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Technical Proposal and Evaluation Criteria

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).*
- *State the length of time and estimated completion date for the project.*
- *Whether or not the project is located on a Federal facility.*

Estimated Start Date:	September 1, 2015
Estimated End Date:	June 1, 2017
Applicant's Name:	Woodruff Irrigation Company
Project Title:	Woodruff Pressurized Irrigation Project

The Woodruff Irrigation Company provides irrigation water to approximately 6,200 acres of agricultural land with approximately 1,550 acres located in the upper system and 4,650 acres located in the lower system. Approximately 20 miles of open canal will be replaced with 9 miles of pressurized pipeline. The company owns and operates two reservoirs with a combined capacity of about 6,600 acre-feet of water and approximately 40 miles of open canals. The proposed project involves the design, construction, and implementation of a pressurized irrigation system in the lower system. The project will:

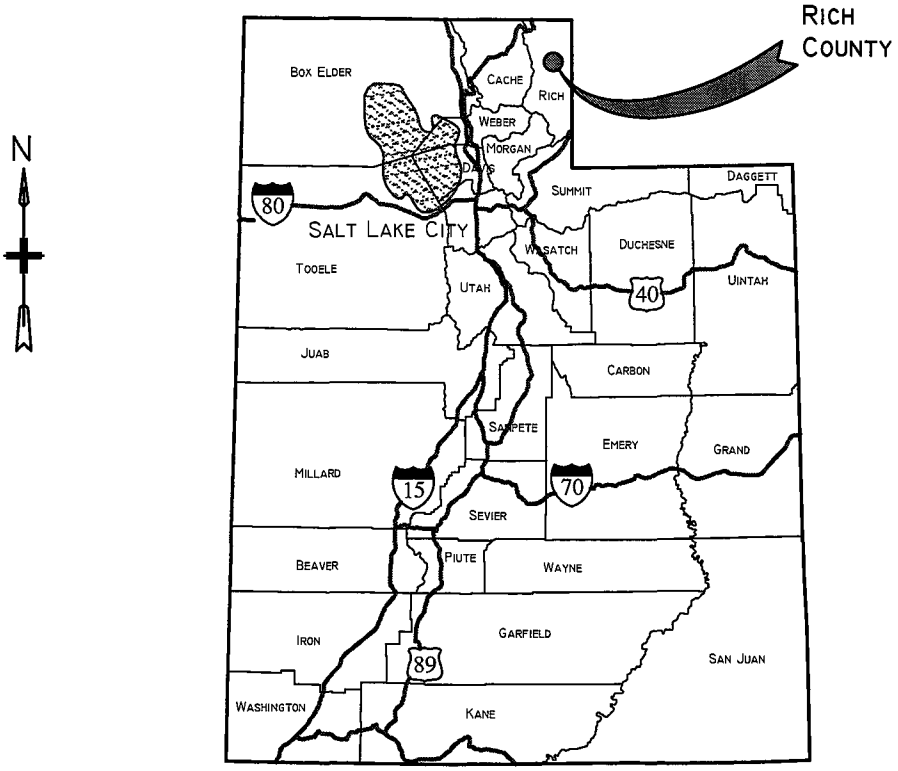
- Conserve nearly 4,500 acre-feet of water annually
- Provide shareholders with a more reliable and sustainable system
- Alleviate yearly summer droughts
- Reduce aquifer reduction from irrigation wells
- Conserve energy from pumping wells
- Improve water quality in a river that is listed as a 303(d) impaired water body

This project would also help stabilize the economics and sustainability of the ranching community by providing improved irrigation efficiency, improved crop production of both hay and livestock, and reduce stresses on the culinary water supply for the Town of Woodruff, Utah. This project is not located on a Federal facility.

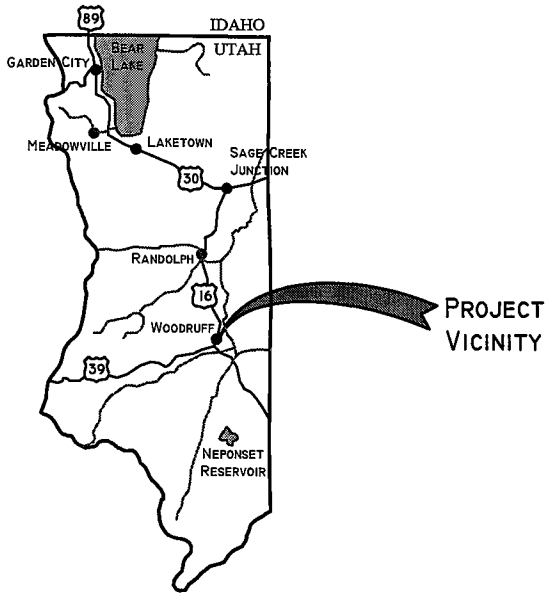
Background Data

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

The project is located around Woodruff, Rich County, Utah. See Figure 1.



State of Utah



Rich County Map

FRANSON CIVIL ENGINEERS	DATE: JANUARY 13, 2015 SCALE: NO SCALE Fig 1 - Location.dwg \\Franson\Data\CLIENT\9-North Utah Area\Woodruff Irrigation Company\Drawings LAYOUT: Fig 1-Loc Maps	WOODRUFF IRRIGATION COMPANY WOODRUFF PRESSURIZED IRRIGATION PROJECT	FIGURE 1 PROJECT LOCATION MAPS

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.

Woodruff Irrigation Company is a nonprofit irrigation company that was established in the late 1800's to provide water to agricultural users near the town of Woodruff, Utah. Water sources include Woodruff Creek, Birch Creek, and several springs throughout the valley. The company's service area covers a total of 6,200 acres, which is divided into an upper system of 1,550 acres and a lower system of 4,650 acres (see Figure 2). There are approximately 50 producers irrigating about 3,100 acres of alfalfa/oats which are mostly sprinkle-irrigated by pumping water as well as about 2,300 acres of native grasses/wild hay (grass-hay) and 800 acres of pasture, which are all flood irrigated.

According to the Utah Division of Water Rights, the region has a water duty of 3 acre-feet per acre. According to this allocation, the current water demand for the irrigation company is 18,600 acre-feet of water annually. On an average year, the irrigation company uses water from spring runoff which typically supplies the water needs during the month of May (7,200 acre-feet). Flows during spring runoff exceed 200 cfs, but the company can only divert up to 120 cfs into the existing canals. By the beginning of June, the company starts to release about 100 cfs from Woodruff Dam and another 20 cfs from Birch Creek Dam, which lasts through the beginning of July (7,200 acre-feet). Therefore, on average the total water available is 14,400 acre-feet annually. This results in the irrigation season ending in the beginning of July and an average yearly shortage of about 4,200 acre-feet of water (22%).

Reservoirs emptying by the first week in July each year causes crops and irrigated pastures to dry-out the last half of the summer. The proposed project would significantly eliminate losses in the conveyance system and improve irrigation efficiencies by converting over 1,500 acres from flood-irrigation to sprinkler systems. A more efficient system would decrease water demands and provide water in late summer that would reduce the reoccurring yearly drought. This would create a more sustainable and reliable water supply.

The irrigation company was awarded a storage water right for an additional 5,400 acre-feet from the Bear River Compact in 1982. Due to the lack of funds, the company has not been able to use this water right. Completing the proposed project would improve the opportunity for funding from other agencies for completing a larger project to rehabilitate the Woodruff Dam and raise the dam to store the additional 5,400 acre-feet of water. Storing this additional water would allow water to be held from spring run-off for late summer irrigation and would completely eliminate the reoccurring drought. A study performed by the Utah Division of Water Resources estimated that crop production would increase 100%, and late summer and fall feed was estimated to increase 100 to 130%, if the system was pressurized and the dam enlarged to store the additional water. The enlargement of the dam is not part of the proposed project under this application; however, it is an important milestone that is contingent on this project.

