WaterSMART

WATER AND ENERGY EFFICIENCY GRANTS FOR FY 2017

NO. BOR-DO-17-F012
FUNDING GROUP I

WHITEROCKS CANAL REHABILITATION & EFFICIENCY PROJECT
WHITEROCKS IRRIGATION COMPANY

IN ASSOCIATION WITH:
MOSBY IRRIGATION COMPANY
UINTAH AND WHITEROCKS RIVER COMMISSION

LAPOINT, UINTAH COUNTY, UTAH

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1. TECHNICAL PROPOSAL

1.1. EXECUTIVE SUMMARY

Start Date: September 1, 2017

Applicant: Whiterocks Irrigation Company (WIC)

Partners: Mosby Irrigation Company (MIC) and
Uinta and Whiterocks River Commission (UWRC)

Location: Lapoint Area, Uintah County, Utah

Project Title: Whiterocks Canal Rehabilitation & Efficiency Project

Project Summary:

The Whiterocks Canal Rehabilitation & Efficiency project is a partnering effort between the Whiterocks and Mosby Irrigation Companies along with the Uinta and Whiterocks River Commission (UWRC). The Whiterocks Irrigation Company (WIC) is acting as the sponsor for the project, in association with the above mentioned entities. The WIC delivers water to 166 shareholders irrigating 6,649 acres, as well as 451 culinary water connections through the Tridell-Lapoint Water Improvement District (TLWID). Currently, WIC has received funding from the Basin States Salinity Control program for piping the lower Whiterocks & Mosby Canals below Lapoint and Red Wash Reservoirs respectively. For a complete system, WIC requires an additional project to replace the unlined canal between the M&S Reservoir and Lapoint Reservoir with a pressurized pipe delivery system, herein referenced as the Lapoint Feeder Pipeline. Piping the canal to Lapoint Reservoir will allow more efficient delivery of critical winter storage water and the users in that area. The pipeline from M&S Reservoir to Lapoint Reservoir will allow WIC to abandon 4.1 miles of canal and eliminate 1640 ac-ft of seepage losses per year. With the implementation of a pressurized pipe system, the farmers and ranchers will have the ability to convert to sprinkler systems for irrigation versus the less efficient flood irrigating practice. The funds from this FOA would serve to install monitoring and SCADA equipment so the Company can monitor the use of water carried in the pipelines for the entire project, including Mosby's pipeline funded by Salinity control . Proposed improvements include automated valves, telemetry, and flow measurement for turnouts. The metering aspect of the project will also allow for easier detection of problems in the pipe system and accurate water usage monitoring.

Length of Time: 16 Months

Completion Date: December 20, 2018

1.2. BACKGROUND DATA

1.2.1. LOCATION

Provide a map of the area showing the geographic location (include the state, county, and direction from nearest town) of the proposed project.

See attached Project Location Map in Appendix C for location of project in relation to watershed boundaries and storage reservoirs. The project is located on the North and West sides of the town of Lapoint in Uintah County, Utah.

See the Site Map in Appendix C illustrating the pipeline alignment and alternative alignment options for the Southwestern end that are being evaluated for greater benefits to water users. Shapefiles and a Google Earth KMZ file will be included in the electronic submittal if possible. Coordinate system is in decimal degrees WGS 84.

1.2.2. APPLICANT'S WATER SUPPLY

As applicable, describe the source of water supply, the water rights involved, current water uses (e.g., agricultural, municipal, domestic, or industrial), the number of water users served, and the current and projected water demand. Also, identify potential shortfalls in water supply. If water is primarily used for irrigation, describe major crops and total acres served.

1.2.2.1. SOURCES OF WATER SUPPLY

Water is diverted from the Whiterocks River with storage from five high mountain reservoirs. These reservoirs include Paradise Reservoir, Chepeta Reservoir, Moccasin Reservoir, Papoose Reservoir and Wigwam Reservoir. Water is also stored in two lower facilities, M&S Reservoir and Lapoint Reservoir.

1.2.2.2. CURRENT WATER USERS AND USAGE

The Whiterocks Canal delivers water to 166 shareholders in the WIC. These shareholders irrigate approximately 6700 acres of land. The canal also supplies water to a treatment facility which then supplies water to 451 culinary water connections. The Company states that culinary water demand comes before irrigation needs. The MIC services approximately 950 acres of irrigated land. Primary production includes alfalfa, grass hay, livestock production such as beef and sheep, and various grains. This project will ensure that water supplies are more efficiently distributed to current water users and storage facilities and allow for better fulfillment to shareholders in drought years.

1.2.2.3. WATER RIGHTS INVOLVED

The WIC holds title to Water Rights 43-503, 43-3042, 43-3053, 43-505, 43-506, 43-507, 43-508, 43-509, 43-511 and 43-512. The company has storage rights in Lapoint Reservoir (1,800 ac-ft/yr), Paradise/Chepeta Reservoir (2,800 ac-ft/yr) and M&S Reservoir (2,750 ac-ft/yr). The canal diverts 18,900 ac-ft during irrigation season and 2,400 ac-ft during non-irrigation season to fill Lapoint Reservoir.

1.2.2.4. POTENTIAL SHORTFALLS IN WATER SUPPLY

Water savings from this project will help eliminate shortfalls in supply of water to the Lapoint area as well as downstream in the river system. Specific shortfalls that concern the applicant are detailed below.

1.2.2.4.1. WATER LOSS DUE TO SEEPAGE

There is noticeable loss to seepage through the entire canal system. The canal is unlined along the entire flow path. Losses in the Whiterocks Canal have been estimated at 4,000 ac-ft/yr. Another 880 ac-ft/yr are estimated to be lost in through the Mosby Canal. Installation of pipe for these services will allow the companies to abandon approximately 13.5 miles of unlined canal and save nearly 5,000 ac-ft/yr of water. The Whiterocks and Mosby Canal Rehabilitation Project will address the canals below Lapoint and Red Wash Reservoirs, however, the segment between M&S and Lapoint Reservoirs is not included in the current budget for the salinity control project and is therefore being proposed in this funding application. There is approximately 4.1 miles of canal on this reach, with an estimated 1,640 ac-ft per year being lost to seepage.

1.2.2.4.2. WINTER STORAGE DIFFICULTIES

Currently, WIC does not have the ability to use their non-irrigation season water right efficiently to fill Lapoint Reservoir if canal is abandoned. The existing M&S Pipeline is not constructed in a manner that will allow winter use due to freezing and above ground features. With the implementation of an underground piped system able to flow during freezing temperatures, WIC will be able to route water to the Lapoint Reservoir and efficiently store water during winter months.

1.2.3. DESCRIBE WATER DELIVERY SYSTEM

In addition, describe the applicant's water delivery system as appropriate. For agricultural systems, please include the miles of canals, miles of laterals, and existing irrigation improvements (e.g., type, miles, and acres). For municipal systems, please include the number of connections and/or number of water users served and any other relevant information describing the system.

The Whiterocks Canal is currently a gravity controlled open channel system that carries water from the diversion structure on the Whiterocks River to M&S Reservoir and Lapoint Reservoir as well as

through the Lapoint area to agricultural turnouts along the 16-mile long facility. WIC supplies water to approximately 6,700 acres of irrigated land. The canal also services a culinary water treatment facility that supplies water to 451 culinary connections in the TLWID. Most agricultural irrigation systems in the area are flood controlled due to lack of a pressurized system. The Mosby Canal is a 3.5-mile unlined channel that services approximately 950 acres of irrigated land. WIC delivers water to 166 shareholders. It is anticipated that with installation of the Lapoint Feeder Pipeline, existing flood irrigation systems in the area between M&S and Lapoint Reservoirs will be converted to sprinkler lines. The ongoing salinity control project will also provide pressurized irrigation from Lapoint and Red Wash Reservoirs south to irrigated lands near Lapoint. The only existing pipeline in the system is the M&S pipeline, approximately 2.3 miles long.

1.2.4. RENEWABLE ENERGY OR ENERGY EFFICIENCY

If the application includes renewable energy or energy efficiency elements, describe existing energy sources and current energy uses.

This project includes installation of automated valves on the reservoir outlet structures. This automation will increase energy efficiency as less travel to the reservoirs will be required. Outflows will be monitored and managed via flow meters equipped with telemetry for real time monitoring and data loggers. Flow meters will also be monitored via telemetry by WIC. The SCADA system includes the installation of solar panels that will provide renewable energy to power the flow meters and actuators on valves. The installation of a piped system with telemetry will also allow monitoring of the entire system to be done remotely. The current canals require frequent physical monitoring to ensure no problems along its length. If possible, the proposed SCADA system will be tied into existing telemetry managed by the Uinta & Whiterocks River commissioner so that upper reservoirs can be monitored without a physical visit by WIC staff.

1.2.5. PRIOR WORK WITH RECLAMATION

Identify any past working relationships with Reclamation. This should include the date(s), description of prior relationships with Reclamation, and a description of the project(s).

WIC is currently working with Reclamation on the Whiterocks and Mosby Canal Rehabilitation Project through the Basin States Salinity Control Program, with applications submitted for the FOA of FY 2015. Recent construction of M&S Dam was also supported by Reclamation, completed in 2011. The Uintah Water Conservancy District is also a supporting entity and has multiple projects with Reclamation including the Steinaker Reservoir and Steinaker Service Canal Enclosure Project.

1.3. PROJECT DESCRIPTION

The project description should describe the work in detail, including project milestones and specific activities that will be accomplished as a result of this project. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal.

The proposed project will include the following milestones and activities:

- Preliminary design and hydraulic analysis of Lapoint Feeder Pipeline
- Permitting and ROW acquisition (proposed to be done concurrently with Salinity portion)
- Environmental surveys for Ute-Ladies Tresses, Biological Assessment, Wetland Delineation, cultural surveys, and other necessary NEPA work (also done concurrently with Salinity Control project)
- Design of Pipeline, Connections, Flow Control, Flow Measurement, and Telemetry/ Automation on all segments of WIC pipeline projects
- Contractor selection
- Installation of approximately 2.8 miles of HDPE pipe with flow control gates, flow measurement instruments and meters, telemetry and automation with solar panels, commissioning of all project elements
- Associated flushing valves, air vents
- Monitoring of improvements and assessment of project goals and water conservation measures

The following list of objectives for the project includes:

- Eliminate water losses in canal between M&S Dam and Lapoint Reservoir
- Deliver irrigation water in pressurized Lapoint Feeder pipeline for approximately 425 acres
- Enclose canal to reduce hazard and maintenance
- Increase efficiency in water deliveries to irrigators
- Remove winter flows from open canal and deliver winter storage flows to Lapoint Reservoir
- Increase accuracy and timeliness of water deliveries through telemetry and meters
- Minimize maintenance costs and physical trips for monitoring
- Automation of critical flow control valves and utilize renewable energy through solar panels
- Install electromagnetic flow meters and SCADA at each irrigation turnout, including Salinity Control pipelines for Whiterocks and Mosby

1.4. EVALUATION CRITERIA

The evaluation criteria portion of your application should thoroughly address each of the following criteria and subcriteria in the order presented to assist in the complete and accurate evaluation of your proposal. If a particular criterion does not apply to your project, please indicate which criteria are inapplicable as part of your application. (Note: it is suggested that applicants copy and paste the

below criteria and subcriteria into their applications to ensure that all necessary information is adequately addressed). Applications will be evaluated against the evaluation criteria (listed below), which comprise 100 points of the total evaluation weight. Please note that projects may be prioritized to ensure balance among the program Task Areas and to ensure that the projects address the goals of the WaterSMART program.

