WaterSMART Grant

Water and Energy Efficiency Grant
Funding Opportunity Announcement No. R24AS00052
For Fiscal Year 2024

Funding Group II Application - $1,485,900 Grant Request

February 22nd, 2024

Smithfield Irrigation Company
Irrigation System Improvements

Cache Valley, Utah

Applicant

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Smithfield Irrigation Co.

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1 – Project Overview

1.1 - Executive Summary

The executive summary should include:

- *The date, applicant name, city, county, and state.*
- *Please indicate whether you are a Category A applicant or a Category B applicant. If you are a Category B applicant, please briefly explain how you are acting in partnership with a Category A partner.*
- *A one paragraph project summary that provides the location of the project, a brief description of the work that will be carried out, any partners involved, expected benefits and how those benefits relate to the water management issues you plan to address.*
- *State the length of time and estimated completion date for the proposed project (month/year).*
- *Whether or not the proposed project is located on a Federal facility.*

Date:	February 22nd, 2024
Applicant:	Smithfield Irrigation Company Pat Draper, President Cache County, Utah 27 West Center Street, Smithfield, UT 84318 smithfieldirrigationcompany@gmail.com, 435-563-3161
Contact:	Steven D. Wood, PE Sunrise Engineering, LLC 2100 North Main St. North Logan, Utah 84341 sdwood@sunrise-eng.com, 435-563-3734
Category:	Category A Applicant

Project Summary

The Smithfield Irrigation Company - Irrigation System Improvements proposes to replace three diversion structures and repair another. The project will also remove the need for an existing pump station by piping and pressurizing an aging section of steep open channel flow supply canal. The Smithfield Irrigation Company (SIC) is based in Cache County in northern Utah. SIC provides secondary water for both residential and agricultural water users both in around Smithfield City. The proposed project is projected to save an estimated 853.5 acre-feet of water and 24,881 kWh annually.

Estimated Project Length: 20 months (starting January 2025)

Completion Date: August 2026

Federal Facility: The proposed project is not on a federal facility.

1.2 - Project Location

Provide specific information on the geographic location of the proposed planning area (e.g., watershed, basin, county) or location of the project being designed, including a map showing the geographic location. For example, [project name] is located in [county and state] approximately [distance] miles [direction, e.g., northeast] of [nearest town]. The project latitude is {##°##'N} and longitude is {###°##'W}.

The proposed project is located primarily in and around Smithfield City, Utah. Smithfield City is 12 miles north of Logan City. The city spans approximately 5.35 square miles. Smithfield Irrigation Company supplies water to 3,700 acres of land and serves approximately 1,100 connections throughout the city. The coordinates for this project are approximately 41°50'33.96" N and 111°48'49.95" W. An area map is shown in Figure 1 depicting the project city in relation to the state of Utah. An overview of the Smithfield Irrigation Company system is shown in Figure 2 with arrows pointing to relevant system components.

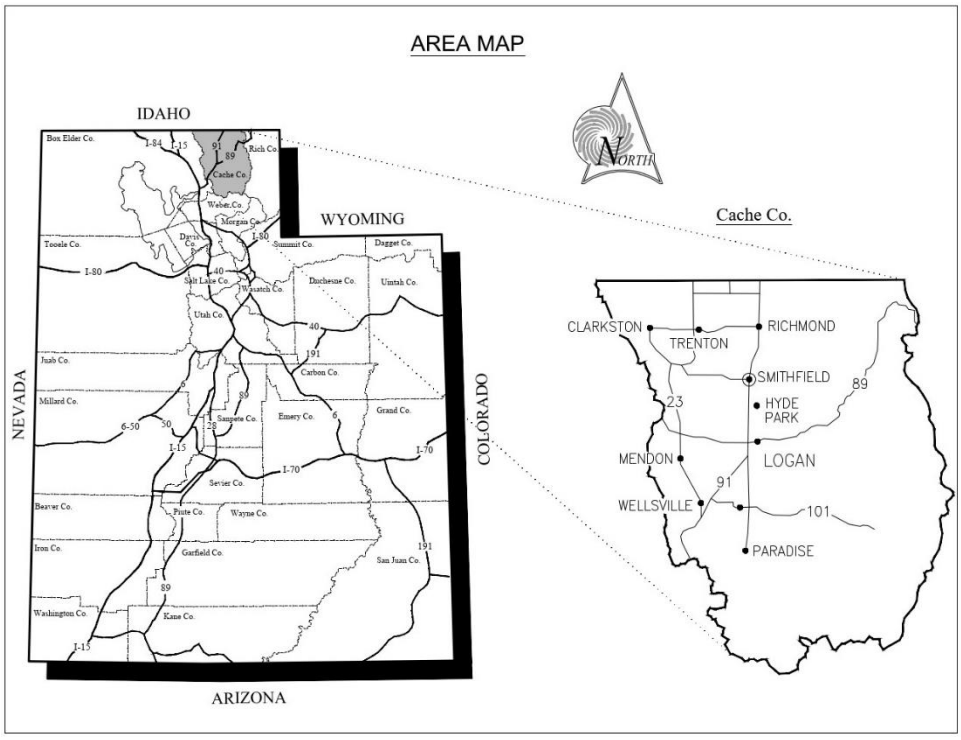

Figure 1: Project Location Map

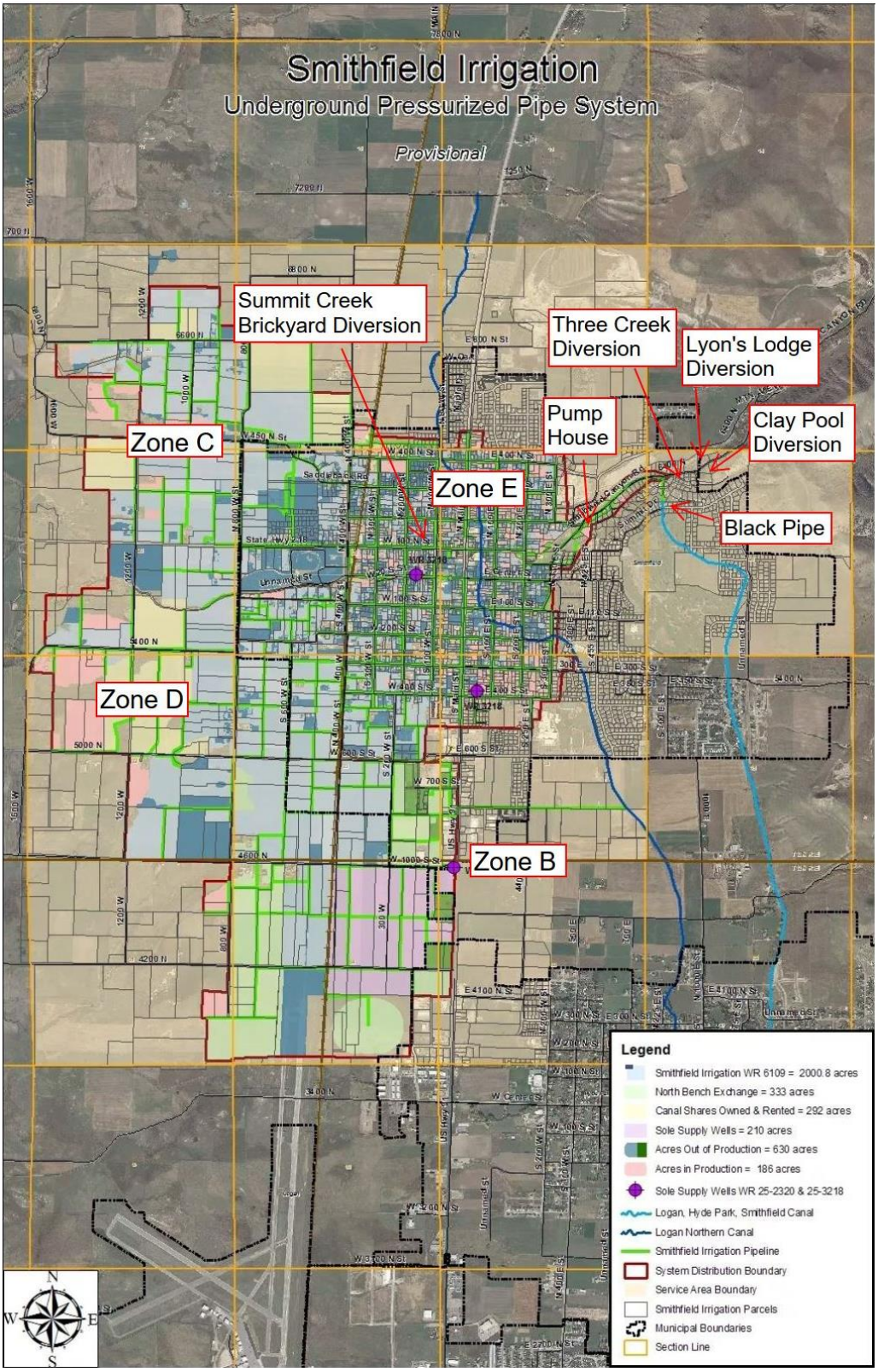

Figure 2: Irrigation System Overview

1.3 - Project Description

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

The SIC Irrigation System Improvements Project will upgrade four diversions structures in the system. There are three concrete diversion structures that will be fully replaced and a fourth concrete structure that will be repaired. Also, an existing open channel pipeline will be replaced and extended with a new pressurized line, which will allow an existing pump station to be removed from the system.

The Smithfield Irrigation Company (SIC) supplies water to farms and residents throughout Smithfield, Utah. Water sources for the company include three waterways, five separate wells, and also one connection to the Cache Highline Water Association (CHWA) irrigation system. SIC currently has 1,100 connections who will all benefit from the project. Connection types include residential, commercial, institutional, industrial, agricultural/residential, and solely agricultural irrigation connections. According to data provided to the Utah Division of Water Rights, SIC supplies an average of 9,600 ac-ft of water to these connections each year. Connection counts are displayed in Table 1.

Table 1: Connection Information

Connection Type	Number of Secondary Connections
Residential	782
Commercial	9
Institutional	14
Industrial	1
Agricultural & Residential	166
Agricultural	128

There are four diversions needing upgrades. They are known as the Three Creek Diversion, the Lyon's Lodge Diversion, the Summit Creek Brickyard Diversion, and the Clay Pool Diversion. All four diversions require similar improvements. A significant amount of debris enters the irrigation system, which leads to overwatering to help flush out this debris. Each diversion needs a new irrigation screen and improved irrigation control gates. The diversions will also be installed with a flow measurement device, and new concrete diversion structures to varying degrees. The Three Creek Diversion will likely only require repairs to the concrete structure, whereas the Lyons Lodge, Summit Creek, and Clay Pool Diversions will require full replacement of the currently deteriorating concrete structures. Figure 4 shows the three creeks diversion structure which has a similar layout to the other diversion structures.

Figure 3: Three Creeks Diversion Structure

Another important component of this project is the replacement of a section of pipe that supplies water to the SIC's system from the Cache Highline Water Association (CHWA) Logan, Hyde Park, Smithfield Canal. The supply line between CHWA and the SIC is known as the "Black Pipe". The Black Pipe is located on the side of a hill at a 45° angle. This pipeline is aging, leaking, and has failing concrete supports. Figure 5 shows the condition of the supports.

