255 South State Street
Roosevelt, Utah 84066

(435) 722-5001
722-5000 Fax

Rooseveltcity.com

December 22, 2015

Gawain Snow, General Manager
Uintah Water Conservancy District
78 West 3325 North
Vernal Utah 84078

RE: Uinta River Bifurcation Structure Replacement – Letter of Commitment

Mr. Snow:

Roosevelt City is submitting this letter to show support for the proposed Uinta River Bifurcation Structure Replacement project being submitted for funding assistance. The structure is an important part of the Uinta River system and the water users who irrigate from it. The total cost estimate for the project is \$854,000. There are two alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity. The following commitment is proposed for our filings in Durigan, proportionate to the average percentage of water usage:

- Cost share of up to **\$770.00**
- Funds to be available by time of construction and as early as July 2016.
- There are no contingencies or constraints on the availability of funding or the commitment of these funds.
- We request further information and coordination as the project commences and the funding scenario is finalized.

We appreciate the opportunity to partner with Uintah Water Conservancy District and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact us with further updates and any other required information. We look forward to hearing about the results of the grant application.

Sincerely,

Ryan Snow
City Manager
Roosevelt City Corporation

Uintah Indian Irrigation Project Operation and Maintenance Company

December 22, 2015

Gawain Snow, General Manager
Uintah Water Conservancy District
78 West 3325 North
Vernal Utah 84078

RE: Uinta River Bifurcation Structure Replacement – Letter of Commitment

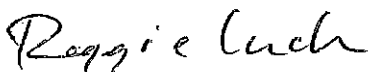
Mr. Snow:

The Uintah & Ouray Indian Irrigation Project Operation & Maintenance Company is submitting this letter to show support for the proposed Uinta River Bifurcation Structure Replacement project being submitted for funding assistance. The structure is an important part of the Uinta River system and the water users who irrigate from it. The total cost estimate for the project is \$854,000. There are two alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity. The following commitment is proposed for our company proportionate to the average percentage of water usage:

- Cost share of up to **\$372,450.00.**
- Including filing for Scott share through Henry Jim Canal (\$90.00).
- Funds to be available by time of construction and as early as July 2016.
- There are no contingencies or constraints on the availability of funding or the commitment of these funds.
- We request further information and coordination as the project commences and the funding scenario is finalized.

We appreciate the opportunity to partner with Uintah Water Conservancy District and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact us with further updates and any other required information. We look forward to hearing about the results of the grant application.

Sincerely,



Reggie Cuch, Chairman
Uintah & Ouray Indian Irrigation Project Operation & Maintenance Company

December 22, 2015

Gawain Snow, General Manager
Uintah Water Conservancy District
78 West 3325 North
Vernal Utah 84078

RE: Uinta River Bifurcation Structure Replacement – Letter of Commitment

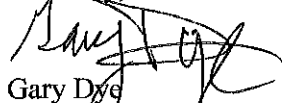
Mr. Snow:

The T.N. Dodd Irrigation Company is submitting this letter to show support for the proposed Uinta River Bifurcation Structure Replacement project being submitted for funding assistance. The structure is an important part of the Uinta River system and the water users who irrigate from it. The total cost estimate for the project is \$854,000. There are two alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity. The following commitment is proposed for our company proportionate to the average percentage of water usage:

- Cost share of up to **\$4,820.00**
- Funds to be available by time of construction and as early as July 2016.
- There are no contingencies or constraints on the availability of funding or the commitment of these funds.
- We request further information and coordination as the project commences and the funding scenario is finalized.

We appreciate the opportunity to partner with Uintah Water Conservancy District and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact us with further updates and any other required information. We look forward to hearing about the results of the grant application.

Sincerely,



Gary Dye
T.N. Dodd Irrigation Company

December 22, 2015

Gawain Snow, General Manager
Uintah Water Conservancy District
78 West 3325 North
Vernal Utah 84078

RE: Uinta River Bifurcation Structure Replacement – Letter of Commitment

Mr. Snow:

Representing the filings for Keith Bastian, we are submitting this letter to show support for the proposed Uinta River Bifurcation Structure Replacement project being submitted for funding assistance. The structure is an important part of the Uinta River system and the water users who irrigate from it. The total cost estimate for the project is \$854,000. There are two alternatives for funding this project through the Bureau of Reclamation's WaterSMART Grant opportunity. The following commitment is proposed for our company/filings proportionate to the average percentage of water usage:

- Cost share of up to \$690.00 (Allred/Colthorp) and \$120.00 (Kiel) = **\$810.00**
- Funds to be available by time of construction and as early as July 2016.
- There are no contingencies or constraints on the availability of funding or the commitment of these funds.
- We request further information and coordination as the project commences and the funding scenario is finalized.

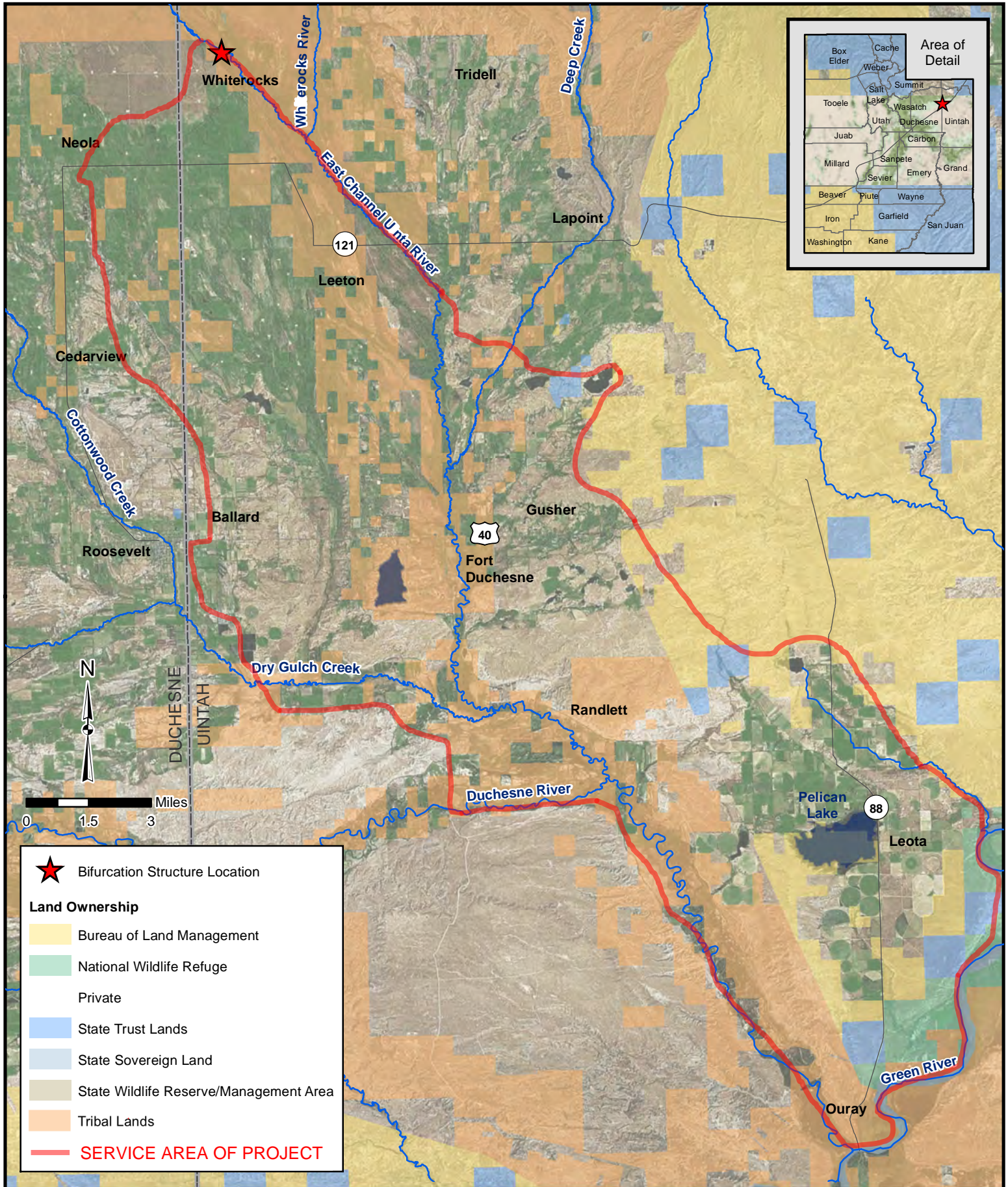
We appreciate the opportunity to partner with Uintah Water Conservancy District and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Please contact us with further updates and any other required information. We look forward to hearing about the results of the grant application.