1.4.1. EVALUATION CRITERIA A: QUANTIFIABLE WATER SAVINGS

*Up to **25 points** may be awarded for a proposal that will conserve water and improve efficiency. 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 significant water savings.*

1.4.1.1. DESCRIBE THE AMOUNT OF WATER SAVED

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 provide sufficient detail supporting how the estimate was determined, including all supporting calculations. 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 (please note, the following is not an exclusive list of eligible project types. If your proposed project does not align with any of the projects listed below, please be sure to provide support for the estimated project benefits, including all supporting calculations and assumptions made). In addition, please note that the use of visual observations alone to calculate water savings, without additional documentation/data, is not sufficient to receive credit under this section.

In addition, all applicants should be sure to address the following:

- *Where is the water that will be conserved currently going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?*
- *Please include a specific quantifiable water savings estimate; do not include a range of potential water savings.*

1.4.1.1.1. WATER SAVINGS ESTIMATE

In the 10-mile stretch of Whiterocks Canal from the diversion into M&S Reservoir through the southern end of the serviced area it is estimated that 4,000 ac-ft/yr of water is lost to seepage. Portions of the Whiterocks Canal will be piped as part of the Salinity Control project, however, the Lapoint Feeder pipeline will address approximately 4.1 miles of open channel and an estimated 1640 ac-ft per year will be saved in this reach of canal. Water savings were established by Reclamation for the Salinity Control project, see Appendix D for water savings data.

1.4.1.1.2. WHERE IS THE WATER CURRENTLY GOING?

The water that will be conserved in this project is currently seeping into the ground along the length of the canal as well as a small portion to evaporation from the open channel. Seepage follows natural water courses and in most cases infiltrates into the surrounding soils.

1.4.1.1.3. WHERE WILL THE CONSERVED WATER GO?

The conserved water will be used in the Company's service area to increase consistency in water storage in Lapoint and M&S reservoirs, more fully supply irrigation water to users and to better meet the demand of the TLWID. Water savings will be shared throughout the system, including those above M&S reservoir and the proposed piping projects.

1.4.1.2. SAVINGS FOR CANAL LINING/PIPING PROJECTS

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

(1) ***Canal Lining/Piping:*** *Canal lining/piping projects can provide water savings when irrigation delivery systems experience significant losses due to canal seepage. Applicants proposing lining/piping projects should address the following:*

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

The original seepage values for the Whiterocks and Mosby canal system were determined by the Bureau of Reclamation (BOR) in calculating the salinity load savings. The annual average water savings for this application come from taking the value determined by the BOR and proportioning it to the proposed length of the Lapoint Feeder canal that this FOA pertains to. The Lapoint Feeder Canal has visible evidence of seepage, with vegetation growth and wet areas all along the downhill side. Average annual water savings is estimated at 1,640 acre-feet per year for 4.1 miles of open channel canal. See Appendix D.

> *(b) How have average annual canal seepage losses been determined? Have ponding and/or inflow/outflow tests been conducted to determine seepage rates under varying conditions? If so, please provide detailed descriptions of testing methods and all results. If not, please provide an explanation of the method(s) used to calculate seepage losses. All estimates should be supported with multiple sets of data/measurements from representative sections of canals.*

See response to (a) above. The BOR determined the seepage rates as part of the salinity calculations that are helping to fund the other portion of the project. Because of the lack of measurement devices along the canal, visual inspections and observations from canal company ditchrider is all that is available. Data from the diversion at the Whiterocks River has been included in the Appendix D.

(c) What are the expected post-project seepage/leakage losses and how were these estimates determined (e.g., can data specific to the type of material being used in the project be provided)?

Post-project seepage losses will be reduced greatly with virtually no water loss in area where pipe is installed. Pipe material will be fused, high density polyethylene pipe with some mechanical fittings for meters and valves. Metering and telemetry will track water diversions and deliveries so losses can also be monitored.

(d) What are the anticipated annual transit loss reductions in terms of acre-feet per mile for the overall project and for each section of canal included in the project?

The anticipated annual transit loss reduction for the entire Whiterocks and Mosby canal system is 4,880 ac-ft/yr over 13.5 miles of canals or approximately 361 ac-ft/mile. The annual transit loss for the Whiterocks Canal is 4,000 ac-ft/yr over 10 miles or approximately 400 ac-ft/mile. The annual transit loss for the Mosby Canal is 880 ac-ft/yr over approximately 3.5 miles or roughly 251 ac-ft/mile. The Lapoint Feeder Pipeline specific to this application accounts for 1640 ac-ft per year over 4.1 miles.

(e) How will actual canal loss seepage reductions be verified?

Inflow/Outflow testing of piped system will be performed after completion to verify overall reduction in seepage and increase in efficiency. (See Subcriterion No. F.3 – Performance Measures.)

(f) Include a detailed description of the materials being used.

Materials to be used include the following list. Other work will include staking, excavation and embankment work.

- HDPE pipe ranging from 42” to 16” diameter; all DR 32.5 rating
- Combination Air Release/Vacuum Valves
- Concrete thrust blocks and thrust restraints
- Modified or replaced valves at reservoir outlets
- Valves at irrigation turnouts
- Flow measurement devices, mainly flow meters on pipelines
- Solar panels for telemetry and flow/depth measurement

(2) Municipal Metering:

The existing flow measurement device will be equipped with SCADA equipment to monitor the amount of water supplied to the TLWID if budget allows. This water will be used to supply the 451 culinary connections, which are already currently being metered by TLWID.

*(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 WIC flow records and experience of the Company staff and users. With the construction of this project, flow measuring devices and telemetry will be installed allowing the WIC to better estimate savings. See Appendix D.

> *(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 irrigation company staff. With the current canal system, losses would occur when excess water goes past the Whiterocks system down the Ouray Valley canal which has been abandoned. With the salinity funding piping the flows below Lapoint reservoir, there would still be a loss down the abandoned Whiterocks canal if Lapoint Feeder Line is not installed with flow measurement and control at the head of the line. Excess water would be stored in reservoirs rather than being sent down an abandoned canal and considered a loss.

> *(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 measured currently at the diversion on Whiterocks River and data can be found at http://duchesneriver.org/rivers/uinta-white-rocks/. A higher accuracy flowmeter is installed where WIC feeds the water treatment plant for the TLWID. Accuracy has not been established, but according to the river commissioner, is close enough for him to allocate flows in the river to multiple water rights, including WICs. Proposed improvements will facilitate verifying accuracy as well as seepage from river to M&S Reservoir for future work on that portion of open channel canal.

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

Specific flow measurement devices being proposed for irrigation turnouts are Alia brand electromagnetic flow meters with total flow and instantaneous flow readouts, a AMC2100 signal converter, solar panel and control box. Larger meters are also proposed to be Alia brand or approved equal, with electromagnetic meters and solar panels for power. Accuracy is greater than 0.4%. Product can be viewed at http://www.alia-inc.com/en/prodetail.asp?pro_id=10 .

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

Under current operating conditions, more water is delivered than necessary due to lack of monitoring abilities and the uncertain amount of water lost due to seepage. It is anticipated that actual delivery volumes will be reduced when monitoring is installed and losses are reduced.

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

Monitored flow rates will be compared to records kept by WIC and average savings will be calculated. Dataloggers on the telemetry will also keep a record of hourly averages and daily averages for review by WIC.

(4)Supervisory Control and Data Acquisition and Automation: SCADA and automation components can provide water savings when irrigation delivery system operational efficiency is improved to reduce spills, over-deliveries, and seepage. Applicants proposing SCADA and automation projects should address the following:

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

Automated valves will be installed/retrofitted to outlet structures on the reservoirs if funding is sufficient. Supervisory control will be given to WIC staff and it is anticipated that these valves will be controlled remotely. Flow measurement devices will be associated with these valves and telemetry will be used to monitor the flows remotely. Records are not available to quantity spills and over-deliveries, however it is a known occurrence to loose water out of the end of the canal.

(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 not been quantified, but have been determined to exist by experience of WIC staff.

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

Under current operating conditions, more water is delivered than necessary due to lack of monitoring abilities and the uncertain amount of water lost due to seepage. It is anticipated that actual delivery volumes will be reduced when pipeline and SCADA is installed and losses are reduced.

(d) Will canal seepage be reduced through improved system management? If so, what is the estimated amount and how was it calculated?

In interviews and meeting with canal operators, it is a common consensus that canals in this area have higher seepage losses when operated at maximum capacity. With the lack of SCADA and automation, individual companies tend to deliver more than enough water to accommodate water users on their system and also account for seepage. Improving system management will allow individual canals to be more accurately measured and documented, allowing future data to be used along with operator experience to determine seepage losses and system performance. When performance is measured, the ability for improvement is obtainable. Areas being piped by the Salinity Control projects and the Lapoint Feeder Pipeline will eliminate seepage losses anywhere downstream of M&S Reservoir. Having WIC tied into SCADA system of the river commissioner will allow them to monitor diversions from the river and understand losses upstream of M&S reservoir.

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

Using existing structures and gates/valves to estimate flow rates and deliveries, records will be compared to new data gathered by the proposed pipe network and SCADA system to document deliveries and compare against flows diverted from Whiterocks River, thus establishing the losses above the M&S Reservoir and also within the piped system.

(5)Landscape Irrigation Measures

N/A

(6)Turf Removal:

N/A

(7)Smart Irrigation Controllers and High-Efficiency Nozzles:

On farm improvements through NRCS EQUIP program will enable farmers to install these types of efficient controllers and nozzles. The extents of this projects end at the flow meter and turnout.

(8)High-Efficiency Indoor Appliances and Fixtures:

N/A

(9)Groundwater Recharge:

N/A

(10)Small Water Recycling and Water Reuse Improvements:

N/A

(11)Other Project Types Not Listed Above:

N/A

1.4.2. EVALUATION CRITERIA B: WATER SUSTAINABILITY BENEFITS EXPECTED TO RESULT FROM THE PROJECT

*Up to **25 points** may be awarded under this criterion based on the water sustainability benefits that are expected to occur as a result of the project.*

Maximum consideration under this criterion will be given to projects that will commit conserved water to instream flows for the benefit of federally listed threatened or endangered species, designated critical habitat, or other fish and wildlife benefits. Consideration will also be given to projects expected to result in water sustainability benefits in other ways, such as making water available to alleviate water supply shortages or to address other specific water management concerns in the region.

