Fremont-Madison Irrigation District

Grassy Lake Automation and SCADA Project

Small Scale Water Efficiency WaterSMART Grant Proposal January 2024

Funding Opportunity Number R24AS00059

Grassy Lake Reservoir

APPLICANT:
Fremont-Madison Irrigation District
350 North 6th West
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Date: January 5, 2024

Applicant Name: Fremont-Madison Irrigation District-Category A Applicant

City, County, State: Saint Anthony, Fremont, Idaho

Project Manager:
Name: Aaron Dalling
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Project Funding Request: Small Scale Water Efficiency Projects- Total Cost $61,388.00. Fremont-Madison Irrigation District is requesting 50% funding from Reclamation or $30,694.00.

Project Summary

Fremont-Madison Irrigation District (Fremont-Madison) proposes to retrofit the existing gates at Grassy Lake Reservoir with automation and remote operation equipment. This system will then be connected to our existing SCADA systems. The gates are currently run via a 60-year-old propane generator. This generator will be eliminated and replaced with a battery system charged with solar panels. Remote operation equipment will be installed, allowing us to adjust water releases from our office. Grassy Lake is a 90-minute drive from our office on a good day. Often, in the spring, the road is still inaccessible to wheeled vehicles because of snow and mud until mid-June requiring the use of snowmobiles or side-by-sides with tracks. This turns a simple flow adjustment during spring runoff into a full day long adventure. By replacing the old and outdated equipment with remotely operable equipment it will eliminate the need to make these trips. It will also upgrade the reservoir with modern technology.

Automation was identified in the Henry's Fork Basin Study as one of the most cost-effective means of conserving water within our watershed.

Our goal is to commence this project in July of 2025 and complete the project in that same month. This project is estimated to take no longer than 30 days to complete.

Grassy Lake Reservoir is a Reclamation facility.

Project Location

Attachment A provides the geographic locations on a map.

Grassy Lake Reservoir is located in Teton County Wyoming on Grassy Creek which is tributary to the Fall River. Grassy Lake Reservoir is located roughly 40 miles east of Ashton, Idaho. The final 22 miles are on dirt roads.

Table 1

Location Name	Latitude	Longitude	County/State
Grassy Lake Reservoir	44°7'42.06"N	II0°48'22.60"W	Teton/Wyoming

Technical Project Description

Provide a comprehensive description of the technical aspects of your project, including the scope of work to be accomplished and the approach for the on-the-ground project. This description should provide detailed information about the project materials and equipment including what is currently installed and a description of the upgrade being made. Include in your description the necessary site preparation, removal of materials, motorized and rotating equipment required for installation, site laydown and mobilization areas, and areas impacted by construction. This section provides an opportunity for the applicant to provide a clear description of the technical nature and installation process of the project and to address any aspect of the project that reviewers may need additional information to understand.

Please do not include your project schedule and milestones here; that information is requested in response to the Evaluation Criterion C-Implementation and Results. In addition, please avoid discussion of the benefits of the project. which are also requested in response to evaluation criteria. This section is solely intended to provide an understanding of the technical aspects of the project.

Please note, if the work/or which you are requesting funding is a phase of a larger project, please only describe the work that is reflected in the budget and exclude description of other activities or components of the overall project.

Fremont-Madison proposes retrofitting the existing gates at Grassy Lake Reservoir with automation and connecting it in with our existing SCADA systems. The gates are currently run via a 60-year-old propane generator.

