WaterSMART

Water and Energy Efficiency Grants for FY 2015

FOA No. R15AS00002

Funding Group I

Moon Lake Water Users – Yellowstone Feeder Canal Improvements

Duchesne County,
Utah

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TECHNICAL PROPOSAL

Executive Summary

The executive summary should include:

- *The date, applicant name, city, county, and state.*
- *A one paragraph project summary that specifies the work proposed, including how project funds will be used to accomplish specific project activities and briefly identifies how the proposed project contributes to accomplishing the goals of this FOA (see Section III.B, "Eligible Projects" in the FOA).*

Start Date: January 23, 2015

Applicant: Moon Lake Water Users Association (MLWUA)

Location: Altonah, Duchesne County, Utah

Project Title: MLWUA Yellowstone Feeder Canal Improvements

Project Summary:

The Yellowstone Feeder Canal, operated by Moon Lake Water Users, delivers critical irrigation water for agricultural production from the Yellowstone and Lake Fork drainages. The proposed project includes identifying and piping the critical areas with high water loss located in the first 10.6 miles of the canal. A 2.4 mile reach has concentrated critical sections to be addressed in the first phase. The MLWUA will plan for a future project of completing the piping of the entire 10.6-mile reach in the coming years with future funding. This project will conserve up to an estimated 6,800 acre-feet of water per year at full build out, reducing flow diversions from the Yellowstone River, increasing efficiency to deliver water, provide stock and wildlife watering sources along the pipeline, and decrease salinity in the project area. The measurable results will be realized in water volume savings quantified by flow meters, efficiencies in delivering water to irrigators with an increase of water in the Yellowstone River, and success of stock and wildlife watering troughs along the piped canal. If funding is available, the highest loss section will be constructed as soon as possible where the large majority of the seepage loss occurs.

Length of Time: 14 Months, including design and construction

Completion Date: April 15, 2016

Background Data

Location

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

See attached Project Location Map in Appendix C for location of project in relation to watershed boundaries and Colorado River Basin. Project is located north of the town of Altonah approximately 10 miles, in Duchesne County, Utah. See attached YFC map illustrating the Critical Section, with other observed water loss areas noted on the map. Shapefiles and a Google Earth KMZ file will be included in electronic submittal if possible, with features showing the reach of canal being proposed for work, as well as the critical section being proposed for this application. Coordinate system is in decimal degrees WGS 84.

Applicant's Water Supply

As applicable, describe the source of water supply, the water rights involved, current water uses (i.e., 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.

Source of Water Supply

MLWUA is comprised of representatives with irrigation districts served by the Moon Lake Project which includes multiple rivers and reservoirs with approximately 75,000 acres of irrigated lands in the Uintah Basin. Primary production includes alfalfa, grass hay, livestock production such as beef and sheep, and various grains.

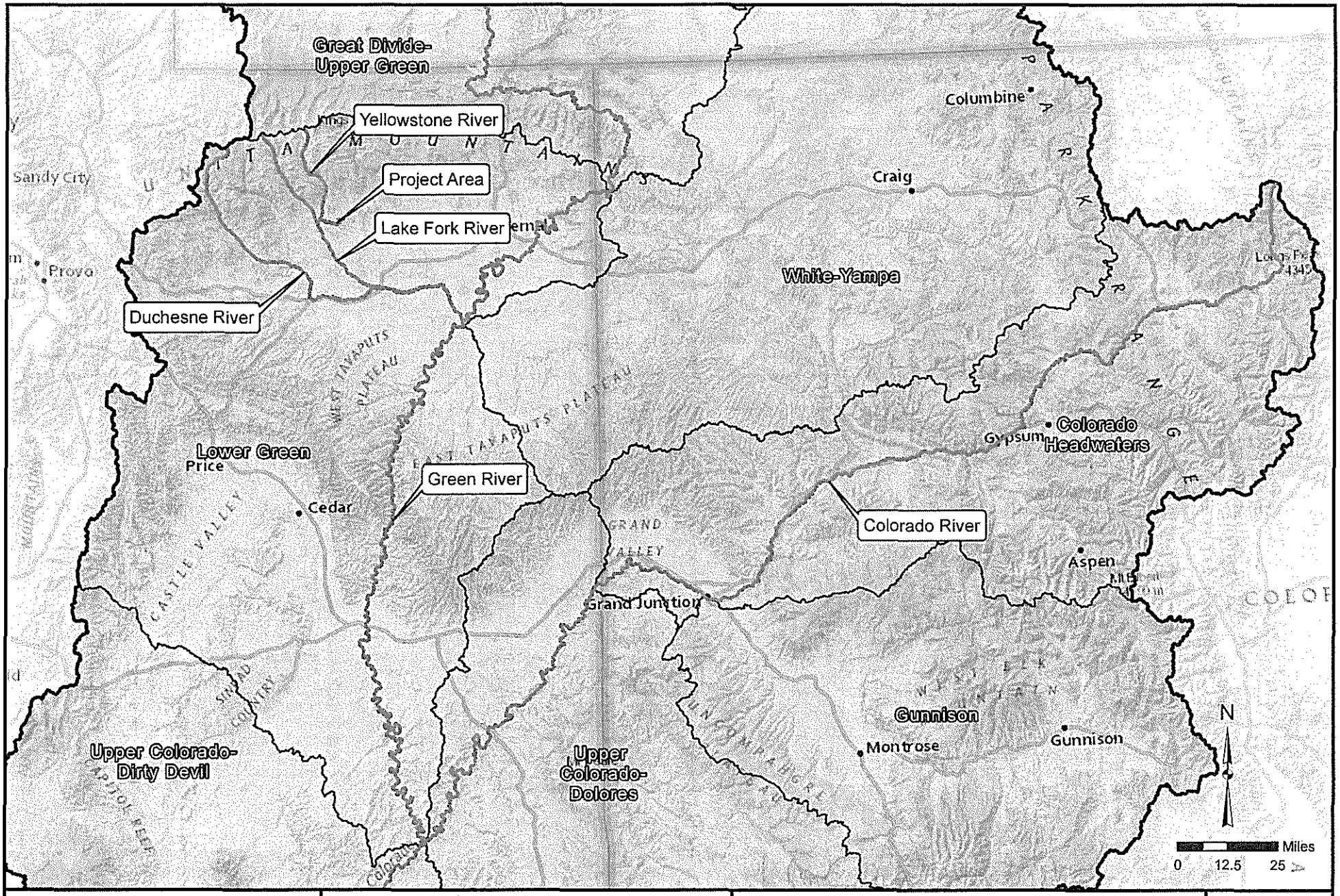
Current Water Users and Usage

The Yellowstone Feeder Canal (YFC) diverts water from the Yellowstone River at the Yellowstone Feeder Canal Diversion Structure north of the town of Altonah, with a maximum flow rate of up to 100 cfs, with the majority of flows around 80 cfs. MLWUA delivers water to multiple irrigation companies, which make up the association. The Moon Lake Project, which includes the construction of the Yellowstone Feeder Canal, was executed in contract in 1934, with operations commenced in 1938. From this time, the MLWUA has been led by producers and landowners in a common goal to supply irrigation and stock water to lands in the Uintah Basin. Over 75,000 acres and approximately a farming population of 1,825 are served by the MLWUA. Project water serves agriculture as well as municipalities such as Roosevelt City, with a population over 6,000 people with secondary water, supplementing culinary water supplies in the area.

The YFC project will indirectly benefit the entire association with water savings, secure and safe deliveries. The land being focused on in the YFC project includes grazing land, open channel canal and access road improvements, as well as an indirect benefit to irrigated pasture, cropland, gardens, and reservoir storage being served by the MLWUA or associated irrigation companies and producers.

Water Rights Involved

Involved Water Rights include: WR 43-2501, 2538, 3177, 3178, and supplemental group



Yellowstone Feeder Canal

Upper Colorado River Basin

HUC 4 Watershed Boundaries

GIS

Jones & DeMille Engineering

- infrastructure professionals -

800.748.5275 www.jonesanddemille.com

Moon Lake Water Users Association

DUCHESNE COUNTY

Yellowstone Feeder Canal
Project Location Map

SCALE: 1 " = 32 miles

Map Name H:\JD\Proj\Development\2013\Yellowstone Feeder Canal\Design\GIS\Maps\MLWUA_Yellowstone_Feeder_Canal_Location_8x11.mxd

Project Number 0000-000 | Drawn by ALP 07-14 | Last Edit 07/10/2014

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216191 among others.