FIGURE 2

EXISTING SERVICE AREA MAP

DATE:	JANUARY 13, 2015
SCALE:	1" = 5000'
Plans.dwg	
\\Franson\Data\CLIENT\9-North Utah Area\Woodruff Irrigation Company\Drawings	
LAYOUT: Fig 2_Existing Service Area	

WOODRUFF IRRIGATION COMPANY

WOODRUFF PRESSURIZED IRRIGATION PROJECT

FRANSON CIVIL ENGINEERS

The irrigation company's water rights are shown in the following table.

Table 1: Water Rights

Water Right Number	Type	Flow (cfs)	Flow (ac-ft)
23-1352	DEC	1.08	
23-16	DEC	0.49	
23-19	DEC	1.47	
23-1953	DEC	55.60	
23-362	DIL	0.70	
23-3650	APPL		5,400
23-423	DEC	0.13	
23-427	DEC	0.97	
23-428	DEC	0.14	
23-429	DEC	3.04	
23-432	DEC	1.13	
23-436	DEC	1.07	
23-437	DEC	2.21	
23-540	DEC	2.69	
23-542	DEC	0.71	
23-543	DEC	0.34	
23-546	DEC	0.67	
23-554	DEC	0.29	
23-565	DIL	0.76	
23-569	DEC	0.84	
23-570	DEC	0.22	
23-571	DEC	2.79	
23-573	DEC	1.30	
23-577	DEC	0.35	
23-583	DEC	2.15	
23-733	DIL	60.00	
TOTAL		**140.06**	**5,400**

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). 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 company owns and operates two reservoirs; Woodruff Creek Reservoir with an existing capacity of 4,350 acre-feet and Birch Creek Reservoir with a capacity of 2,250 acre-feet. Water from these reservoirs is released to Woodruff Creek and Birch Creek, respectively. Water is then diverted into several irrigation canals and delivered to approximately 110 shareholders. The irrigation company owns and maintains 23 canals/laterals, all which are unlined earth. The canals are highly encroached with vegetation. Parshall flumes are located at the beginning of most canals. The irrigation company maintains good records of water diverted into each of the canals. Board members from the irrigation company estimate that 40 to 50% of the water is lost to seepage and evaporation.

The canals and laterals are composed of approximately 30 miles (see Figure 3). Approximately two-thirds of the land is currently flood-irrigated. A study performed in 1986 by the Rich Soil Conservation District indicated that flood irrigation systems in Rich County are 11% efficient. A letter concerning this study is available for review upon request. Flood irrigation creates return-flows that are high in nitrogen and phosphorus. These return flows end at the Bear River, which Woodruff Creek is a tributary. The Bear River is a 303(d)-listed river, indicating that it is an impaired body of water for water quality standards, particularly total phosphorus and dissolved oxygen.

Renewable Energy or Energy Efficiency

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

The shareholders using sprinklers to irrigate are currently pumping water from the canals. Some shareholders also pump from private wells.

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).

There have been no direct working relationships between Woodruff Irrigation Company and Reclamation.

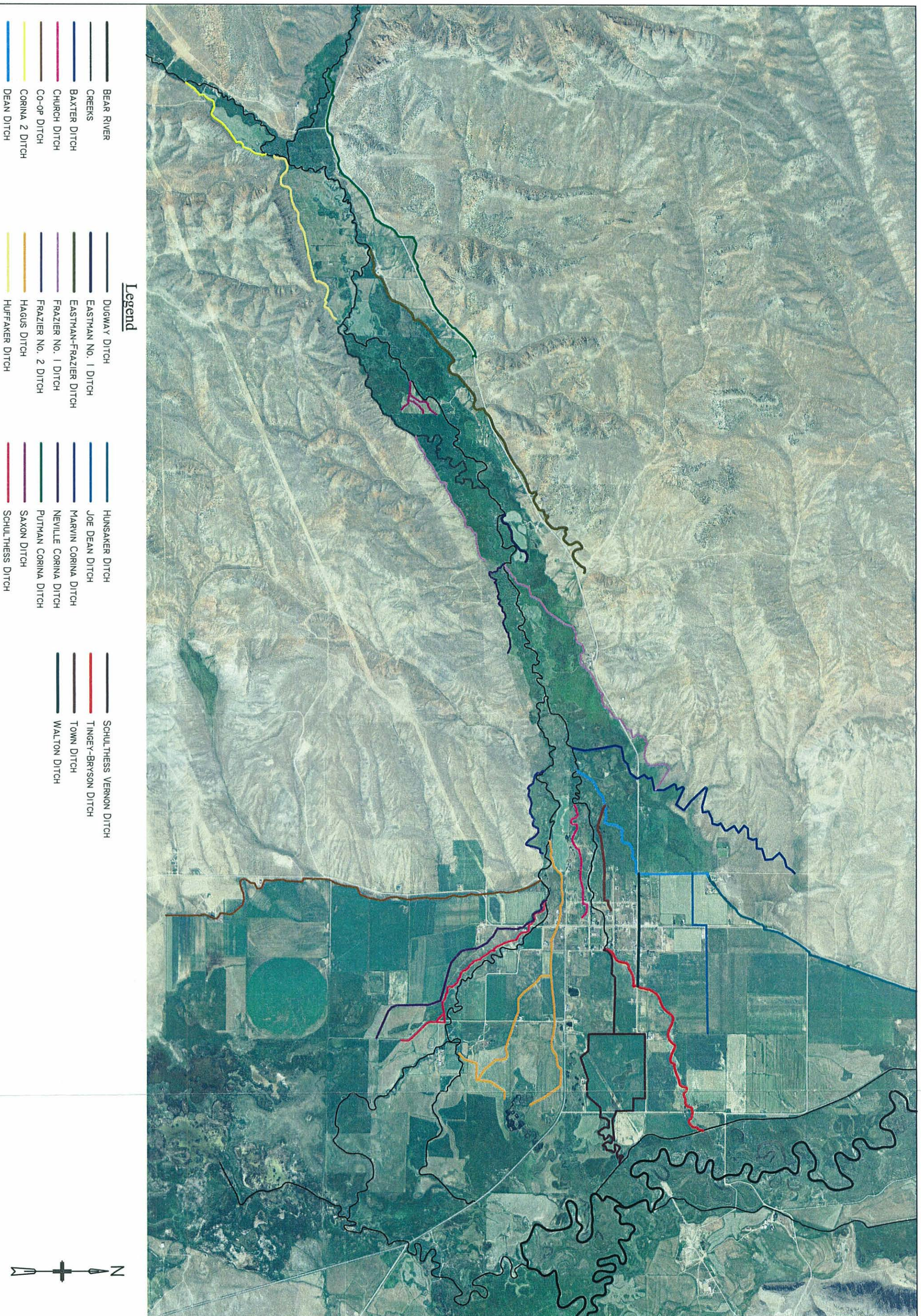


FIGURE 3

EXISTING CANAL SYSTEM MAP

DATE:	JANUARY 13, 2015
SCALE:	1" = 3000'
Plans.dwg	
\\Franson\Data\CLIENT\9-North Utah Area\Woodruff Irrigation Company\Drawings	
LAYOUT: Fig 3_Existing Canals	

WOODRUFF IRRIGATION COMPANY

WOODRUFF PRESSURIZED IRRIGATION PROJECT

FRANSON CIVIL ENGINEERS

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.