Some projects may address water supply sustainability in ways other than committing water for instream flows. If the questions listed above are not applicable to your project, please address the following to explain how the water savings from the project are expected to result in a public benefit:

- *Is there a specific water supply sustainability concern in the region? What factors are contributing to the concern? Please include a description of the impacted geographic area and stakeholders, the partners that are collaborating to resolve the concern, and any other applicable information.*

The sustainability issues that concern WIC and users come from drought related problems. Seepage and loss have been exasperated by recent drought conditions. Recently, the M&S Dam was constructed to allow more storage for the users to help alleviate the effects of drought. Nearly 5,000 ac-ft of water are lost to seepage every year in the 13.5 miles of canal that will be replaced by this project and the Salinity Control project. The WIC, MIC, TLWID, and their users are all interested and stand to benefit from increased efficiency in the Whiterocks and Mosby Canals.

- *How will the proposed project help to address that concern? Will water conserved through the project result in reduced diversions or be made available to help alleviate water supply shortages due to drought, climate variation, or over-allocation?*

The proposed pipeline will remove loss due to seepage and evaporation over an area that shows critical loss for the system. The conserved water will be stored and made available to users for varied climate conditions and drought. In times of serious water shortage, all of the available water is used to meet culinary demand. The water savings will allow irrigation demands to be more fully met and will allow storage in the existing reservoirs to be maximized. This project will also allow WIC to convey water to Lapoint Reservoir in the winter months to increase storage. With current infrastructure, this is almost impossible without continued use of the open channel canal with all the associated seepage problems and salinity contributions. Metering irrigation turnouts will also promote water conservation and allow WIC to track its water use as well as individual users to avoid

over-allocations. Diversions will naturally reduce when efficiency is increased in the piped system and reservoirs are more consistently filled.

- *Will the project make additional water available to Indian tribes, and/or rural or economically disadvantaged communities)? If so, please explain.*

The area for which the WIC serves is located in and around Tridell and Lapoint, Utah. The communities are surrounded by the Uintah and Ouray Indian Reservation. The areas are unincorporated communities in Uintah County, Utah. The population of Lapoint as of 2010 was 1,102 persons. As of 2014, the population of Tridell was 531 persons. Most of the area is based on agriculture and are considered highly rural. As these communities lie within the boundaries of the Uintah and Ouray Indian Reservation, there is potential for available water to serve the local tribes. The Ute tribe also diverts water from Whiterocks and Uinta rivers and efficiencies in these systems will directly benefit all users on the rivers in the area, including the Ute Tribe.

- *Will water conserved through the project help to address water supply sustainability in a way not listed above?*

The portions of the salinity control project being piped will be required to implement a habitat replacement plan and the associated action of the Lapoint Feeder Pipeline will be included in that mitigation effort, therefore the proposed project in this application will include mitigation for habitat lost due to removing water from the canal. Possible mitigation being evaluated are local fish and wildlife habitat improvements, in-place mitigation of Ute Ladies Tresses (endangered flower), and other habitat improvements to an extent equal to the current habitat values in the existing canal system.

Note: Maximum consideration under this criterion is also available to projects that result in habitat improvements that benefit federally listed threatened or endangered species, designated critical habitat, or other fish and wildlife (i.e., Task C activities).

For Task C activities with benefits unrelated to water savings (e.g., habitat improvements, or installation of fish bypasses or fish screens), describe the activities and associated benefits in detail. Please address the following: Will the project benefit federally-recognized candidate species? Will the project directly accelerate the recovery of, threatened or endangered species or address designated critical habitat? Is the project expected to have other fish and wildlife benefits?

Note: For projects that primarily focus on restoration activities consider the WaterSMART Cooperative Watershed Management Program (CWMP) Phase II FOA, which is expected to be available in December 2016. See the WaterSMART CWMP webpage, www.usbr.gov/watersmart/cwmp/index.html, for updates and other information.

1.4.3. EVALUATION CRITERIA C: ENERGY-WATER NEXUS

*Up to **18 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. Note: an applicant may receive points under both subcriterion No.C.1 and C.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 18 points total under both subcriteria No. C.1 and C.2.*

For projects that include construction or installation of renewable energy components, please respond to Subcriterion No. C.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. C.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. However, an applicant may receive no more than 18 points total under both Subcriteria No. C.1 and C.2.

1.4.3.1. SUBCRITERION NO. C.1: IMPLEMENTING RENEWABLE ENERGY PROJECTS RELATED TO WATER MANAGEMENT AND DELIVERY

*Up to **18 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. C.2 below.*

- *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.*

For each of the flow measurement devices and the associated telemetry system, solar panels will be installed to provide power. The meters require anywhere from 3 to 17 watts per day. The plans include 45 turnouts each with a meter. With solar panels powering each of these meters, approximately 300 kilowatts may be conserved each year. The telemetry will also be powered by the panels so savings will most likely be greater.

- *Please describe and provide sufficient detail on any additional benefits expected to result from the renewable energy project, including:*
    - *Expected environmental benefits of the renewable energy system*

The installation of automated valves and telemetry will allow the monitoring of the system to occur without travel by company staff. This will save the emissions of vehicles that would be used to access the locations. Telemetry will also allow the monitoring at each turnout to be monitored without travel. This telemetry will be powered by solar panels.

- *Any expected reduction in the use of energy currently supplied through a Reclamation project*
- *Anticipated beneficiaries, other than the applicant, of the renewable energy system*

The river commissioner (UWRC) will benefit from accurate flow measurement on the WIC system, as well as individual water users who will gain an accurate accounting of their water use each year

- *Expected water needs of the renewable energy system.*

No water needs will be required for the solar panel system.

1.4.3.2. SUBCRITERION NO. C.2: INCREASING ENERGY EFFICIENCY IN WATER MANAGEMENT

*Up to **4 points** may be awarded for projects that address energy demands 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 management project (e.g., reduced pumping).

- *Please provide sufficient detail supporting the calculation of any energy savings expected to result from water conservation improvements. If quantifiable energy savings are expected to result from water conservation improvements, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.*
- *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?*
- *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.*
- *Does the calculation include the energy required to treat the water?*
- *Will the project result in reduced vehicle miles driven, in turn reducing carbon emissions? Please provide supporting details and calculations. 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).*

Currently, no pumping is required for the transmission of irrigation water as the canal is gravity fed. Farms with pivots or sprinklers have been required to pump on their individual systems, with the pressurized pipeline, many if not all existing on-farm pumping systems will not be necessary. The WIC estimates the pumping costs of these sprinkling systems at $50 per acre per year. The installation of a pressurized pipeline has the potential to save pumping costs for 145 acres on the Mosby line and 545 acres on the Whiterocks line. The savings come out to be $34,500 per year due to the pressurized line eliminating pumps. In Kilowatt hours, this equates to 616,000 kilowatt hours per year based on Moon Lake Electric's rate of 0.056 per KWH.

With the installation of SCADA, solar panels will be installed. This will provide a small amount of renewable energy. Along with this installation, the WIC will not have to drive multiple miles to check the dam outlet structures or along the canal. A pipeline is much less demanding as far as maintenance and thus will not require as frequent of visits or the use of heavy machinery.

1.4.4. EVALUATION CRITERIA D: ADDRESSING ADAPTION STRATEGIES IN A WATERSMART BASIN STUDY

*Up to **8 points** may be awarded for projects that address an adaptation strategy identified **in a completed WaterSMART Basin Study.***

Proposals that provide a detailed description of how a project is addressing an adaptation strategy specifically identified in a completed Basin Study (e.g., a strategy to mitigate the impacts of water shortages resulting from climate change, drought, increased demands, or other causes) may receive maximum points under this criterion. Applicants should provide as much detail as possible about the relationship of the proposed project to the adaptation strategy identified in the Basin Study, including, but not limited to, the following:

- *Identify the specific WaterSMART Basin Study where this adaptation strategy was developed. Describe in detail the adaptation strategy that will be implemented through this WaterSMART Grant project and how the proposed WaterSMART Grant project would help implement the adaptation strategy.*
- *Describe how the adaptation strategy and proposed WaterSMART Grant project will address the imbalance between water supply and demand identified by the Basin Study.*
- *Identify the applicant's level of involvement in the Basin Study (e.g., cost-share partner, participating stakeholder, etc.).*
- *Describe whether the project will result in further collaboration among Basin Study partners.*

Through the WaterSMART Basin Study Program, Reclamation is working with state and local partners, as well as other stakeholders, to comprehensively evaluate the ability to meet future water demands within a river basin. The Basin Studies allow Reclamation and its partners to evaluate potential impacts of climate change to water resources within a particular river basin, and to identify adaptation strategies to address those impacts. For more information on Basin Studies, including a list of completed basin studies and reports, please visit: www.usbr.gov/WaterSMART/bsp.

The project's objectives of addressing the primary resource concern of insufficient water/inefficient use of irrigation water is an identified CCA Colorado River Basin priority. Based on Reclamation's Colorado River Basin Water Supply and Demand Study, there are 4 groups of adaptation strategies:

1. Increase Colorado River Basin water supply (Increase Supply),
2. Reduce Basin water demand (Reduce Demand),
3. Focus on modifying operations (Modify Operations)
4. Focus primarily on Basin governance and mechanisms to facilitate option implementation (Governance and Implementation).

With high amounts of water lost from leaks and seepage along the canal, there is a large volume of water lost during the course of a year of operations. Conserving water is a state priority as well, and will benefit users by increasing the efficiency of the irrigation system. The adaptation strategy for the Whiterocks Canal project is directly linked to the increase supply by delivering more water to users that normally was lost through seepage.

An additional objective of this project is to decrease salinity in the Colorado River Basin. Estimates of salt load reductions for this project are 1,635 tons per year. Some funding has been received from the Colorado River Basinwide and Basin States Salinity Control Program. Currently, the Salinity Control project does not have enough budget to include the Lapoint Feeder Pipeline, and if funding is not acquired, a reduction in salt savings is likely to be imposed if the upper reach from M&S Dam to Lapoint Reservoir is not abandoned. Abandoning this portion of canal requires either major upgrades and replacement of the existing M&S Pipeline to allow flow during winter water rights availability or install a second feeder line capable of flowing 10 cfs to the Lapoint Reservoir to fill it during available winter storage right allocations. If the Lapoint Feeder Pipeline is not funded, WIC may opt to reduce their salt savings and utilize the open channel of the existing canal to fill Lapoint Reservoir during the winter months, thus loosing efficiency and increasing seepage loss.