Potential Shortfalls in Water Supply

Water savings from this project will help combat potential shortfalls in the MLWUA system and associated irrigation districts relying on flows from the Uinta Mountains with relatively little storage capacity. Potential shortfalls in water supply that are important for MLWUA include:

1. Water Loss Due to Seepage – The YFC project and associated project area was chosen for focus by MLWUA because of the high amount of water loss experienced over the past several years. The estimated loss volume is more than some of the storage reservoirs that are often left partially filled during dry years. MLWUA has prioritized this project as a necessary improvement for their system to maintain deliveries to irrigation companies relying on this critical canal to deliver water to their shareholders. The YFC project will contribute to the Colorado River Basin goals in directly targeting insufficient water/inefficient use of irrigation water. An estimated that as much as 6,800 acre-feet per year is lost in this reach of the YFC. This water would greatly assist producers and water users for a consistent delivery.

2. Lack of Storage – The YFC was constructed to supplement eastern Duchesne County with water because of the lack of storage reservoirs in the Uinta River drainage. Water lost could be more efficiently stored in Browns Draw Reservoir, benefiting water users during drought.

3. Transmission Canal Risk Management & Maintenance – A catastrophic failure of this canal would be extremely difficult for water users in this area and therefore a high priority for MLWUA. Canal maintenance is becoming more costly as seepage and leaking occurs along the rocky hillside.

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 (i.e., type, miles, and acres).

The MLWUA manages approximately 47 miles of irrigation canals, Moon Lake Dam, a reservoir with approximately 49,500 acre-ft, and multiple diversion structures and flow measurement structures serving approximately 75,000 acres of irrigated lands in the Uintah Basin. The YFC diverts water from the Yellowstone River at the Yellowstone Feeder Canal Diversion Structure which were both constructed during the years of 1938-1940 by the Civilian Conservation Corps. Actions in this proposed project include only improvements to the canal, as the diversion structure has had upgrades recently due to damages from high water runoff in recent years. No construction activity will be required within the Yellowstone River channel or nearby riparian area, and effects of the YFC project are considered to be beneficial to the river as less water will be required to be diverted to meet demands of agricultural producers holding water rights. Efficiencies in the pipeline system will be passed downstream as an indirect action by MLWUA. MLWUA will continue to monitor

diversion flows as well as the USGS river gauge on the Yellowstone River.

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

No proposed renewable energy elements are included with this project at this time, however the MLWUA system is extremely energy efficient with gravity-fed canals and pipelines. Gravity flow system will be maintained and enhanced with the project. Piping the critical section will also reduce required maintenance trips, travel, and equipment mobilization required to maintain temporary repairs until a long-term solution is installed.

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 projects(s).

Moon Lake Water Users has appreciated past relationships and funding assistance from Reclamation, including the Lake Fork Connector Pipeline in FY 2012, which included piping 6,100 feet of 36 to 22-inch diameter HDPE pipe, with a project cost of $638,000. Past projects include large water resource projects such as the Moon Lake Project, Big Sand Wash Reservoir as well as multiple canal, pipeline, and structural projects for both MLWUA and irrigation companies served by MLWUA.

Technical Project Description

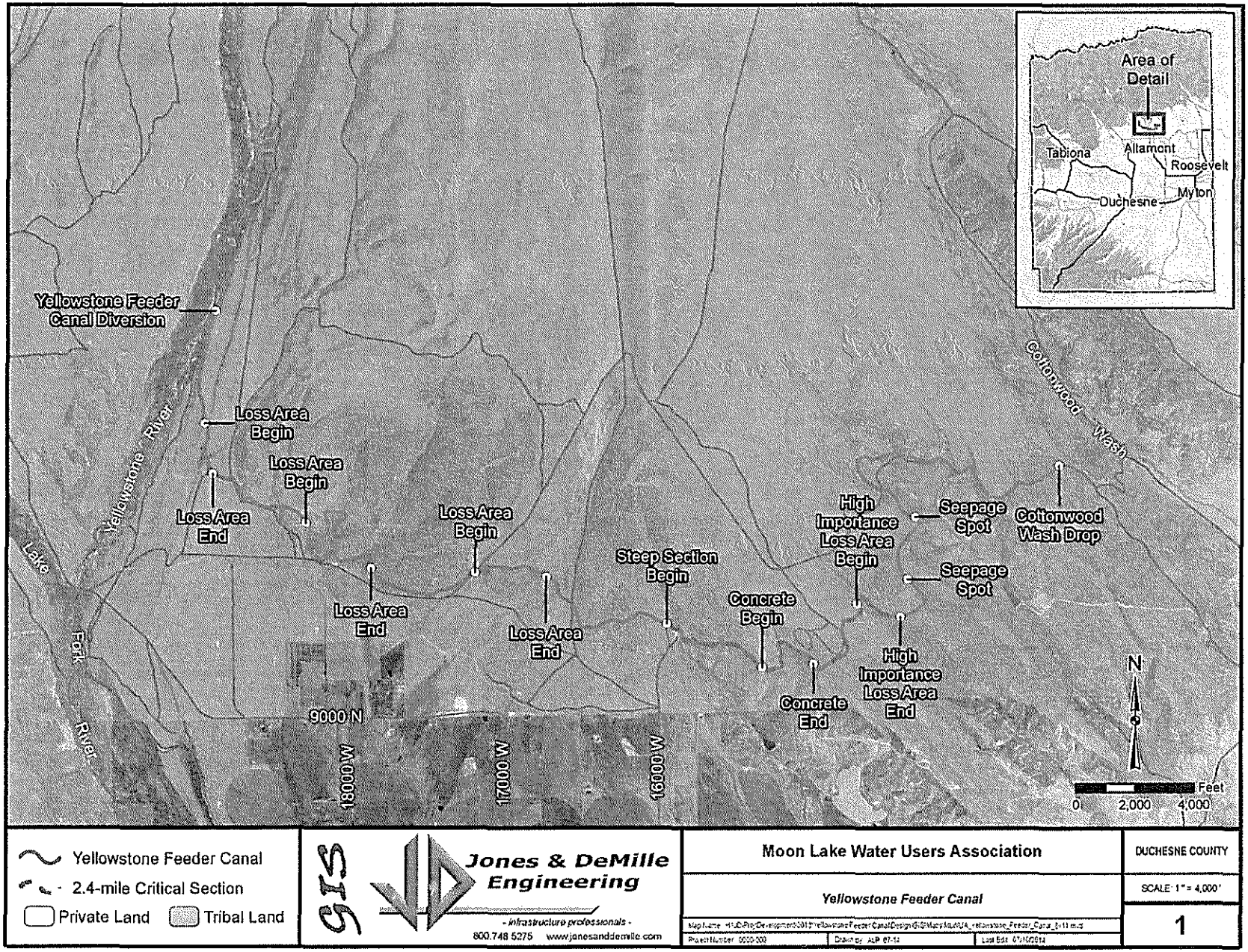
The technical project description should describe the work in detail, including specific activities that will be accomplished as a result of this project. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal.

The proposed project will include the following elements:

- Preliminary design and hydraulic analysis of YFC
- Analysis and selection of highest loss areas for construction
- Installation of up to 2.4 miles of HDPE 63-inch Pipe within existing right-of-way and canal channel and access roadway (see Project Map below and in Appendix C)
- Installation of inlet grate and outlet structure
- Associated flushing valves, air vents, and access road restoration included in project

The following list of objectives for the project include:

- Eliminate water losses in canal
- Reduce salinity and improve water quality
- Enclose canal and stabilize steep banks
- Increase efficiency in water deliveries to irrigators and storage


Area of Detail
Tabiona
Altamont
Roosevelt
Duchesne
Myton
Yellowstone Feeder Canal Diversion
Yellowstone River
Loss Area Begin
Loss Area End
Loss Area Begin
Loss Area End
Loss Area Begin
Loss Area End
Steep Section Begin
Concrete Begin
Concrete End
High Importance Loss Area Begin
High Importance Loss Area End
Seepage Spot
Seepage Spot
Cottonwood Wash Drop
Cottonwood Wash
Lake Fork River
9000 N
18000 W
17000 W
16000 W
N
0
2,000
4,000
Feet
Yellowstone Feeder Canal
2.4-mile Critical Section
Private Land
Tribal Land
GIS
Jones & DeMille Engineering
- infrastructure professionals -
800.748.5275 www.jonesanddemille.com
Moon Lake Water Users Association
DUCHESNE COUNTY
Yellowstone Feeder Canal
SCALE: 1" = 4,000'
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Evaluation Criteria

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

Evaluation Criteria A: Water Conservation (28 points)
Up to 28 points may be awarded for a proposal that will conserve water and improve efficiency. Points will be allocated to give consideration for projects that are expected to result in significant water savings.