If a grant from Reclamation is awarded, the irrigation company will secure a loan from the Utah Division of Water Resources to complete the project. The application has been submitted and is on the agenda for the March 18 meeting for approval. Once funding is secured, an engineering design report will be prepared to finalize the best alignment options, pipe sizes, and complete all the required permits. Then, an environmental and cultural review will be done by a registered environmental firm. Once environmental clearance is obtained, the engineering design and construction documents will be prepared. It is anticipated that all permitting, environmental clearances, and engineering design would be completed by the summer of 2016 and that construction of proposed facilities would occur fall/winter of 2016-2017 with an estimated completion by June 2017.

A preliminary analysis has been completed to evaluate potential pipe alignments and sizing. The proposed project will replace the existing canals in the lower system with pressurized pipelines as shown in Figure 4. Approximately 20 miles of canals will be replaced with 9 miles of pipe. It is anticipated that nearly 4,500 acre-feet of water will be conserved annually. All materials used will be from well-known manufacturers and meet general NRCS irrigation standards.

PVC pipe will be used for enclosing the canals, which is commonly used for irrigation systems. The pipe sizes will vary from 12-inch to 48-inch in diameter. The system will have 4 major pipelines that have a combined capacity of 60 cfs.

The pipelines will be designed not to exceed the industry accepted standard of a water velocity of 5 feet per second. A hydraulic model will be prepared based on the determined design flows to evaluate potential surges and to verify sizing and pressure requirements. Air-valves, control valves, drains, fittings, and relief valves will be installed at appropriate locations to ensure the proper operation of the pipeline.

Installing a pipeline to pressurize the lower system will eliminate the need to pump water from canals, thus conserving energy. In addition, it will provide an incentive for those currently flood-irrigating to convert to more efficient methods of irrigation.

The complete design of the irrigation system will be done by a professional engineering firm to ensure that the system meets minimum standards of quality. All design drawings will be stamped by a professional engineer and be available to Reclamation for review if requested.

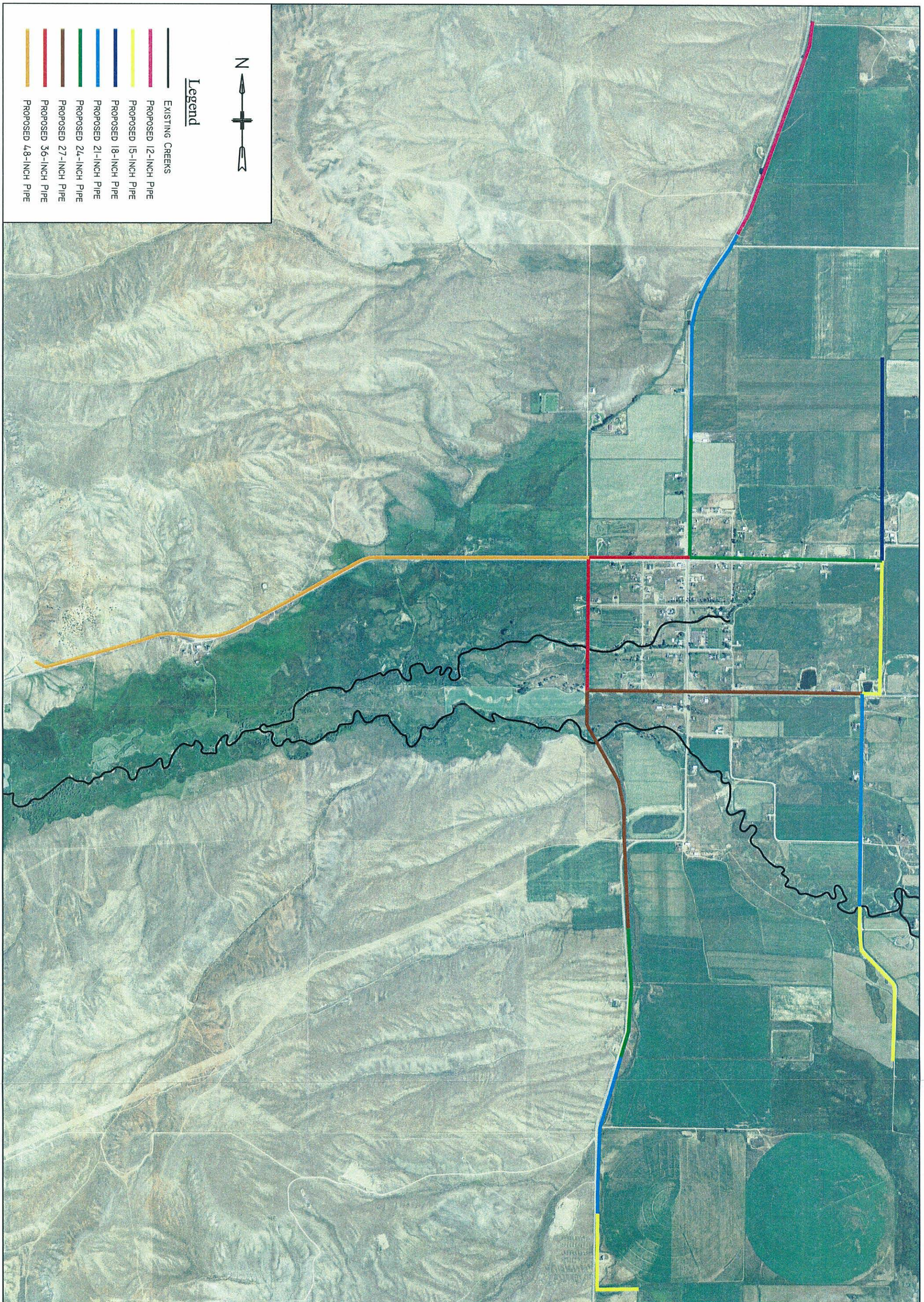


FIGURE 4

PROPOSED SYSTEM MAP

DATE:	JANUARY 13, 2015
SCALE:	1" = 1600'

Plans.dwg

\\Franson\Data\CLIENT\9-North Utah Area\Woodruff Irrigation Company\Drawings

LAYOUT: Fig 4_Proposed

WOODRUFF IRRIGATION COMPANY

WOODRUFF PRESSURIZED IRRIGATION PROJECT

FRANSON CIVIL ENGINEERS

Evaluation Criteria

Evaluation Criterion 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 to projects that are expected to result in significant water savings.

Subcriterion No. A.1: Quantifiable Water Savings

Up to 24 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 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, 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 (e.g., 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.

The irrigation company has an average of 14,400 acre-feet of water annually, with approximately 10,800 acre-feet being used in the lower system to irrigate 4,650 acres. Of the 4,650 acres, about one-third (1,550 acres) is flood-irrigated. The conveyance system of unlined canals is estimated to lose approximately 33% of the conveyed water to seepage into the ground. This was estimated by flow measurements performed by the river commissioner. This was verified through many measurements throughout the past several years. We believe this to be a conservative estimate as the lower system canals are much flatter and carry less water in general. Board members believe that losses in the lower system canals could be as high 50% based on many years of visual observation.

A study performed in 1986 by the Rich Soil Conservation District indicated that flood irrigation systems in Rich County are 11% efficient. We estimated that a sprinkler-irrigation system is about 65% efficient (typical value). This will improve on-farm irrigation efficiencies by 54%.

The total water conserved is estimated to be 4,460 acre-feet annually as shown in Table 2. This equates to a total system loss of about 41%. In other words, over one-third of the water is lost due to low system efficiencies and seepage losses.