Sincerely,

Dusty Olsen

A handwritten signature in black ink, appearing to read "Dusty Olsen", written over a white background.

APPENDIX C. PROJECT MAPS



★ Bifurcation Structure Location

Land Ownership

- Bureau of Land Management
- National Wildlife Refuge
- Private
- State Trust Lands
- State Sovereign Land
- State Wildlife Reserve/Management Area
- Tribal Lands

— SERVICE AREA OF PROJECT

GIS **Jones & DeMille Engineering**

800.748.5275 www.jonesanddemille.com

Uintah Water Conservancy District

*Uinta River Bifurcation Structure
Project Location*

Map Name: H:\JDI\Proj\1601-099\Design\GIS\Maps\Project_Location.mxd
Project Number: 1601-099 Drawn by: JWW 01-16 Last Edit: 01/15/2016

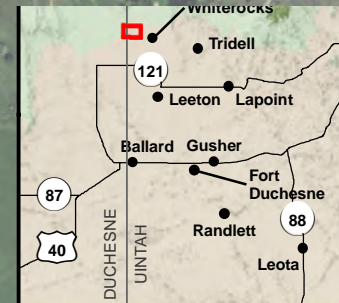
UINTAH COUNTY

SCALE: 1" = 3 miles

1

**2021 PROPOSED STRUCTURES
DUE TO UPSTREAM LOCATION R.O.W.
SITUATION UNABLE TO MOVE FORWARD**

**LOCATION IS
NO LONGER
BEING
PURSUED**



DUCHESNE
UINTAH

**CHANNEL CLEANING FOR
RETURN FLOW TO EAST
CHANNEL**

**2021 PROPOSAL -
BUILD DESIGNED
STRUCTURE HERE**

**2021 PROPOSAL -
STRUCTURE TO DIVERT
INDEPENDENT FLOWS
AND SEND REMAINDER
BACK TO EAST CHANNEL**

**CONSTRUCT BERM TO
KEEP FLOOD & WINTER
FLOWS OUT OF WEST
CHANNEL**

**Existing Uinta
River Bifurcation
Structure**

GIS  **Jones & DeMille
Engineering**
- infrastructure professionals -
800.748.5275 www.jonesanddemille.com

Uintah Water Conservancy District

UINTAH COUNTY

**Uinta River Bifurcation Structure
Site Map**

SCALE: 1" = 800'

Map Name: H:\JD\Proj\1601-099\Design\GIS\Maps\Site_Map.mxd

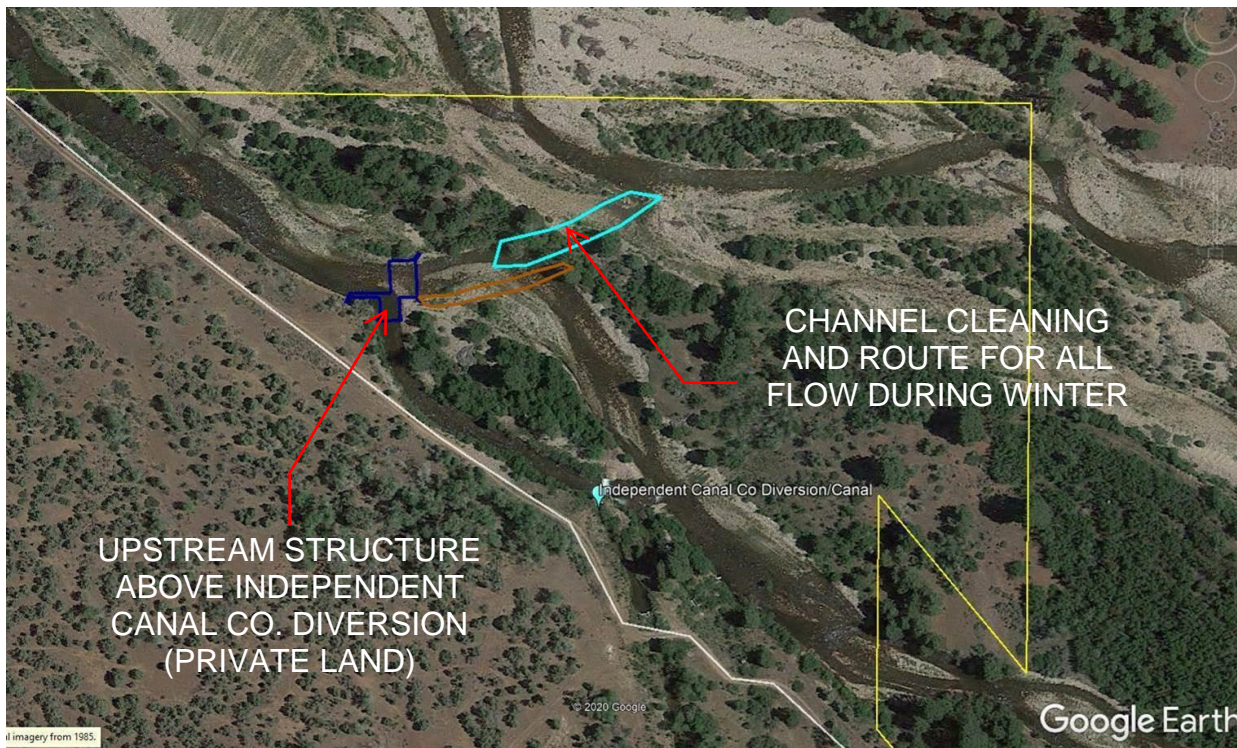
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Drawn by: JWW 07-16