Figure 4: Condition of Black Pipe Supports

In addition to replacing a deteriorating system component, the new pipeline will provide benefit by being pressurized. This project will replace the existing Black Pipe with 480 feet of 48" double wall HDPE pipe. An additional 1,400 feet of new 24" C900 PVC pipe, with a minimum

pressure rating of 100 psi, will replace existing irrigation ditches and connect to an existing pipeline. The addition of the pressurized pipe will allow for a pump station to be removed from the system. This pump station is located approximately half a mile downstream of the Black Pipe. Figure 5 shows the pump station which will be taken offline.

Figure 5: Pump Station to be Removed from Service

The headworks for the new pipe will be located on the upstream end of the existing Black Pipe. A traveling wire mesh screening device will be placed before the pipe inlet structure to remove debris and avoid any pipeline clogs or damage. The rotating traveling screen will be placed at a 45° angle to pull debris from the stream and away on a conveyer belt. For reference, Figure 6 depicts a recently installed traveling wire mesh screening device.

Figure 6: Traveling Wire Mesh Screening Device

SIC supplies water from April 15th to October 15th (the irrigation season) per their water rights and uses an average of 9,600 ac-ft of water during that time. Recorded flows for the black pipe are illustrated in Figure 6. During the 2021 irrigation season there was a substantial decrease in flow due to a blockage in the Black Pipe. This blockage left large portions of the irrigation company coverage area without water.

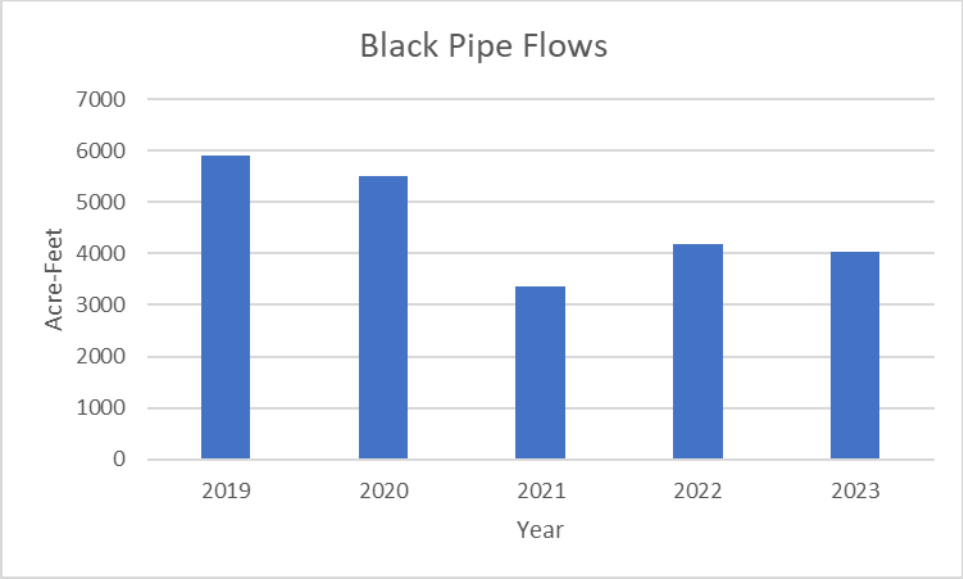

Figure 7: Black Pipe Flows

SIC has received a letter from the Utah Division of Water Resources (DWRe) stating their support for this project. This letter of support is included in Appendix A. Once funding is secured, a full engineering design will be completed. The engineering design will include plans for the Black Pipe replacement, the 24" pressurized pipe, and the removal of the pump station. A preliminary engineering analysis has been conducted to determine potential pipe sizes and pipe lengths. The analysis indicated that installing the pressurized pipe along Meadowlark Lane to be the most cost-effective and efficient path.

2 – Evaluation Criteria

2.1 - Evaluation Criterion A – *Quantifiable Water Savings*

*Up to **25 points** may be awarded for this criterion. This criterion prioritizes projects that will conserve water and improve water use efficiency, supporting the goals of E.O. 14008. Points will be allocated based on the quantifiable water savings expected as a result of the project. Points will be allocated to give greater consideration to projects that are expected to result in more significant water savings.*

All applicants should be sure to:

- ***Describe the amount of estimated water savings**. For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre- feet per year) as a direct result of this project.*

  The System-Wide Improvements projects is estimated to save 853.5 ac-ft of water annually. The water savings result from a reduction in overwatering practices and the piping and restoration of the Black Pipe section. A summary of the estimated water savings is provided in Table 2.

Table 2: Total Water Savings

Source of Water Savings	Water Savings [ac-ft]	Percent Savings
Elimination of Over Watering Practices	769	8.01 %
Water Retention from Black Pipe Restoration and Piping	84.5	0.88 %
Total	**853.5**	**8.89 %**

* Percent savings as compared to the average yearly demand of 9,600 acre-feet

Equation 1. Percent Savings Calculation

$$\frac{853.5\ {}^{ac*ft}/_{year}}{9{,}600\ {}^{ac*ft}/_{year}} = 0.0889 = 8.89\%\ Water\ Savings$$

The first category of water savings is the elimination of overwatering practices. Three out of SIC's five irrigation zones (Zones B, C, and D) serve mainly agricultural farming operations. Static pressures in these zones range from approximately 25 psi to 95 psi. According to the SIC water master, nearly all the sprinklers in these zones utilize a larger 3/16" nozzle. A significant amount of debris enters the irrigation system which can plug nozzles, which is why the larger nozzles are used. The bylaws for the SIC assume that a typical sprinkler head uses seven gpm; however, with the high pressures in the system, a 3/16" nozzle has the capacity to spray more than seven gpm.

Replacing deteriorating diversion structures will help to reduce debris in the system so that smaller sprinkler nozzles can be used without plugging. SIC will enact a policy of requiring water users to use smaller sprinkler nozzles to keep them under the target of seven gpm.

The second category of water savings is the reduction of seepage by replacing the Black Pipe. The black pipe is aging and deteriorating and leaks along its entire length.

The accompanying calculations for these loss estimations can be found in Appendix B and later in this document. Also included in Appendix B are the references for the supporting documentation of the water loss analysis used.

- ***Describe current losses.*** *Please explain where the water that will be conserved is currently going and how it is being used. Consider the following:*

  a. *Explain where current losses are going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?*

     Water losses from overwatering fields are either evaporated into the atmosphere or seep into the underground aquifer. A small portion may indirectly flow downstream and into the Logan River. Currently, an estimated 769 ac-ft of water are lost each year from over watering practices.

     An estimated 84.5 ac-ft per year are being lost to seepage, evaporation, and vegetation uptake along the Black Pipe and a section of irrigation ditch immediately downstream. Once the system is pressurized at the top of the hill, everything below the headworks will no longer lose water to seepage, evaporation, and unwanted vegetation uptake. Calculations for these losses are included in Appendix B.

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

     To SIC's knowledge, current losses are not being directly used by others or for another productive process. There is a high water table in the area, so the need for groundwater recharge is not a significant concern. Losses may support the growth of weeds in the area.

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

There are no known direct benefits associated with current losses from the Smithfield Irrigation Company's system. The water does not directly contribute to any significant animal habitats. Water that is lost to runoff is either evaporated or seeps into the underground aquifer.

- ***Describe the support/documentation of estimated water savings.*** *Please provide sufficient detail supporting how the estimate was determined, including all supporting calculations.*

  Calculations for savings related to overwatering assume that once debris is reduced in the system, water users will be able to use smaller sprinkler nozzles with flow rates below seven gpm. The following additional assumptions were also made:

  - According to the SIC water master, nearly all sprinklers currently use a 3/16" nozzle. Estimates of current water usage are based on the 3/16" nozzle. Estimates of possible water savings are based on the nozzle required to limit flow to below seven gpm.
  - There are 1.5 waterings per crop cutting and 3 cuttings per irrigation season.
  - The irrigation season lasts 183 days.
  - Irrigation Zones B and D have a 60' riser spacing. Approximately 1/3 of Zone C has a 40' riser spacing and the rest has a 60' riser spacing.
  - Sprinkler heads are typically spaced every 40' so each sprinkler covers an area of either 40'x40' or 40'x60'
  - Approximately 1/3 of the total irrigated area is on a 24-hour sprinkler rotation and 2/3 is on a 12-hour rotation for a weighted average of 16 hours of watering usage per irrigated area.

  Assumptions for calculations related to water loss along the Black Pipe are provided in answer to the next question.

  The calculations for the water loss estimates and water savings are provided in Appendix B. Also included in Appendix B are the references for the supporting documentation of the water loss analysis used.

- ***Please address the following questions according to the type of infrastructure improvement you are proposing for funding.*** *See Appendix A: Benefit Quantification and Performance Measure Guidance for additional guidance on quantifying water savings.*

  1. ***Canal Lining/Piping:*** *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:*

     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.*

Water savings from piping and pressurizing the Black Pipe section were determined by calculating the amount of water loss along this section due to seepage, evaporation, and vegetation uptake. It is anticipated that all water losses along this section could be saved. Water losses occur along the 480' of the Black Pipe in addition to 280' of irrigation ditch that will be piped before it connects to an existing pipeline.

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.*

Traditional methods of determining seepage loss such as ponding and inflow/outflow tests have not been performed on this canal section. An empirical method based on canal geometry and the material composing the canal was used to determine seepage, evaporation, and vegetation uptake loss.

Seepage Losses were determined using an empirically derived method outlined in the United States Department of Agriculture Soil Conservation Service's National Engineering Handbook Chapter 2 – Irrigation Water Requirements. The full reference has been included in Appendix B. This method uses the geometry of the canal and the canal soil type to determine the seepage loss per mile. Geometric data was gathered via site visits, aerial imagery, and owner furnished data. Calculations assume that the Black Pipe is leaking into the surrounding soil at a rate greater than the rate of other water losses. Soil data was acquired from the United States Geological Survey (USGS) online data base and has been included in Appendix B. The soil in the area is a sandy clay loam.

The method outlined in the National Engineering Handbook also provides guidelines to determine water loss due to evaporation and vegetation uptake. Evaporation is generally taken as 10% of the amount lost due to seepage. This amount lost to evaporation is supported by the National Engineering Handbook as well as a published research article from Utah State University (USU) entitled "How Well Does Your Irrigation Canal Hold Water? Does it Need Lining?", and a published presentation from the NRCS entitled "Irrigation Water Conveyance".

Water loss due to vegetation is based on a percentage of the total flow within the earthen canal ranging from 0.5% to 1.0%. The canal banks for the canal have heavy vegetation growth and thus a 1.0% was used to determine total water loss due to undesired vegetation uptake. This method is supported in both the National Engineering Handbook and the presentation previously

stated produced by the NRCS. All of the materials referenced in this section are referenced in full in Appendix B.

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

Post-project losses are anticipated to be negligible.