Subcriterion No. A-1: Water Conservation
For projects with quantifiable and sustained water savings, please respond to Subcriterion No. 1(a)-Quantifiable Water Savings described in this subsection. If the project does not result in quantifiable water savings but will improve water management, please respond to Subcriterion No. 1(b) Improved Water Management described in this subsection. If the project has separate components that will result in both quantifiable water savings and improved water management, an applicant may respond to both Subcriteria No. A.1 (a) and (b). However, an applicant is limited to 20 points total under both Subcriteria No. A.1 (a) and (b).

Subcriterion No. A.l(a)—Quantifiable Water Savings
Up to 20 points may be allocated based on the quantifiable water savings expected as a result of the project.

Describe the amount of water saved. For projects that conserve water, please state the estimated amount of water 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, all applicants should be sure to address the following:

- *What is the applicant's average annual acre-feet of water supply?*
- *Where is that water currently going (i.e., back to the stream, spilled at the end of the ditch, seeping into the ground, etc.)?*
- *Where will the conserved water go?*

Please include a specific quantifiable water savings estimate; do not include a range of

potential water savings.

What is the applicant's average annual acre-feet of water supply?

MLWUA delivers approximately 165,000 acre feet of water annually on average.

Where is that water currently going?

Water delivered through the YFC is diverted from the Yellowstone River and follows the natural contours around the base of the Uinta Mountains to irrigation companies on the east side of Duchesne County and western Uintah County. Storage deliveries are also provided to the Browns Draw Reservoir. Water lost in seepage runs off the hillside into natural drainages and watercourses, eventually entering the Green River and Colorado River Systems.

Where will the conserved water go?

Conserved water will either be used to supplement storage in Browns Draw Reservoir, solidify water deliveries to irrigators and association affiliated canal companies, or passed downstream from the diversion on the Yellowstone River. No construction activity will be required within the Yellowstone River channel or nearby riparian area, and effects of the YFC project are considered to be beneficial to the river as less water will be required to be diverted to meet demands of agricultural producers holding water rights. Efficiencies in the pipeline system will be passed downstream as an indirect action by MLWUA. MLWUA will continue to monitor diversion flows as well as the USGS river gauge on the Yellowstone River.

Specific Canal Lining/Piping Questions

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

- *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.*
- *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.*
- *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?)*
- *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?*

- *How will actual canal loss seepage reductions be verified?*
    - *Include a detailed description of the materials being used.*

The MLWUA has gathered flow data at both the Yellowstone Feeder Diversion and the Payne Canal diversion downstream of the first 10.6 mile reach. Real time data is logged on data loggers and values were used to find an annual average flow of 23.4 cfs from 2009 to 2014 (which includes 2 to 3 months of winter shut-down each year). Peak daily average flow is approximately 100 cfs, but most delivery flows are around 50 cfs. MLWUA members monitor flows at several flow measurement locations and have determined loss rates of 40%. To be conservative, the loss rate of 40% was applied to the average daily flow, which equates to 6,800 acre feet per year. MLWUA staff have observed that higher flows result in a substantial seepage loss rate, with one particular section being observed to accumulate more than 5 cfs below the canal. This alone would be over 3,000 acre-ft per year and attempts to repair this area seem futile.

The proposed project will involve further design and analysis to determine segments with the highest loss to pipe with available project resources and funds. Additionally, flow data will be closely monitored during the 2015 delivery season for a pre-construction record to assist in determining the performance of the project's post-construction water savings. Addressing the critical seepage areas first will greatly reduce seepage, with virtually no water loss in area where pipe is installed. Pipe material will be fused, High Density Polyethylene pipe with no fittings or mechanical joints.

Subcriterion No. A.l(b)- Improved Water Management
Up to 5 points may be awarded if the proposal will improve water management through measurement, automation, advanced water measurement systems, through implementation of a renewable energy project, or through other approaches where water savings are not quantifiable.

Describe the amount of water better managed. For projects that improve water management but which may not result in measurable water savings, state the amount of water expected to be better managed, in acre-feet per year and as a percentage of the average annual water supply. (The average annual water supply is the amount actually diverted, pumped, or released from storage, on average, each year. This does not refer to the applicant's total water right or potential water supply.) Please use the following formula:

$$\frac{\textit{Estimated Amount of Water Better Managed}}{\textit{Average Annual Water Supply}} = \frac{10{,}250 \text{ ac-ft}}{165{,}000 \text{ ac-ft}} = 6.2\%$$

Subcriterion No. A.2- Percentage of Total Supply
Up to 4 additional points may be allocated based on the percentage of the applicant's total average water supply (i.e., including all facilities managed by the applicant) that will be conserved directly as a result of the project.

Provide the percentage of total water supply conserved: State the applicant's total average annual water supply in acre-feet. Please use the following formula:

$$\frac{\textit{Estimated Amount of Water Conserved}}{\textit{Average Annual Water Supply}} = \frac{6{,}800 \text{ ac-ft}}{165{,}000 \text{ ac-ft}} = 4.1\%$$

Subcriterion No. A.3- **Reasonableness of Costs**
Up to 4 additional points may be awarded for the reasonableness of the cost for the benefits gained.

Please include information related to the total project cost, annual acre-feet conserved (or better managed), and the expected life of the improvement. Use the following calculation:

$$\frac{\textit{Total Project Cost}}{\textit{(Acre-Feet Conserved, or Better Managed x Improvement Life)}}$$

Failure to include this required calculation will result in no score for this section. For all projects involving physical improvements, specify the expected life of the improvement in number of years and provide support for the expectation (e.g. manufacturer's guarantee, industry accepted life-expectancy, description of corrosion mitigation for ferrous pipe and fittings, etc.) Failure to provide this information may result in a reduced score for this section.

MLWUA will be enabled to better manage their water through the system with this project. In addition, the project will conserve approximately 6,800 acre-ft of water annually. It is anticipated that the pipe used will be HDPE, which has an industry accepted life-expectancy of 100 years.

$$\frac{\textit{Total Project Cost}}{\textit{AF Conserved or Better Managed x Improvement Life}} = \frac{\$1{,}122{,}000}{(6{,}800 + 10{,}250)*100} = \$0.66$$

The calculation yields a cost of $0.66 for every acre-foot per year of water conserved and better managed.

Evaluation Criteria B: Energy Water Nexus (16 Points)
Up to 16 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.

For projects that include construction or installation of renewable energy components, please respond to Subcriterion No. B.1-Implementing Renewable Energy Projects Related to Water Management and Delivery. If the project does not implement a renewable energy project but will increase energy efficiency, please respond to Subcriterion No.B.2-Increasing Energy Efficiency in Water Management. If the project has separate components that will result in both implementing a renewable energy project and increasing energy efficiency, an applicant may respond to both. However, an applicant may receive no more than 16 points total under both Subcriterion No. B.1 and B.2.

Subcriterion No. B.l- Implementing Renewable Energy Projects Related to Water Management and Delivery
Up to 16 points may be awarded for projects that include construction or installation of renewable energy components (i.e., 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. 2 below.

Subcriterion No. B.1 is not applicable to this project.

Subcriterion No. B.2- Increasing Energy Efficiency in Water Management
Ifthe project is not implementing a renewable energy component, as described in Subcriterion No. B.1 above, 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).

- *If quantifiable savings are expected to result from water conservation improvements, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimate amount in kilowatt hours per year. Please provide sufficient detail supporting the calculation of any energy savings expected to result from water conservation improvements.*
- *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 estimates 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 (i.e., installing small scale solar as part of a SCADA system).*

MLWUA continues to operate using gravity fed systems, with solar panel SCADA for flow control and measurement devices. The YFC is purely a transmission canal, so flow measurement will be relatively simple between the diversion and first downstream meter. While the piped section will eventually be extended, solar panel SCADA equipment may be installed at intermediate points along the canal alignment. Existing systems will continue to be utilized to measure flow while reducing energy requirements.

Evaluation Criteria C: Benefits to Endangered Species (12 Points)
*Up to **12 points** may be awarded for projects that will benefit federally-recognized candidate species or up to **12 points** may be awarded for projects expected to accelerate the recovery of threatened species or engendered species, or addressing*

designated critical habitat.

For projects that will directly benefit federally-recognized candidate species, please include the following elements:

- *What is the relationship of the species to water supply?*
- *What is the extent to which the proposed project would reduce the likelihood of listing or would otherwise improve the status of the species?*

The YFC diverts water for water users in eastern Duchesne County and western Uintah County from the Yellowstone River (see attached project location map). Efficiencies in the delivery of irrigation water to water users holding water rights on the upstream end of the system benefits the entire system, as well as increasing flows in the Yellowstone and Lake Fork Rivers. Currently, MLWUA must divert as much water as possible to deliver water to producers, livestock, and maintain irrigation storage in Browns Draw Reservoir. With current water losses due to leakage and seepage, a substantial portion (6800 acre-ft per year or up to 38 cfs during irrigation flows) is lost in transit. With greater efficiency in delivery and transmission of water in the YFC, less water will be required at the diversion, thus allowing more flows below the YFC diversion on the Yellowstone River. As indicated on the project location map, the Yellowstone River is a tributary of the Duchesne River and ultimately the Green and Colorado rivers. Four threatened or endangered fish species are located in the Lower Duchesne River and the Lower Lake Fork River below the Myton Diversion structure. These are the Colorado Pike Minnow, Razorback Chub, Humpback Chub and the Bonytail. No threatened or endangered fish species are known to inhabit the Duchesne River upstream from the Myton diversion.