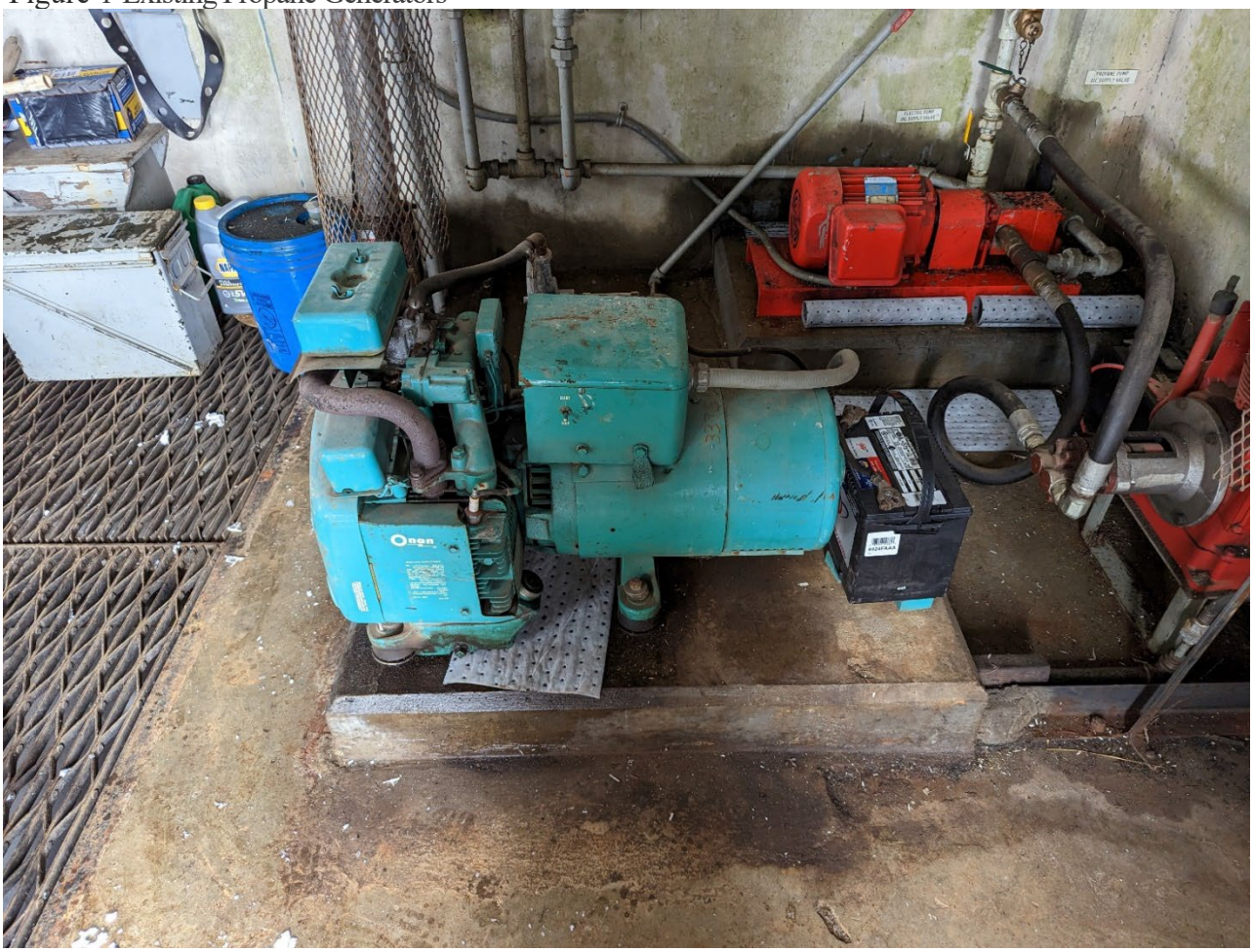
The existing propane generator and backup propane generator (See Figure 1) will be replaced with a battery system charged with solar panels. The solar panels will be installed outside the gatehouse on a concrete pad. This system will operate the guard gate, which is located 500ft up into the tunnel, the clamshell valve located in the gate house and the lights and ventilation for the tunnel/gate house.

Two hydraulic pumps will be needed. One as the primary and one as a backup to prevent

potential issues that could be dangerous for the facility and community.

Automation and communications equipment will then be installed so that we can control reservoir releases remotely from our SCADA system.

Figure 1-Existing Propane Generators



Technical Proposal: Evaluation Criteria

The evaluation criteria portion should be addressed in the technical proposal section of the application. Applications should thoroughly address each criterion and any sub-criterion in the order presented below. **Applications will be evaluated against the evaluation criteria listed below.**

Evaluation Criterion A. Project Benefits (35 points)

Up to **35 points** may be awarded based upon evaluation of the benefits that are expected to result from implementing the proposed project. This criterion considers a variety of project benefits, including the significance of the anticipated water management benefits and the

public benefits of the project. This criterion prioritizes projects that modernize existing infrastructure to address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflict in the region.

If the work described in your application is a phase of a larger project, only discuss the benefits that will result directly from the work discussed in the technical project description and that is reflected in the budget, not the larger project.