1.4.5. EVALUATION CRITERIA E: EXPEDITING FUTURE ON-FARM IRRIGATION IMPROVEMENTS

*Up to **8 points** may be awarded for projects that describe in detail how they will directly expedite future **on-farm irrigation improvements**, including future on- farm improvements that may be eligible for NRCS funding.*

*Note: Scoring under this sub-criterion is based on an overall assessment of the extent to which the WaterSMART Grant project will facilitate future on-farm improvements. Applicants should describe any proposal made to NRCS, or any plans to seek funding from NRCS in the future, and how an NRCS-funded activity would complement the WaterSMART Grant project. Applicants may receive maximum points under this sub-criterion by addressing the types of information described in the bullet points below. Applicants **are not required to have assurances of NRCS funding 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 funding if necessary.*

If the proposed projects will help expedite future on-farm improvements please address the following:

- *Include a detailed listing of the fields and acreage that may be improved in the future.*
- *Describe in detail the on-farm improvements that can be made as a result of this project. Include discussion of any planned or ongoing efforts by farmers/ranchers that receive water from the applicant.*

- *Provide a detailed explanation of how the proposed WaterSMART Grant project would help to expedite such on-farm efficiency improvements.*
- *Fully describe the on-farm water conservation or water use efficiency benefits that would result from the enabled on-farm component of this project. 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.*
- *Projects that include significant on-farm irrigation improvements should demonstrate the eligibility, commitment, and number or percentage of farmers/ranchers who plan to participate in any available NRCS funding programs. Applicants should provide letters of intent from farmers/ranchers in the affected project areas.*
- *Describe the extent to which this project complements an existing NRCS-funded project or a project that either has been submitted or will be submitted to NRCS for funding.*

Note: On-farm water conservation improvements that complement the water delivery improvement projects selected through this FOA may be considered for NRCS funding and technical assistance in FY 2017 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 www.nrcs.usda.gov for further contact information in your area.

The area served by the WIC has historically been irrigated by method of flooding the fields. Conveyance by canal does not allow sprinkling as there is no pressure. With the installation of a piped line, the connections will now be pressurized. This will allow irrigators to use more efficient methods to produce crops. Many of the users have acknowledged plans to upgrade their systems with the installation of the pipeline and a few have initiated NRCS EQUIP agreements for pivots and wheel-ines. As a pattern for the Lapoint Feeder Pipeline, the Whiterocks & Mosby Rehabilitation Project included on-farm improvements for approximately 1455.5 acres of land to be more efficiently watered. Although these are the only planned improvements, this project will allow every user to upgrade their systems to a more efficient method.

Essentially all of the stakeholders in the WIC that irrigate between M&S Reservoir and Lapoint Reservoir and are not currently close enough to the M&S Pipeline would have the opportunity to improve their farm systems once pressurized pipeline is made available. The Lapoint Feeder piping project would provide more stability that would allow farmers to invest in future improvements. Approximately 425 acres could be served by the Lapoint Feeder Pipeline, primarily owned by Renn Smith, Aaron Simmons, Lance Luck, and Scott Elder.

1.4.6. EVALUATION CRITERIA F: IMPLEMENTATION AND RESULTS

*Up to **8 points** may be awarded for these subcriteria.*

1.4.6.1. SUBCRITERION NO. F.1: PROJECT PLANNING

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

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

Provide the following information regarding project planning:

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

The WIC has a Water Management and Conservation Plan. It was completed in 2008, with an update being completed early in 2017 in conjunction with the Salinity Control project. Upon review of this application, a draft copy can be made available upon request and a final copy is anticipated by March 2017.

(2)Describe how the project conforms to and meets the goals of any applicable planning efforts, and identify any aspect of the project that implements a feature of an existing water plan(s).

The Utah State Water Plan emphasizes water conservation and efficient management of developed water supplies as key strategies in providing for the present and future water needs in the state. In addition, this project meets the goals of the WIC and the UWRC to conserve water. One of the major goals of the area is to encourage users to implement pressurized irrigation systems and develop underground delivery systems. This project will directly lead to the ability for users to implement pressurized systems and install underground delivery systems within the region.

1.4.6.2. SUBCRITERION NO. F.2: SUPPORT AND COLLABORATION

Points may be awarded based upon the extent to which the project garners widespread support and promotes collaboration.

Describe the extent to which the project garners support and promotes collaboration.

Does the project promote and encourage collaboration among parties? Consider the following:

- *Is there widespread support for the project?*
- *What is the significance of the collaboration/support?*
- *Will the project help to prevent a water-related crisis or conflict?*
- *Is there frequently tension or litigation over water in the basin?*
- *Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?*

There is widespread support and collaboration for this project. The Utah Division of Water Resources has expressed support of the project as well as the Colorado River Basin Salinity Control

Program. This project is proposed by the WIC and is supported by the MIC. The companies have a memorandum of agreement (MOA) in the joint project for the Salinity Control pipelines, which will also cover the additional telemetry and meters being proposed by this WaterSMART project. All major users are in support of the project. All stakeholders affected by the project are affected positively. With the pipeline construction, users at each end of the system will receive great benefit due to better efficiency of water delivery.

1.4.6.3. SUBCRITERION NO. F.3: PERFORMANCE MEASURES

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

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved). For more information calculating performance measure, see Section D.2.2.5 Performance Measures.

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

To calculate potential water savings, a physical measurement of seepage/leakage losses will be performed using an Inflow/Outflow test. The water will be measured flowing from the reservoirs to the irrigation turnouts and measured at each turnout. The post project results will be compared to the existing losses estimated in 2016. It is anticipated that flow meters or flow measuring devices will be installed at the inlet and outlet locations. These measuring devices will be consulted annually to ensure the continued integrity of the project, as well as real time data and data logger records periodically inspected by WIC staff.

1.4.7. EVALUATION CRITERIA G: ADDITIONAL NON-FEDERAL FUNDING

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

$$\frac{Non - Federal\ Funding}{Total\ Project\ Cost}$$

The percentage of non-Federal funding in this proposal is currently 72% of the project costs, assuming NRCS RCPP funding is not awarded and WIC funds the remainder of the project. If NRCS RCPP funding is obtained, the telemetry portion of the project still has WIC funds above the cost share match requirement of %50 of non-federal funding.

1.4.8. EVALUATION CRITERIA H: CONNECTION TO RECLAMATION PROJECT ACTIVITES

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

(1)How is the proposed project connected to Reclamation project activities?

The project is closely connected with a Reclamation project activity for the Salinity Control project. The proposed action in this application will fund water meters and telemetry for the irrigation turnouts installed in the Salinity Control project, along with the Lapoint Feeder Pipeline that will result in all canals being abandoned and piped below M&S Dam.

(2)Does the applicant receive Reclamation project water?

The project does not receive Reclamation water.

(3)Is the project on Reclamation project lands or involving Reclamation facilities?

The proposed project does not involve current Reclamation lands or facilities.

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

The project is in the same basin as the Colorado River for which there are multiple Reclamation projects and activities, including the Whiterocks & Mosby Canal Rehabilitation Project funded through Salinity Control program.

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

The proposed project will result in improved water conservation within the Colorado River Basin for which there is a Reclamation Basin Study and multiple Reclamation projects.

(6)Will the project help Reclamation meet trust responsibilities to Tribes?

The proposed project does not involve Reclamation trust responsibilities to Tribes, however, water efficiency and savings will benefit the Ute Tribe by passing efficiencies across irrigation systems in the region.

1.5. PERFORMANCE MEASURES

All WaterSMART Grant applicants are required to propose a method (or "performance measure") of quantifying the actual benefits of their project once it is completed. Actual benefits are defined as

water actually conserved or better managed, as a direct result of the project. A provision will be included in all assistance agreements with WaterSMART Grant recipients describing the performance measure and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project.

Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of WaterSMART Grants.

See Subcriterion No. F.3 – Performance Measures. There will also be quantifiable data for flow diversions at Whiterocks River that can be compared to pre- and post-project conditions as well as water delivered to shareholders and an increase of yield per share due to efficiency and individual metering.

2. ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

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

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

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

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

2.1. ENVIRONMENTAL QUESTIONS

Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. The application should include the answers to:

- *Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.*

The proposed project is designed to minimize environmental impacts. The Lapoint Feeder Pipeline would be buried in the existing canal where possible and otherwise largely follows the property owner's fence lines for ease of connections, avoiding Tribal Lands along canal. Where the pipeline will not be placed in existing right-of-way, easements will be acquired from property owners. The majority of new alignment is through agricultural lands that have been disturbed through production of crops and grazing. Other parts of the alignment follow a road where land has been previously disturbed. The pipeline will be buried by heavy equipment. It is anticipated that a trench will be excavated and the spoils will be stored on one side of the trench the other side will be used for staging the pipe and fusing. The pipe will be placed and the soil will be replaced on top of it and compacted. These heavy machinery operations will temporarily introduce dust into the surrounding air. The canal will be dewatered during construction. It is anticipated that this project will increase

water quality and quantity. Best management practices such as dust control, noxious weed control, and erosion and sediment control will be implemented, with strict specifications included in the construction documents and contract.

Impacts to wildlife habitat will be minimized by collocating the pipeline within existing disturbed areas, and timing restrictions may be applied to prevent disturbance during sensitive time periods.

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

The USFWS IPaC system was accessed on 1-16-2017, and the following species were identified as potentially occurring within the area:

- Mexican spotted owl
- Yellow-billed cuckoo
- Bonytail Chub
- Colorado pikeminnow
- Humpback Chub
- Razorback sucker
- Ute Ladies'-tresses
- Black-footed Ferret (Experimental Population, Non-Essential)
- Canada Lynx

During the project, construction will be primarily confined to existing canal corridors and a few adjacent staging areas as well as agricultural land and street right-of-ways, no impacts to these plant or animal species is expected. Once design and construction plans are complete, a more thorough analysis will be performed. It is anticipated that the ULT will undergo full consultation with USFWS and is being handled through the Salinity Control project.

- *Are there wetlands or other surface waters inside the project boundaries that potentially fall under Clean Water Act (CWA) jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.*

A wetland delineation will be done in conjunction with the salinity control project through the entire alignment of the canals. Once this is completed, any impacts will be evaluated and all necessary permits will be acquired.

- *When was the water delivery system constructed?*

An exact date of construction could not be found although indications are that it was constructed in the early 1900's. It is at least 50 years old and will be documented in cultural resource report.

- *Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.*

This project will result in modifications to the canal system supplying water to users downstream. The canal was constructed in the early 1900's This canal will be abandoned for irrigation use after completion of the piping project. It is proposed that the canal remain in place to fulfill drainage purposes for the area upstream of Lapoint Reservoir and means will be used to divert drainage water towards the reservoir rather than allowing it to accumulate closer to Lapoint town. During final design, actual disturbances and modifications will be documented and cleared.

- *Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.*

Since the canal itself is more than 50 years old, it may be eligible for listing in the National Register. A cultural resource survey was conducted in the Fall 2016, with SHPO consultation being part of that effort.

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

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

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

The project will not adversely affect low income or minority populations, but will benefit the local agricultural community by increasing irrigation water delivery efficiency.

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

The project will not affect access to tribal lands or sites. Although the canal crosses through Ute Tribal lands, the proposed pipeline remains on private property.