Table 2: Water Conserved

Description	Amount
Total water available for use in lower system =	10,800 acre-feet
Estimated losses in conveyance (33%) = *(from river commissioner measurements)*	3,600 acre-feet
Total water available for irrigation = *(available – 33% losses)*	7,200 acre-feet
Total amount of water used by sprinkler systems = *(two-thirds of water available)*	4,800 acre-feet
Total amount of water used for flood irrigation = *(one-third of water available)*	1,600 acre-feet
On-farm irrigation efficiency improvements (54%) = *(1,600 acre-feet * 54%)*	860 acre-feet
Total amount of water conserved = ***(Conveyance loss + irrigation efficiency improvement)***	**4,460 acre-feet**

During the month of May, the irrigation company diverts 90 cfs into the irrigation canals in the lower system. This equals to about 5,400 acre-feet of water during the month of May. By the beginning of June, spring runoff flows reduce and the irrigation company calls for water from both reservoirs, using another 5,400 acre-feet in the lower system during the month of June. The reservoir typically empties by the first week in July, resulting in the dry-out of crops and pasture during most of the summer months.

Reducing losses in the system will reduce diversion in the lower system from 90 cfs to 60 cfs during the months of May and June. This results in an additional 30 cfs remaining in the creeks during the month of May. This equates to 1,800 acre-feet of water flowing into the Bear River System for downstream water users and for environmental benefits to the Bear River Migratory Bird Refuge. The remaining 2,660 acre-feet of conserved water will be used by the irrigation company to reduce the reoccurring summer drought. The improved efficiencies and conserved water is estimated to extend the irrigation season by 15 to 20 days.

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.*

As stated above, the conveyance system of unlined canals is estimated to lose approximately one-third (33%) of the conveyed water to seepage into the ground. This was estimated by flow measurements record by the river commissioner. This was verified through many measurements throughout the past several years. We believe this to be a conservative estimate as the lower system canals are much flatter and carry less water, and are more encroached with vegetation in general. Board members all agree that losses in the lower ditch could be as high as 50%. The total water savings from canal seepage is 3,600 acre-feet with an additional 860 acre-feet by converting from low efficiency flood irrigation to a pressurized system.

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.*

As stated above, inflow/outflow tests and flow records from the river commissioner were used to estimate losses.

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?)*

Seepage losses will be completely eliminated. The canals will be replaced with PVC pipe. With good construction practices, the losses will be near zero.

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?*

Approximately 20 miles of canal will be replaced with 9 miles of pipelines for a total water conservation of nearly 4,500 acre-feet annually. Therefore, about 500 acre-feet will be conserved per mile of pipe installed.

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

The pipeline will be designed with a maximum capacity of 60 cfs. Historical records show an irrigation diversion of 90 cfs in the lower system from the beginning of May to the first week in July. Flow records into the proposed pipeline will verify the 60 cfs diversion.

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

As stated in the Technical Description section, PVC pipe will be used for enclosing the canals, which is commonly used for irrigation systems. The pipe sizes will vary from 12-inch to 48-inch in diameter. All PVC pipe shall comply with industry accepted P.I.P. irrigation pipe standards in accordance with the Natural Resources of Conservation Service 430-DD specifications and dimensionally comply with Annex A1 of ASTM D2241. The minimum pressure rating of the pipe will be DR 51, which is rated for 80 psi. Larger pressure ratings may be required in some locations. The PVC compound used in the extrusion of the pipe shall meet or exceed the requirements of ASTM D1784 cell class 12454. The joints will be a bell and spigot. Joint Design shall be tested to the requirements of ASTM D3139 with rubber gaskets that conform to ASTM F477.

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:

$$\frac{\text{Estimated Amount of Water Conserved}}{\text{Average Annual Water Supply}} = \frac{4{,}460 \text{ af}}{10{,}800 \text{ af}} = 41\%$$

Evaluation Criterion 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 Subcriteria No. B.1 and B.2.

Subcriterion No. B.1: 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 (e.g., hydroelectric units, solar-electric facilities, wind energy systems, or facilities that otherwise enable the use of renewable energy). Projects such as small-*

scale solar resulting in minimal energy savings or production will be considered under Subcriterion No. B.2 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.

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

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

- *Expected environmental benefits of the renewable energy system*
- *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*
- *Expected water needs of the renewable energy system*

This project does not include construction or installation of renewable energy components. However, this project is the first phase in a much larger project that would include improvements to the reservoirs and a transmission line. As such, this project enables future hydropower development with a theoretical capacity of 1,100 kW. This calculation is based on head difference between the Woodruff Creek Reservoir and the splitter structure of 300 feet, a flow of 60 cfs, and an efficiency of 70%. If the power plant would operate 4 months per year, it would potentially generate 3,200,000 kilowatt-hours annually.

Subcriterion No. B.2: Increasing Energy Efficiency in Water Management

If the 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).

- *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.*

The total area served by the proposed project is 4,650 acres (lower system). Approximately two-thirds, 3,100 acres, are currently sprinkler-irrigated by pumping water out of the various canals. It is estimated that a total of 4,800 acre-feet is pumped to pressurize the current system. A report prepared by the Utah Division of Water Resources indicated if pumping was eliminated that an energy savings would be $110,000 to $120,000 annually. This equals to approximately $24 per acre-foot, which is typical for other users in the region.

Table 3: Current Energy Uses (Estimated)

Description	Amount
Total Water Pumped =	5,400 acre-feet
Irrigated Acreage =	3,100 acres
Estimated Cost per Acre-Foot =	$24.00
Total Annual Energy Cost =	**$115,000**

It is estimated that the proposed project will eliminated the need for pumping water. This will be an annual savings of about $115,000 for all shareholders currently pumping. Assuming a cost per kilowatt-hour of $0.06, the total energy conserved is 1,900,000 kilowatt-hours per year.

In addition to shareholders pumping water from canals, there are six irrigation wells in the system drawing on subsurface water. These wells are privately owned and the power usage is unknown. Therefore, it is not included in the calculations shown above. But it is anticipated that demands from these wells will also decrease.

- *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?*

As stated above, energy requirements will be eliminated. The difference in elevation from the pipeline inlet to the water users will allow the pipe to pressurize by gravity and eliminate the need for pumping.

- *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.*

The energy savings is based on the originate point of diversion.

- *Does the calculation include the energy required to treat the water?*

Water will be used for irrigation. It is anticipated that a trash rack will be installed at the pipeline inlet. If power is needed to operate the trash rack, the energy requirements are anticipated to be minimal. No other treatment will be required.

- *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).*

Piping of canals will result in reduced maintenance and operation. The water master would not need to drive the canal alignment as frequently for safety and other inspection needs. In addition, there would not be a need for burning the canals to eliminate encroaching vegetation. All these activities will reduce carbon emissions.

Evaluation Criterion 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 endangered 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?*

Woodruff Creek is a tributary of the Bear River, which terminates at the Great Salt Lake. Prior to entering the Great Salt Lake, diversions are made to the Bear River Migratory Bird Refuge operated by the U.S. Fish and Wildlife Service. Historically, the refuge has had some difficulty in diverting the necessary water supply to maintain a healthy ecosystem, sometimes resulting in outbreaks and disease. By increasing water inflows in the Bear River, additional supplies would be available to those species that rely on the bird refuge. There are 2 species of birds that are listed on the federally endangered species act, which are the Yellow-billed Cuckoo (threatened), and the Greater sage-grouse (candidate).

- *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 increased water supply would directly lead to an improved habitat for the candidate species and reduce likelihood of disease at the bird refuge.

For projects that will directly accelerate the recovery of threatened or endangered species or address designated critical habitats, please include the following elements:

1) *How is the species adversely affected by a Reclamation project?*
2) *Is the species subject to a recovery plan or conservation plan under the Endangered Species Act?*
3) *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 Artic Peregrine Falcon is listed as a "Recovery" species. Although a specific recovery plan is not listed, the description of the benefits to the Bear River Migratory Bird Refuge will aid in the recovery of the Artic Peregrine Falcon as well.