The project will replace earthen canals with 24-inch C900 PVC pressurized pipe and the existing Black Pipe section with 48-inch HDPE double wall pipe with gasketed fittings. Losses due to seepage, evaporation, and undesired vegetation uptake will be effectively eliminated. Due to the nature of PVC and HDPE, leakage through the pipe walls does not occur unless cracks or breaks develop; however, if fittings are not installed correctly, water can be lost at pipe junctions, service line connections, or similar pipe fittings.

The National Engineering Handbook states that buried pipeline losses range from 0.01 to 0.15 ft^3/ft^2 per year of wetted perimeter depending on the age of the pipe. The pipes that will be installed will be new HDPE pipe and PVC pipe, thus estimated loss through the pipe is 0.01 ft^3 per year per ft^2 of wetted perimeter. The calculations for wetted perimeter are presented in the following table.

Table 3: Data for Wetted Perimeter Calculations

Pipe Diameter (in)	Pipe Circumference (ft)	Pipe Length (ft)	Total Wetted Perimeter (ft^2)
48	12.57	480	6,0327
24	6.28	1,400	8,796
		Total	**14,828**

Equation 2. Converting wetted perimeter to acre-ft/year

$$14{,}828\ ft^2 * 0.01 \frac{\frac{ft^3}{ft^2}}{yr} = 148.28 \frac{ft^3}{yr} = 0.00341 \frac{acre\ ft}{yr}$$

Based on these calculations, post-project losses are negligible as other water losses have only been calculated to one decimal place or less.

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

The project consists of piping approximately 1,400 feet of open irrigation ditches and replacing 480 feet of existing antiquated pipe that has failing supports and a history of blockage.

Based on the above calculations, the system currently experiences approximately 587 acre-ft/year of loss per mile of earthen ditch near the black pipe. After the proposed project's completion, the new pressurized pipe will experience a total loss of approximately 0.0096 ac-ft/year per mile of pipe, which is negligible. This equates to an annual transit loss reduction of essentially 100% or an annual reduction of the full pre-project total loss of 361 acre-ft/year per mile. The equations shown below detail the calculation for the water loss per mile.

e. How will actual canal loss seepage reductions be verified?

Flow measuring devices were previously installed at key points along the canal network and pipe network to monitor the actual flow through these key points. There is a flow measuring device directly before the project headworks near the golf course and another downstream near the three creeks diversion, where the canal and pressurized pipe meet. These flow measuring devices will provide accurate readings of water flow volume and accurate data to determine future seepage losses.

f. Include detailed description of the materials being used.

The upper portion of the existing earthen canal will be replaced with pressurized 24-inch C900 PVC pipe and the existing Black Pipe section along with some open canal will be replaced with corrugated 48-inch HDPE double wall piping with gasketed fittings. The flow will move from the earthen canal upstream of the project through a traveling wire mesh screening device then through a concrete inlet structure that will direct the water through the new pipes.

2.2 - Evaluation Criterion B – *Renewable Energy*

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

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

This project will not have a renewable energy aspect and is therefore considered under Subcriterion B.2. with response details found in the following section, 2.2.2

This project will result in energy savings but not related to renewable energy. An existing pump station will be taken offline. The power usage from said pump station will be eliminated and result in energy savings.

2.2.2 - Subcriterion B.2: Increasing Energy Efficiency in Water Management

Up to 6 points may be awarded for projects that address energy demands and reduce greenhouse gas emissions by retrofitting equipment to increase energy efficiency and/or through water conservation improvements that result in reduced pumping or diversions.

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

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

  The new pressurized pipeline will result in a pump station being removed from service. The yearly power usage for this pump station in 2023 was 24,881 kilowatt hours (kWh) but varies year to year. The usage breakdown for the past four years is shown in Table 4.

Table 4: 2020 Pump Power Usage

Year	Kilo Watt Hours
2020	4,105
2021	2,506
2022	30,765
2023	24,881

Based on discussions with the SIC water master, it is anticipated that taking this pump station off line will save approximately 24,881 kWh per year on average.

It is also anticipated that energy will be saved due to a reduction in overwatering because of this project. With water demand decreased in several zones of the SIC irrigation system, the number of times other pump stations are operated will be decreased. However, currently a precise value of energy savings has not been quantified.

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

According to the EPA greenhouse gas equivalencies calculator, 24,881 kWh used is equivalent to 17.4 tons of Carbon Dioxide emissions. Since the pump station will betaken offline, carbon emissions will be reduced by 2 tons per year moving forward.

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

With the addition of the pressurized line, two 30 hp pumps and one 10 hp pump will be eliminated during this project.

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

Energy savings will not come from the point of diversion. Savings will stem from an alternate site of origin, namely the existing pump station located approximately half a mile downstream and of the main project location. The energy savings will originate from the elimination of the existing pump station.

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

No energy is currently being used to treat water. After this project is finished, there will be no energy used for water treatment.

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

This project is not anticipated to result in reduced vehicle miles driven.

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

The project will not involve a renewable energy component.

2.3 - Evaluation Criterion C – *Other Project Benefits*

*Up to **15 points** may be awarded under this criterion. This criterion prioritizes projects that*

addressa specific water and/or energy concern(s), including enhancing drought resilience and sustainability, addressing the current and future impacts of climate change, and providing ecological benefits.

- ***Resilience and Sustainability Benefits.*** *Will the project address a specific water and/or energy sustainability concern? Please address the following:*

  a. *Explain and provide detail of the specific issue(s) in the area that is impacting water resilience and sustainability. Consider the following:*

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

      The project area within Cache County has experienced regular severe drought conditions over the past two decades, significantly impacting water resilience and sustainability. The past two years have seen a reduction in the intensity of droughts particularly with high snowfall in the winter of 2022-23. However significant drought conditions are still anticipated in the coming years. Future drought conditions are anticipated leading to reduced water availability for agricultural, residential, and ecological needs. Water scarcity has strained local water resources, affecting the community's ability to maintain agricultural productivity, sustain natural habitats, and meet the growing water demands from an increasing population. These conditions underline the critical need for the proposed irrigation system improvements to enhance water efficiency and conservation.

    - *Is the project in an area that is experiencing, or recently experienced, drought or water scarcity?*

      The project has recently experienced significant drought or water scarcity conditions. Cache County is not currently experiencing drought conditions, however, it anticipates drought conditions in the future. Cache County, including the project area, has been facing prolonged periods of drought that have led to a decrease in water availability for various uses. This situation underscores the need for the proposed improvements to enhance the region's water resilience and sustainability in the face of ongoing climate challenges in the area.

    - *Describe any projected increases to the severity or duration of drought or water scarcity in the project area. Provide support for your response (e.g., reference a recent climate informed analysis, if available).*

      Cache County has experienced frequent drought conditions for the past 20 years but is not currently experiencing drought conditions. It is reasonable to assume that the recent conditions are the result of

higher preciptitation in recent years, but not necessarily indicative of a trend that will continue into the future. Figure 8 below shows recent extreme draught conditions from August 2022.

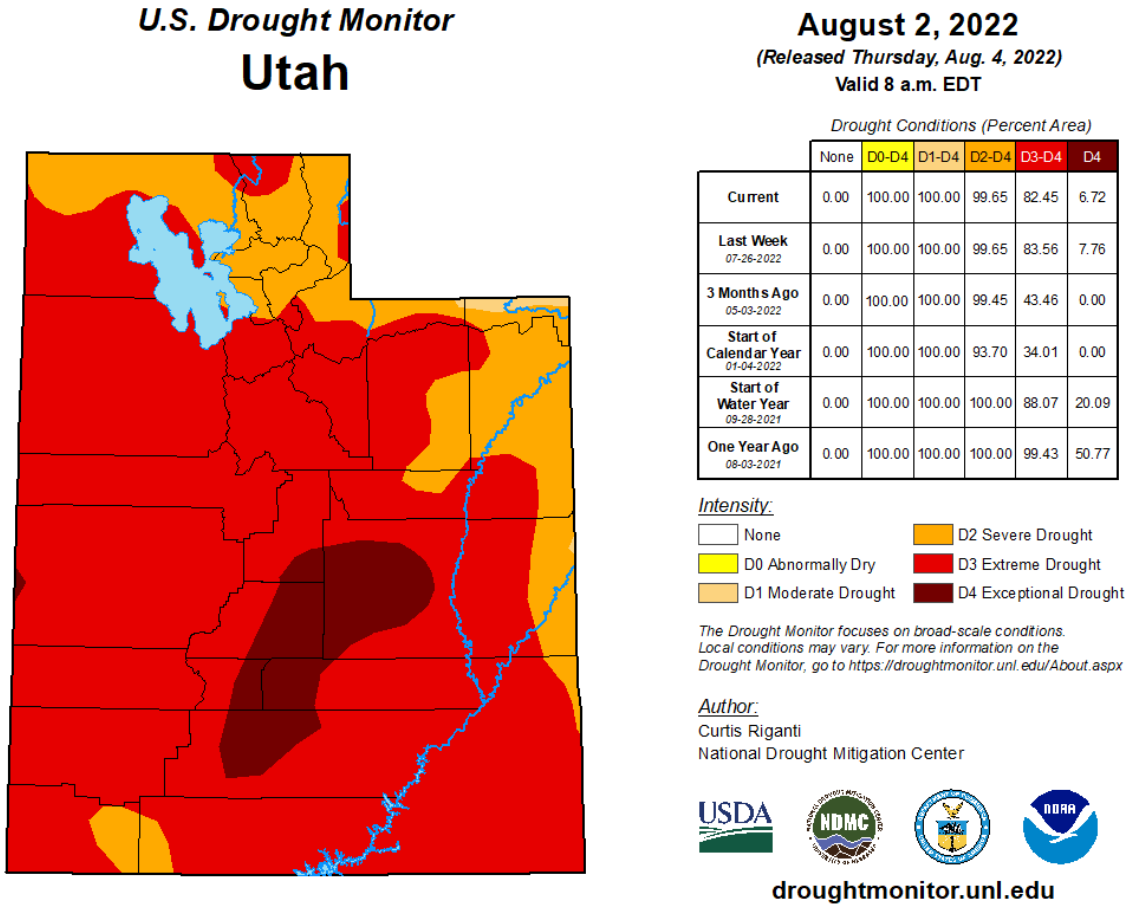

Figure 8: Cache County Drought Conditions

Conditions during extreme draught include high fire danger, stressed native vegetation, and low streamflow. Lower stream flows result in less available water for irrigation which impacts agricultural production decrease and economic growth and returns. Downstream of the irrigation canals, lower stream flows result in lower reservoir, marsh, and lake levels which impacts bird habit, hydroelectric power generation, tourism, recreation, and business.

This has created a larger demand for water within the valley. Smithfield Irrigation has felt this increased demand from its shareholders. Smithfield City is also growing in population, which adds to overall water demand.

The Company supplies water to two main demographics, the first is farmers and the second is residents. As drought conditions continue, both parties demand more water in times of drought. Residents use more water to keep landscaping green and lush. Farmers demand more to maintain crop yield during times of drought.

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

The Cache Valley is over reliant on non-renewable resources. Many homes are heated by natural gas and fossil fuels. This project will reduce the amount of energy that is required to provide irrigation water to shareholders by reducing pumping energy costs due to lower water demands. This will decrease the reliance that the community has on non-renewable energy sources.