Last Edit: 07/19/2016

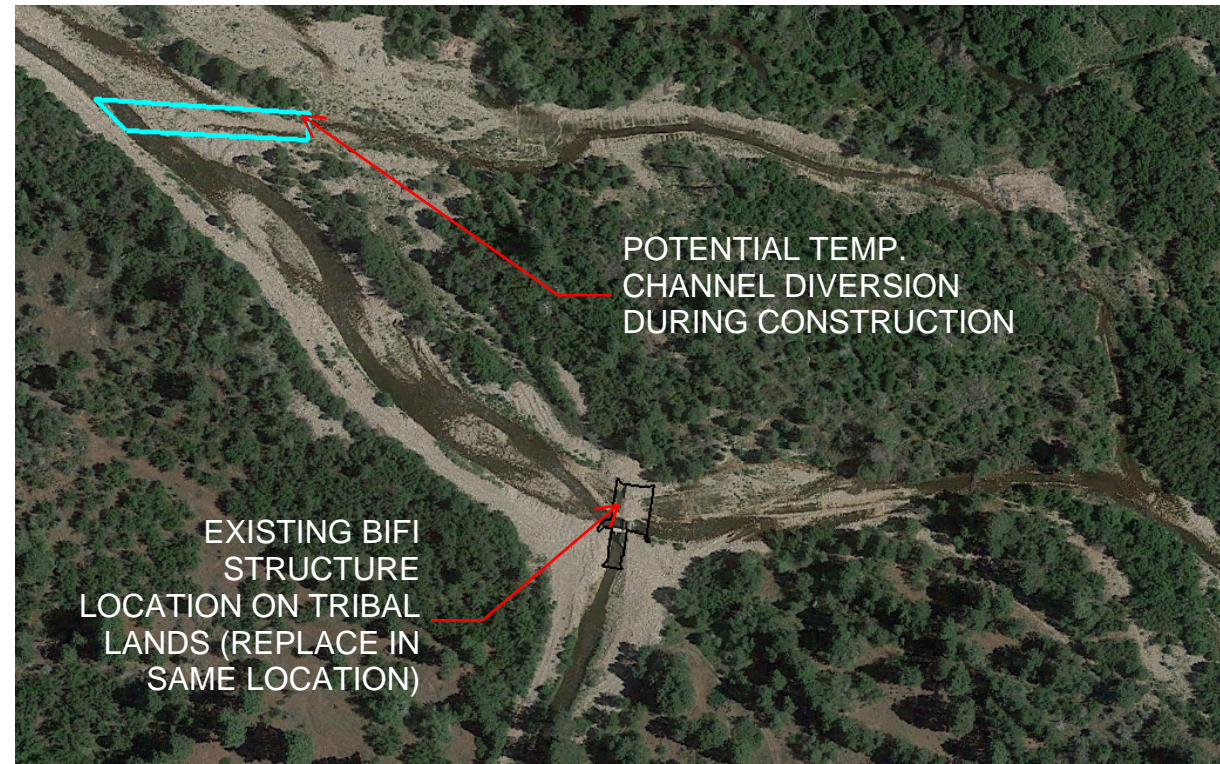
1

2022 UINTA RIVER BIFURCATION STRUCTURE REPLACEMENT (TWO STRUCTURES TO ACCOMPLISH GOALS OF UINTA RIVER WATER USERS)



PROPOSED ACTION PLAN

1. MEET WITH UWCD AND DISCUSS SUBMITTAL OF FUNDING APPLICATION THROUGH FY2022 WATERSMART GRANT (\$500,000 Grant and FGII Grant)
2. JDE TO UPDATE COST ESTIMATES, CONCEPT DESIGN, UTILIZE PREVIOUS DESIGN AND NEW TOPO;
3. ULT SURVEYS AUGUST 2021 (ESPECIALLY NEW UPSTREAM STRUCTURE LOCATION) -COMPLETED
4. LANDOWNER & INDEPENDENT IRR. CO. COORDINATION - (INITIATED)
5. CALL MEETING WITH STAKEHOLDERS (IRRIGATION COMPANIES) AND REVIEW UPDATED COSTS, FUNDING, AND CONCEPT - (COMPLETED OCT. 26)
6. CATEGORICAL EXCLUSION FROM BIA FOR EXISTING LOCATION AND ROW PROCESS DEFINED THROUGH CANAL ACT ON UPSTREAM PRIVATE LAND LOCATION (Obtained Oct. 26)



APPENDIX D. WATER SAVINGS DATA

Water Loss Figures - Uinta River Bifurcation Structure	
Irrigation Season (On Average Years)	
	4/1/2015 to 10/31/2015 213 days
Operational Spill point at Bench Canal Heading on West Channel	
Average Daily Spill*	4.6 cfs
<i>*Assuming 2 weeks at 40 cfs, 3 weeks at 20 cfs/# days in irrigation season</i>	
	Converting to Acre-ft per Year 397,440 ft ³ /day 9.1 acre-ft/day
Water Lost Annually	1943.4 acre-ft/year
Water Loss assuming Spilling over Daily Average at End of Canals	
Bench Canal	1188.6 acre-ft
Independent Canal	32.0 acre-ft
Uintah No. 1 Canal	674.6 acre-ft
Total on Two Major Canals w Observed Spillage	1895.2 acre-ft
Total Calculated Losses (Operation + Spills)	3838.6 acre-ft
Water Savings Estimate Used in Report	3800.0 acre-feet

Water Loss assuming Spilling over Daily Average at End of Canals (acre-ft)							
Period of Data Record (May to July)	2017	2018	2019	2020	2021	5 Year Average	4 Year Average
Bench Canal	231.25	672.09	454.52	636.22	1188.60	636.54	737.86
Independent Canal	92.84	20.41	105.49	135.92	32.02	77.34	73.46
Uintah No. 1 Canal	1101.16	682.72	796.47	852.91	674.62	821.58	751.68
Total	1425.24	1375.22	1356.48	1625.06	1895.24	1535.45	1563.00

APPENDIX E. CATEGORICAL EXCLUSION FOR EXISTING LOCATION

**CATEGORICAL EXCLUSION EXCEPTION REVIEW (CEER)
CHECKLIST**

Project: Uinta River Bifurcation Structure Replacement	Date: 10/20/21
Letter and Text of category (BIA - 516 DM 10.5 ; DOI - 43 CFR46-210)	
A. Operation, Maintenance, and Replacement of Existing Facilities. Examples are normal renovation of buildings, road maintenance and limited rehabilitation of irrigation structures.	

Evaluation of Extraordinary Circumstances (43 CFR 46.215):

1. This action would have significant impacts on public health or safety.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
2. This action would have significant impacts on: natural resources & unique geographical features as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild & scenic rivers; national natural landmarks; sole or prime drinking water aquifers; prime farmlands wetlands; floodplains; national monuments; migratory birds; and other ecologically significant areas.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
3. This action would have highly controversial environmental effects or unresolved conflicts concerning alternate uses of available resources.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
4. This action would have highly uncertain environmental effects or involve unique or unknown environmental risk.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
5. This action will establish a precedent for future actions.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
6. This action is related to other actions with individually insignificant but cumulatively significant environmental effects.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
7. This action will have significant impacts on properties listed or eligible for listing in the National Register of Historic Places.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
8. This action will have significant impacts on a species listed or proposed to be listed as endangered or threatened, or Critical Habitat of these.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
9. This action violates federal, state, local, or tribal law or requirements imposed for protection of the environment.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
10. This action will have a disproportionately high and adverse effect on low income or minority populations.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
11. This action will limit access to, and ceremonial use of, Indian sacred sites on federal lands, by Indian religious practitioners, and/or adversely affect the physical integrity of such sites.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>
12. This action will contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or may promote the introduction, growth, or expansion of the range of such species.	NO <input checked="" type="checkbox"/>	YES <input type="checkbox"/>

A "yes" to any of the above exceptions will require that an environmental assessment be prepared.