Evaluation Criterion D: Water Marketing (12 points)

Up to 12 points may be awarded for projects that propose developing 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:

- *Estimated amount of water to be marketed.*
- *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.*

The town of Woodruff has two culinary wells, much of which is used for watering lawns and gardens. About half of the city residents have water shares in the irrigation company and use it to irrigate their lawns and gardens. The other half of residents use culinary water to irrigate their lawns. The town estimates that nearly 70% of the total water used from the culinary wells is for irrigation purposes during the summer. By pressurizing the water system, the irrigation company can provide water to the other half of the town that is currently using culinary water. The town has a population of about 180 with a total of 73 water connections. Water use in the town varies between 40 and 70 acre-feet per year with most of the water being used for outdoor purposes.

By pressurizing the irrigation system, a new water market will be created with the possibility of leasing water to Woodruff Town. The lease water would serve the 35 connections that currently do not have shares in the irrigation company. Eliminating the need of outdoor usage from the culinary system will significantly help the overstressed water system in the town. Discussion has begun with the town, but no formal agreements have been signed. The town would be responsible for its own distribution system.

State laws prohibit the sale of water rights that are designated for a specific plot of land, unless the land itself is sold and taken out of production. However, during the last 100 years, some development has occurred on land that used to be irrigated. Therefore, the company would be able to lease the 35 shares to the town. The company would coordinate with the Utah Division of Water Rights to ensure no laws or regulations are broken by leasing this small amount of water.

Evaluation Criterion E: Other Contributions to Water Supply Sustainability

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 1) how the project relates to a completed WaterSMART Basin Study; 2) how the project could expedite future on-farm improvements; 3) how the project will build resiliency to drought; and/or 4) 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.

Subcriterion E.1: Addressing Adaptation Strategies in a WaterSMART Basin Study

Up to 14 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 (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:

- *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 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: http://www.usbr.gov/WaterSMART/bsp/

This project does not fall within one of the areas that have a completed WaterSMART Basin Study. However, the Bear River Basin is an important river basin that is included in both the Utah and Idaho State Plans.

Subcriterion E.2: Expediting Future On-Farm Irrigation Improvements

Up to 14 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.

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 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 or newly awarded NRCS funded project.*

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 2015 to the extent such assistance is available. 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.

This project will improve water sustainability for 4,650 acres of agricultural land. Of the 4,650 acres, about one-third (1,550 acres) is flood-irrigated. A study performed in 1986 by the Rich Soil Conservation District indicated that flood irrigation systems in Rich County are 11% efficient. We estimate that a sprinkler-irrigation system is about 65% efficient. This will improve on-farm irrigation efficiencies by 54%. The estimated water available to irrigate these fields is 1,600 acre-feet annually (refer to Evaluation Criteria A). As such, the total water conserved due to on-farm efficiency improvements is 860 acre-feet per year.

The proposed project will expedite the replacement of flood irrigation with sprinkler irrigation by providing all shareholders in the project area with pressurized water. The irrigation company board members are very familiar with the NRCS funding and technical assistance options and are committed to assist shareholders in using this resource as needed. Based on shareholders meetings, it is anticipated that all flood irrigation land will convert to sprinkler systems within 5 years after the completion of the proposed project.

Subcriterion E.3: Building Drought Resiliency

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. in the 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. in the FOA for a detailed description of the types of projects eligible for funding.*

The reservoirs empty by the first week in July, which causes crops and irrigated pastures to dry-out during most of the summer months. The existing water rights and regional weather allows for a much longer irrigation season; however, due to water losses and inefficient irrigation, the irrigation season is only two months long. The proposed project would conserve a significant amount of water, which would alleviate the annual reoccurring drought. The conserved water is expected to extend the irrigation season by about 15 to 20 days, which would make a significant difference to the shareholders.

A substantial aspect of this project is that it will significantly increase funding options for a larger project that can completely eliminate the yearly summer drought. The Utah Division of Water Resources has indicated to board members that pressurizing their system would improve their chances of receiving a grant/loan to rehabilitate Woodruff Dam to increase its storage capacity. Storing this additional water would allow water to be held from spring run-off for summer and early fall irrigation. The additional water supply would nearly double the irrigation period and create a more sustainable and reliable water supply. Results will be easily measured by increased crops and irrigated pastures for late summer and fall feed for livestock, resulting in measurable sell weights for livestock. A study performed by the Utah Division of Water Resources estimated that crop production would increase 100% and late summer and fall feed was estimated to increase 100 to 130%.

The enlargement of the dam is not part of the proposed project under this application; however, completing the proposed project is a critical milestone that would end the yearly reoccurring drought.

Subcriterion E.4: Other Water Supply Sustainability Benefits

Up to 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? For example:*
    - *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?*

As explained above, on average years, the irrigation company is out of water by the beginning of July. In dry years, the irrigation company typically needs to start calling for water releases from the reservoirs earlier than usual, resulting in an even shorter irrigation season. Unfortunately, the opposite is not true in wet years. In the area, nearly all precipitation is in the form of snow. During snowmelt season (March-April) the reservoirs fill. Due to the small size of the reservoirs, they typically fill every year; however, during wet years, the "extra" water spills and goes unused by the irrigation company. Because of the improved system efficiency, the proposed project would allow for smaller releases from the reservoirs to meet the irrigation demands. This would extend the irrigation season and reduce the negative impact caused by the lack of storage. In addition, the Bear River Basin covers three states: Utah, Wyoming, and Idaho. Within these three states, there are countless irrigation companies, municipalities, and individual users all vying for the same water. Any water conservation measures will improve relations within the basin.

- *Will the project make additional water available for Indian tribes?*

The project will not make water available for Indian tribes.

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

Yes, this project will make more water available for a rural community.

- *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?*

The project will require collaboration from several entities including Woodruff Irrigation Company, Woodruff Town, Reclamation, Utah Division of Water Resources, and NRCS. The irrigation company shareholders have voted to implement the project. With Utah being the second driest state in the country, water conservation projects are widely supported throughout the state. Water conservation and development is a top priority for the State of Utah.

- *Will the project increase awareness of water and/or energy conservation and efficiency efforts?*
    - *Will the project serve as an example of water and/or energy conservation and efficiency within a community?*
    - *Will the project increase the capability of future water conservation or energy efficiency efforts for use by others?*
    - *Does the project integrate water and energy components?*

The proposed project will integrate water conservation and eliminate a large amount of electrical energy consumption. The project will conserve a large amount of water that will set an example of water and energy conservation to the local and surrounding communities. As Woodruff Irrigation Company has followed the example of other companies that have improved their system to conserve water, other entities will likewise follow the example of Woodruff Irrigation Company.

Evaluation Criterion F: Implementation and Results (10 Points)

*Up to **10 points** may be awarded for the following:*

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, System Optimization Review (SOR), and/or district or geographic area drought contingency plans in place? Does the project relate/have a nexus to an adaptation strategy developed as part of a WaterSMART Basin Study? 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, Basin Study,*

drought contingency plan, or other planning efforts done to determine the priority of this project in relation to other potential projects.

The Woodruff Irrigation Company does not have a Water Conservation Plan. However, this project is in compliance with the Utah State Water Plan. A Water Conservation Plan will be prepared by the irrigation company as it is required for obtaining funding from the State of Utah.

A preliminary design has been done by Franson Civil Engineers to be used in the funding acquisition portion of the project. Preliminary pipe size, pipe lengths, alignments, cost estimates, water savings, and financial feasibility were all prepared.