Lower water levels in Cutler Reservoir may result in decrease hydroelectric power generation. If there is a significant decrease in power generation, there may be future interruptions in service.

c. Please describe how the project will directly address the concern(s) stated above.

This project will reduce the demand for water and reduce losses within the system. This will in turn decrease the amount of water this is required to be pumped, reducing the energy expended on pumping. This project will help SIC confront shortages by reducing the amount of water needed for irrigation and improving the efficiency of the system. Leaving more water available for culinary drinking, habitat, and emergency uses like fire suppression.

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

This project will allow for more efficient water supply management. Meters at the diversions will be capable of relaying information to SIC. Consumption volumes, time of consumption and average daily usage values will all be communicated with SIC and the users. This will allow for the shareholders to better understand how much water they are consuming and encourage conserving. This will lead to better managed water supplies.

In addition, this project will directly result in a more efficient management of the water supply since irrigators will be able to water their fields slower allowing deeper

soil penetration, decreased water loss, and healthier crops. Water managers and irrigators will have more flexibility with the watering schedule and water at more efficient times.

Water conserved in the system is also essential for the culinary water exchange between two local cities. Water that is kept in the system may be used for Smithfield drinking water and decrease the cities dependence upon the local spring, therefore providing Hyde Park greater shares of the spring water for their culinary water use.

e. *Please address where any conserved water as a result of the project will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.*

Water that is not used for the Smithfield Irrigation system will remain in the Logan River and in the aquifers that groundwater wells draw from. Water that will remain in the aquifers can be used for other purposes, such as culinary drinking water and emergency water for Smithfield City.

Water that remains in the Logan River will flow to Cutler Reservoir. Where Cutler Dam produces hydroelectric power for the surrounding communities. Once leaving the Cutler Reservoir water flows to the Great Salt Lake, which has recently recorded it lowest historic water levels. The area that the Great Salt Lake covers has decreased by nearly 70% in the past 40 years. This is a great concern because there are large deposits of poisonous arsenic that will be exposed to the air if the lake dries up completely. Any water that can be left in the Logan River will end up in the Great Salt Lake, which will benefit many communities in the Salt Lake Valley.

In addition, water diverted for irrigation purposes from the Logan River will experience less water loss. The conserved water in the canal will eventually flow into Summit Creek before reaching the Bear River System. Additionally, the extra water in the canal system can be filtered and used by Smithfield culinary water allowing Hyde Park to use the spring water normally utilized by Smithfield.

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

  The volume of conserved water will be 853.5 ac-ft of water each year. This water will remain in the Logan River and in the aquifers that wells draw water from. The Logan River empties into the Cutler Reservoir. Part of the reservoir is the hydro dam that is operated, supplying power to surrounding communities. If more water makes it

to Cutler Reservoir, more water will be available to create power for communities in Cache Valley.

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

  There will not be a mechanism required to put conserved water to the intended use. Conserved water will remain in the Logan River that naturally flows into Cutler Reservoir. Other amounts of conserved water will remain in the aquifers that supply water for the wells that SIC uses. Any other water left in the system will be available for downstream users and wildlife habitat.

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

This project is not impacted by any interstate compacts.

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

Yes, farmers will be required to reduce water consumption to less than seven gpm. This will allow all irrigators to use water more fairly and equitably. Also, with a reduction in overwatering, any water that can remain in the Logan River will end up in the Great Salt Lake which will help avoid the devastating consequences from the lake drying up. Water that is left in reservoirs will also be available for emergency and culinary drinking water uses.

Agriculture is an important aspect of life in Cache Valley. Slowly, the flood irrigation system and many canals are being lined, piped, and converted into pressurized systems to better conserve water and serve agricultural users. Since water rights, water access, and water availability are integral parts of life and business in the valley, it is detrimental to crops, business, and recreation when water is unavailable due to water loss, canal bed failure, and drought. This project will greatly reduce general water loss and guarantee an increase in available secondary water therefore preventing any conflict due to water access.

- ***Ecological Benefits.*** *In addition to the separate WaterSMART Environmental Water Resources Projects NOFO, this NOFO places a priority on projects that that result in ecological benefits, through this section and other sections above, consistent with the SECURE Water Act. Please provide information regarding how the project will provide ecosystem benefits, including the following:*

a. *Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please describe the relationship of the species to the water supply, and whether the species is adversely affected by a Reclamation project or is subject to a recovery plan or conservation plan under the Endangered Species Act (ESA).*

The project may indirectly benefit species that rely on the Logan River. There are many species of fish that are native to the Logan River such at Rainbow Trout, Cutthroat Trout and the occasional white fish. There are no endangered or threatened species that will be affected by this project.

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

Water will remain in the system for longer periods of time since water losses along this section of canal will effectively become zero after implementation of this project. Since water losses will be eliminated, water within the pipe will be reliable and of a consistent temperature when the water emerges downstream of the pipe.

Smithfield City draws culinary water from several streams and springs, as does Hyde Park. Additional water in the system can be used for Smithfield's culinary use and provide Hyde Park greater access to drinking water from the springs that Smithfield is not in need of.

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

The proposed project is expected to contribute positively to the ecological status of species by ensuring more consistent and reliable water flows into habitats downstream, particularly the Cutler Reservoir, an area recognized for its ecological significance. Although not directly aimed at reducing the likelihood of species listing, by enhancing water availability and quality, the project indirectly supports the health and resilience of local ecosystems. This improved environmental condition can foster better habitats for various species, potentially stabilizing populations and contributing to their long-term viability.

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

Smithfield Irrigation draws water from reservoirs through wells and the Logan River by diversions. The Logan River naturally empties into the Cutler Reservoir. Cutler Reservoir is a migratory bird area, home to thousands of birds. The area is protected by the National Audubon Society as an Important Bird Area. The reservoir provides food and nesting sources for many species of birds. As more water empties to Cutler

Reservoir from the Logan River, it will directly benefit this Important Bird Area and help sustain many species of birds.

- ***Climate Change:*** *E.O. 14008 emphasizes the need to prioritize and take robust actions to reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity.*

  a. *Describe how the project addresses climate change and increases resiliency. For example, does the project help communities adapt to bolster drought resilience?*

  This project will strengthen the water supply sustainability because the Logan, Hyde Park, Smithfield Canal flows into summit creek, a tributary of the Bear River. Since this project eliminates water losses and therefore conserves water, there will be an increased quantity of water downstream that will first feed into the Bear River, then help generate hydroelectric water as it flows through Cutler dam, before continuing downstream to the Great Salt Lake. Any additional water in the Great Salt Lake is extremely beneficial to prevent the lake from drying up.

  If the Great Salt Lake dries up it will impact businesses, environment, and health. As the lake dries, fine dust particles release with the potential to cause major health concerns such as asthma, bronchitis, cancer, and heart attacks. Strong wind and dust storms may cause infrastructure damage to the surrounding area and further spread dust particles to worsen any health problems and dirty the snowpack. Darker and dirty snowpack will decrease albedo (the reflective capacity of the snow) which will cause less precipitation in the area, decrease the snowpack volume, and the snowpack to begin melting earlier. If the Great Salt Lake dries up further drought conditions will worsen and the climate conditions will become more extreme.

  b. *Does the project seek to improve ecological resiliency to climate change?*

  This project does seek to improve ecological resiliency to climate change. Cache County has faced drought conditions for the past 20 years. 37% of the county is in extreme drought. This has caused the Logan River to have lower flow level that typical, where SIC gains some of its water. Metering secondary water connections will reduce the demand for water. If the demand for water decreases, less will need to be taken from the Logan River.

  In addition, this project will improve overall ecological resilience to climate change by keeping more of the water in the canal system and in turn the downstream streams, rivers, reservoirs, and lakes. The more water kept in the system the lower the impact of draught on the various aquatic and marsh ecosystems.

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

The Smithfield Irrigation Company Irrigation System Improvements project actively seeks to reduce or mitigate climate pollution. By upgrading the irrigation infrastructure to more efficient systems, the project minimizes water loss and reduces the energy required for water distribution, thereby lowering associated air pollution from energy production. Furthermore, by eliminating the need for a pump station and replacing it with a gravity-fed system, the project reduces energy consumption and the carbon footprint associated with operating the pump station, directly contributing to a reduction in air pollution.

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

This project incorporates green and sustainable infrastructure elements to improve community climate resilience. By replacing old, leaky pipes with new, more durable materials such as HDPE and C900 PVC, the project ensures a longer lifespan of the infrastructure with less need for repairs, reducing the environmental impact over time. Additionally, the installation of a pressurized system to replace open canals decreases water evaporation and contamination, enhancing water efficiency and quality, which are key aspects of sustainable water management.

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

Beyond the direct improvements to water conservation and efficiency, the project contributes to climate change resiliency in several indirect ways. By ensuring a more reliable water supply, it supports agricultural practices that can adapt to changing climate conditions, promoting food security. The project's emphasis on water efficiency also indirectly supports the preservation of local ecosystems, which are vital for maintaining biodiversity and ecological balance. This holistic approach to irrigation management strengthens the community's overall resilience to the adverse effects of climate change.

2.4 - Evaluation Criterion D – *Disadvantaged Communities, Insular Areas, and Tribal Benefits*

*Up to **15 points** may be awarded based on the extent that the project demonstrates support for the Biden-Harris Administration's priorities, including E.O. 14008: Tackling the Climate Crisis at Home and Abroad and the President's memorandum, Tribal Consultation and Strengthening Nation-to-Nation Relationships.*

Please address only those priorities that are applicable to your project. It is not necessary to address priorities that are not applicable to your project. A project will not necessarily receive more points simply because multiple priorities are addressed. Points will be allocated based on the degree to which the project supports one or more of the priorities listed, and whether the connection to the priority(ies) is well supported in the application.

2.4.1 - Subcriterion D.1: *Disadvantaged Communities*

E.O. 14008 affirms the advancement of environmental justice for all through the development and funding of programs to invest in disadvantaged communities. This criterion, which is used to identify projects that advance the Justice 40 Initiative, includes all Federally recognized Tribes and Tribal entities, and any disadvantaged communities in insular areas (American Samoa, Guam, the Northern Mariana Islands, or the Virgin Islands) identified pursuant to the following criteria.

- *Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool (CEJST), available online at Explore the map – Climate & Economic Justice Screening Tool (screeningtool.geoplatform.gov/en/#17.59/36.63278/-105.181329) to identify any disadvantaged communities that will benefit from your project. The CEJST developed by the White House Council on Environmental Quality is a geospatial mapping tool that utilizes publicly available, nationally consistent data sets related to climate change, the environment, health, and economic opportunity to identify disadvantaged communities. In addition to identifying specific census tracts that are disadvantaged, the CEJST includes the lands of Federally recognized Tribes as disadvantaged communities. In addition, regardless of whether a Federally recognized Tribe has land, all Federally recognized Tribal entities are considered disadvantaged communities for the purposes of the Justice40 Initiative.*

  After utilizing the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool (CEJST), we have identified several census tracts (e.g. 49005000600) within and around Cache County, Utah, that qualify as disadvantaged communities under the criteria set forth by the tool. These areas are characterized by factors such as lower income levels, lacking of indoor plumbing, higher shared to asthma, and limited access to high school education and economic opportunities.