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

Best management practices will be applied to prevent the spread or establishment of noxious weeds or invasive species.

3. LETTERS OF SUPPORT

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

Letters of support are included in Appendix B.

4. REQUIRED PERMITS OR APPROVALS

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

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

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

Most of the work will be done on private property or in the existing canal easement. Approval of the project proposal has been received from the State Division of Water Resources and the Bureau of Reclamation through the Salinity Control Program for the proposed pipelines. All environmental compliance permits will be obtained in accordance to NEPA requirements. Final approval for the Lapoint Feeder Canal will follow NEPA work and appropriate funding requirements. Currently, WIC has a significant balance (approximately $1 Million) left in their loan with the Board of Water Resources for the M&S Dam and M&S Pipeline. Attached is an action letter with the most recent modification. This funding is anticipated to be used if NRCS RCPP is unavailable to fund the WIC portion of the WaterSMART project.

5. OFFICIAL RESOLUTIONS

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

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

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

The WIC board will meet in February to sign official resolution and send to Reclamation within 30 days.

OFFICIAL RESOLUTION
OF THE
WHITEROCKS IRRIGATION COMPANY

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 has requested proposals from eligible entities to be included in the WaterSMART Program, and

WHEREAS, the Whiterocks Irrigation Company (WIC) has need for funding to complete an irrigation project that will upgrade a conveyance system and install metering and SCADA so that water can be conserved, measured, and efficiently delivered to the water users.

NOW, THEREFORE, BE IT RESOLVED that the WIC Board of Directors agrees and verifies that:

1. The application has been reviewed and supports the application submitted;

2. The WIC 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: _____

SIGNED: _____

NAME: Tyson Murray
TITLE: President, WIC

ATTEST: _____

6. PROJECT BUDGET

6.1. 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.

6.1.1. LETTERS OF COMMITMENT

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

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

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

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

Note: applicants proposing a Funding Group II project are not required to have non-Federal cost share funding secured for the entire project at the time of award. Funding Group II applicants must demonstrate sufficient evidence that non-Federal cost-share for the first year of the project will be available by the start of that phase and must describe a plan and schedule for securing non- Federal funding for subsequent years of the project.

6.1.2. FUNDING PLAN

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

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

The total project cost is $1,100,000. The WIC has applied for funding from the NRCS RCPP through the UWCD that may provide $450,000 towards the Lapoint Feeder Pipeline, with cost share for that

funding coming from work done in Uintah County coordinated by UWCD. If this RCPP funding is not acquired, the WIC will fund the $800,000 portion of the project. If the $300,000 WaterSMART grant requested by this application is not approved, the project may not be further developed and a reduction in salinity salt load will likely occur so that WIC can still fill Lapoint Reservoir during winter months through open channel canal. Turnouts on entire system would not have metered systems and no SCADA would be installed.

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

Cost for this project have already been incurred in the form of preliminary engineering and NEPA work commencing in August/September 2016. Jones & DeMille Engineering has been assisting WIC in preparing funding applications as well as preliminary design alignments and project management for the Lapoint Feeder Canal and SCADA improvements. These services are not in the form of in-kind services or donations. The costs incurred thus far are $19,500. The costs have been reduced due to the services done concurrently with the salinity control project. These costs have accumulated between August 2016 and the date of this submission. It benefits the project directly by applying for funding, beginning cultural surveys, and advancing the pre-construction design.

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

No funding has been officially awarded to WIC from NRCS (or UWCD) at this time, it is assumed that WIC will fund their portion of the project through Board of Water Resources loans and an outstanding balance on the M&S Dam project (see attached Action Letters from the Utah Board of Water Resources).

Describe any funding requested or received from other Federal partners. Note: other sources of Federal funding may not be counted towards the required cost share unless otherwise allowed by statute.

The WIC has applied for funding through the NRCS RCPP in the form of $450,000. This RCPP application is pending approval and cost share coming from Uintah County. This is not anticipated to go towards the cost share requirement of WaterSMART grants.

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

The WIC has applied for funding through the NRCS RCPP in the amount of $450,000. This application has not been officially awarded by the agency yet. The NRCS is waiting on two watershed plans to be completed, which could take up to a year. If this funding is denied, WIC would need to provide the additional funds to complete the project. The project would still be pursued by WIC, although meters and telemetry will likely be put on hold and not installed until further budget is known and bids are received or this WaterSMART grant application is funded.

6.1.3. NON-FEDERAL AND FEDERAL FUNDING SOURCES

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

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

FUNDING SOURCES	FUNDING AMOUNT
Non-Federal Entities	
1. Applicant – Whiterocks Irrigation Company	
Non-Federal Subtotal	$800,000
Other Federal Entities	
1. NRCS RCPP (not finalized)	
Other Federal Subtotal	
Requested Reclamation Funding	$300,000
Total Project Funding	$1,100,000

6.2. BUDGET PROPOSAL

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

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

See Appendix A

6.3. 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. Include the value of in-kind contributions or donations of goods and services and sources of funds provided to complete the project. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsections. Costs, including the valuation of in-kind contributions and donations, must comply with the applicable cost principles contained in 2 CFR Part §200, available at the Electronic Code of Federal Regulations (www.ecfr.gov).

6.3.1. SALARIES AND WAGES

Indicate program manager and other key personnel by name and title. Other personnel may 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 should identify the direct labor rate separate from the fringe rate or fringe cost for each category. All labor estimates, including any proposed subcontractors, shall be allocated to specific tasks as outlined in the recipient's technical project description. Labor rates and proposed hours shall be displayed for each task.

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.

Clearly identify any proposed salary increases and the effective date.

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. The salaries and/or reimbursements of WIC staff are not included in this budget nor are they anticipated to be a part of it.

6.3.2. FRINGE BENEFITS

Indicate rates/amounts, what costs are included in this category, and the basis of the rate computations. Indicate whether these rates are used for application purposes only or whether they are fixed or provisional rates for billing purposes. Federally approved rate agreements are acceptable for compliance with this item.

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

6.3.3. TRAVEL

Include purpose of 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.

6.3.4. EQUIPMENT

Itemize costs of all equipment having a value of over $5,000 and include information as to the need for this equipment, as well as how the equipment was priced if being purchased for the agreement. 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 for the project. If equipment currently owned by the applicant is proposed for use under the proposed project, and the cost to use that equipment is being included in the budget as in-kind cost share, provide the rates and hours for each piece of equipment owned and budgeted. These should be ownership rates developed by the recipient for each piece of equipment. If these rates are not available, the U.S. Army Corp of Engineer's (USACE) recommended equipment rates for the region are acceptable. Blue book, Federal Emergency Management Agency (FEMA), and other data bases cannot be used.

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

6.3.5. 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, past experience, engineering estimates, or other methodology).

Materials and supplies will be part of the contracted portion of project and will be documented as required.

6.3.6. CONTRACTUAL

Identify all work that will be accomplished by subrecipients, 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. If a subrecipient, consultant, or contractor is proposed and approved at the time of award, no other approvals will be required. Any changes or additions will require a request for approval. Identify how the budgeted costs for subrecipients, consultants, or contractors were determined to be fair and reasonable.

Jones & DeMille Engineering will be contracted to perform the design and construction engineering for this project. They have prepared the funding application and will prepare bid packages for the project. They will monitor progress during construction to provide quality assurance with plans and specifications. The table below includes the design engineering laborer classifications, billing rates and estimated number of hours.

Table 2. Design Engineering Hours & Rates for Lapoint Feeder Canal

Role/Position	Rate	Hours	Total
Senior Project Manager	$145.00	10	$1,450.00
Senior Project Manager	$145.00	60	$8,700.00
Project Manager	$115.00	45	$5,175.00
Project Engineer	$110.00	90	$9,900.00
Graduate Engineer	$90.00	90	$8,100.00
Senior CAD Designer	$90.00	50	$4,500.00
CAD Technician	$65.00	60	$3,900.00
Construction Engineering Technician	$80.00	23	$1,840.00
Professional Land Surveyor	$115.00	4	$460.00
Survey Office Technician	$105.00	30	$3,150.00
Survey	$125.00	30	$3,750.00
Administrative Assistant	$55.00	20	$1,100.00
Total		**512**	**$52,000.00**

A contractor will be procured to perform the construction tasks on the project. However it is possible that the WIC will perform some of the construction tasks to minimize the amount of loan required from the Board of Water Resources.

6.3.7. ENVIRONMENTAL AND REGULATORY COMPLIANCE COSTS

Applicants must include a line item in their budget to cover environmental compliance costs. "Environmental compliance costs" refer to costs incurred by Reclamation and the recipient in complying with environmental regulations applicable to an award under this FOA, including costs associated with any required documentation of environmental compliance, analyses, permits, or approvals. Applicable Federal environmental laws could include NEPA, ESA, NHPA, CWA, and other regulations depending on the project. Such costs may include, but are not limited to:

- *The cost incurred by Reclamation to determine the level of environmental compliance required for the project*
- *The cost incurred by Reclamation, the recipient, or a consultant to prepare any necessary environmental compliance documents or reports*
- *The cost incurred by Reclamation to review any environmental compliance documents prepared by a consultant*
- *The cost incurred by the recipient in acquiring any required approvals or permits, or in implementing any required mitigation measures*

The amount of the line item should be based on the actual expected environmental compliance costs for the project, including Reclamation's cost to review environmental compliance documentation. However, the minimum amount budgeted for environmental compliance should be equal to at least one to two percent of the total project costs. If the amount budgeted is less than one to two percent

of the total project costs, you must include a compelling explanation of why less than one to two percent was budgeted.

How environmental compliance activities will be performed (e.g., by Reclamation, the applicant, or a consultant) and how the environmental compliance funds will be spent, will be determined pursuant to subsequent agreement between Reclamation and the applicant. The amount of funding required for Reclamation to conduct any environmental compliance activities, including Reclamation's cost to review environmental compliance documentation, will be withheld from the Federal award amount and placed in an environmental compliance account to cover such costs. If any portion of the funds budgeted for environmental compliance is not required for compliance activities, such funds may be reallocated to the project, if appropriate.

For assistance related to budgeting for environmental compliance costs, contact your local Reclamation office, listed at www.usbr.gov/main/offices.html.

Environmental costs are included in the project. The NEPA work is proposed to be done in conjunction with the Salinity Control projects and efficiencies have already been realized in this method. Metering will not require additional disturbance, however, Lapoint Feeder line will also need to be covered in NEPA permitting. Approximately 1.5% was assumed and has been budgeted, see Appendix A.

6.3.8. 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.

Not Included.

6.3.9. INDIRECT COSTS

Indirect costs that will be incurred in performance of Project activities, which will not otherwise be recovered, may be included as part of the budget proposal. Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable cost principles for the recipient's organization. Applicants must not incorporate indirect rates within other direct cost line items.