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 for the Bear River Basin 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. The specific goals include water conservation, water use efficiency, and protection of state river systems.

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).

The project is ready to move forward if the grant is awarded. The remaining funding will be secured from the Utah Division of Water Resources. A loan application is currently on file with the Utah Division of Water Resources and is pending approval on the Board Meeting scheduled for March 18. The application is pending the award of the grant application. Once funding is secured, an engineering design report and the design work will begin immediately thereafter.

Please explain any permits that will be required, along with the process for obtaining such permits. Identify and describe any engineering or design work performed specifically in support of the proposed project.

Environmental clearance will be completed before construction begins. The environmental clearance is not expected to have any major issues. The irrigation company will work with Reclamation to comply with NEPA requirements. Coordination with Rich County and the Utah Department of Transportation will be required for some road crossings and locations where the

pipe is installed parallel to roadways. No issues are anticipated with obtaining the required permits.

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, marketed, or better managed, or energy saved). For more information calculating performance measure, see Section VIII.A.1 "FY2015 WaterSMART Water and Energy Efficiency Grants: Performance Measures."

Note: All WaterSMART 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. 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.

Water meters will be installed to measure the amount of water diverted into the pipelines. Meter readings will clearly show the amount of water conserved when compared to the historical usages. The water conserved will be reported in the final report submitted to Reclamation.

To quantify the energy savings by improving efficiency in water management is more difficult. The irrigation company is planning to gather current pumping costs for the 2015 and 2016 irrigation season. The project will eliminate the need for the lower system users to pump water. Energy bills from the 2015 and 2016 can be used to evaluate the total amount of energy conserved.

The environmental benefits will be very apparent as the proposed water system will divert less water during the month of May. The additional water from snow-melt will stay in the creek and flow downstream to critical habitat areas.

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.

The 10,800 acre-feet of water used in the lower system will be better managed through the pressurized irrigation system. In addition, about 4,500 acre-feet of water will be conserved annually. Some of the water conserved will be used by the irrigation company to reduce the annual reoccurring drought during the summer months. It is anticipated that all pipe used will be PVC, which has a life expectancy of 50 years. Corrosion resistant fittings will be used to increase life expectancy of all fittings and appurtenances.

The project will conserve about 1,900,000 kilowatt-hours of energy by eliminating the need to pump water to irrigate 3,100 acres.

The total project cost is $4,200,000.

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.

$$\frac{\text{Non} - \text{Federal Funding}}{\text{Total Project Cost}} = \frac{\$3{,}200{,}000}{\$4{,}200{,}000} = 76\%$$

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?*
2. *Does the applicant receive Reclamation project water?*
3. *Is the project on Reclamation project lands or involving Reclamation facilities?*
4. *Is the project in the same basin as a Reclamation project or activity?*
5. *Will the proposed work contribute water to a basin where a Reclamation project is located?*
6. *Will the project help Reclamation meet trust responsibilities to Tribes?*

The project has no direct ties to a Reclamation project. However, there are numerous Reclamation projects within the county and the Bear River Basin, including but not limited to the Hyrum Project, Newton Project, Middle Ditch Water Conservation Project and Renewable Energy Project, West Lewiston Pressurized Irrigation Project, Upper High Creek Canal Enclosure and Hydropower Development Project, Preston Bench Project, and Preston-Whitney Interconnect Project.

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, 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.

Environmental 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 and cultural resources 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.

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 existing road corridors or previously disturbed areas. There will be minimal, short-term impacts associated with installing the pipelines. All land surface disturbances would be confined to the proposed pipe alignment area and small staging areas. Contract documents for construction work will outline the responsibility of the contractor relative to dust control, air and water pollution during construction activities. Minimal environmental disturbances are anticipated and all work will be performed in previously disturbed areas. It is anticipated that the NEPA environmental compliance for this project will be at the level of a categorical exclusion.

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

Project participants are not aware of any plants or animals listed under the Federal threatened or endangered species, or designated critical habitat that would be impacted by the project. Before construction activities begin, the irrigation company will work with the Bureau of Reclamation to comply with NEPA requirements and identify any species or critical habitat areas. The project is not anticipated to have any impact to such areas or species.

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.*

Project participants are not aware of any wetlands or other surface water inside the project boundaries that fall under Clean Water Act (CWA) jurisdiction as "water of the United States." This will be verified by the environmental engineers when complying with the NEPA requirements.

4. *When was the water delivery system constructed?*

It is unknown exactly when the canals were constructed, but the associated water rights have a priority date in 1884. The facilities were likely constructed shortly thereafter.

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 canals will be replaced with pipelines in a pressurized system. As such, all canals and their structures will be abandoned.

6. *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.*
7. *Are there any known archeological sites in the proposed project area?*

It is unknown if any structures are listed or eligible for listing on the National Register of Historic Places database or archeological sites. A complete cultural resources report will be prepared prior to any construction activities in the area, which will include consultation with Utah State of Historic Preservation Office (SHPO), a complete Class I literature search to identify any archaeological and historic architectural resources within the project area, and a Class III pedestrian inventory of the pipeline corridor, laterals, and staging areas. It is not anticipated that the project will impact any archeological sites or historic structures.

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

The project will not have a disproportionately high and adverse effect on 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 tribal lands.

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.

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.

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 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.H1. 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.

An environmental clearance will be required before construction begins. The environmental clearance is not expected to have any major issues. Permits will be required from the State of Utah Department of Transportation and Rich County. No other permits are anticipated.

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 WaterSMART 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*

An official resolution meeting 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 signed Official Resolution is shown in Appendix A.

Project Budget

The project budget includes: (1) Funding Plan and Letters of Commitment, (2) Budget Proposal, (3) Budget Narrative and (4) Budget Form.

Funding Plan and Letters of Commitment

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

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

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 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 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.

A loan will be acquired from the Utah Division of Water Resources. The application has been submitted and is on file pending an award of a grant to supplement the total project costs. The loan will only be finalized if funding from Reclamation is granted. A letter of commitment from the Utah Division of Water Resources will be submitted as soon as they are available. The Division of Water Resources Board Members will meet on March 18, 2015 to approve the loan.

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 in-kind contributions and source funds contributed by the applicant (e.g., reserve account, tax revenue, and/or assessments).*

The total project cost is $4,200,000. Woodruff Irrigation has applied for a loan from the Utah Division of Water Resources for $3,200,000. The loan will be paid back with assessments to the water users. If the $1,000,000 grant requested by this application is not approved, it is unlikely that this project will be implemented. Woodruff Irrigation Company shareholders cannot afford to borrow all the money for the project. If a grant is awarded, Woodruff Irrigation Company will finalize the loan from the Utah 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

Expenses incurred include engineering fees for a preliminary design of the proposed system, preparation of this funding application, and preparation of a loan application to the Utah Division of Water Resources.

   (b) How they benefitted the project

Engineering assistance was essential to determine the scope and cost of the proposed project. The engineering services were essential for funding procurement.

(c) The amount of the expense

The irrigation company signed a contract for $10,000 with Franson Civil Engineers for preliminary analysis and to complete the funding applications to Reclamation and the Utah Division of Water Resources.

(d) The date of cost incurrence

Cost was incurred between November 2014 and January 2015.

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

A total loan of $3,200,000 will be provided by the Utah Division of Water Resources. A letter of support for this project from the Utah Division of Water Resources is shown in Appendix D. The loan application is scheduled to be approved at the Utah Division of Water Resources Board Meeting on March 18, 2015.

4. *Describe any funding requested or received from other Federal partners. Note: other sources of Federal funding may not be counted towards your 50 percent cost share unless otherwise allowed by statute.*

No other applications for funds have been requested from any other Federal funding agency.