  Additionally, according to the 2020 census data, Smithfield, Utah is considered a disadvantaged community as defined in section 1015 of the cooperative watershed act. The median household income of Smithfield Utah is 99.44% of the median household income for Utah, which is less than defined 100%. The median household income in 2020 for Smithfield Utah was $73,788, which is only $409 less than the median household income for Utah in 2020 which was $74,197.

- *If applicable, describe how the proposed project will serve or benefit a disadvantaged community, identified using the tool. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantaged community?*

  The project directly benefits the disadvantaged community of Smithfield, Utah whose median household income falls below the statewide annual median

household income. The LDPS and SIC canal service area includes two Title 1 elementary schools, multiple public parks, a public library, and the local high school with underprivileged students from low-income families enrolled. A lot of these schools have difficultly cleaning the currently available water enough to adequately use it. The diversion work proposed will provide cleaner water making the water more accessible for their use.

This community has felt disproportionate impacts of climate change. Smithfield City has experienced worsening drought conditions for the past 20 years. Cache County has been in some form of drought for the last 20 years. In 2021 the Logan River was at its lowest flows since 1992 when the second worst drought on record was documented. Over 80% of Utah is currently in severe draught and residents, businesses, municipalities, vegetation, and recreators are feeling the effects. This river is a major source of irrigation water for residents throughout the county. By metering secondary connections and improving diversions, Smithfield Irrigation will be able to better serve its shareholders and the community. Meters will reduce consumption of water; diversions will increase the reliability of the system. This project will serve a community that has been battling against the current unprecedented drought that has reduced flows in the Logan River.

In addition, the general benefits include increased publish safety due to the elimination of drowning risk, increased reliable secondary water for crop life, and better water management and conservation due to the elimination of seepage. In addition, the project will significantly reduce the risk of canal blockage and canal bank failure that could result in hazardous conditions, be costly to repair, and prevent water from reaching many irrigators. This project will also reduce drought impacts by conserving water for its intended purpose.

2.4.2 - Subcriterion D.2: *Tribal Benefits*

The Department is committed to strengthening tribal sovereignty and the fulfillment of Federal Tribal trust responsibilities. The President's memorandum, Tribal Consultation and Strengthening Nation-to-Nation Relationships, asserts the importance of honoring the Federal Government's commitments to Tribal nations. Address the following, if applicable:

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

  This project will not impact tribal lands or ceremonial Indian sacred sites.

- *Does the proposed project support Tribal led conservation and restoration priorities, and/or incorporate or benefit indigenous traditional knowledge and practices?*

  This project will not impact tribal lands or ceremonial Indian sacred sites.

- *Does the proposed project directly support tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety through water quality improvements, new water supplies, increased renewable energy, or economic growth opportunities? Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?*

  This project will not impact tribal lands or ceremonial Indian sacred sites.

2.5 - Evaluation Criterion E – *Complementing On-Farm Irrigation Improvements*

*Up to **8 points** may be awarded for projects that describe in detail how they will complement on-farm irrigation improvements eligible for NRCS financial or technical assistance.*

If the proposed project will complement an on-farm improvement eligible for NRCS assistance, please address the following:

- *Describe any planned or ongoing projects by farmers/ranchers that receive water from the applicant to improve on-farm efficiencies.*
  - *Provide a detailed description of the on-farm efficiency improvements.*

    This project will conserve water that could be available for on-farm use within the Smithfield Irrigation Company water right allotted through company shares. The project will also increase the reliability and stability of water flow. In the past, the canal has been managed in a reactive method. With the upgrade of diversion structures and new pipeline pressurization, the system can operate in higher efficiency with less water loss, which will help ensure water is available for users when they need it in drought conditions.

  - *Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future?*

    Some farmers throughout the company have requested NRCS funding for on-farm improvements. Additionally, more shareholders are planning on applying with the NRCS. These applications are complementary to this project but are not made in direct response to this project.

  - *If available, provide documentation that the on-farm projects are eligible for NRCS assistance, that such assistance has or will be requested, and the number or percentage of farms that plan to participate in available NRCS programs.*

    These on-farm projects are not directly in response to this project.

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

Although farmers/shareholders have and continue to apply for funding through the NRCS for on-farm improvements, they are not directly in response to this project.

- *Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement.*

    - *Will the proposed WaterSMART project directly facilitate the on-farm improvement? If so, how? For example, installing a pressurized pipe through WaterSMART can help support efficient on-farm irrigation practices, such as drip-irrigation.*

      The irrigation system wide improvements of the SIC's canal will provide valuable information to help increase the efficiency of the main delivery system. However, this project will not directly facilitate on-farm improvements. It will complement them in the increased reliability and stability of water flows, but it does not directly facilitate them or make them possible.

    - *Will the proposed WaterSMART project complement the on-farm project by maximizing efficiency in the area? If so, how?*

      The proposed project will complement present and ongoing on-farm projects with their increased efficiency in water management. The proposed project's goal is to help increase the efficiency in which water is delivered to the agricultural and residential users. By upgrading four diversion structures and repairing Black Pipe section, less water will be lost or used for flush debris, this will in turn improve farm efficiency. Additionally, in the past there have been moments in which adjustments could not be made to the main canal quick enough and caused disruptions for on-farm watering practices. This often led to watering sets having to be restarted thus wasting water and time. This project will help increase the stability and reliability of the water delivery system for all shareholders.

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

    - *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.*

      This project will help conserve water throughout the system and will increase the stability and reliability of the water which will help conserve water for on-farm systems. However, this benefit has not been quantified in a manner that can provide an accurate water savings value.

- *Please provide a map of your water service area boundaries. If your project is selected for funding under this NOFO, this information will help NRCS identify the irrigated*

lands that may be approved for NRCS funding and technical assistance to complement funded WaterSMART projects.

Please reference Figure 1 for a map of the system.

2.6 - Evaluation Criterion F – *Readiness to Proceed*

*Up to **8 points** may be awarded for this criterion.*

Points may be awarded based upon the extent to which the proposed project is capable of commencing upon entering into a financial assistance agreement. Note: If your project is selected, responses provided in this section will be used to develop the scope of work that will be included in the financial assistance agreement.

Applications that include a detailed project implementation plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

- *Identify and provide a summary description of the major tasks necessary to complete the project. **Note: Do not repeat the more detailed technical project description provided in Section D.2.2.2 Application Content. This section should focus on a summary of the major tasks to be accomplished as part of the project.***

1) Project Funding
    a. Application and Securement of BOR WaterSMART Grant
    b. Application and Securement of Utah Division of Water Resources Loan
2) Environmental Clearances
    a. Cultural Review and Approvals
    b. Environmental Review and Approvals (CE, EA, or EIS)
3) Topographic Survey and Base Mapping
    a. Collection of Field Data
    b. Collection of Topography Data
    c. Mapping of Property Lines and Easements
4) Irrigation System Design
    a. Design Report
    b. Service Connection Design
    c. Diversion Designs
    d. Black Pipe Restoration Design
    e. Book of Specifications Development
5) Permitting
    a. Cache County and Smithfield Conditional Use Permits and Encroachment Permits
    b. Storm Water Pollution Prevention Permit
6) Materials Procurement
    a. Secure and Purchase Large Items
7) Contractor Procurement
    a. Select and Contract with Local Competent Contractor
8) Construction
    a. Construct Diversions
    b. Construct Black Pipe Restoration Elements
    c. Install Service Connections and Meters
9) Project Start Up
    a. Fill System and Inspect for Deficiencies
10) Project Close Out
    a. Complete Final Funding Reports
    b. Perform Operation and Maintenance Training
    c. Turn Completed System Over to Irrigation Companies for Operation

- *Describe any permits that will be required, along with the process for obtaining such permits.*

Various permits will be required for this project. The permits and the general process for their approval are listed below:

- Smithfield City Conditional Use – this permit requires an application and a meeting in which plans, easements, and documentation for use are needed.

- Smithfield Encroachment – this permit requires an application in which the plans are needed. This permit is obtained by the Contractor at the time of construction.

- Smithfield Zoning Clearance – this permit requires an application and a meeting in which plans, easements, and location requirements are needed.

- Cache County Conditional Use - this permit requires an application and a meeting in which plans, easements, and documentation for use are needed.

- Storm Water Pollution Prevention Plan – this permit requires an application and a special storm water prevention plan set. The plan set will be provided by the Engineer, but the full permit will be obtained by the Contractor at the time of construction.

- Environmental Clearance – this will be addressed in compliance with NEPA and the Bureau to ensure items are addressed properly.

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

  Design work required for this project will be a schematic of meter connections, the design of diversions, and the piping plan for both the Black Pipe and pressurized pipe. By having each of these elements professionally designed will reduce the risk of failure and ensure proper safety measure are taken.

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

  Once debris has been reduced in the system, SIC will enact a policy requiring agricultural irrigators to use smaller sprinkler nozzles to limit flow to less than seven gpm in accordance with the company's bylaws. The company will monitor users to ensure compliance. Once the funding has been awarded, financial policies may need to be altered or added to conform the Bureau of Reclamation's requirements. SIC is committed to implementing all new policies and performing all administrative actions that may be required for this project.

- *Describe the current design status of the project. If additional design work is required prior to construction, describe the planned process and timeline for completing the design work.*

Design for this proposed project has not started yet, it is anticipated to start in January 2025 once this grant application was awarded. There is no additional design or construction work required prior to this project.

- *Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: complete environmental and cultural compliance; mobilization; begin construction/installation; construction/installation (50% complete); and construction/installation (100% complete). Was the expected timeline for environmental and cultural compliance discussed with the local Reclamation regional or area office?*

  Attached in Appendix H is a detailed schedule for this project.

2.7 - Evaluation Criterion G - *Collaboration*

*Up to **5 points** may be awarded for projects that promote and encourage collaboration among parties in a way that helps increase the sustainability of the water supply.*

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

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

  The Utah Division of Water Resources have stated their support for this project and are excited to view its success. Likewise, the Cache County School District, Cache Water District and Smithfield Irrigation Company (the applicant) have also stated their support. The Cache Water District has also requested information regarding past improvements and reports on planned improvements, and Cache County School District is satisfied to see benefits this irrigation system optimization project could bring.

  Furthermore, the Federal Representative Blake Moore and Utah State Senator Chris Wilson expressed their support, because they believe this proposed project will significantly benefit the Cache Valley area and alleviate the Utah drought condition. Appendix A includes all letters of support from above entities and individuals.

- *What is the significance of the collaboration/support?*

  The Utah Division of Water Resources (DWRe) provides funding for water projects such as this. Their support is paramount in completing the project. Without their support the project could not move forward. With DWRe support, the irrigation company can secure the loan necessary to complete the project. DWRe's also helps promote future projects based on the funded projects.

Cache Water District provides a wealth of knowledge and expertise. Their support will provide suggestions on how to best finish this project in a cost-effective and efficient manner. Also, support from the Cache County School District is crucial, because the school district is willing to help manage and protect the water resources within Cache Valley. Therefore, their support for this project will help them further see the need to protect and conserve the water used in agricultural processes.