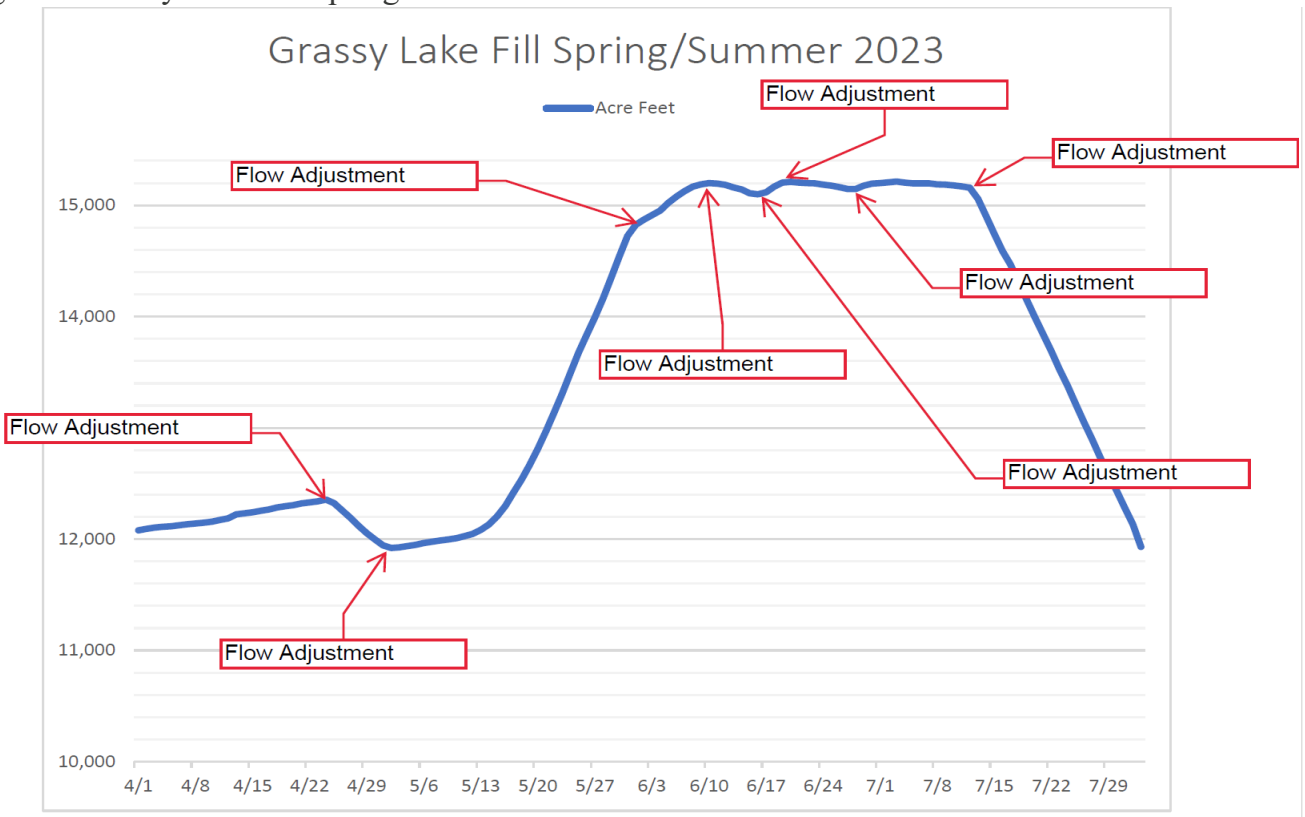
Benefits to the Category A Applicant's Water Delivery System: Describe the expected benefits to the Category A applicant's water delivery system. Address the following:

Clearly explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers. Consider:

- Will the project result in more efficient management of the water supply?

Our water supply and the supply of the Upper Snake Reservoir System will also benefit. With remote operations equipment we can set reservoir releases to match inflow once the reservoir is full and adjust the reservoir release as inflow changes. This will reduce or eliminate the chance that we might not have the reservoir full at the beginning of irrigation demand. In both 2022 and 2023 we would make a trip up to increase the release to avoid surcharge and then need to make another trip back up once the reservoir drafted below full to ensure a full reservoir at the beginning of irrigation demand. (See figure 2).

Figure 2-Grassy Lake fill Spring/Summer 2023



Remote Operations of the gate will reduce the risk of spilling below Milner while there is still space in Grassy Lake as an upstream reservoir.

- Where any conserved water as a result of the project will go and how it will be used?

Water conserved by this project can be held in the reservoir until it is needed. This project will also help us more closely meet our flow target on the Henry's Fork River which will reduce required releases from Island Park.

Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers. Consider:

- Are customers not currently getting their full water right at certain times of year?

So far customers have received their full water rights. This project reduces the risk customers wouldn't get their full water rights in the future.

- Does this project have the potential to prevent lawsuits or water calls?

Yes, better management of available water on the Fall River will help prevent future lawsuits or water calls.

- What are the consequences of not making the improvement?

The consequence of not making this improvement is not having a full reservoir at the beginning of irrigation demand.

Additionally, we put the safety of our staff at risk by making trips to the reservoir before the road is passable for wheeled traffic. This project will eliminate the need for these trips.

This project will save us time and allow us to focus on other aspects of our water deliveries and management. This project would have eliminated 12 required staff days in May and June alone this year.