The natural resource concerns addressed by this project includes Fish and Wildlife - Threatened and Endangered Fish and Wildlife Species and will decrease the chances for the resource concern of inadequate water becoming an issue for these and many other species using the Yellowstone River riparian area. The project will not affect or include any work near the Yellowstone River, as the existing diversion and outlet works are in good condition. The measureable results that will be documented for the YFC project will include flow gage measurements and real time data of the Yellowstone River and diversions made for the YFC. Comparisons with historic flows and diversions will be used to show efficiencies and flows remaining in the river system.

Evaluation Criteria D: Water Marketing (12 Points)

*Up to **12 points** may be awarded for projects that propose water marketing elements, with maximum points for projects that establish a new water market.*
*Note: Water marketing does **not** include an entity selling conserved water to an existing customer. This criterion is intended for the situation where an entity that is conserving water uses water marketing to make the conserved water available to meet other existing water supply needs or uses.*

Briefly describe any water marketing elements included in the proposed project.
Include the following elements:

- *Estimate amount of water to be marked*
- *A detailed description of the mechanism through which water will be marketed*

(e.g., individual sale, contribution to an existing market, the creation of a new water market, or construction of a recharge facility)
- *Number of users, types of water use, etc. in the water market*
- *A description of any legal issues pertaining to water marketing (e.g., restrictions under reclamation law or contracts, individual project authorities, or State water laws)*
- *Estimated duration of the water market*

State laws prohibit the sale or lease of water rights that are designated for a specific plot of land, unless the land itself is taken out of production. As such, the water conserved will not be available to lease or sale.

Evaluation Criterion E: Other Contributions to Water Supply Sustainability (14 Points)

Up to 14 points may be awarded for projects expected to contribute to a more sustainable water supply. This criterion is intended to provide an opportunity for the applicant to explain how the project relates to a WaterSMART Basin Study, how the project could expedite future on-farm improvements, and/or how the project will provide other benefits to water supply sustainability within the basin. An applicant may receive the maximum 14 points under this criterion based on discussion of one or more of the numbered sections below.

*(1) 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 Basin Study (i.e., 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:

(a) 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.

(b) Describe how the adaptation strategy and proposed WaterSMART Grant project will address the imbalance between water supply and demand identified by the Basin Study.

(c) Identify the applicant's level of involvement in the Basin Study (e.g., cost-share partner, participating stakeholder, etc.).

(d) 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 meeting 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, please visit: <www.usbr.gov/WaterSMART/bsp>.

The YFC 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 YFC project is directly linked to the increase supply by delivering more water to users that normally was lost through seepage. The diversion amount required to meet those needs will also be minimized, therefore reducing demand as well.

The second concern addressed with the YFC of reducing seepage and therefore reducing excessive salinity in surface waters (also a Colorado River Basin priority) will help producers and water users in the area to avoid a need for stricter water quality requirements and regulations. Downstream benefactors include the entire Colorado River drainage with excessive salinity problems.

(2) 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 shareholders 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/or NRCS funding and technical assistance in FY 2014 to the extent such assistance is available. Complementing NRCS Farm Bill programs include the Environmental Quality Incentive Program (EQIP) and Agricultural Water Enhancement Program (AWEP), which are the primary programs that address water quantity and water quality conservation practices. For more information, including application deadlines and a description of available funding, please contact your local NRCS office or visit <www.nrcs.usda.gov>for further contact information in your area.

The MLWUA has previously applied for Regional Conservation Partnership Program funding for the entire 10.6 mile segment of YFC and were selected to submit a full proposal in the final selection process, however, funding was not awarded at this time. It is anticipated that future NRCS funding will be sought for future phases of the YFC. As a transmission canal, there are few on-farm users receiving water directly from YFC, however, outreach has been made for EQUIP funding to utilize water conserved more efficiently. Partnering with tribal and private irrigation companies will allow NRCS funds to be utilized successfully. A letter of support from the State NRCS Conservationist is included in Appendix B.

(3) *Up to **14 points** may be awarded for projects that will **build long-term drought resilience** in an area affected by drought.*

If the proposed project will make water available to alleviate water supply shortages resulting from drought, please address the following:

- *Explain in detail the existing or recent drought conditions in the project area. Describe the severity and duration of drought conditions in the project area. Describe how the water source that is the focus of this project (river, aquifer, or other source of supply) is impacted by drought.*

- *Describe the impacts that are occurring now or are expected to occur as a result of drought conditions. Provide a detailed explanation of how the proposed WaterSMART Grant project will improve the reliability of water supplies during times of drought. For example, will the proposed project prevent the loss of permanent crops and/or minimize economic losses from drought conditions? Will the project improve the reliability of water supplies for people, agriculture, and/or the environment during times of drought? Please note that all proposed projects must meet the project eligibility requirements described in Section III.B. of this FOA. In accordance with those requirements, project proposals requesting compensation for economic losses resulting from drought, and proposals for the purchase of water are not eligible for funding under this program. Please see Section III.B. of this FOA for a detailed description of the types of projects eligible for funding.*

The Uintah Basin water users have experienced several years of drought and historically have water shortages in areas without sufficient storage. The YFC delivers water to users in the Uinta River drainage that lacks large scale reservoirs, relying mostly on runoff and high lake storage in small wilderness reservoirs in the Uinta Mountains. During periods of drought, water transfer from the Moon Lake Project is vital to maintain water supplies to levels that provide some relief to water users in watersheds that do not have this storage. This efficiency directly increases the reliability of water supply for agricultural users, decreases loss of crops, and minimizes negative economic impacts. MLWUA is able to transfer water in the system with the YFC as the highest upstream canal to increase the effectiveness of alleviating water supply shortages.

(4) *Up **10 points** may be awarded for projects that include **other benefits** to water supply sustainability.*

Projects may receive up to 10 points under this sub-criterion by thoroughly explaining additional project benefits, not already described above. Please provide sufficient explanation of the additional expected project benefits and their significance. Additional project benefits may include, but are not limited to, the following:

- *Will the project make water available to address a specific concern?*
    - *Will the project directly address a heightened competition for finite water supplies and over-allocation (e.g., population growth)?*
    - *Describe how the water source that is the focus of this project (river, aquifer, or other source of supply) is impacted by climate variation.*

- *Will the project help to address an issue that could potentially result in an interruption to the water supply if unresolved?*

Improvements to the MLWUA conveyance system would conserve approximately 6,800 acre-ft of water. The water rights owned by MLWUA have some of the highest priority on the Yellowstone and Lake Fork Rivers, and water shortages typically occur for the downstream users, especially during drought periods. Climate variability and the lack of water storage limits the water supply available in the Uintah Basin. This project would improve the finite water supply and reduce the current and future shortages experienced by MLWUA and downstream water-users. In summary, this project would significantly improve the water supply for the MLWUA and improve the water supply for downstream water users. In addition, the water conserved and not used in the system would remain in the Yellowstone River and lower Duchesne River and would improve the habitat for the four threatened or endangered fish species found there as described previously.

- *Will the project make additional water available for Indian tribes?*
- *Will the project make water available for rural or economically disadvantaged communities?*

The MLWUA YFC lies in an existing right-of-way across Ute Tribal grazing lands. While the critical section is in a less-desirable grazing location, collaboration is ongoing to provide stock water troughs to sustain wildlife and livestock grazing activities. MLWUA has other canals in their system that delivers water to tribal lands, which will benefit from water conservation on the YFC by increasing available water for other areas of the basin. Several rural communities will also benefit with increased reliability and water delivery in the system and directly from YFC efficiencies.

- *Does the project promote and encourage collaboration among parties?*
  - *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 a widespread support for the project. The MLWUA and irrigation companies within the association and area are very supportive of the project. The Utah Division of Water Resources Board has approved an application to be considered for funding the remaining portion of the project for the 2.4 mile critical section. A letter of support is included in Appendix B. Many water users with irrigation companies benefiting from the YFC project show interest in converting to sprinkler irrigation as this and other projects are implemented, which would further increase the amount of water conserved. The project would increase the water supply in the area and reduce potential for water related conflict with downstream water uses due to post project water supply increases.

(c) Will the project increase awareness of water and/or energy

conservation and efficiency efforts?