The endorsement of the Smithfield Irrigation System Wide Improvements project by Federal Representative Blake Moore and Utah State Senator Chris Wilson significantly underscores the project's importance. Their support highlights the project's critical role in addressing key issues such as water conservation, sustainable agriculture, and infrastructure modernization within their constituencies. It reflects a recognition of the project's potential to make tangible improvements in water management efficiency, environmental sustainability, and economic vitality in the region. This political backing also signals to community members and stakeholders that the project aligns with broader goals of enhancing public safety, supporting disadvantaged communities, and fostering economic growth through improved agricultural practices. Essentially, their endorsements serve as a testament to the project's capacity to address pressing local and regional challenges, contributing to a more resilient and prosperous future for the areas served.

Several meetings have been held with the Smithfield Irrigation Company board members to discuss the project and how to make the project feasible. Additionally, input from shareholders was gathered by the board members to gauge their interest in the project. The consensus was that this project will provide a desired and warranted benefit to the majority of the Smithfield Irrigation Company canal and pipeline users. All users along the canal will benefit by the reduction of open earthen channel ditches that require constant maintenance and the replacement of the Black Pipe which is prone to blockages. The Cache Highline Water Association board sees this as a major benefit to the entire system as well.

- *Will this project increase the possibility/likelihood of future water conservation improvements by other water users?*

  Yes, this project will increase the possibility of future water conservation improvements by other users. A successful project will encourage other cities and irrigation companies to find and implement similar municipal metering and piping projects. Once data is collected of water savings and presented, other communities will realize the possible benefits of the proposed project.

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

The amount of 853.3 ac-ft irrigation water can be saved through the reduction in overwatering practices and the piping and restoration of the Black Pipe section. These saved water in the irrigation canal can be allocated with higher efficiency. The enhanced water efficiency can lead to more sustainable farming practices, allowing for the cultivation of crops with reduced water input, which can be especially crucial in areas prone to drought.

Although it might not meet the standards required for drinking purposes without treatment, the saved irrigation water can be an invaluable resource for fire protection. Fire departments require large volumes of water for firefighting and emergency response. Utilizing saved irrigation water for this purpose can help ensure adequate supplies are available for municipal fire services, reducing the strain on potable water reserves and ensuring communities are better prepared for fire emergencies.

Additionally, in the industrial sector, saved irrigation water can be particularly beneficial for use in cooling towers. Cooling towers are essential components in many industries, including power generation, manufacturing, and chemical processing, where they help remove heat from various processes. Using non-potable water from irrigation savings in cooling towers can significantly reduce the demand for treated water and lower operational costs. It also promotes sustainable water use by recycling water through industrial processes.

Meanwhile, this proposed project possesses huge benefits to the environmental and recreational sectors. Conserving water helps maintain natural habitats, supports biodiversity, and can improve the quality of local water bodies by reducing withdrawals that may lead to lowered water levels and quality. Also, water bodies maintained at healthier levels support recreational activities such as fishing, boating, and swimming, thereby also supporting local economies dependent on tourism and recreation.

In summary, efficiently saving irrigation water not only supports the direct needs of agriculture but also contributes positively to broader environmental, social, and economic objectives, making such projects highly beneficial across multiple sectors.

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

  Attached in Appendix A are letters of support from the DWRe, the Cache County School District, the Cache Water District, Federal Representative Blake Moore, State Senator Chris Wilson.

2.8 - Evaluation Criterion H - *Nexus to Reclamation*

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

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

- *Does the applicant have a water service, repayment, or operations and maintenance (O&M) contract with Reclamation?*

  The Smithfield Irrigation Company does not have a water service, repayment, or operations and maintenance (O&M) contracts with Reclamation.

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

  No, the Smithfield Irrigation Company does not receive reclamation water.

- *Will the proposed work benefit a Reclamation project area or activity?*

  The proposed project is located in the Bear River Basin. Various projects have been completed through the Reclamation within the Bear River Basin. Below is a brief list of some of the projects.

  - Newton Lateral Piping Project (completed)
  - North and South Litz Canal Piping Project (in progress)
  - South Fields Earthen Canal Piping Project (completed)
  - Hansen and Ezola Piping Project (completed)
  - Quarter Circle Drive Section (completed)
  - Newton Water Users Piping Project (completed)
  - Newton Dam Outlet Project (completed)
  - Benson Canal Enclosure (completed)

- *Is the applicant a Tribe?*

  The applicant is not a tribe.

3 – Performance Measures

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved). For more information calculating performance measure, see Appendix A: Benefit Quantification and Performance Measure Guidance.

*All Water and Energy Efficiency Grants applicants are **required** to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with Water and Energy Efficiency Grants recipients describing the performance measure and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of Water and Energy Efficiency Grants.*

The proposed project will measure success based on systematic agriculture flow and pressure checks. The primary goal of this project is to clean the water brought into the system to allow for the use of smaller nozzles on the agricultural fields. Due to how the system was originally built, with risers installed on the main pipelines in some areas, it is not feasible to provide individual meters for specific farms. Therefore, SIC will implement an operational plan to check both flow rates and pressures of private irrigation systems to verify the irrigation systems are consuming the proper flow rates during use.

Checks will be accomplished by using portable meters with pressure gauges. SIC plans on building ten (10) portable meters equipped with pressure gages that can be installed on the end of a wheel line, handline, reel sprinkler, or other irrigation systems. These will be installed for a period of time on each system, typically 7 to 10 days, to verify that the private irrigation system is not pulling more water than 7 gpm per sprinkler head on average. If more water is being applied than this approved rate, different size nozzles will be required based on the system pressure as recorded by the pressure gages. If the private irrigation system has significant leaks in the pipes, then a notice will be issued that the system shall be repaired in a set period of time or either water will be cut off or other penalties will be exacted for that specific farm.

In addition to this data, total water consumption data will be recorded. Data reported to the Utah Division of Water Rights and internal water consumption data will be recorded and compared to prior years historic data to evaluate water consumption reduction in response to this project.

All data gathered through this process will be recorded in an online GIS environment that will track trends and provide warnings if trends are progressing negatively. Data provided by the temporary meters will be available to both the shareholders and SIC. With knowledge of accurate consumption data, the agricultural users will be able to utilize the data to help increase the efficiency for water consumption and increase crop yield.

In addition to monitoring water usage, SIC will also be able to determine energy savings as a result from this project. SIC can compare energy consumption values before and after the project implementation to determine energy savings. Since the pump station is projected to be unneeded at the completion of the project, all energy that the station used historically will be considered savings. Additionally, as water consumption is reduced on the agricultural systems as nozzles are adjusted properly for system pressures, the water being received from Summit Creak will be able to be utilized more effectively thus reducing the demand for water from the wells within the system. This will result in additional energy savings that will be measured through the comparison of electrical consumption statement from Rocky Mountain Power.

The historic energy consumption data will be added to the online GIS database for tracking purposes. As new energy consumption data comes in, the GIS database will be set to provide trend analysis to help further manage well operations to reduce energy consumption. This data, along with the water consumption data, will be reviewed by the board on a regular basis and an annual report will be provided to the shareholders to provide transparency and information to help induce further water and energy conservation.

4 – Project Budget

In the budget detail and narrative section, applicants should describe and justify requested budget items and costs. Applicants should provide details to support the SF-424A, "Object Class" categories or the SF-424C, "Cost Classification" categories. The budget narrative must clearly identify all items of cost (total estimated project cost), including those contributed as non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those covered using the funding requested from Reclamation, and any requested pre-award costs.

The total project cost is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party contributions necessary to complete the project. Applicants must include detailed descriptions of all cost justifications (see Reclamation's suggested format in Attachment B for more detail). Costs, including the valuation of third-party in-kind contributions, must comply with the applicable cost principles contained in 2 CFR, §200.

Note: The Budget Narrative Attachment Form in Grants.gov is to be used to upload the budget proposal.

4.1 - Funding Plan and Letters of Commitment

The total project cost is the sum of all allowable items of costs, including all required cost sharing and voluntary committed cost sharing, including third-party contributions, that are necessary to complete the project. Please include the following chart (Table 4) to summarize all funding sources. Denote in-kind contributions with an asterisk (*).

The funding plan for the project is as follows:

- 12.11% from Cache Highline Water Association: $ 400,000
- 6.44 % from Smithfield Irrigation Company: $ 212,415
- 36.45 % from Smithfield Irrigation Company through the Utah Division of Water Resources Loan: $ 1,203,685
- 45 % Bureau of Reclamation WaterSMART Grant: $ 1,485,900

Letters of support for this project and funding plan have been received from Smithfield Irrigation Company and Utah's Division of Natural Resources can be found in Appendix A. A draft copy of the official resolution from Smithfield Irrigation Company is included in Appendix G.

The funding plan is to borrow $ 1,203,685 at a potential interest rate of 1% from the State of Utah Board of Water Resources. The ratification of the loan will take place at a Water Resource Board meeting. Passing of the loan by the Division of Water Resources Board is the only constraint on the funds. There are no other known contingencies that are associated with the funding commitment. SIC is prepared to contribute $212,415 for the project. The remaining funds are requested to come from the BOR WaterSMART Grant. Table 5 shows a summary of

the non-federal funding sources, their amounts, the non-federal subtotal, and the amount requested from the BOR WaterSMART Grant.

Table 5: Summary of Non-Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	
Cache Highline Water Association	$400,000
DWRe Water Savings Loan	$1,203,685
Company Contributions	$212,415
Non-Federal Subtotal	**$1,816,100**
REQUESTED RECLAMATION FUNDING	**$1,485,900**

4.2 - Budget Proposal

The budget proposal should include detailed information on the categories listed below and must clearly identify all items of cost, ***including those that will be contributed as non-Federal cost share by the applicant (required and voluntary), third-party in-kind contributions, and those that will be covered using the funding requested from Reclamation****, and any requested pre-award costs (Table 5).*

Table 6: Total Project Cost

CONTRACTUAL COSTS	AMOUNT
Engineering	$526,000
Environmental	$16,000
Material Procurement and Contractor Services	$2,760,000
SOURCES	**AMOUNT**
Costs to be reimbursed with the requester Federal funding	$1,485,900
Costs to be paid by the applicant	$1,816,100
TOTAL PROJECT COST	**$3,302,000**

4.3 - Budget Narrative

Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in Section B of the SF-424A. The types of information to describe in the narrative include, but are not limited to, those identified in the Budget Narrative Guidance attached to this NOFO. Applicants may elect to use the Budget Detail and Narrative

spreadsheet for their budget narrative (see attached). Costs, including the valuation of third-party in-kind contributions, must comply with the applicable cost principles contained in 2 CFR Part §200.

The budget narrative has been attached separately as part of the online submission.

4.4 – Pre Awards Costs

If the proposed project is selected, the awarding Reclamation Grants Officer will review the proposed pre-award costs to determine if they are consistent with program objectives and are allowable in accordance with the authorizing legislation. Proposed pre-award costs must also be compliant with all applicable administrative and cost principles criteria established in 2 CFR Part §200 and all other requirements of this NOFO. In no case will costs incurred prior to April 1, 2022, be considered for inclusion in the proposed project budget.