NEPA Action: CE EA

Project (con't): Uinta River Bifurcation Structure Replacement

Name and Title of person preparing this checklist

Kenneth Asay, Irrigation System Manager

Concur: *Garry J. Cantley*
Regional Archeologist

Date: 10/21/2021

Concur:
Other Environmental Professional

Date:

Concur: *Chip Lewis*
Regional/Agency/OFMC NEPA Reviewer

Date: 10/25/2021

Approve: 
Regional Director/Agency Superintendent/
OFMC Official

Digitally signed by ANTONIO
PINGREE
Date: 2021.10.25 12:55:25 -06'00' **Date:**

NOTES: This is for the Uinta River Bifurcation Structure Replacement at the original location. The environmental surveys were completed a few years ago when we had propose a new location for construction. It was determined that no suitable habitat existed for the ULT in the project area. An MOA was completed and signed by all parties relating to this old structure.



APPENDIX F. 2021 ULT SURVEY RESULTS

Spiranthes diluvialis Survey

Uinta River Bifurcation

Uintah County, Utah



September 2021
Wetland Resources



Spiranthes diluvialis Survey

Uinta River Bifurcation Project

Prepared for:

Jones and DeMille Engineering
Jenna Jorgensen, Project Manager
1535 South 100 West
Richfield, Utah 84701
(435) 896-8266

Prepared by:

Wetland Resources
182 East 300 North
Logan, Utah 84321
(435) 753-4517



September 2021

CONTENTS

1.0	Introduction	1
2.0	Methodology	1
3.0	Results	2
4.0	References	4

Appendix A: Maps

Appendix B: Photos

Appendix C: Surveyor Qualifications

A. INTRODUCTION

Wetland Resources conducted a survey for Ute ladies'-tresses (*Spiranthes diluvialis*) (ULT) for a proposed bifurcation structure in the Uinta River in Uintah County, Utah. The survey area consists of the project disturbance limits plus a 300-foot buffer around the disturbance limits (Appendix A: Map 1). The survey was conducted for Jones and DeMille Engineering, who is providing engineering and environmental services for this project. The survey was conducted August 23 through 26, 2021 during the ULT blooming season.

The survey area is situated along the Uinta River on the south slope of the Uinta Mountains at 6150 feet above mean sea level. The survey area consists of numerous braided river channels, floodplain wetlands, cobble bars, and sagebrush/ponderosa pine uplands. The project area contains both private and Tribal lands.

B. METHODOLOGY

The assessment of ULT suitable habitat criteria and disqualifiers were conducted in accordance with the U.S. Fish and Wildlife Service (USFWS) protocol (USFWS 1992, 2007, and 2011) and supplemental publications and studies (Arft 1995; Fertig 2005). It was determined that ULT was blooming in the area based on several ULT populations identified in the area the previous week by Wetland Resources.

Spiranthes diluvialis is typically found associated with alluvial deposits of silty, sandy, gravelly, or cobbly soil (USFWS 1992). The species may occasionally also be found in highly organic soils or peat. The species seems to prefer well drained soils with fairly high moisture content. Soils may exhibit some gleying or mottling but are generally not strongly anaerobic. *Spiranthes diluvialis* is found in some heavily disturbed sites, for example, old gravel mines that have since been developed into wetlands, and along well traveled footpaths built on old berms. The species is also found in grazed pastures with introduced pasture grasses. *Spiranthes diluvialis* is found with grasses, sedges, and rushes, in shrubs, and riparian trees such as willow species. It rarely occurs in deeply shaded sites and prefers partially shaded open glades or pastures and meadows in full sunlight. Specifically, the following criteria was used to determine suitable ULT habitat (USFWS 1992):

1. Seasonally high water table (within 18 inches of the soil surface for at least one week sometime during the growing season, growing season defined as when soil temperatures are above 41 degrees Fahrenheit).
2. In or near wet meadows, stream channels, or flood plains.
3. Vegetation falling into the Facultative Wet or Obligate Wet classification, including introduced pasture grasses.
4. Jurisdictional wetlands as specified under the Clean Water Act.

The following criteria was used to disqualify certain habitats within the survey area that do not support potential ULT habitat (USFWS 2007):

1. Appropriate hydrology not present, typically indicated by:
 - area is comprised of mostly upland vegetation
 - area dries up by mid-July, with water table lower than 12 - 18 inches below the soil surface

-
2. Heavy clay soils present
 3. Soils strongly alkaline
 4. Site heavily disturbed, such as, for example:
 - stream banks channelized and stabilized by heavy rip-rap
 - highway rights-of-way built on filled or compacted soil or rock material
 - construction sites where construction has either stripped the topsoil or where construction has been completed within the last 5 years but the area has not been revegetated
 5. Stream banks steep, transition from stream margin to upland areas abrupt
 6. Site characterized by standing water with cattails, bulrushes, and other emergent aquatic vegetation (note that margins of such areas may be suitable habitat).
 7. Riparian areas, stream banks, or wetlands vegetated with dense rhizomatous species such as reed canary grass (*Phalaris arundinacea*), tamarisk or salt cedar (*Tamarix ramosissima*), teasel (*Dipsacus sylvestris*), common reed (*Phragmites australis*), or saltgrass (*Distichlis spicata*)
 8. Riparian areas overgrazed or otherwise managed such that the vegetation community is comprised of upland native or weedy species or is unvegetated. (note that the orchid can tolerate rather extreme overgrazing as long as it has not resulted in a drop in the water table as indicated by conversion of the riparian or wet meadow pasture vegetation community to mostly upland species).
 9. Potential habitat is no longer in a natural condition, for example, has been converted to agricultural uses and is now plowed and cropped, or has been converted to lawns or golf courses (note that wet meadow pastures with a mix of native and non-native pasture grasses, including pastures that are regularly hayed, are suitable potential habitat).
 10. Wetland is a brackish playa or pothole not fed by springs or not in the floodplain of or hydrologically connected with a riparian system or other source of fresh water (note that fens and wetlands associated fresh water springs are suitable potential habitat).

Areas that were determined to contain suitable ULT habitat were surveyed using a 100% coverage pedestrian survey with transect widths of 6 feet. ULT locations were mapped with a sub-meter GPS

C. RESULTS AND DISCUSSION

The survey area includes high quality ULT habitat, and 711 ULT individuals were identified within the survey area. The areas of suitable ULT habitat and the ULT locations can be found on Maps 2 through 5 in Appendix A. Photos of the survey area are provided in Appendix B.

The banks of the Uinta River provide high quality ULT habitat. The banks of the braided river channels have cobbly sandy soil, and in the occupied ULT areas they are dominated by *Agrostis stolonifera*, *Juncus balticus*, *Juncus torreyi*, *Equisetum hyemale*, *Carex rostrata*, *Carex nebrascensis*, *Epilobium ciliatum*, *Eleocharis palustris*, *Scirpus acutus*, and *Castilleja minor*. Where there was a shrub overstory, the dominant shrub species were *Salix exigua*, *Salix lutea*, and *Alnus incana*. In addition to the river banks, there are also several side channels that only flow during high water, and several islands, that support palustrine emergent wetlands and provide high quality ULT habitat. The associated species in these off-channel wetlands are the same as on the river banks.

On the main river channel banks, the ULT individuals were typically found on inside corners where there are depositional gravel and cobble bars near the low-flow elevation of the river, which keeps them moist throughout the growing season (Photos 1 through 3). The banks on the outside corners of the river channels were typically much steeper with very little herbaceous riparian vegetation, and did not support ULT populations (Photo 4). There are some sections of the river banks that have been altered by heavy machinery and placement of cobble (Photo 5). These areas did not support ULT.