(i) Will the project serve as an example of water and/or energy conservation and efficiency within a community?

(ii) Will the project increase the capability of future water conservation or energy efficiency efforts for use by others?

(iii) Does the project integrate water and energy components?

As previously described, the project will directly benefit water supplies and storage recharge which will be monitored and tracked by not only MLWUA, but several downstream irrigation companies. This will be a good example for other irrigation companies to encourage accurate data and quantification of water losses in nearby canal systems. The proposed project will encourage and increase the capability for future water conservation. MLWUA has an extensive system of data logging and SCADA capabilities, with solar panels operating a vast majority of the MLWUA equipment. This system will be instrumental to obtain data and publish success of the water-saving efforts of MLWUA.

Evaluation Criteria F: Implementation and Results (10 points)
Up to 10 points may be awarded for the following:

Subcriterion No. F.l- 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, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place ? Does the project relate have access to an adaptation strategy developed as part of a WaterSMART Basin Study? Please self-certify, or provide copies, where appropriate to verify there is a water conservation plan, SOR. and/or district or geographic area drought contingency plans 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.

MLWUA creates an annual report on the system, with priorities and needs identified and ranked. This project has been a subject for improvement for several years, with maintenance done annually to reduce seepage. The past two years have seen a sharp increase in leakage and seepage losses. The following objectives for MLWUA are listed below, with application to the YFC project described for each outlined objective:

- **Increase amount of stored water in Moon Lake.** By decreasing the large amount of seepage lost in the YFC, Moon Lake Reservoir will be able to retain more storage every year as the entire system realizes the benefits of the project, giving valuable water during times of drought.
- **Improve delivery time and reduce operation and maintenance.** By installing the proposed pipeline, annual maintenance activities will be greatly decreased. The YFC has had a history of maintenance needs and expenses.
- **Decrease water losses to producers.** The estimated savings of 6,800 acre-feet of water per year will be realized due to the reduction in seepage and leakage from the critical loss areas identified on the YFC.
- **Reduce salinity in water to producers and other downstream users.** Piping sections of open canal greatly reduces seepage and deep percolation into the ground water in the area. The ground water has a large amount of salt, which is carried with the water as it surfaces, thus becoming a pollutant to the irrigated acres and the downstream users.
- **Improve recreational activity on Moon Lake**. Moon Lake is a very popular recreation site in the area. The additional 6,800 acre-feet conserved will allow more water to remain in Moon Lake every year as well as increase the supply to Browns Draw Reservoir, both of which will benefit the fishery and the recreation activities in the area.

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

Design work will proceed during the spring and summer of this year for obtaining additional data and segments with the highest seepage prioritized. Preliminary hydraulic design and cost estimates have been important for funding application and budget prioritization.

(3) Describe how the project conforms to and meets the goals of any applicable State or regional water plans, 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 reducing water shortages in Duchesne County, which is an objective of the Duchesne County Water Conservancy District.

Subcriterion No. F.2- Readiness to Proceed
Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement.

Describe the implementation plan of the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. (Please note, 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).

If funding is awarded through this application, the remaining funding will be secured from the Utah Division of Water Resources (See Appendix B). A loan application is currently on file with the Utah Division of Water Resources. The application is pending the award of a grant application. Once funding is secured, the design work will begin immediately thereafter. Construction would be anticipated to occur during the fall of 2015 through spring of 2016. A detail schedule showing major tasks, milestones, and dates is shown in Appendix A.

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

It is anticipated that no stream alteration permits and possible Section 404 permits will be required for installation of a pipeline through the critical seepage segment. These permits will be reviewed and if necessary applied as part of the engineering design process and no complications are anticipated. There are no expected delays due to environmental compliance and a categorical exclusion is anticipated for NEPA compliance.

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 (i.e., water saved, marketed, or better managed, or energy saved). For more information calculating performance measure, see Section VIII.A .1 "FY2014 WaterSMART Water and Energy Efficiency Grants: Performance Measures"

Note: All Water SMART 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 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. 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. Quantification of project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of Water SMART Grants.

To calculate potential water savings, a physical measurement of seepage losses will be performed using an Inflow/Outflow test. The water will be measured flowing in and out of the conveyance system. At least two tests (early and late season) will be performed. The post project results will be compared to the existing losses estimated in 2013 to 2014. It is anticipated that flow meters will be installed at the inlet and outlet locations. Pre-project diversion records will be compared to post-project diversion records.

Subcriterion No. F.4: Reasonableness of Costs
Points may be awarded based on the reasonableness of the cost for the benefits gained.

Please include information related to the total project cost, annual acre-feet conserved, energy capacity, or other project benefits and the expected life of the improvement(s).

For all projects involving physical improvements, specify the expected life of the improvement in number of years and provide support for the expectation (e.g., manufacturer's guarantee, industry accepted life-expectancy, description of corrosion mitigation for ferrous pipe and fittings, etc.). Failure to provide this information may result in a reduced score for this section.

Expected life of the improvements to YFC using HDPE pipe has been found to be 100 years based on a recent study by the Plastics Pipe Institute. Required fittings for air release valves, bends, or other appurtenances will also be HDPE where possible to extend the life of the project and provide a corrosion free environment, leak-proof joints, and a durable product. Links to the interim report can be found on the http://www.plasticpipe.org/ website or the Jana Labs website www.janalab.com.

Evaluation Criterion G: Additional Non-Federal Funding (4 points)
Up to 4 points may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided.

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

The YFC project has $822,000 of Non-Federal funding, with a total project cost of $1,122,000. The percentage of non-federal funding is 73%.

Evaluation Criterion H: Connection to Reclamation Project Activities (4 points)
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 Moon Lake Dam and Reservoir and Sand Wash Dam and Reservoir were both Bureau of Reclamation projects built in conjunction with MLWUA. These projects have been purchased by MLWUA and are being operated and maintained by MLWUA personnel.

(2) Does the applicant receive Reclamation project water?

The project does not receive Reclamation water, however there is 1,500 acre-feet of Reclamation project water in the Sand Wash Reservoir that is being delivered via pipeline to MLWUA canals in Roosevelt, Utah.

(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 integrated into several existing projects and activities that Reclamation has been involved in. The Uintah Basin has had numerous Reclamation projects.

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

The project will contribute water into the MLWUA system, which includes the Moon Lake Project and lands associated with numerous past Reclamation projects.

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

The proposed project does not involve Reclamation trust responsibilities to Tribes.

Performance Measures

(See Section VIII.A for additional details.)

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, marketed, or better managed, as a direct result 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.

Environmental and Cultural Resources Compliance and Cultural Resources Compliance

To allow Reclamation to 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 NEPA, ESA, and NHPA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. Additional information about environmental compliance is provided in Section IV.D.4. "Project Budget," under the discussion of "Environmental and Regulatory Compliance Costs," and in Section VIII.B., "Overview of Environmental and Cultural Resources Compliance Requirements."

Note: Applicants proposing a Funding Group II project must address the environmental compliance questions for their entire project, not just the first one-year phase.

If you have any questions, please contact your regional or area Reclamation office (see <http://www.usbr.gov/main/regions.html>) with questions regarding ESA compliance issues. You may also contact Mr. Josh German at 303-445-2839 or jgerman@usbr.gov, for further information.

Note, if mitigation is required to l en 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 application 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.

Environmental Questions

(1) Will the project impact the surrounding environment (i.e. 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 pipe alignment will follow the existing canal and right-of-way access road. There will be minimal, short-term, impacts associated with installing the pipe. All land surface disturbances would be confined to the proposed pipe alignment area and small staging areas within the right-of-way of the pipeline. All disturbed areas will be restored, rehabilitated and/or reseeded as part of the restoration phase of construction. 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.

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

According to the U.S. Fish and Wildlife Endangered Species report for Utah, various plants and animals were listed as endangered or threatened in Duchesne County. The proposed project will not have any negative effects on plants or animals listed, as it is unlikely that habitat exists in the canal right-of-way. There will be benefits to habitat on the Yellowstone River seen from this project, however no construction or disturbance is planned near any riparian areas. Coordination with Federal and State agencies will be done prior to execution of the project and during design.

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

All facilities will be installed in currently disturbed areas. No named streams or waterways will be disturbed with this construction. Should there be an impact to a waterway, a Stream Alteration permit and Joint 404 permit would be obtained. The 2.4 mile critical water loss area that will be the focus of this project is several miles away from the Yellowstone River or any other natural stream channels.

(4) When was the water delivery system constructed?

The YFC diverts water from the Yellowstone River at the Yellowstone Feeder Canal Diversion Structure which were both constructed during the years of 1938-1940 by the Civilian Conservation Corps. Since that time, it has been an active canal, with annual maintenance activities, including some segments with concrete lining and disturbance from cleaning operations.