If the applicant has separate rates for recovery of labor overhead and general and administrative costs, each rate shall be shown. The applicant should propose rates for evaluation purposes, which will be used as fixed or ceiling rates in any resulting award. Include a copy of any federally approved indirect cost rate agreement. If a federally approved indirect rate agreement is not available, provide supporting documentation for the rate. This can include a recent support for the rate calculation. Please note that the applicant will need to obtain a federally negotiated indirect cost rate agreement within one year of award.

If the applicant has never received a Federal negotiated indirect cost rate, the budget may include a de minimis rate of up to 10 percent of modified total direct costs. For further information on modified total direct costs, 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 exense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from Interior, the National Business Center, and Indirect Cost Services at www.doi.gov/ibc/services/finance/indirect-cost-services

Not Included.

6.3.10. TOTAL COSTS

Indicate total amount of project costs, including the Federal and non-Federal cost share amounts.

Reclamation Water SMART Grant	**$300,000.00**
Whiterocks Irrigation Company (WIC)	**$350,000.00**
Additional WIC (NRCS RCPP if available)	**$450,000.00**
TOTAL FUNDING	**$1,100,000.00**

APPENDIX A. PROJECT BUDGET

Whiterocks Irrigation Company
Whiterocks Canals Rehabilitation & Efficiency Project
January 17, 2017
Eric Major, PE

Jones & DeMille Engineering
Roosevelt: 435.722.8267
www.jonesanddemille.com

Concept Opinion of Probable Cost					
	Item Description	**Quantity**	**Unit**	**Unit Price**	**Total Cost**
Materials					
	Lapoint Feeder Pipeline to Lapoint Reservoir				
	20-inch HDPE DR 32.5 (64 psi)	14700	FT	$ 17.00	$ 249,900.00
	Pipe Appurtenances (Air Valves, Fittings, Drain Valves, Etc)	1	Lump	$ 63,000.00	$ 63,000.00
	Irrigation Turnouts	5	EA	$ 5,000.00	$ 25,000.00
	Isolation Valve	1	EA	$ 20,000.00	$ 20,000.00
	Headgates at Pipe Inlet & Settling Pond	1	EA	$ 20,000.00	$ 20,000.00
				Material Subtotal	**$ 377,900.00**
Installation					
	Mobilization	5.00%	Lump	$ 15,200.00	$ 15,200.00
	Install 20-inch HDPE DR 32.5 (64 psi)	14700	FT	$ 14.00	$ 205,800.00
	Install Pipe Appurtenances (Air Valves, Fittings, Drain Valves, Etc)	1	Lump	$ 40,000.00	$ 40,000.00
	Install Isolation Valves and Connect to Existing M&S Pipeline	1	EA	$ 10,000.00	$ 10,000.00
	Contingency & Items Not Estimated (Restoration, Utility Impacts, Tie Ins, Staking, etc.)	10.00%	Lump	$ 30,100.00	$ 30,100.00
				Subtotal	**$ 301,100.00**
				Total Probable Construction Cost (Materials + Installation)	**$ 679,000.00**
Other Indirect Costs					
	Design: Preconstruction Engineering, Survey, Contractor Procurement	1	Lump	$ 52,000.00	$52,000.00
	Construction Administration (Construction Management & Observation)	449	Hourly	$ 102.00	$46,000.00
	Cultural Survey, T&E, Wetlands, etc. (Completed Concurrent with Salinity Portion)	1	Lump	$ 11,000.00	$11,000.00
				Subtotal	**$109,000.00**
				Total Probable Construction Cost (Materials + Installation + Other) - Lapoint Feeder Pipeline	**$788,000.00**

Whiterocks Canal Efficiency Project					
	Item Description	**Quantity**	**Unit**	**Unit Price**	**Total Cost**
Materials					
	Alia Flow Meters with Solar Panel Pack for Turnouts (Whiterocks)	20	EA	$ 5,000.00	$ 100,000.00
	Alia Flow Meters with Solar Panel Pack for Turnouts (Mosby)	10	EA	$ 5,000.00	$ 50,000.00
	Alia Flow Meters with Solar Panel Pack for Turnouts (Lapoint Feeder)	5	EA	$ 5,000.00	$ 25,000.00
	42 Inch Mag Meter with Solar Panel, Datalogger	1	EA	$ 21,000.00	$ 21,000.00
	20 Inch Mag Meter with Solar Panel, Datalogger	2	EA	$ 11,000.00	$ 22,000.00
				Material Subtotal	**$ 218,000.00**
Installation					
	Install Turnout Flow Meters, Solar Panel, and Telemetry	35	EA	$ 1,000.00	$ 35,000.00
	Install Mag Meters, Solar Panels, and Telemetry	3	EA	$ 5,000.00	$ 15,000.00
	Data System Setup for New Telemetry and Existing Telemetry	1	Lump	$ 10,000.00	$ 10,000.00
				Subtotal	**$ 60,000.00**
				Total Probable Construction Cost (Materials + Installation)	**$ 278,000.00**
Other Indirect Costs					
	Preconstruction Engineering, Construction Observation, Commissioning Equipment	1	Lump	$34,000.00	$34,000.00
				Subtotal	**$34,000.00**
				Total Probable Construction Cost (Materials + Installation + Other) - Whiterocks Canal Efficiency Project	**$312,000.00**

Total Project Cost (Lapoint Feeder Pipeline and Whiterocks Canal Efficiency Project)	**$1,100,000.00**

Propose Funding Scenario

Reclamation Water SMART Grant	**$300,000.00**
Whiterocks Irrigation Company	**$350,000.00**
NRCS RCPP (if unavailable, WIC)	**$450,000.00**
TOTAL FUNDING	**$1,100,000.00**

APPENDIX B. LETTERS OF SUPPORT & COMMITMENT

Uintah Water Conservancy District

"Steinaker Dam"

78 West 3325 North
Vernal, Utah 84078
Phone: (435) 789-1651
Fax: (435) 789-1670

"Red Fleet Dam"

January 17, 2017

Tyson Murray, President
Whiterocks Irrigation Company
P.O. Box 385
Lapoint, UT 84039

RE: Whiterocks Canal Rehabilitation & Efficiency Project – Letter of Support

Mr. Murray:

As the General Manager of the Uintah Water Conservancy District (UWCD), I am submitting this letter to show support for the proposed Whiterocks Canal Rehabilitation and Efficiency project being submitted for funding assistance. I understand that this project includes installing telemetry, SCADA, and meters for turnouts on the proposed pipelines being installed under the Salinity funding project, as well as a pipeline to feed Lapoint Reservoir and abandon the open channel canal in that area.

The UWCD is committed to assisting water users in the Uintah County and has also recently been awarded an NRCS RCPP funding opportunity that will allow up to $450,000 go towards this project for Whiterocks Irrigation Company if other match money in the County is utilized. This money could be made available in early 2018, as watershed plans are being completed by NRCS before it can be authorized.

I appreciate the opportunity to partner with Whiterocks Irrigation Company and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. This project will enhance the efficiency of the irrigation in the Lapoint area and aligns with the goals of the UWCD.

Sincerely,

Gawain Snow
General Manager
Uintah Water Conservancy District

January 17, 2017

Tyson Murray, President
Whiterocks Irrigation Company
P.O. Box 385
Lapoint, UT 84039

RE: Whiterocks Canal Rehabilitation & Efficiency Project – Letter of Support

Mr. Murray:

As the Uinta and Whiterocks River Commissioner, I am submitting this letter to show support for the proposed Whiterocks Canal Rehabilitation and Efficiency project being submitted for funding assistance. I understand that a portion of this project includes installing telemetry, SCADA, and meters for turnouts on the proposed pipelines being installed under the Salinity funding project, as well as a pipeline to feed Lapoint Reservoir and abandon the open channel canal in that area. The proposed SCADA system would include Red Wash Reservoir, M&S, and Lapoint Reservoir data and automation for valves being installed at the two lower dams for remote access to flow data, remote operating capabilities, and data loggers for tracking water usage over time. This will allow Company staff and myself access to reservoir elevation and flow diversion data in real time. It will also reduce the number of trips required for myself and others to monitor flow diversions and reservoir elevations.

Work being done on some of the upper reservoirs may also be included in the proposed SCADA system, either now or in the near future which will further reduce trips required for my duties as a river commissioner and more accurately account for storage flows and water rights to both WIC, the Ute Tribe, and other water rights held within this river system.

I appreciate the opportunity to partner with Whiterocks Irrigation Company and other entities sharing in the project as well as the possible funding assistance from the WaterSMART grant. Thank you for considering this grant.

Sincerely,

DocuSigned by:
500892CC112247E...

Shane Hamblin
Uinta and Whiterocks River Commissioner

January 17, 2017

Tyson Murray, President
Whiterocks Irrigation Company
P.O. Box 385
Lapoint, UT 84039

RE: Whiterocks Canal Rehabilitation & Efficiency Project – Letter of Support

Mr. Murray:

The Mosby Irrigation Company is submitting this letter to show support for the proposed Whiterocks Canal Rehabilitation project being submitted for funding assistance. Mosby Irrigation Company understands that a portion of this project includes installing telemetry, SCADA, and meters for turnouts on the proposed pipelines being installed under the Salinity funding project. Also, SCADA system would include Red Wash Reservoir data and automation for valve being installed at the dam for remote access to flow data, remote operating capabilities, and data loggers for tracking water usage over time. This will greatly improve our system and allow Company staff and leadership to have real time data for Mosby's portion of the combined piping project.

We appreciate the opportunity to partner with Whiterocks Irrigation Company 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,

Chris Walker
President
Mosby Irrigation Company

GARY R. HERBERT
Governor
GREG BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Water Resources
DENNIS J. STRONG
Division Director

January 18, 2017

Craig Hansen, President
Whiterocks Irrigation Co.
P.O .Box 385
Lapoint, UT 84039

Mr. Hansen:

In its August 11, 2011 meeting the Board of Water Resources committed an additional $1,150,000 to the Whiterocks Irrigation Company's M&S Dam project. The board will amend the existing contractual agreement to advance 50.6% of the project cost up to $7,700,000, which the company will return to the state at 1% interest over 60 years with annual payments starting at $118,000 and increasing $1,000 each year, with an additional $32,000 added to the repayment beginning in 2020 and the balance of approximately $117,000 being paid the final year.

We will now prepare the amendment to the contractual agreement between the state and the company, the execution of which will be necessary to make the additional funds available for the project. This may take several weeks to accomplish.

Please call Tom Cox at 801-538-7265 or me if you have any questions.

Thank you,

Val J. Anderson
Chief of Investigations

cc: Gawain Snow
Heather Hoyt
ESI

1594 West North Temple, Suite 310, PO Box 146201, Salt Lake City, UT 84114-6201
telephone (801) 538-7230 • facsimile (801) 538-7279 • TTY (801) 538-7458 • *www.water.utah.gov*

GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Water Resources
ERIC L. MILLIS
Division Director

March 22, 2016

Tyson Murray, President
Whiterocks Irrigation Company
P. O. Box 433
Lapoint, UT 84039

RE: Whiterocks Irrigation Company Proj. Action Letter, No. E375

Mr. Murray:

In its March 16, 2016 meeting, the Board of Water Resources authorized the company's canal piping project. The board will advance 39.7% of the project cost up to $1,785,000, which the company will return to the state at 1% interest over 20 years with annual payments of approximately $99,000. The Board's action is contingent upon the availability of funds at the time the project is ready for construction.