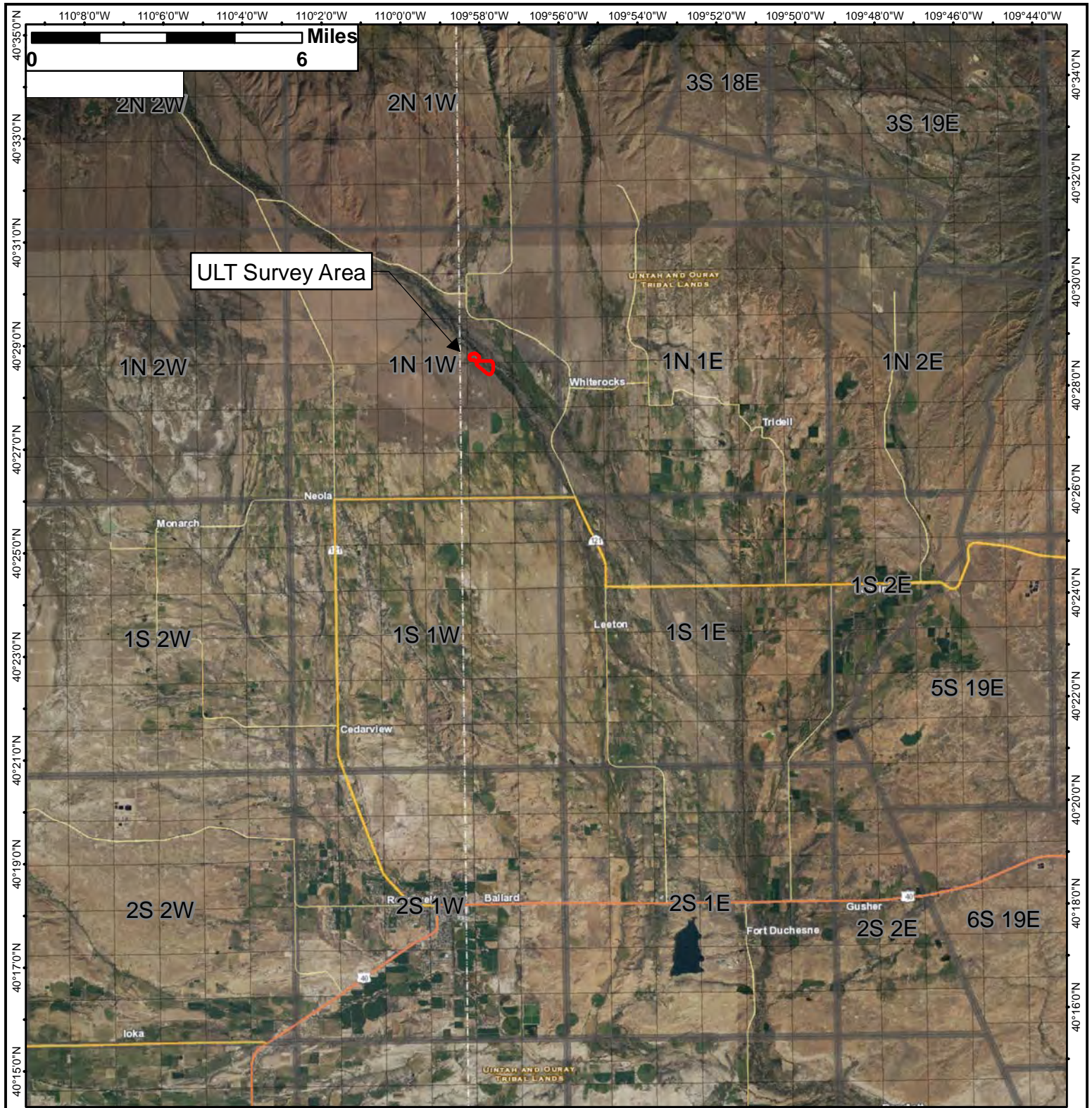
The ULT populations found in the off-channel areas were typically along the edges of palustrine emergent wetlands with a perennial water source (Photos 6 through 8). This perennial water is provided by the high water table associated with the Uinta River permeating through the well-drained cobbly sand soils found throughout the broad floodplain. The ULT individuals were typically found near the edge of the wetland in the less densely vegetated cobbly areas, versus down in the lower areas of the wetlands that were wetter and more densely vegetated.

The phenology of the ULT individuals varied from full bloom to fully past bloom. Roughly a quarter of the individuals were still in full bloom (Photo 9), half of the individuals were in partial bloom (some white flowers, some brown dried flowers) (Photo 10), and a quarter were fully past bloom (all brown dried flowers) (Photo 11). Because so many individuals were fully past bloom and hard to see, there is a possibility of a higher number of individuals within the project area. The upland areas adjacent to the floodplain are dominated by sagebrush and ponderosa pine, and do not contain any suitable ULT habitat (Photo 12).

REFERENCES

- Arft, A.M. 1995. The Genetics, Demography, and Conservation Management of the Rare Orchid *Spiranthes diluvialis*. PhD dissertation. University of Colorado, Boulder, CO.
- Fertig, Walter, Black, Rick, and Wolken, Paige. 2005. Rangewide Status Review of Ute Ladies' Tresses (*Spiranthes diluvialis*). Prepared for the U.S. Fish and Wildlife Service and the Central Utah Water Conservancy District.
- Natural Resources Conservation Service (NRCS). 2020. Web Soil Survey. Website: <http://websoilsurvey.nrcs.usda.gov>.
- US Fish and Wildlife Service. 1992. Interim Survey Requirements for Ute Ladies'-tresses Orchid (*Spiranthes diluvialis*).
- US Fish and Wildlife Service. 2007. Ute Ladies Tresses Field Survey Guidelines. Utah Ecological Services Field Office.
- US Fish and Wildlife Service. 2011. USFWS Utah Field Office Guidelines for Conducting and Reporting Botanical Inventories and Monitoring of Federally Listed, Proposed, and Candidate Plants.

APPENDIX A: MAPS



Project Overview

Uinta River Bifurcation

Section 14, 23
in T.1N, R.1W U.S.B.&M.

Legend

 ULT Survey Area

Projection:

NAD 83 UTM Zone 12N

Source:

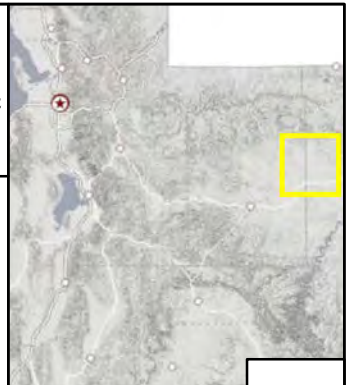
2018 Google Imagery

Survey Performed by
Todd Sherman



Wetland Resources, Inc.