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.*

If funds are not secured from Reclamation or the Utah Division of Water Resources, the project will not move forward.

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 4. Summary of non-Federal and Federal funding sources

Funding Sources	Funding Amount
Non-Federal (Utah Division of Water Resources)	$3,200,000
Requested Reclamation Funding:	$1,000,000
Total Project Funding:	$4,200,000

For applicants submitting a proposal under Funding Group II, please include the following chart to summarize your Federal funding request by year.

Table 5. Funding Group II Funding Request

Funding Group II Request			
	Year 1 (FY 2015)	**Year 2 (FY 2016)**	**Year 3 (FY 2017)**
Funding Requested	$200,000	$500,000	$300,000

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 6 and 7 or a similar format that provides this information. If selected for award, successful applicants must submit detailed supporting documentation for ***all*** *budgeted costs.*

Table 6. Funding Sources

Funding Sources	Percent of Total Cost	Total Cost by Source
Recipient Funding	76%	$3,200,000
Reclamation Funding	24%	$1,000,000
Other Federal Funding	0%	$0
Totals	**100%**	**$ 4,200,000**

Table 7. Budget Proposal

Budget Item Description	Computation		Quantity Type (hours/days)	Total Cost
	$/Unit	Quantity		
Contractual/Construction [1]				
Environmental Services	See Appendix B			$ 50,000
Engineering Services	See Appendix C			$ 450,000
Construction Services	See Appendix D			$ 3,700,000
Total Project Costs				**$ 4,200,000**

[1] Contracts should be broken out into specific line items. You may attach a separate, detailed budget for each contract to adequately address all contractor budget items.

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 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.

Woodruff Irrigation Company board members will not earn a salary, wages, fringe benefits or reimbursements from funding obtained to implement this project. All contributions by Woodruff Irrigation Company board members will be volunteered. The irrigation company does not have any employees.

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 proposed. 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. 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.

Not Applicable.

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.

Not Applicable.

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.

Not Applicable.

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 recommended equipment rates for the region are acceptable. Blue book, Federal Emergency Management Agency (FEMA), and other data bases should not be used.

Not Applicable.

Materials 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).

Not Applicable.

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 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.

All funding for the project will be used to pay consultants and construction contractors. These include engineering services and construction services. Detailed tasks to be completed, estimated time, rates, supplies and materials for each task is outlined in the Appendix as follows:

1. Appendix B – Engineering Services
2. Appendix C – Construction Services

The costs shown in the appendices were prepared by a professional engineering firm. Cost for construction services were estimated using bid abstracts from similar projects. Bid abstracts used for the estimate are available for review upon request. A detailed narrative for each cost estimate is also shown in the respective appendix.

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 WaterSMART 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.

A total of $50,000 is budgeted for environmental services. It is anticipated that the NEPA compliance for this project will be at the level of a categorical exclusion; however, $50,000 is budgeted if other issues arise and an environmental assessment is required. The budget amount is approximately 1% of the total project cost, which is the estimate based on other similar projects.

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. E. 2 "Program Performance Reports" for information on types and frequency of reports required.

A total of $10,000 is budgeted for coordination with Reclamation. This amount includes the cost to create a final construction report and finalize repayment agreements, quarterly reports, annual

project performance reports, coordinate request for reimbursement, assisting the irrigation company to register in SAM and ASAP, and to provide information to Reclamation as requested.

This work will be performed by Franson Civil Engineers, the consulting firm selected to design the system, and therefore is included in the contractual cost for engineering services as shown in Appendix C (see Engineering Design/ Task 5 - Coordination with Reclamation).

Other

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 Applicable.

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 www.doi.gov/ibc/services/Indirect_Cost_Services/index.cfm.

Not Applicable.

Total Costs

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

The total project cost is $4,200,000.

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. These forms are available at http://apply07.grants.gov/apply/FormLinks?family=15.

Form SF-424C, Budget Information – Construction Programs, is enclosed with the application for federal assistance SF-424.

Appendix A – Official Resolution

OFFICIAL RESOLUTION
OF THE
WOODRUFF IRRIGATION COMPANY

RESOLUTION NO. 2015 - 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 Woodruff Irrigation Company has need for funding to complete Pressurized Irrigation System.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors agrees and authorizes that

1. The Board of Directors has reviewed and supports the proposal submitted;

2. The applicant is capable of providing the amount of funding and/or in-kind contributions, specified in the funding plan; and

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

DATED: 1/14/15

Wesley Tingey, President

ATTEST:

Eric Franson, Project Manager

Appendix B – Probable Cost for Engineering Services

(Engineering Design and Construction Management)

Woodruff Irrigation Company

Probable Cost Opinion for Engineering Services

(Rate Table Attached)

Task Description	Hours By Personnel Category								Total Hours	Total Labor Charges	Other Direct Costs	Total Fee
	1	2	3	4	5	7	14	15				
	Principal	Senior Manager	Senior Engineer	Staff Engineer	Field Manager	Designer	Office Assistant	Clerk				
Engineering Design/Planning/Permitting												
Task 1. Design Team Management	60			40					100	$13,760	$0	$13,760
Task 2. Client Meetings & Coordiantion	100			60					160	$22,240	$0	$22,240
Task 3. Coordination with Division of Water Resources	10								10	$1,600	$0	$1,600
Task 4. Coordination on Environmental Clearance	5			30					35	$3,920	$0	$3,920
Task 5. Coordination with Reclamation	10			80					90	$9,920	$80	$10,000
Task 6. Coordination with Woodruff Town	20			10					30	$4,240	$0	$4,240
Task 7. Preliminay Analysis/Pipe Alignment/Easements	10			80					90	$9,920	$0	$9,920
Task 8. Site Visits/Surveying				40		20			60	$6,080	$1,000	$7,080
Task 9. Design Criteria Contract	10			20			10		40	$4,270	$0	$4,270
Task 10. Preliminary Analysis/Pipe Alignment/Easements	10		10	30			20		70	$7,100	$0	$7,100
Task 11. Hydraulic Analysis and Model			10	50		20			80	$8,320	$0	$8,320
Task 12. Surge Analysis and Protection			5	35					40	$4,240	$0	$4,240
Task 13. Air-Valves Sizing			5	10					15	$1,640	$0	$1,640
Task 14. Pipe Inlet Structural Design			10	70					80	$8,480	$0	$8,480
Task 15. Trasmission Line Design and Coordination with UDOT			10	70					80	$8,480	$0	$8,480
Task 16. Inlet Structure Design (Trash Rack)			10	70					80	$8,480	$0	$8,480
Task 17. Stream Crossing Design			10	20					30	$3,280	$0	$3,280
Task 18. Road Crossing Design and Coordination			10	40					50	$5,360	$0	$5,360
Task 19. Construction Drawings Draft			10	60		300			370	$36,240	$600	$36,840
Task 20. Construction Drawings Final	10		10	60		300	20		400	$39,020	$430	$39,450
Task 21. Construction Specifications	10		10	60			20		100	$10,220	$700	$10,920
Task 22. Bid & Award Coordination	10			10			20	20	60	$4,880	$500	$5,380
SUBTOTAL	265	0	110	945	0	640	90	20	2,070	$221,690	$3,310	$225,000
Construction Management												
Task 1. Construction Team Management/Meetings	80		80	80	80				320	$40,000	$0	$40,000
Task 2. On-Site Observation and Documentation	40				800				840	$99,200	$9,000	$108,200
Task 3. Submittal Reviews	5		20	100					125	$13,600	$0	$13,600
Task 4. Contractor Coordination	5		50	80	100				235	$26,720	$0	$26,720
Task 5. Record Drawings Preparation	10		10	20		120	60		220	$19,940	$0	$19,940
Task 6. O&M Manual	10		10	40		40	10	20	130	$12,450	$0	$12,450
Task 7. Project Closeout	1			10			40	10	61	$4,090	$0	$4,090
SUBTOTAL	151	0	170	330	980	160	110	30	1,931	$216,000	$9,000	$225,000
Project Totals	416	0	280	1275	580	800	200	50	4,001	$437,690	$12,310	$450,000

FRANSON CIVIL ENGINEERS
FEE SCHEDULE – 2015

This Fee Schedule applies to services rendered during the current year. A new Schedule will be issued at the beginning of each year. These fees include overhead and profit.