(5) Will the 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.

The open ditches and canal will be replaced with a pressurized pipe. There are no diversion structures or headgates in the area being piped. No other extensive alteration or modifications are anticipated.

(6) Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the Nation 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.

It is not anticipated that any items eligible for listening on the National Register of Historic Places will be affected by the project.

(7) *Are there any know archeological sites in the proposed project area?*

There are no known sites in the area.

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

The project will not affect low income or minority populations.

(9) Will the 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, with an existing right-of-way for the canal crossing the Ute Tribal lands. The critical section is in areas without any other access besides the canal access road, which will be improved with the project. The area proposed for construction is in a rocky hillside with little grazing activity and will not adversely affect grazing and wildlife operations, and will increase hillside stability and safety.

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

The project will not contribute to the spread of noxious weeds. Disturbed areas will be reseeded with native species. Best Management Practices for equipment cleaning and dirt and seed removal will be implemented and required in the project specifications.

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 in the 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 Mr. Josh German at 303-445-2839 or jgerman@usbr.gov.

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 Section III.H Reclamation may also require additional 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.

Tribal access permits will be required for contractors working on project. MLWUA maintains a good relationship with the tribe and is current in all permits, as well as a right-of-way document for the canal. No major problems are anticipated with acquiring permits or approvals from tribe, state and federal agencies. All environmental compliance permits will be obtained in accordance to NEPA requirements. It is not anticipated that any stream alteration permits or 404 permits will be required for this segment of the canal.

OFFICIAL RESOLUTION

Include an official resolution adopted by the applicant's board of directors or governing body, or for state government entities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of Water SMART Grant financial assistance, verifying:

- *The identity of the official with legal authority to enter into 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 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.*

Official resolution will be signed in the coming February 11th MLWUA Board meeting, a blank copy is submitted on the following page for reference. A fully executed official resolution will be submitted within 30 days from the application deadline.

OFFICIAL RESOLUTION
OF THE
MOON LAKE WATER USERS ASSOCIATION

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 Moon Lake Water Users Association (MLWUA) has need for funding to complete an irrigation project that will upgrade a conveyance system so that water can be conserved and efficiently delivered to the water users.

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

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

2. The MLWUA is capable of providing the amount of funding as specified in the funding plan;

3. If selected for a WaterSMART Grant, the applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement; and

4. The Company Official signing this document has the legal authority to enter into this agreement.

DATED: January 23, 2015

SIGNED: _____

NAME: Shawn McConkie

TITLE: President, MLWUA

ATTEST:

_____

FUNDING PLAN AND LETTERS OF COMMITMENT

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

Letter 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:

(1) The amount of funding commitment
(2) The date the funds will be available to the applicant
(3) Any time constraints on the availability of funds
(4) 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 time line 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 a WaterSMART Grants project 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.

Additional funding will be acquired from the Utah State Board of Water Resources. The application has been submitted and is on file pending an award of a grant to supplement the total project costs. A letter from the Board of Water Resources is shown in Appendix B, which states that the board has received and is reviewing the application.

Funding Plan

The funding plan must include all project costs, as follows :
(1) How you will make your contribution to the cost share requirement, such as monetary and/or inkind contributions and source funds contributed by the applicant (e.g. reserve account, tax revenue, and/or assessments).

The total project cost $1,122,000. MLWUA will apply for a loan from the Utah Board of Water Resources for $522,000. In addition MLWUA will contribute $300,000 of its own funds to the project. The loan will be paid back with assessments to the water users. If the $300,000 grant requested by this application is not approved, it is unlikely that this project will be implemented. The loan money should be available by the start of the project.

MLWUA cannot afford to borrow all the money for the project. If a grant is awarded, MLWUA will finalize the loan from the Division of Water Resources.

(2) Describe any in-kind costs incurred before the anticipated project start date that you seek to include as project costs. Include:

(a) What project expenses have been incurred?

Engineering costs associated with preparation of financial assistance applications.

(b) How they benefitted the project?

It allowed MLWUA to explore funding options and plan for the implementation of the project.

(c) The amount of the expense?

MLWUA signed a contract for $27,000 with Jones & DeMille Engineering to complete the funding applications and to perform preliminary survey and right-of-way verification on the entire 10.6 miles canal. As of the date of this application submission only costs associated with funding application have been incurred.

(d) The date of cost incurrence?

Jones & DeMille Engineering has been assisting the MLWUA with funding applications since August 2014.

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

The total of $522,000 will be provided by the Utah Board of Water Resources. The letters of commitment are included in Appendix B.

(4) Describe any funding requested or received from other Federal partners. Note: Other sources of Federal funding may not be counted towards the applicant's 50-percent cost share unless otherwise allowed by statute.

In the fall of 2014 MLWUA submitted an application to the Regional Conservation Partnership Program (RCPP) for funding on this project. They were not awarded any funding through that program at this time. No other applications for funds have been requested from other Federal funding agencies.

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

There are no other pending funding requests.

Non-Federal and Federal Funding Sources

Please include the following chart to summarize your non-Federal and other Federal funding sources. Denote in-kind contributions with an asterisk(*). Please ensure that the total Federal funding (Reclamation and all other Federal sources) does not exceed 50 percent of the total estimated project cost.

Table 5: Funding Sources

Funding Sources	Funding Amount
Non-Federal Entitles	
1. Utah Board of Water Resources	$522,000
2. Applicant - MLWUA	$300,000
Non-Federal Subtotal	$822,000
Other Federal Entities	
1. N/A	
Other Federal Subtotal	$0
Request Reclamation Funding	$300,000
Total Non-Federal Project Funding	**$1,122,000**

BUDGET PROPOSAL

Budget Proposal

The project budget shall 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. Additionally, applicants shall include a narrative description of the items included in the project budget, including the value of 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 tables 3 and 4 or a similar format that provides this information.

See Appendix A

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 of goods, services and source 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.

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 proposed. The labor rates shoul4 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.

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.

The total cost for the proposed phase of the project is estimated to be $1,122,000 dollars. This cost includes the design and construction engineering and environmental work in addition to the construction costs for 0.75 miles of pipeline along the canal. There is are 2.4 miles of the total 10.6 miles of canal that have been identified as the most problematic sections for water loss. Of that length much of the water loss is occurring in a 0.5 to 0.75 mile section. This is the section that will be piped with this project.

The project budget also covers hydraulic analysis, surveying and right-of-way verification for the entire 10.6 miles of the canal.

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.

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.

Equipment
Itemize costs of all equipment having a value of over ~ 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 US Army Corp of Engineer's recommended equipment rates for the region are acceptable. Blue book, Federal Emergency Management Agency (FEMA), and other data bases should not be used.

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

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 contractual portion of project and will be documented as required.

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 sub recipient, consultant, or contractor is proposed and approved at 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 will be contracted to perform the design and construction engineering for this project. They have written the grant and will prepare the construction bid packages for the project. They assist Moon Lake Water Users Association during the construction process to ensure conformance with the plans and specifications. The table below includes the design engineering laborer classifications, billing rates and assumed number of hours.

Design Engineering Hours and Rates

LABOR	RATE	HOURS	AMOUNT
Senior Principal Professional Engineer	$150.00	1.5	$225.00
Principal Professional Engineer	$135.00	16	$2,160.00
Professional Engineer	$110.00	163	$17,930.00
Project/Field Engineer	$90.00	278	$25,020.00
Professional Land Surveyor III	$98.00	18	$1,764.00
Survey Technician	$65.00	43	$2,795.00
CAD III	$85.00	143	$12,155.00
1-Person GPS Survey Crew	$125.00	101	$12,625.00
Office Technician III	$65.00	53	$3,445.00

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

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 or the recipient in complying with environmental regulations applicable to a Water SMART Grant, including costs associated with any required documentation of environmental compliance, analyses, permits, or approvals. Applicable Federal environmental laws could include NEPA, ESA, NHPA, and the 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. However, the minimum amount budgeted for environmental compliance should be equal to at least 1-2 percent of the total project costs. If the amount budgeted is less than 1-2 percent of the total project costs, you must include a compelling explanation of why less than 1-2 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. 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.

Environmental costs are expected to be minimal. A cost between the range of 1%-2% was assumed.

Reporting

Recipients are required to report on the status of their project on a regular basis. Failure to comply with reporting requirements may result in the recipient being removed from consideration for funding under future funding opportunities. Include a line item for reporting costs (including final project and evaluation costs). Please see Section VI for information types and frequency of report required.

Reports will be done by the project engineer. An amount of $12,000 was budgeted.

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 what it will be used for. No profit or fee will be allowed.

Not included.

Indirect Costs

Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable OMB circular cost principles (see Section III. E., "Cost Sharing Requirement") for the recipient's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.