Created: 9/1/2021
Author: CMM







109°58'20"W 109°58'15"W 109°58'10"W 109°58'5"W 109°58'0"W 109°57'55"W 109°57'50"W 109°57'45"W



ULT Overview Map

Uinta River Bifurcation

Legend

-  Project Disturbance Limits
-  ULT 300' Survey Buffer
-  ULT Detail Map Extents
-  ULT Suitable Habitat

Number of ULT Plants

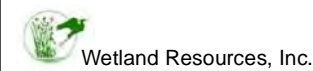
-  1 - 2
-  3 - 4
-  5 - 8
-  9 - 14
-  15 - 19

Projection:
NAD 83 UTM Zone 12N

Source:
2015 Google Imagery



Survey Performed by
Todd Sherman



Created: 9/1/2021
Author: CMM



109°58'20"W

109°58'15"W

109°58'10"W

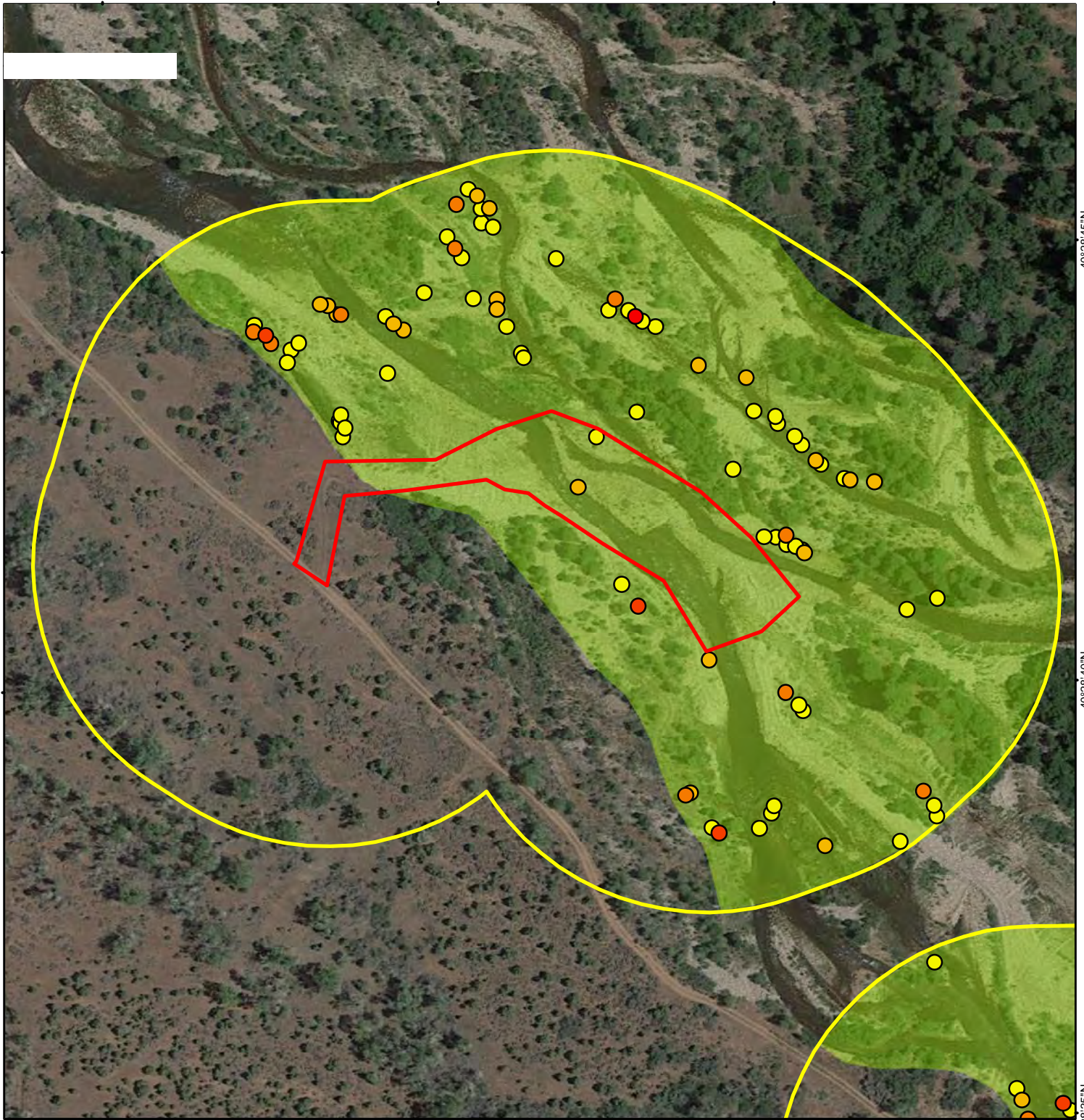
40°28'45"N

40°28'45"N

40°28'40"N

40°28'40"N

40°28'35"N



ULT Detail Map

Uinta River Bifurcation

Legend

- Project Disturbance Limits
- ULT 300' Survey Buffer
- ULT Suitable Habitat

Number of ULT Plants

- 1 - 2
- 3 - 4
- 5 - 8
- 9 - 14
- 15 - 19

Projection:

NAD 83 UTM Zone 12N

Source:

2015 Google Imagery

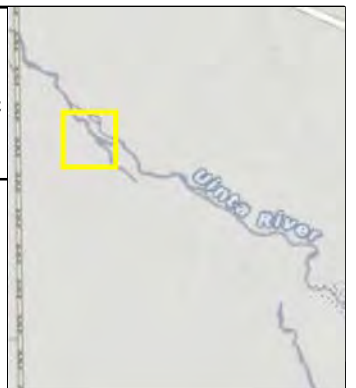


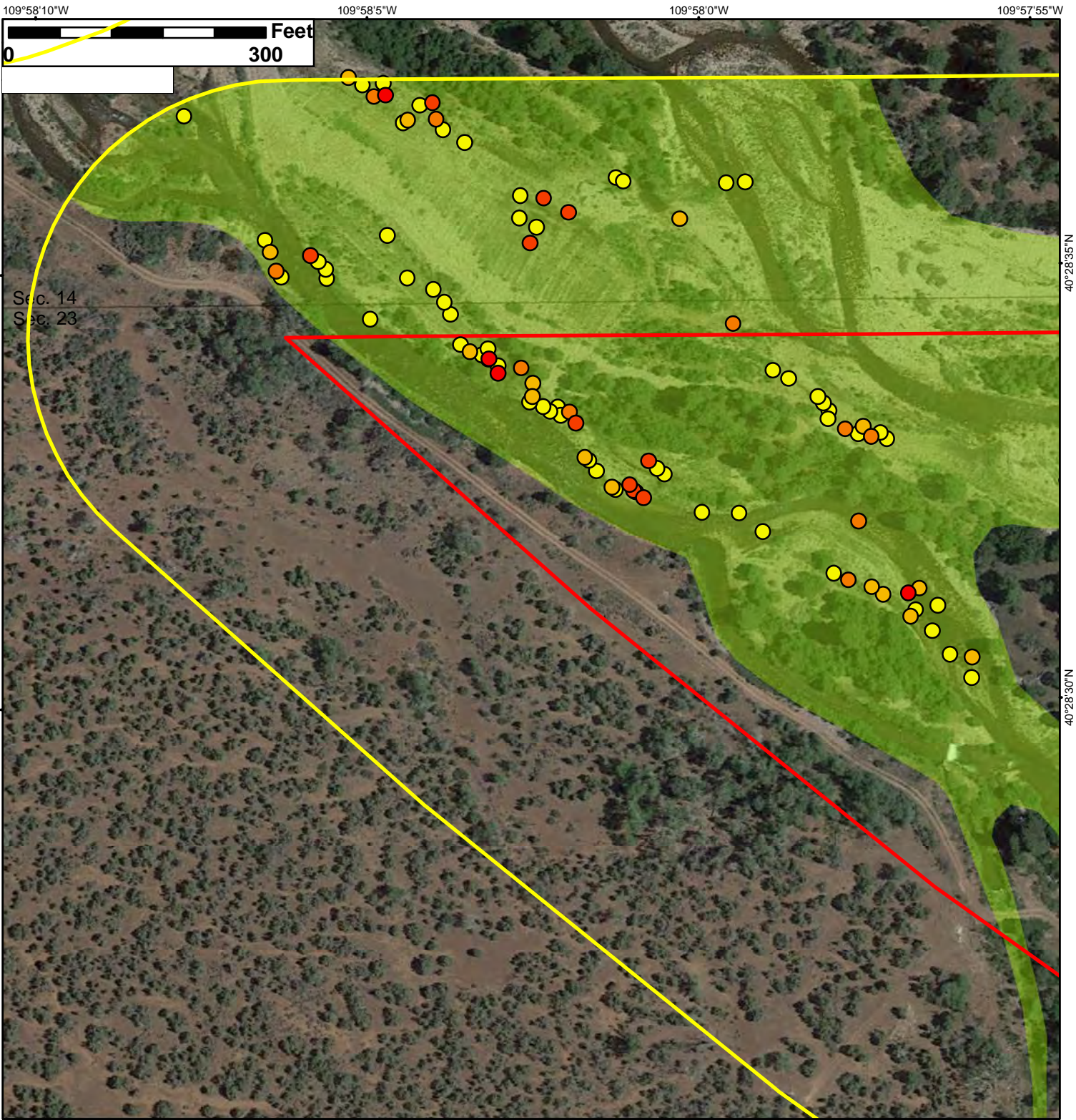
Survey Performed by
Todd Sherman



Wetland Resources, Inc.

Created: 9/1/2021
Author: CMM








ULT Detail Map

Uinta River Bifurcation

Legend

-  Project Disturbance Limits
-  ULT 300' Survey Buffer
-  ULT Suitable Habitat

Number of ULT Plants

-  1 - 2
-  3 - 4
-  5 - 8
-  9 - 14
-  15 - 19

Projection:

NAD 83 UTM Zone 12N

Source:

2015 Google Imagery

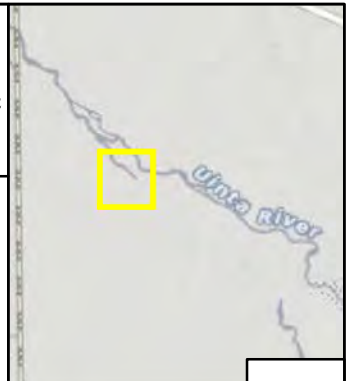


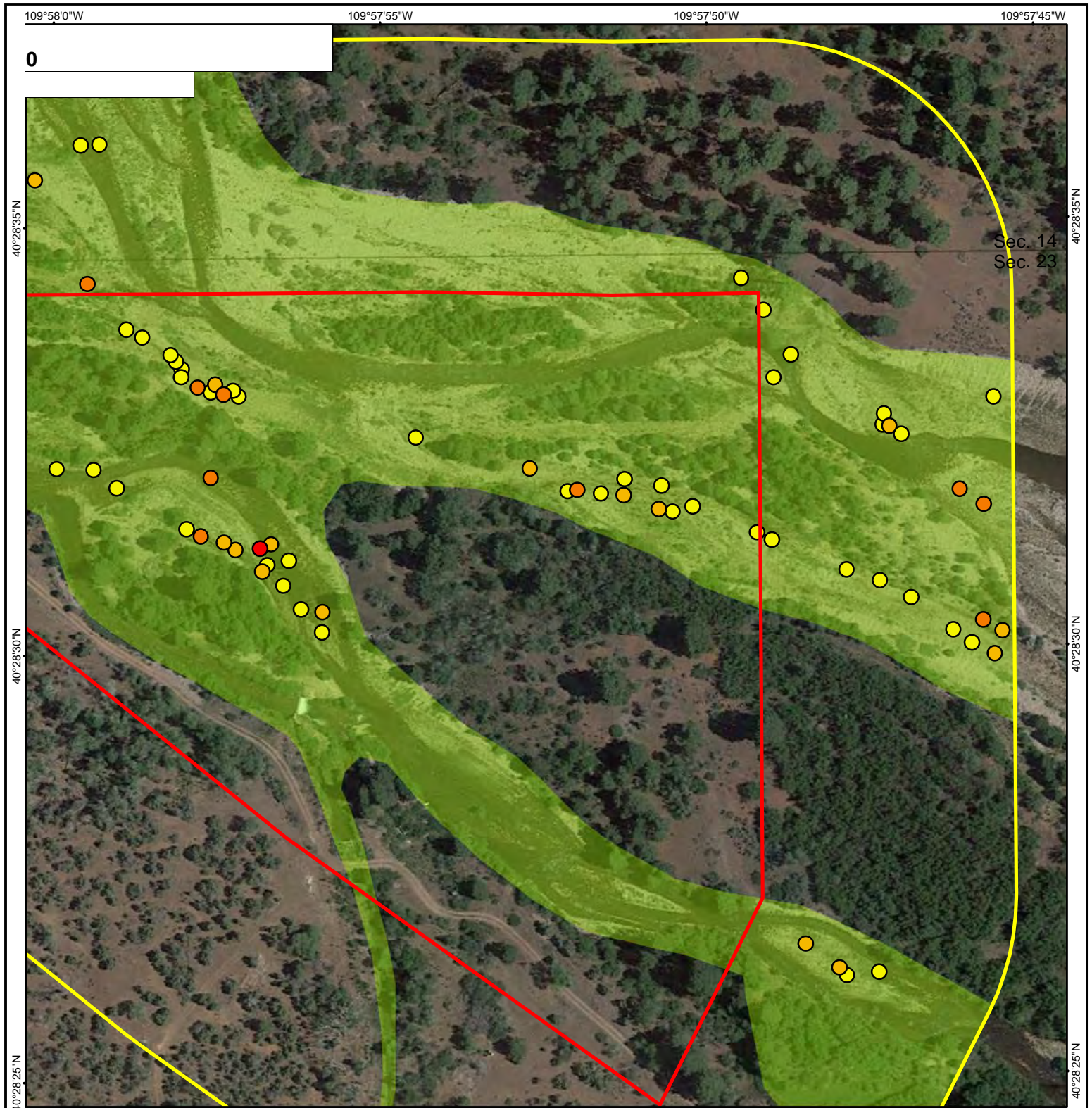
Survey Performed by
Todd Sherman



Wetland Resources, Inc.

Created: 9/1/2021
Author: CMM





ULT Detail Map

Uinta River Bifurcation

Legend

- Project Disturbance Limits
- ULT 300' Survey Buffer
- ULT Suitable Habitat

Number of ULT Plants

- 1 - 2
- 3 - 4
- 5 - 8
- 9 - 14
- 15 - 19

Projection:

NAD 83 UTM Zone 12N

Source:

2015 Google Imagery

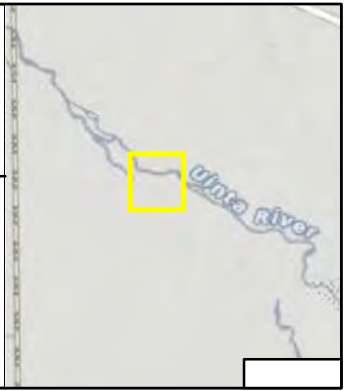


Survey Performed by
Todd Sherman



Wetland Resources, Inc.

Created: 9/1/2021
Author: CMM



APPENDIX B: PHOTOS



Photo 1.
Occupied ULT
habitat along the
Uinta River.



Photo 2.
Occupied ULT
habitat along the
Uinta River.



Photo 3.
Occupied ULT
habitat along the
Uinta River.



Photo 4.
Steep bank on an
outside corner of
the river. No
suitable ULT
habitat.



Photo 5.
Altered area
adjacent to the
Uinta River. No
suitable ULT
habitat.