The following items must be accomplished before the funding agreement can be executed:

1. Obtain all easements, rights-of-way, and permits required to construct, operate, and maintain the project.

2. Execute a service agreement with Mosby Irrigation Company governing water rights, and the operation, maintenance and funding aspects of the project.

3. Pass a resolution by the appropriate (as defined in the company's Articles of Incorporation and Bylaws) majority of company stock authorizing its officers to do the following:

   a. Assign properties, easements, and water rights required for the project to the Board of Water Resources.

   b. Enter into a contract with the Board of Water Resources for construction of the project and subsequent purchase from the Board.

4. Have an attorney give the Board of Water Resources a written legal opinion that:

   a. The company is legally incorporated for at least the term of the purchase contract and is in good standing with the state Department of Commerce.

1594 West North Temple, Suite 310, PO Box 146201, Salt Lake City, UT 84114-6201
telephone (801) 538-7230 • facsimile (801) 538-7279 • TTY (801) 538-7458 • *www.water.utah.gov*

b. The company has legally passed the above resolution in accordance with the requirements of state law and the company's Articles of Incorporation and Bylaws.

c. The company has obtained all permits required for the project.

d. The company owns all easements and rights-of-way for the project, as well as the land on which the project is located, and that title to these easements, rights-of-way, and the project itself can be legally transferred to the Board.

e. The company is in compliance with sections 73-10-33, 10-9a-211, and 17-27a-211 of the Utah Code.

5. Obtain approval of final plans and specifications from the Division of Water Resources.

6. Update its water management and conservation plan for its service area, and obtain approval of it from the Division of Water Resources.

7. Obtain letters from all outside financing agencies establishing their commitment of funds to the project.

8. Be in compliance with Section 73-10-33, Section 10-9a-211, and Section 17-27a-211 of the Utah Code.

Certification and Acknowledgment Forms are included that, when completed by the company, will accomplish Item #3. Please fill out either the Stockholder or Board of Directors version, depending on which the company's Articles of Incorporation require.

After all these things have been substantially accomplished, the project will be presented to the board for committal of funds. Board policy requires that these items be completed in 18 months or less, or the board will consider either withdrawing your project or reauthorizing it with possibly more restrictive financial terms.

Please call Tom Cox (801-538-7265) or me if you have any questions.

Thank you,

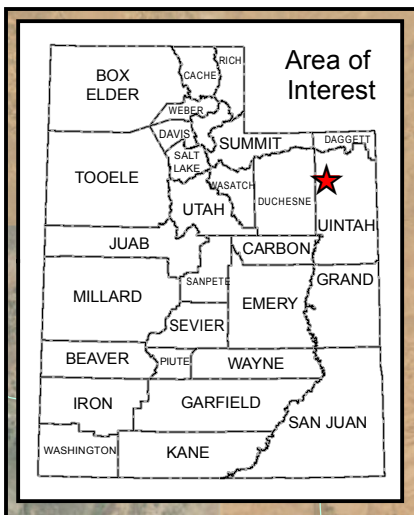
Joel K. Williams

Joel Williams, P.E.
Chief of Investigations

Enclosure

cc: Gawain Snow
Uintah County Council
Division of Water Rights, Vernal

APPENDIX C. PROJECT MAPS



Uintah and Ouray Tribal Lands

Whiterocks Canal

M&S Reservoir

9500 E

Deep Creek Rd

Red Narrows Rd

11284

Lapoint Feeder Pipeline Proposed for WaterSMART Grant

Lapoint Feeder

Mosby Canal

10000 N

M&S Existing Pipeline

8500 E

9000 E

9750 E

9000 N

M&S Pipeline Extension

Lapoint Reservoir

Whiterocks

Mosby Ln

Deep Creek Canal

N

0 0.125 0.25 Miles

Pipe Diameter

- 16"
- 20"
- 30"
- 34"
- 36"
- 42"
- Existing Canals

Land Ownership

- Private
- Tribal Lands

Jones & DeMille Engineering

- Shaping the Quality of Life -

800.748.5275 www.jonesanddemille.com

Whiterocks & Mosby Irrigation Companies

Whiterocks & Mosby Canals Rehabilitation Project
Lapoint Feeder Alignment

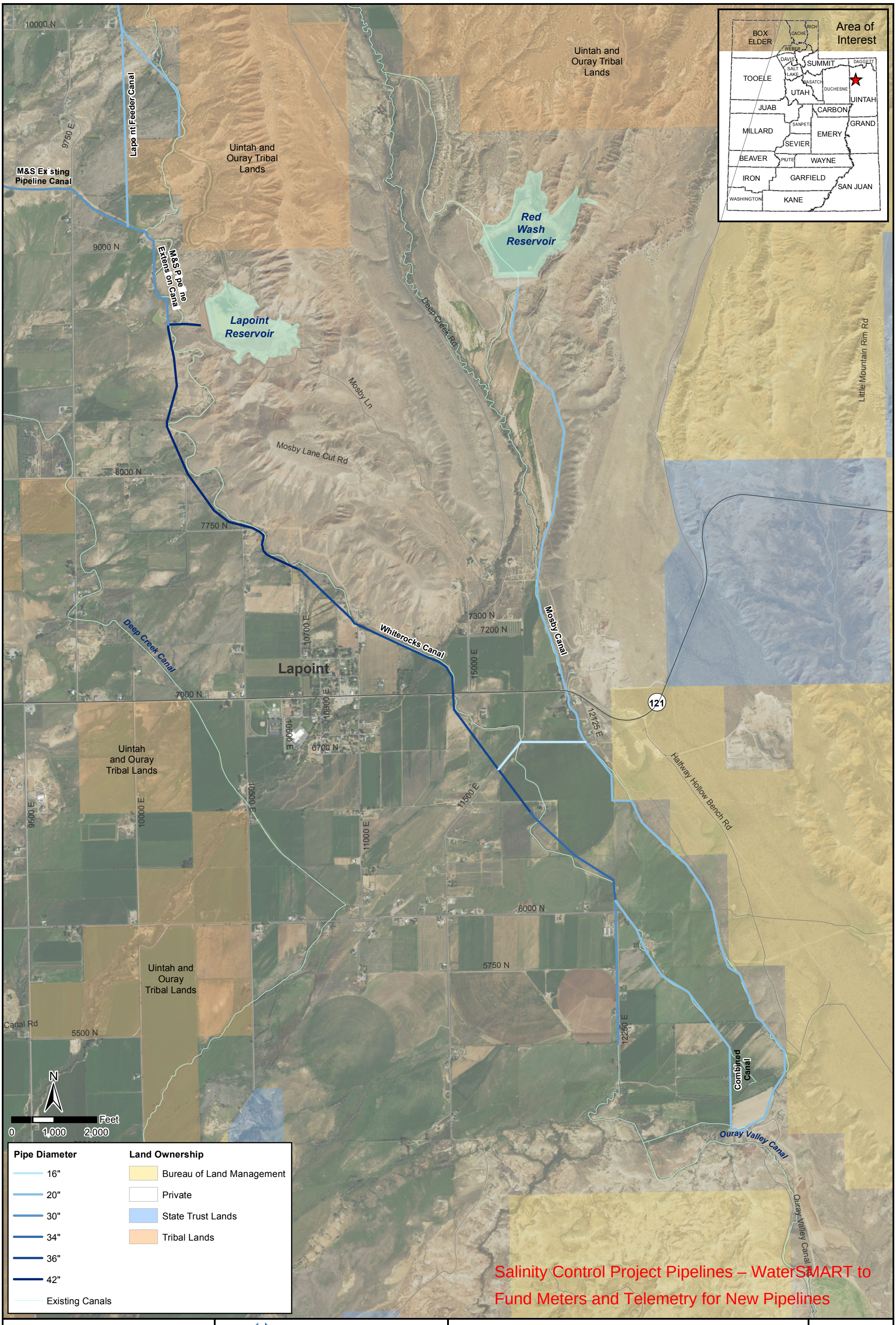
Map Name: H:\JD\Proj\1607-331\Design\GIS\Maps\Overview_Lapoint_Feeder_Tabloid.mxd

Project Number: 1607-331 | Drawn by: JWW 11-16 | Last Edit: 11/08/2016

Uintah County

Scale: 1 " = 0.25 Miles

1



Salinity Control Project Pipelines – WaterSMART to Fund Meters and Telemetry for New Pipelines

Jones & DeMille Engineering

- Shaping the Quality of Life -

800.748.5275 www.jonesanddemille.com

Whiterocks & Mosby Irrigation Companies

Whiterocks & Mosby Canals Rehabilitation Project
Whiterocks Canal Alignment

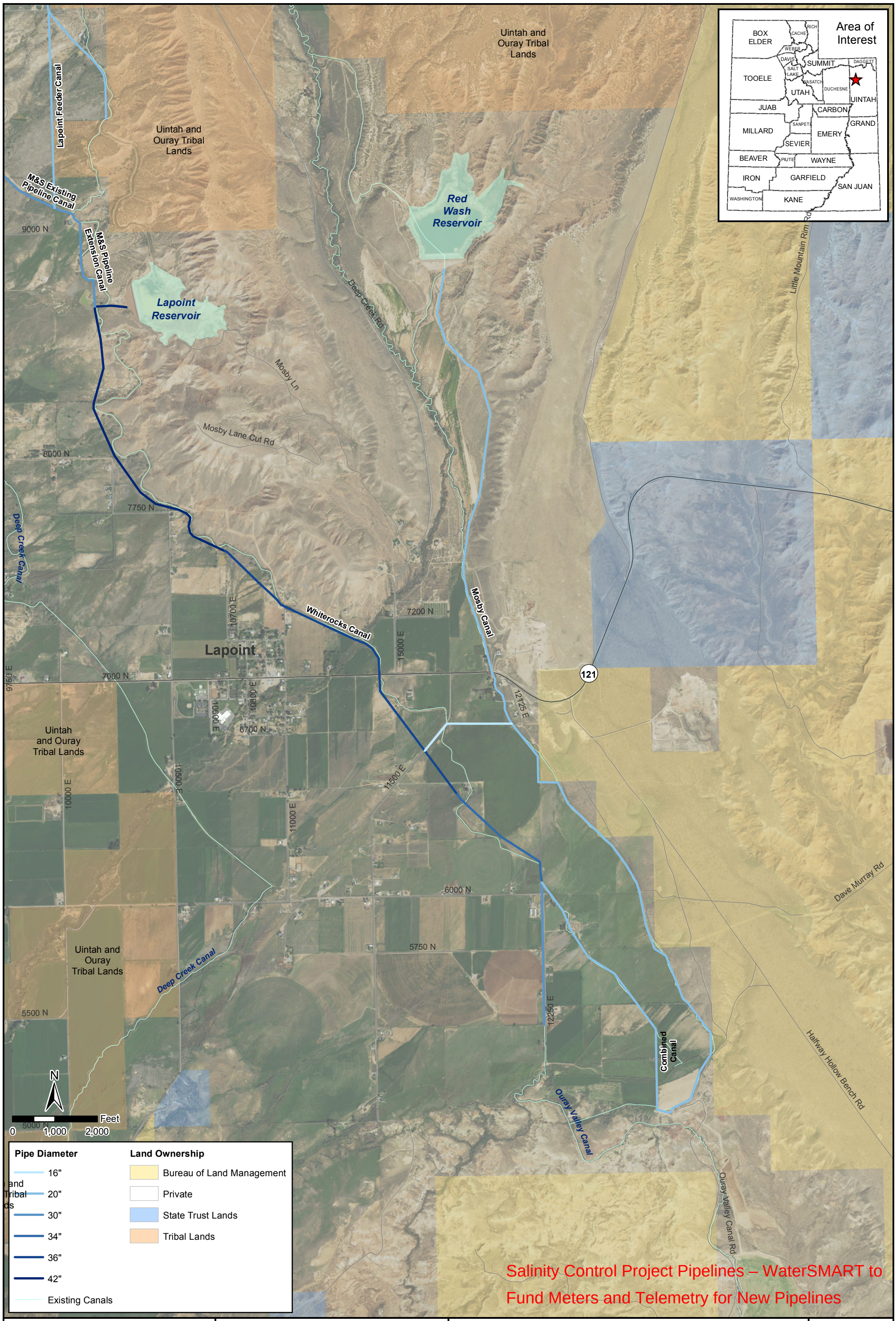
Map Name: H:\JD\Proj\1607-331\Design\GIS\Maps\Overview_Whiterocks_Tabloid.mxd