If the recipient 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 recommendation by a qualified certified public accountant (CPA) along with support for the rate calculation.

If you do not have a federally approved indirect cost rate agreement, or if unapproved rates are used, explain why, and include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from Interior, the National Business Center, and Indirect Cost Services, at http://WWW.aqd.nbc.gov/services/ICS.aspx.

Not included.

Total Cost

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

The estimated total project cost is $1,122,000.

Non Federal = $822,000

Federal = $300,000

Budget Form

In addition to the above-described budget information, the applicant must complete an SF-424A, Budget Information - Nonconstruction Programs, or an SF-424C, Budget Information Construction Programs.

Forms SF-424C and SF-424D are enclosed with the application for federal assistance SF-424.

Appendix A

Budget & Schedule

Moon Lake Water Users Association (MLWUA)

Yellowstone Feeder Canal Improvements

PROBABLE COST OPINION

Moon Lake Water Users

Yellowstone Feeder Canal

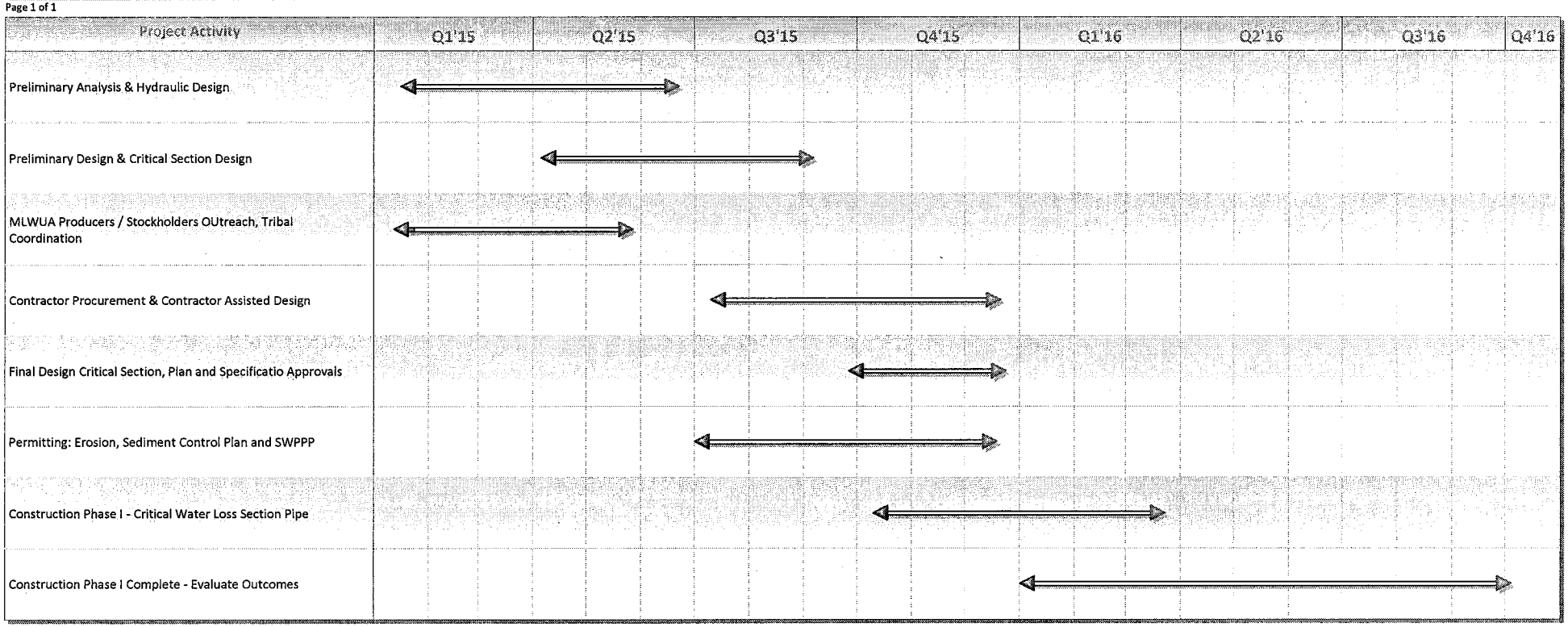
January 23, 2015
By: Michael Hawley, P.E.
Eric Major, P.E.

Jones & DeMille
Engineering, Inc.
1535 South 100 West; Richfield, UT
84701
45 South 200 West; Roosevelt, UT
84066

PRELIMINARY OPINION OF PROBABLE COST					
Item No.	**Item**	**Quantity**	**Unit**	**Unit Price**	**Cost**
1	Mobilization (4%)	1	LUMP	$32,000.00	$32,000.00
2	Temporary Inlet Structure	1	EACH	$5,000.00	$5,000.00
3	60" Fused HDPE Pipe Installed + Material	4000	LF	$190.00	$760,000.00
4	Temporary End Structure	1	EACH	$5,000.00	$5,000.00
5	Flushing Valves	2	EACH	$2,000.00	$4,000.00
6	Air Vents	3	EACH	$3,000.00	$9,000.00
7	Wash Crossings	2	EACH	$2,000.00	$4,000.00
8	Road Reconstruction	1	LUMP	$10,000.00	$10,000.00
					$0.00
				CONSTRUCTION SUBTOTAL	**$829,000.00**
	Construction Contingency - 15%	1	LUMP	$119,000.00	$119,000.00
				TOTAL PROBABLE CONSTRUCTION COST	**$948,000.00**
MISCELLANEOUS EXPENSES					
1	Funding Procurement	1	LUMP	$5,000.00	$5,000.00
2	Environmental Permitting	1	LUMP	$13,000.00	$13,000.00
3	Final Reporting Costs	1	LUMP	$12,000.00	$12,000.00
4	Preliminary Survey & ROW Invcestigation - 10.6 miles	1	LUMP	$27,000.00	$27,000.00
5	Preliminary Analysis and Hydraulic Design - 10.6 miles	1	LUMP	$20,000.00	$20,000.00
6	Design Engineering	1	LUMP	$33,000.00	$33,000.00
7	Construction Engineering, Materials Testing, Staking	1	LUMP	$64,000.00	$64,000.00
				TOTAL PROBABLE COST	**$1,122,000.00**

MLWUA Yellowstone Feeder Canal Improvements

Project Schedule



Appendix B

Letter from
Utah Division of Water Resources
&
NRCS Utah State Conservationist

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

September 30, 2014

Shawn McConkie, President
Moon Lake Water Users Association
P.O. Box 235
Roosevelt, Utah 84066

RE: Moon Lake Water Users Association, Project No. E362

Mr. McConkie:

On September 30, 2014 the Board of Water Resources received an application from the Moon Lake Water Users Association to pipe the Yellowstone Feeder Canal. Phase I of this project is estimated to cost $3,250,000. The sponsor is requesting financial assistance from the Board for approximately $1,382,000 (43%) of the total amount. The project would likely go before the board for authorization either December 2014 or February 2015. Any board action will be subject to the availability of funds, however we do not anticipate a shortage of funds.

We look forward to continue working with you in the development of this project. Please contact me if you have any questions.

Thank you,

Val J Anderson

Val J. Anderson, P.E.
Chief of Investigations

cc: Eric Major
Gawain Snow

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*

USDA

United States Department of Agriculture

October 2, 2014

Mark A. Rose, Director
Financial Assistance Programs Division
Department of Agriculture
Natural Resources Conservation Service
RCPP Application
P.O. Box 2890
Washington, D.C. 20013-2890

Dear Mr. Rose:

I am writing in support of the Moon Lake Water Users Association proposal to the Regional Conservation Partnership Program (RCPP). Their proposal is entitled "Moon Lake Water Users Association Yellowstone Feeder Canal."

This proposal is a Colorado River Critical Conservation Area locally led initiative aimed at improving irrigation water delivery system to livestock and wildlife as well as reduce salinity in the Colorado River watershed. The system water users association coordinating with federal and state contributors leads this proposal.