Personnel

Classification	2015
Principal	$160
Senior Manager	$140
Senior Engineer	$120
Senior Field Manager	$116
Staff Engineer	$104
Senior Designer	$96
Engineer I	$89
Reports Writer/Editor	$88
Designer	$87
Engineering Assistant	$83
Engineering Intern	$72
Office Assistant	$59
Clerk	$53

Expenses

Expenses incurred for the project will be invoiced at direct cost. Standard rates for selected common direct expenses are as follows:

	2015
Mileage (IRS mileage rate + $0.10)	$0.68/mile
Copy/Print – 8.5x11	$0.04/page
Copies – 11x17	$0.08/page
Color Copy/Print	$0.25/page
Oversize copies/prints	$1.00/sq. ft.

Appendix C - Probable Cost for Construction Services

Woodruff Irrigation Company
Construction Costs

Item	Description	Quantity	Unit	Unit Cost	Total Cost
1	Mobilization	1	EA	$200,000.00	$200,000
2	48" HDPE DR 41 (50 PSI)	7,300	LF	$115.00	$839,500
3	48" HDPE DR 32.5 (64 PSI)	3,300	LF	$138.00	$455,400
4	36" C905 PVC DR 51 (80 PSI)	4,260	LF	$80.00	$340,800
5	27" PIP DR 51 (80 PSI)	9,500	LF	$40.00	$380,000
6	24" PIP DR 51 (80 PSI)	8,000	LF	$32.00	$256,000
7	21" PIP DR 51 (80 PSI)	10,700	LF	$25.00	$267,500
8	18" PIP DR 51 (80 PSI)	3,700	LF	$19.00	$70,300
9	15" PIP DR 51 (80 PSI)	7,920	LF	$15.00	$118,800
10	12" PIP DR 51 (80 PSI)	4,100	LF	$10.00	$41,000
11	Small Service Turnouts	30	EA	$3,000.00	$90,000
12	Large Service Turnouts	34	EA	$4,000.00	$136,000
13	36" Isolation Gate Valves	2	EA	$42,000.00	$84,000
14	24" Isolation Gate Valves	4	EA	$23,500.00	$94,000
15	18" Isolation Gate Valves	4	EA	$15,000.00	$60,000
16	Air-Valves	26	EA	$5,000.00	$130,000
17	Air-Relief Valves	6	EA	$4,800.00	$28,800
18	2" Drains	7	EA	$2,500.00	$17,500
19	Asphalt Repairs	5,000	SF	$5.00	$25,000
20	15" Bore under Highway	60	LF	$160.00	$9,600
21	21" Bore under Highway	60	LF	$230.00	$13,800
22	27" Bore under Highway	60	LF	$300.00	$18,000
23	36" Bore under Highway	60	LF	$400.00	$24,000
				Construction Subtotal	**$3,700,000**

Budget Narrative

All unit costs above were estimated using actual construction bids from project recently completed. In each case, the bid item was averaged between the 4 lower bidders and adjusted by 5% for inflation. The bid abstracts used include:

- North Summit Pressurized Irrigation Project, Wanship Pipeline; October 2014
- Middle Ditch Piping and Hydropower Project, June 2014
- West Lewiston Pressurized Irrigation Project; May 2012
- Moroni Pipeline Project, Phase I; January 2013
- Emery Pipeline, Phase A; May 2013

The bid abstracts are available for review upon request. More detail is provided below:

Item 1 – The mobilization is based on 5% to 6% of the total construction costs. The percentage was calculated based on the Wanship Pipeline bid abstract, which the average of the four lowest bidders was about 5.4%.

Item 2 and Item 3 – Pipe cost for the 48" HDPE pipe was obtaining from a quote from HD Supply received in January 2015. The supplier indicated that HDPE pipe costs were about $1.15 per pound. For the installation costs, we used the average of 4 bidders on the Middle Ditch Piping and Hydropower Project. The Middle Ditch Piping and Hydropower Project included installation of 42" pipe instead of 48" pipe. Therefore, the installation costs were increased proportionally to account of the larger size of pipe. The pipe cost and installation costs were added together and increased by 5% to account for inflation. Values were rounded to the nearest dollar.

Item 4 through Item 10 – Pipe costs were estimated by obtaining a quote a pipe supplier and using bid abstracts for the West Lewiston Pressurized Irrigation Project for the installation costs. Valley Implement is the supplier who provided the pipe costs. The quote from the supplier was obtained in January 2015. For the installation costs, we used the average of 4 bidders on the West Lewiston Pressurized Irrigation Project. The pipe cost and installation costs were added together and increased by 5% to account for inflation. Values were rounded to the nearest dollar.

Item 11 and Item 12 – The cost for the service turnouts were based on the Wanship Pipeline bid. It is an average of the 4 lowest bidders, increased by 5% to account for inflation.

Item 13 through 15 – The cost for gate valves where based on the Moroni Pipeline Project. It is an average of the 4 lowest bidders, increased by 5% to account for inflation.

Item 16 through 19 – These costs are based from the Wanship Pipeline. It is an average of the 4 lowest bidders, increased by 5% to account for inflation.

Item 20 and Item 23 – The cost for these items are based on the Emery Pipeline bid abstract. The Emery Pipeline Project included bid items to bore a 36" pipe for about 250 feet. The average of the 4 lowest bidders was $100,000, which is $400 per foot. For this project we are assuming a right-of-way of a bore length of 60 feet. Therefore, the estimated cost for the 36" bore is $24,000. The cost per foot for the smaller bores were proportionally estimated based on the $400 per foot for the 36" pipe.

Appendix D – Letter from Division of Water Resources

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

January 15, 2015

Mr. Wesley Tingey, President
Woodruff Irrigation Company
PO Box 520
Woodruff, Utah 84086

RE: Project E365 – Woodruff Irrigation Company
Division of Water Resources funding letter for WaterSMART grant application

Mr. Tingey:

We have been asked to provide this letter regarding available state funding for the Woodruff Irrigation Company's Pressurized Irrigation Company. We understand this letter is to be submitted with the company's WaterSMART grant application package to the Bureau of Reclamation.

We acknowledge receipt of the company's application to the Board of Water Resources (Board) for financial assistance for this project. The purpose of the project is to construct a pressurized irrigation system by installing about nine miles of transmission pipeline.

We understand that Woodruff Irrigation Company is applying for a $1,000,000 WaterSMART grant. We anticipate that the Board will provide $3,200,000 in the form of loan. It is understood that funding will be needed between September 2015 and June 2017.

The application has been approved by the local Board member for the area. We have meet with the company and are now preparing a Feasibility Report to present to the Board for their Authorization. It is anticipated that the report will be presented at the March 2015 board meeting. Any Board action on the Feasibility Report will be subject to availability of funds, but we do not anticipate a shortage of funds at this time.

We look forward to continue working with you in the development of this project. Please contact me if you have any questions at 801-538-7266.

Thank you,

Marisa D. Egbert, P.E.
Project Manager

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