Project Number: 1607-331 | Drawn by: JWW 11-16 | Last Edit: 11/08/2016

Uintah County

Scale: 1 " = 2,000 '

2



Jones & DeMille Engineering

- Shaping the Quality of Life -

800.748.5275 www.jonesanddemille.com

Whiterocks & Mosby Irrigation Companies

Whiterocks & Mosby Canals Rehabilitation Project
Mosby Canal Alignment

Map Name: H:\JD\Proj\1607-331\Design\GIS\Maps\Overview_Mosby_Tabloid.mxd

Project Number: 1607-331 | Drawn by: JWW 11-16 | Last Edit: 11/08/2016

Uintah County

Scale: 1 " = 2,000 '

3

APPENDIX D. WATER SAVINGS

APPENDIX D - Diversion Records

Whiterocks Canal

(Units: Acre-feet)

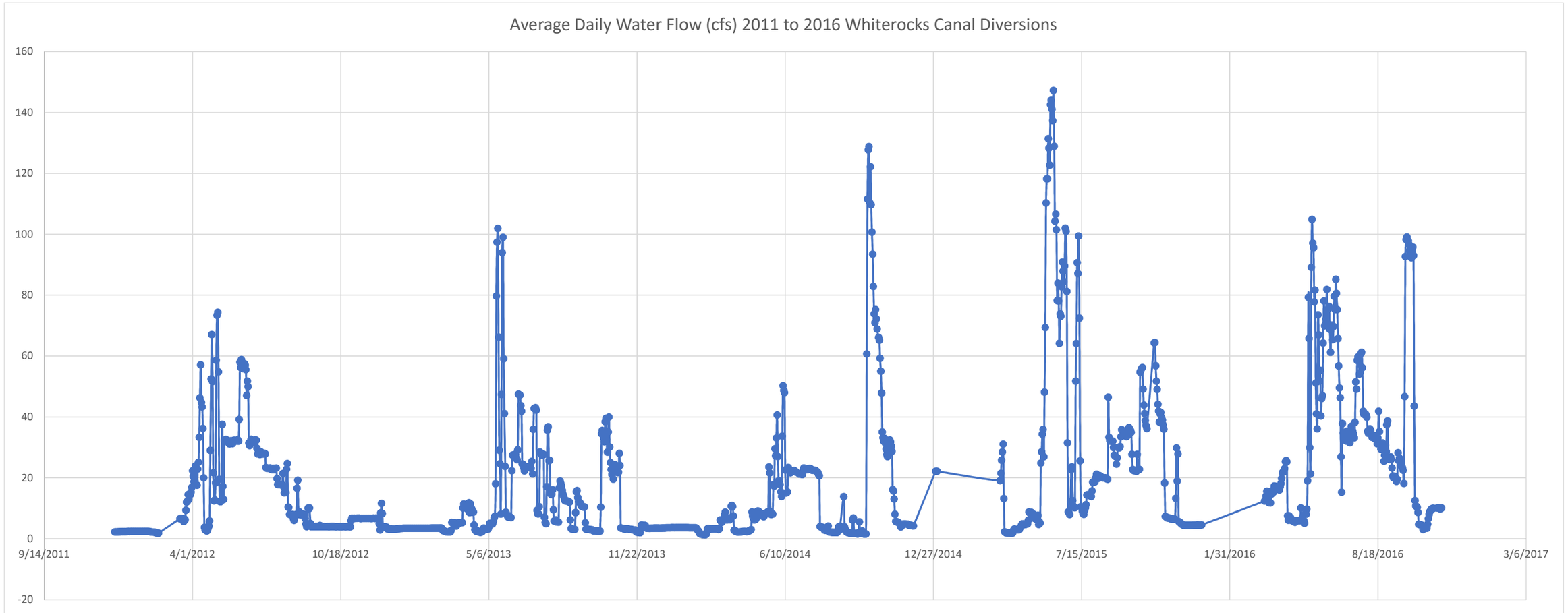
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1950				1,184	4,967	7,000	4,798	2,955	1,644	1,246			23,794
1951				397	2,751	5,447	2,763	3,084	1,341	2,908			18,690
1952					6,254	7,406	5,691	5,070	3,229	2,463	926		31,039
1953				458	912	6,192	2,688	1,109	256	1,230			12,845
1954				823	5,804	1,547	1,269	639	601	2,174			12,857
1955				175	4,675	2,406	1,732	1,091	676	1,872			12,627
1956				496	5,002	4,437	2,059	1,109	294	845			14,241
1957				323	153	8,069	4,159	3,479	3,614	1,999			21,796
1958				1,043	6,341	5,326	2,977	1,170	698	1,670			19,226
1959			323	363	1,402	3,915	3,185	1,805	1,753	2,463			15,211
1960				916	2,904	3,324	2,366	536	204	1,777			12,028
1961			476	422	2,600	2,213	2,166	1,174	3,870	2,712			15,635
1962				1,722	6,147	6,056	3,594	3,447	1,174	2,293			24,432
1963				277	4,261	1,855	3,638	1,280	2,064	3,009			16,383
1964				690	4,219	5,664	4,128	2,662	1,345	1,313			20,022
1965				178	3,004	5,448	7,274	4,103	2,743	2,458			25,209
1966				1,328	7,089	2,105	3,732	1,579	762	2,565			19,160
1967				472	3,824	6,704	6,448	3,947	3,278	1,658			26,330
1968				902	2,700	7,507	4,996	3,673	2,829	2,087			24,695
1969				1,127	7,779	4,768	3,911	2,906	1,275	2,198			23,963
1970				483	3,730	7,632	3,130	3,532	2,914	1,882			23,304
1971				635	3,294	8,280	3,811	3,075	1,129	1,968			22,192
1972				681	4,331	7,750	3,621	2,337	694	2,692			22,107
1973				1,326	4,577	7,013	5,509	4,232	2,696	2,066			27,419
1974				483	3,987	2,666	2,084	1,230	576	1,269			12,295
1975				658	1,180	8,597	8,980	2,310	1,234	1,889			24,848
1976				414	4,783	4,116	2,283	1,355	937	601			14,488
1977				39	10	2,841	991	995	502	818			6,195
1978				400	1,709	8,179	2,192	1,574	1,033	743			15,830
1979				445	4,030	3,627	2,286	1,277	779	1,242			13,686
1980				719	4,723	7,555	4,307	2,312	996	2,268			22,880
1981				1,207	5,060	4,866	2,042	2,933	607	2,060			18,775
1982				574	5,595	8,617	3,623	2,439	3,430	1,233			25,511
1983													
1984				182	5,597	6,453	3,323	5,265	4,257	2,994			28,071
1985				1,712	8,528	3,568	3,324	2,234	3,821	2,197			25,385
1986				277	4,363	7,118	3,283	4,518	2,594	2,896			25,049
1987				1,230	6,333	5,646	3,341	3,330	1,568	1,467			22,915
1988				858	1,546	2,397	2,137	966	852	949			9,703
1989				694	396	888	543	550	478	1,320			4,871
1990													
1991													
1992													
1993													
1994													
1995				1,002	1,504	6,145	8,334	2,904	2,726	1,411			24,026
1996				468	4,036	4,568	3,726	2,255	882	1,230			17,165
1997			267	428	2,055	7,341	4,717	2,545	4,234	2,674	1,475	159	25,895
1998													
1999											1,203	856	2,059
2000													
2001											1,203	856	2,059
2002	798	692	680	379	65	861	442	147	177	917	1,483	621	7,262
2003	433	609	1,080	837	4,254	2,655	3,340	1,468	923	708			16,308
2004	479	536	1,521	937	3,191	1,964	1,766	593	376	3,687	926	842	16,818
2005	308	189	954	1,366	4,990	6,454	5,420	3,659	3,134	2,363			28,837
2006				707	488	1,882	4,635	2,130	404	2,488			12,734
Total	**2,019**	**2,026**	**5,301**	**32,436**	**177,144**	**237,068**	**166,764**	**108,983**	**77,604**	**88,972**	**7,216**	**3,333**	**908,867**
Ave	505	507	757	705	3,769	5,044	3,548	2,319	1,651	1,893	1,203	667	18,548
Max	798	692	1,521	1,722	8,528	8,617	8,980	5,265	4,257	3,687	1,483	856	31,039
Min	308	189	267	39	10	861	442	147	177	601	926	159	2,059

Irrigation Season

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1950-2006				32,436	177,144	237,068	166,764	108,983	77,604	88,972			888,972
Ave				705	3,769	5,044	3,548	2,319	1,651	1,893			18,929

Non-Irrigation Season

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2002-2006	2,019	2,026	4,235								2,409	1,462	12,152
Ave	404	405	847								482	292	2,430


Average Daily Water Flow (cfs) 2011 to 2016 Whiterocks Canal Diversions
160
140
120
100
80
60
40
20
0
-20
9/14/2011
4/1/2012
10/18/2012
5/6/2013
11/22/2013
6/10/2014
12/27/2014
7/15/2015
1/31/2016
8/18/2016
3/6/2017