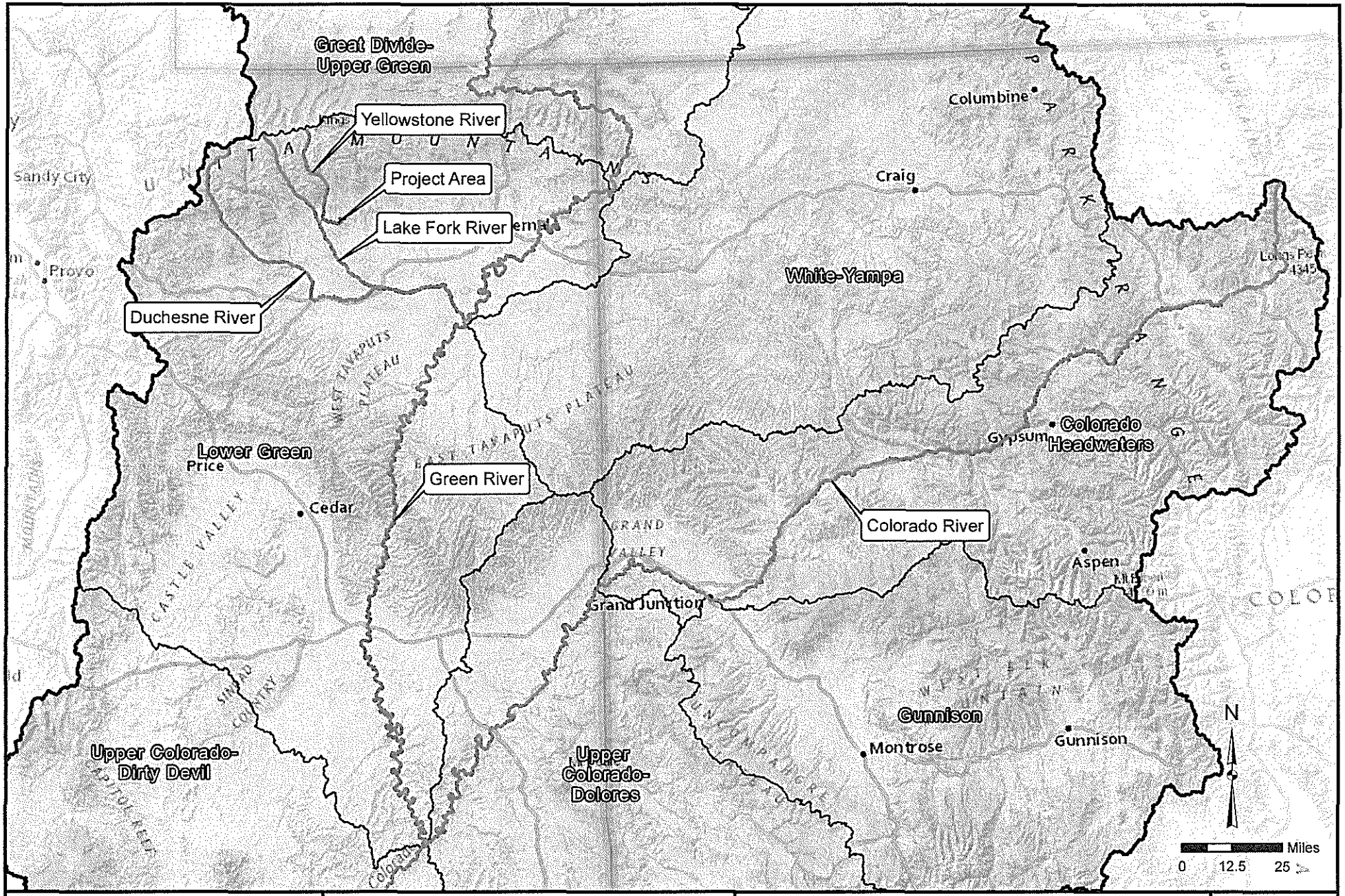
This program will increase the coordination of the contributing partners and landowners to accelerate the strategic implementation of conservation practices that reduce water system losses while providing watershed protections. This proposal aligns with Utah NRCS and State Technical Advisory Committee resource priorities.

Timothy Wilson
Acting State Conservationist

Natural Resources Conservation Service
Wallace F Bennett Federal Building
125 S State St Room 4402
Salt Lake City UT 84138-1100

Appendix C

Project Location Map and Project Map



Yellowstone Feeder Canal

Upper Colorado River Basin

HUC 4 Watershed Boundaries

Jones & DeMille Engineering

- infrastructure professionals -

800.748.5275 www.jonesanddemille.com

Moon Lake Water Users Association

DUCHESNE COUNTY

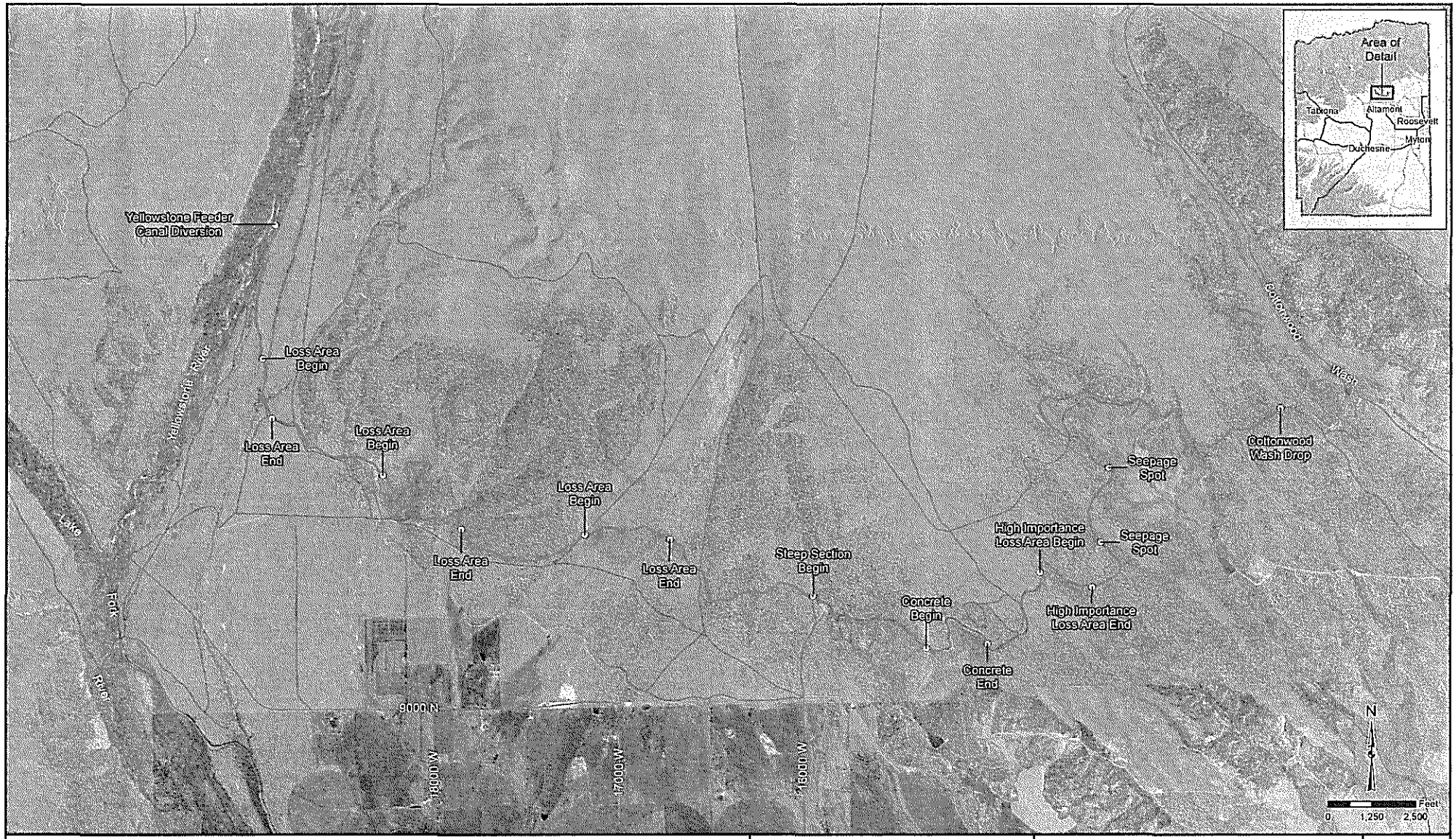
Yellowstone Feeder Canal
Project Location Map

SCALE: 1 " = 32 miles

Map Name: H:\JD\ProjDevelopment\2013\Yellowstone Feeder Canal\Design\GIS\Maps\MLWUA_Yellowstone_Feeder_Canal_Location_8x11.mxd

Project Number: 0000-000 | Drawn by: ALP 07-14 | Last Edit: 07/10/2014

1



Yellowstone Feeder Canal

2.4-mile Critical Section

Land Ownership

Private

Tribal Lands

GIS

Jones & DeMille Engineering

- infrastructure professionals -

800.748.5275 www.jonesanddemille.com

Moon Lake Water Users Association

Yellowstone Feeder Canal

Map Name: C:\Users\GRIFFIN\Desktop\Moon_Lake\GIS Maps\MLWUA_Yellowstone_Feeder_Canal.mxd

Project Number: 0020-029 | Drawn by: ALP 02.13 | Last Edit: 02.05.2013

DUCHESNE COUNTY

SCALE: 1" = 2,500'

1