Photo 6.
Occupied ULT
habitat along in
an off-channel
area near the
Uinta River.



Photo 7.
Occupied ULT
habitat along in
an off-channel
area near the
Uinta River.



Photo 8.
Occupied ULT
habitat along in
an off-channel
area near the
Uinta River. A
cluster of ULT
individuals can be
seen on the left
side of the photo.



Photo 9.
ULT in full
bloom.



Photo 10.
ULT in partial
bloom.



Photo 11.
ULT fully past bloom.



Photo 12.
Upland habitat adjacent to the Uinta River floodplain. No suitable ULT habitat.

APPENDIX C: SURVEYOR QUALIFICATIONS

TODD SHERMAN - WETLAND ECOLOGIST

Todd received his Masters from Utah State University's Department of Landscape Architecture and Environmental Planning in 1996 where his research focused on wetland ecosystems of the Intermountain West, and the planning issues associated with these unique environments. Todd is a certified Senior Professional Wetland Scientist (SPWS #1345) whose experience includes ULT surveys, jurisdictional wetland delineation, wetland functional assessment, vegetation analysis and plant community mapping, Section 404 permitting, wetland restoration design, construction supervision and long-term monitoring of wetland mitigation sites, and stream revegetation design. Todd has been conducting ULT surveys since 2001 on over 100 projects throughout the Intermountain West and has found numerous new populations of ULT.

APPENDIX G. PROJECT PHOTOS



Figure 1: Flooding in 2016 at Existing Structure



Figure 2: Existing Structure on Tribal Land

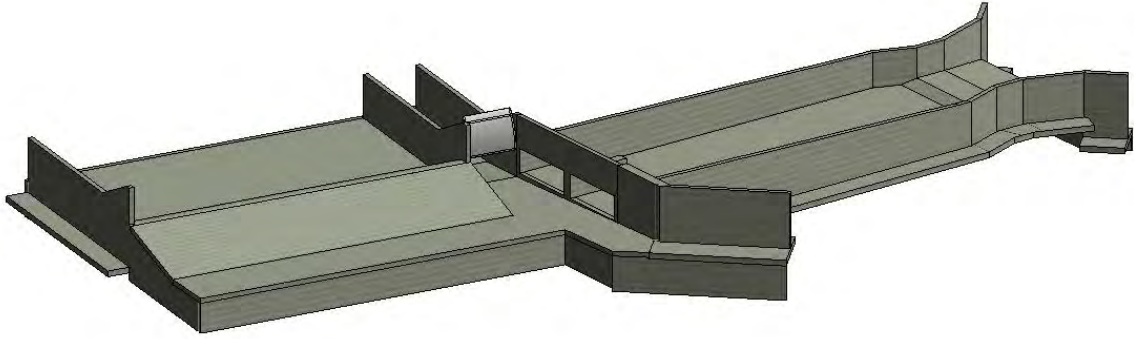
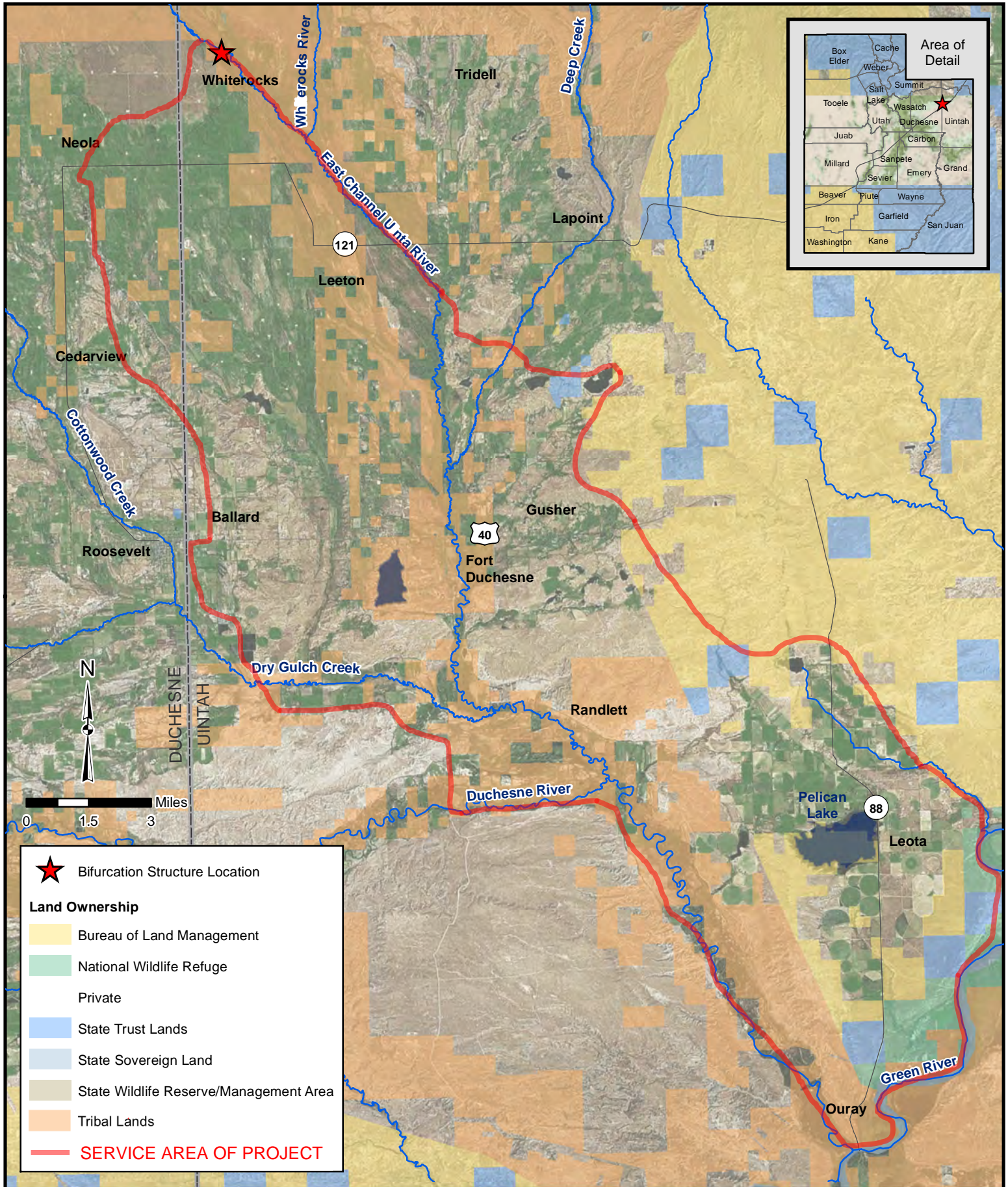


Figure 3: 2019 Proposed Structure to Be Modified 3D view



★ Bifurcation Structure Location

Land Ownership

- Bureau of Land Management
- National Wildlife Refuge
- Private
- State Trust Lands
- State Sovereign Land
- State Wildlife Reserve/Management Area
- Tribal Lands

SERVICE AREA OF PROJECT

GIS **Jones & DeMille Engineering**

800.748.5275 www.jonesanddemille.com

Uintah Water Conservancy District

*Uinta River Bifurcation Structure
Project Location*

Map Name: H:\JDI\Proj\1601-099\Design\GIS\Maps\Project_Location.mxd
 Project Number: 1601-099 Drawn by: JWW 01-16 Last Edit: 01/15/2016

UINTAH COUNTY

SCALE: 1" = 3 miles

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