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

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

The only pre award cost at the time of submission is the cost to prepare and submit this grant application. Smithfield Irrigation Company is covering the cost of preparation and grant submittal. During spring and fall of 2025, permitting and predesign costs may be incurred; the applicant is requesting that funding go towards these costs which are included in the budget.

5 – 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 should consider 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. The application should include the answers to:

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

  Smithfield Irrigation Company will not begin any ground-disturbing activities on this project prior to the acceptance of their completed environmental and cultural resources compliances as approved by a Reclamation Grants Officer. Smithfield Irrigation Company further understand that this documented notification pertains to all components of this project including those funded by the non-Federal cost-sharing entities, namely Smithfield Irrigation Company and the State of Utah's Division of Natural Resources.

  This project involves digging and pipe installation in a waterway. The waterway is regularly chemically dosed and cleaned therefore it is not suitable for habitat. The ditch is regularly cleaned with an excavator and burning to help weed and grub control. Best management practices will be used to protect and conserve air quality, water quality, and habit including operating during normal business hours, all equipment complying with emissions regulations, and only disturbing area in the canal right of way. Since the vegetation surrounding the black pipe is severely overgrown, vegetation will be removed to complete this project.

- *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?*

  There are two threatened species within Smithfield Irrigation Company's service boundaries. The first is a Yellow-Billed Cuckoo and the second is a Utah-Ladies Tresses. These species have been identified through a preliminary IPaC evaluation. A full and thorough environmental evaluation of the area will be completed before construction is started to ensure no activities performed will endanger these species.

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

  There are no wetlands or other surface waters inside the project boundaries.

- *When was the water delivery system constructed?*

  Smithfield Irrigation Company was founded in 1915 due to a merger of Smithfield Irrigation District and Brickyard Systems. This merger combined both canal systems. Today SIC operates a fully pressurized system.

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

  Alterations of the irrigation system will be to the diversion structures. Upgrades to the diversions will include new screens, improved control gates, and new concrete structures. The diversions were first constructed in 1989. The Black Pipe will also be replaced as a part of this project.

- *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.*

  There are no structures located in the project area eligible for historic place registration to the knowledge of SIC. A cultural resources evaluation will be conducted.

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

  There are no known archeological sites in the proposed project area to the knowledge of SIC.

- *Will the proposed project have a disproportionate and adverse effect on any communities with environmental justice concerns?*

  This project will not have a disproportionately high impact on low income or minority populations.

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

  This project will not impact tribal lands or ceremonial Indian sacred sites.

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

  The project will not contribute to the spread of non-native species or noxious weeds and will help reduce the spread.

6 – Required Permits or Approvals

You should state in the application whether any permits or approvals are necessary and explain the plan for obtaining such permits or approvals.

Note: Improvements to Federal facilities that are implemented through any project awarded funding through this NOFO must comply with additional requirements. 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.

Environmental clearance will be required before construction can begin. Preliminary research with the Historic Places and National Wetlands Inventory suggests that there are no apparent areas to be concerned with at this time. Permits with Storm Water Pollution & Prevention Plans and City of Smithfield permits are required for the project, but it is not anticipated that these permits will have major consequences with the project.

The following permits and clearances will be acquired before construction:

- Environmental Clearance
- Smithfield City Encroachment
- Smithfield City Conditional Use
- Smithfield City Zoning Clearance
- Storm Water Pollution Prevention Plan (SWPPP)

An environmental clearance will be required before construction can begin. Preliminary research with the Historic Places and National Wetlands Inventory suggests that there are no apparent areas to be concerned with at this time. Permits with Storm Water Pollution & Prevention Plans, Cache County, and City of Smithfield permits are required for the project, but it is not anticipated that these permits will have major consequences with the project.

7 – Overlap or Duplication of Effort Statement

Applicants should provide a statement that addresses if there is any overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel. If any overlap exists, applicants must provide a description of the overlap in their application for review.

Applicants should also state if the proposal submitted for consideration under this program does or does not in any way duplicate any proposal or project that has been or will be submitted for funding consideration to any other potential funding source—whether it be Federal or non-Federal. If such a circumstance exists, applicants must detail when the other duplicative proposal(s) were submitted, to whom (Agency name and Financial Assistance program), and when funding decisions are expected to be announced. If at any time a proposal is awarded funds that would be duplicative of the funding requested from Reclamation, applicants must notify the NOFO point of contact or the Program Coordinator immediately.

There is presently no overlap or duplication between this proposed project and any other active or anticipated proposal.

8 – Conflict of Interest Disclosure Statement

Per 2 CFR §1402.112, "Financial Assistance Interior Regulation" applicants should state in the application if any actual or potential conflict of interest exists at the time of submission. Submission of a conflict-of-interest disclosure or certification statement is mandatory prior to issue of an award.

There are no actual or potential conflicts of interest at the time of submission that the Smithfield Irrigation Company is aware of.

8.1 – Applicability

This section intends to ensure that non-Federal entities and their employees take appropriate steps to avoid conflicts of interest in their responsibilities under or with respect to Federal financial assistance agreements.

In the procurement of supplies, equipment, construction, and services by recipients and by sub recipients, the conflict of interest provisions in 2 CFR §200.318 apply.

There are no actual or potential conflicts of interest at the time of submission. Smithfield Irrigation Company will maintain oversight of contractor's performance in accordance with the terms and conditions of the contract and best management practices.

Smithfield Irrigation Company agrees to maintain oversight of contractor's performance in accordance with the terms and conditions of the contract and best practices. Additionally, Smithfield Irrigation Company will remain in compliance with provisions in 2 CFR §1402.112

8.2 – Notification

Non-Federal entities, including applicants for financial assistance awards, must disclose in writing any conflict of interest to the DOI awarding agency or pass- through entity in accordance with 2 CFR §200.112.

Recipients must establish internal controls that include, at a minimum, procedures to identify, disclose, and mitigate or eliminate identified conflicts of interest. The successful applicant is responsible for notifying the Financial Assistance Officer in writing of any conflicts of interest that may arise during the life of the award, including those that have been reported by sub recipients.

There are no actual or potential conflicts of interest at the time of submission. If a conflict of interest arises, Smithfield Irrigation Company will handle the situation appropriately and then notify the financial assistance officer in writing.

If a conflict of interest arises, Smithfield Irrigation Company will handle the situation appropriately and then notify the financial assistance officer in writing. With funding secured,

Smithfield Irrigation Company will verify that current internal contracts are adequate and will update them if needed.

8.3 – Restrictions on Lobbying

Non-Federal entities are strictly prohibited from using funds under a grant or cooperative agreement for lobbying activities and must provide the required certifications and disclosures pursuant to 43 CFR §18 and 31 USC §1352.

Smithfield Irrigation Company will not use any funding from this grant for lobbying activities.

Smithfield Irrigation Company acknowledges and certifies the required lobbying statements. Smithfield Irrigation Company does not employ a lobbyist and has not completed any activities that would require filling out federal form SF-LLL.

8.4 – Review Procedures

The Financial Assistance Officer will examine each conflict of interest disclosure on the basis of its particular facts and the nature of the proposed grant or cooperative agreement, and will determine whether a significant potential conflict exists and, if it does, develop an appropriate means for resolving it. Enforcement. Failure to resolve conflicts of interest in a manner that satisfies the government may be cause for termination of the award. Failure to make required disclosures may result in any of the remedies described in 2 CFR §200.339, Remedies for noncompliance, including suspension or debarment (see also 2 CFR §180).

Smithfield Irrigation Company understands the need for a review process and will readily assist as needed.

9 – Uniform Audit Report Statement

All U.S. states, local governments, federally recognized Indian Tribal governments, and non-profit organizations expending $750,000 USD or more in Federal award funds in the applicant's fiscal year must submit a Single Audit report for that year through the Federal Audit Clearinghouse's Internet Data Entry System. U.S. state, local government, federally recognized Indian Tribal governments, and non-profit applicants must state if your organization was or was not required to submit a Single Audit report for the most recently closed fiscal year. If your organization was required to submit a Single Audit report for the most recently closed fiscal year, provide the Employer Identification Number (EIN) associated with that report and state if it is available through the Federal Audit Clearinghouse website.

SIC was not required to submit a Single Audit report for the prior fiscal year. As such, an audit report is not available through the Federal Audit Clearinghouse website. The Irrigation Company's Employer Identification Number (EIN) is 87-0177285.

10 – Certification Regarding Lobbying

Applicants requesting more than $100,000 in Federal funding must certify to the statements in 43 CFR §18, Appendix A. If this application requests more than $100,000 in Federal funds, the authorized official's signature on the appropriate SF-424 form also represents the applicant's certification of the statements in 43 CFR § 18, Appendix A.

Smithfield Irrigation Company acknowledges and certifies the referenced lobbying statements. Smithfield Irrigation Company does not employ a lobbyist. The signed SF-424 form (application for federal assistance) is attached to this grant application submittal for reference.

11 – SF-LLL: Disclosure of Lobbying Activities

If applicable, a fully completed and signed SF-LLL: Disclosure of Lobbying Activities form is required if the applicant has made or agreed to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. This form cannot be submitted by a contractor or other entity on behalf of an applicant.

Smithfield Irrigation Company will not use any funding from this grant for lobbying activities. SIC does not employ a lobbyist. SIC has not completed any activities that would require filling out federal form SF-LLL.

12 – Letters of Support

You should include any letters from interested stakeholders supporting the proposed project. To ensure your proposal is accurately reviewed, please attach all letters of support as an appendix. Letters of support received after the application deadline for this NOFO will not be considered in evaluating your proposed project. These letters do not count within the 125-page maximum.

Letters of support for the project are attached in Appendix A. Appendix A includes Letters of Support from the following individuals or groups:

- Department of Natural Resources – Division of Water Resources: Marisa Egbert
- House of Representatives: Representative Blake Moore
- Utah State Senator: Senator Chris Wilson
- Smithfield Irrigation Company: Pat Draper, President
- Cache Water District: Nathan Daugs, Manager
- Cache County School District: Scott R. Rigby
- Cache Highline Water Association: Lyle D. Thornley

13 – Official Resolution

If selected, the applicant must provide prior to award an official resolution adopted by your organization's board of directors or governing body, or, for state government entities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of a financial assistance award under this NOFO, verifying:

- *The identity of the official with legal authority to enter into an agreement*
- *The board of directors, governing body, or appropriate official who has reviewed and supports the application submitted*
- *That your organization will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement*

An official resolution meeting the requirements set forth above is mandatory before an award of funding will be made.

An official resolution meeting the criteria set forth above will be signed and submitted to the Bureau of Reclamation prior to award. A draft copy of the resolution has been attached in Appendix G.

14 – Letter of Funding Commitment

If a project is selected for award under this funding opportunity and cost share funding is anticipated to be provided by a source other than the applicant, the third-party cost share must be supported with letters of commitment prior to award. Letters of commitment should identify the following elements:

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

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 execute a financial assistance agreement until non-Federal funding has been secured or Reclamation determines that there is enough evidence and likelihood that non-Federal funds will be available to the applicant after executing the agreement.

Appendix A in this report includes Letters of funding commitment from the following individuals or groups:

- Smithfield Irrigation Company: Pat Draper, President
- Cache Highline Water Association: Lyle D. Thornley, Treasurer

15 – Unique Entity Identifier and System for Award Management

Register with the System for Award Management

Each applicant (unless the applicant is an individual or Federal awarding agency that is excepted from those requirements under 2 CFR 25.110 (b) or (c), or has an exception approved by the Federal awarding agency under 2 CFR 25.110 (d)) is required to:

- *Be registration in SAM before submitting an application. Instructions for registering are available at sam.gov/content/home. The "Help" tab on the website contains User Guides and other information to assist you with registration. The Grants.gov "Register with SAM" page also provides detailed instructions. You can also contact the supporting Federal Service Desk for help registering in SAM.* ***There is no cost to register with SAM.gov****. There are third-party vendors who will charge a fee in exchange for registering entities with SAM.gov;* ***please be aware you can register and request help for free****. Note: An organization's SAM.gov registration process may take up to 6 weeks to complete, so please allow sufficient time to ensure applications are submitted before the closing date.* ***Applicants that do not have an active SAM registration will not be able to submit an electronic application in Grants.gov****.*
- *Provide a valid UEI in its application. You are required to register in SAM.gov prior to submitting a federal award application and obtain a UEI. A UEI will be assigned to entities upon registering with SAM.*
- *Maintain an active SAM registration with current information at all times during which it has an active Federal award or plan under consideration by a Federal award agency.*
- *Once registered in SAM.gov, entities must renew and revalidate their SAM.gov registration at least once every 12 months from the date previously registered.*
- *Entities are strongly encouraged to revalidate their registration as often as needed to ensure their information is up to date and reflects changes that may have been made to the entity's Internal Revenue Service information.*

See the "Submission Requirements" section of this document below for more information on SAM.gov registration.

Smithfield Irrigation Company has an active registration with SAM, with the unique entity ID (UEI) as GSCCHFZL4KW3. SIC will maintain the proper registrations throughout the project.

Appendix A

Commitment Letters and Support Letters

2/15/2024

Bureau of Reclamation
Upper Colorado Regional Office
125 South State, Room 8100
Salt Lake City, UT 84138-1147

RE: Letter of Support for Smithfield Irrigation Company – Irrigation System Improvements 2024

Bureau of Reclamation Application Review Committee:

Smithfield Irrigation Company appreciates the opportunity to pursue grant funding under the Water and Energy Efficiency Grant FY 2024. This project seeks to improve or replace four aging and deteriorating concrete diversion structures. Improving these diversions will help to reduce system blockages caused by debris. The project will also replace an aging supply pipeline with a new pressurized line which will allow a downstream pump station to be removed from the system. These proposed improvements will provide greater water savings for shareholders and other downstream users.

Grant funds will play an important role in making the proposed project possible. Smithfield Irrigation Company is committed to paying for all costs not covered by this application opportunity with existing resources.

Thank you for your consideration,

Pat Draper 15 Feb 2024

Pat Draper, President
Smithfield Irrigation Company.
27 West Center Street
Smithfield, Utah 84335

CACHE HIGHLINE
WATER ASSOCIATION

P.O. Box 100
Providence
Utah 84332

February 22, 2024

Bureau of Reclamation
Upper Colorado Regional Office
125 South State, Room 8100
Salt Lake City, UT 84138-1147

RE: Letter of Financial Commitment for Smithfield Irrigation Company – Irrigation System Improvements 2024

Bureau of Reclamation Application Review Committee:

It is the understanding of Cache Highline Water Association (CHWA) that Smithfield Irrigation Company (SIC) is seeking a grant from the Bureau of Reclamation to address their intake structures along Summit Creak including the Black Pipe. The Black Pipe is owned by the CHWA and is used as the exchange point for water between the CHWA and SIC.

CHWA would like to state their official support of this project and to commit a minimum of $400,000.00 to help construct this project.

Grant funds will play an important role in making the proposed project possible. Cache Highline Water Association is committed to assisting in the completion of this project and costs not covered by this application opportunity with existing resources.

Thank you for your consideration,

Respectfully,

X Lyle D Thornley (SIGNATURE)

Lyle D. Thornley
Treasurer
lyle@printwatkins.com
Cache Highline Water Association
3700 S 450 W Nibley, UT, 84321

BLAKE D. MOORE
1ST DISTRICT, UTAH

1131 LONGWORTH HOB
WASHINGTON, D.C. 20515
202–225–0453

324 25TH STREET
OGDEN, UT 84401
801–625–0107

Congress of the United States
House of Representatives
Washington, DC 20515–4401

COMMITTEES

WAYS AND MEANS
SUBCOMMITTEE ON HEALTH
SUBCOMMITTEE ON SOCIAL SECURITY
SUBCOMMITTEE ON WORK AND WELFARE

BUDGET

BLAKEMOORE.HOUSE.GOV

February 20, 2024

Camille Calimlim Touton
Commissioner
Bureau of Reclamation
1849 C Street NW
Washington, DC 20240

Dear Commissioner Touton,

I write today in reference to the Smithfield Irrigation Company's application for grant funding under the Bureau of Reclamation's WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2024 funding opportunity.

The proposed project includes replacing and pressurizing an aging supply pipeline and replacing four diversion structures. As the Representative for Utah's 1st Congressional District, I understand the importance of water and energy conservation in the state of Utah and am thankful for Smithfield Irrigation Company's efforts to optimize their system and conserve water and energy.

I appreciate your full and fair consideration of this important grant application.

Should you have any questions, please feel free to contact Rebekah Rodriguez, my Legislative Director, at rebekah.rodriguez@mail.house.gov.

Sincerely,

Blake D. Moore

Representative Blake Moore
Member of Congress

CACHE WATER DISTRICT

2/21/2024

Pat Draper, President
Smithfield Irrigation Company
27. West Center Street
Smithfield, Utah 84335

RE: Letter of Support for Smithfield Irrigation Company – Irrigation System Improvements 2024

Dear Mr. Draper:

The purposes of the Cache Water District include planning for and facilitating the long-term conservation, development, protection, distribution, management and stabilization of water rights and water supplies for domestic, irrigation, power, manufacturing, municipal, recreation and other beneficial uses, including the natural stream environment, in a cost-effective way to meet the needs of the residents and growing population of Cache County. It is our goal to help all water users in the Cache Valley area to manage, use, and conserve water in the most economical and effective way possible. This includes helping communities and irrigation companies manage their water more effectively with elements such as meters, SCADA data bases, quality distribution systems, etc.

The Smithfield Irrigation Company is proposing improvements to replace aging diversion structures and a supply pipeline in their system. The improvements will help to improve the functionality of the diversions, limit debris, decrease water loss, and increase system efficiency. We believe this project will be a great benefit to the water users throughout Smithfield City.

Sincerely,

Nathan Daugs, Manager
Cache Water District
435-999-0051

CACHE WATER DISTRICT

2/20/2024

Pat Draper, President
Smithfield Irrigation Company.
27 West Center Street
Smithfield, Utah 84335

RE: Letter of Support for Smithfield Irrigation Company – Irrigation System Improvements 2024

Dear Pat Draper,

I'm writing to express my support for the proposed improvements for the Smithfield Irrigation Company, which include replacing a deteriorating pipeline and four concrete diversion structures. As the State Senator for Senate District 2, and an advocate for Cache Valley's natural resources, I understand the importance of projects that improve water efficiency for our community. The diversion improvements in the Smithfield Irrigation Company canals are important for increasing the water available downstream. The project addresses water needs and promotes development, helping to make Cache Valley a more attractive place to live and do business.

I wholeheartedly endorse the diversion improvements and encourage the Bureau of Reclamation application review panel to favorably consider this application.

Sincerely,

Senator Chris Wilson
cwilson@le.utah.gov
Utah Senate District 2
350 North State, Suite 320
Salt Lake City, UT

State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Department of Natural Resources

JOEL FERRY
Executive Director

Division of Water Resources

CANDICE A. HASENYAGER
Division Director

February 15, 2024

Pat Draper, President
Smithfield Irrigation Company
27 West Center Street
Smithfield, Utah 84335

RE: Letter of Support for Smithfield Irrigation Company: Irrigation System Improvements 2024

Mr. Draper:

The Utah Division of Water Resources understands that the Smithfield Irrigation Company is seeking federal funds through the Bureau of Reclamation's WaterSMART grant program. The Division would like to extend its support for the proposed irrigation system improvements. The improvements will include replacing four aging diversion structures and an aging pipeline within the company's system. These improvements will increase the functionality of the diversions to reduce debris buildup. They will also decrease water loss and increase overall system efficiency.

The Division's mission is to plan, conserve, develop and protect Utah's water resources. Over the years, the Division has funded similar projects throughout the state. This project falls within the Division's overall objectives and could receive funding upon request.

Thank you,

Marisa Egbert, P.E.
Project Funding Section Manager

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

2/15/2024

Pat Draper, President
Smithfield Irrigation Company
27 West Center Street
Smithfield, Utah 84335

RE: Letter of Support for Smithfield Irrigation Company – Irrigation System Improvements 2024

Dear Mr. Draper:

As a representative of the Cache County School District, I have an interest in the citizens in and around Smithfield who are served by our schools. The project that Smithfield Irrigation Company is proposing will improve diversion structures to help limit debris in the irrigation system thus benefiting local residents. In addition to benefiting Smithfield citizens, these improvements may benefit Sunrise Elementary in Smithfield. Sunrise currently has an irrigation connection that has been out of use due to heavy debris that flows through nearby canals. The new diversion improvements will reduce debris and will increase the potential that this connection could be used. I support Smithfield Irrigation Company in the pursuit of funding for these improvements.

Sincerely,

Scott R. Rigby
scott.rigby@ccsdut.org
Director of Finance
Cache County School District
84 East 2400 North, North Logan Utah 84341
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CACHE COUNTY
SCHOOL DISTRICT

Appendix G

Official Resolution Draft

OFFICIAL RESOLUTION

OF THE

Smithfield Irrigation Company

Resolution No. 2024 -1

The President of the Company is Pat Draper, and he will be the legal authority on the project.

AUTHORIZING THE PRESIDENT OF THE SMITHFIELD IRRIGATION COMPANY TO APPLY FOR A CONTRIBUTION GRANT FROM THE U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF RECLAMATION, FOR THE INSTALLATION OF IRRIGATION METERS AND SYSTEM WIDE IMPROVEMENTS.

WHEREAS, The Smithfield Irrigation Company, (the "Company") of Smithfield, Utah deems it necessary to apply to the Department of the Interior, Bureau of Reclamation, for funding through a cost-sharing grant, shall not exceed ($ 3,302,000 Total Project, $ 1,485,900 WaterSMART Grant) for installation of irrigation meters and system-wide improvements, including improving diversions and wells.

WHEREAS, The Company intentions are to provide the remaining funding through a Utah Water Resources loan, a Utah Secondary Metering Grant, and/or company finances specified in the funding plan.

WHEREAS, the Company will work with Reclamation to meet environmental compliance and established deadlines for the entering into a grant or cooperative agreement.

Date: _____

_____
Pat Draper, President

ATTEST:

_____
Steven Wood, Project Manager