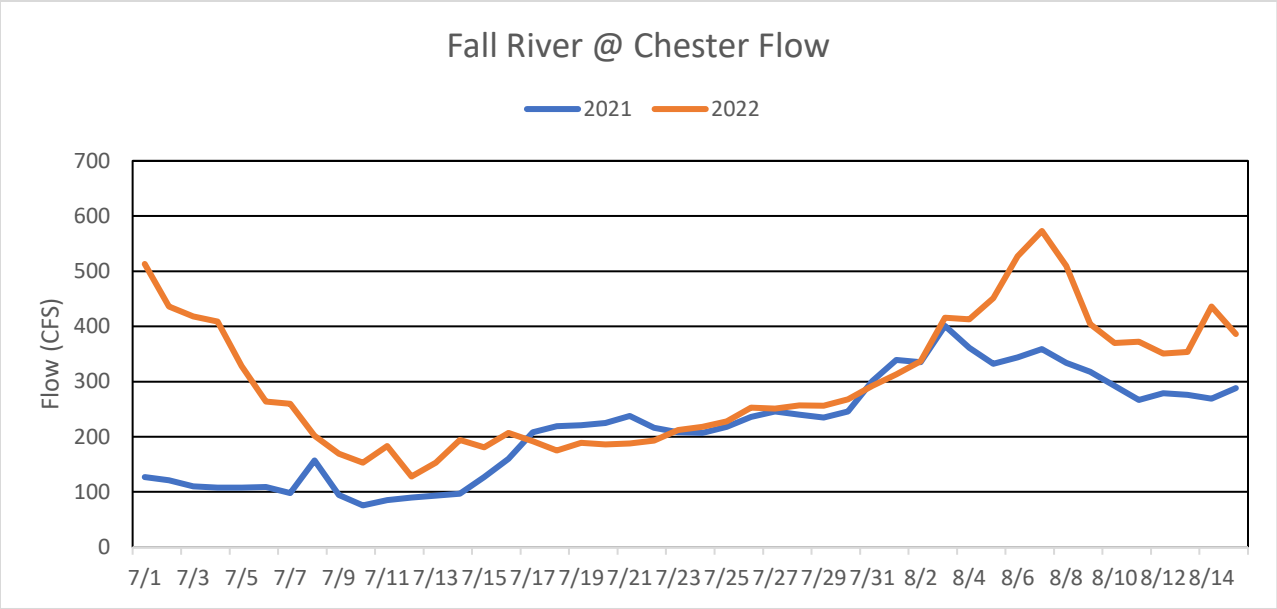
- Are customer water restrictions currently required?

No, this project will help prevent this in the future.

- Other significant concerns that support the need for the project?

Another significant benefit of remote operations at Grassy Lake is being able to adjust reservoir releases to meet irrigation demand on the Fall River. Historically, a release is set and left for a period during the irrigation season. Due to travel time, it is not realistic to make in-season adjustments to meet a flow target on the Fall River that would benefit both irrigator and recreationist. This would have been especially beneficial during the drought years of 2021 and 2022. Figure 3 illustrates the river flows at the Chester Gauge during the peak of the irrigation season. This gauge is below all the irrigation diversions on the Fall River and illustrates the flow variation in those years. As you can see flow varies greatly during this six-week period. Installing the remote-control equipment will allow us to make adjustments to reservoir releases and maintain a more consistent flow in the river.

Figure 3. Fall River Flows 2021 and 2022



Broader Benefits: Describe the broader benefits that are expected to occur as a result of the project. Consider:

Will the project improve broader water supply reliability at sub-basin or basin scale?

- Will the proposed project increase collaboration and information sharing among water managers in the region? Please explain.

Yes, this project will increase collaboration and available information to Fremont-Madison, Reclamation and the canal companies on the Fall River. This project will eliminate a point of contention between Fremont-Madison and Reclamation on the management of Grassy Lake Reservoir.

- Is the project in an area that is experiencing, or recently experienced, drought or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale? Please explain.

There is a significant amount of water delivered via exchange on the Fall River, meaning it is delivered from reservoirs it cannot be physically delivered from, rather it is delivered via exchange. This includes storage water physically held in Island Park Reservoir, Jackson Lake Reservoir and American Falls Reservoir, See Table 2. In total 68,428-acre feet were assigned to the Fall River in 2022 to be delivered via exchange. The only actual storage on the Fall River is Grassy Lake Reservoir which holds a total of 15,180-acre feet.

Table 2-Storage Water Delivered Via Exchange on the Fall River

Reservoir	Fall River Assignment 2022 (AF)
Island Park	52,522
Jackson Lake	5,883
American Falls	10,024
Total	**68,428**

In recent years, specifically 2021 and 2022, the Fall River's reduced flow barely allowed for delivery of this exchanged water. It is critically important that we improve the equipment we have, to better manage available water supplies on the Fall River to prevent a shortfall in physical water availability.

- 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 explain.

The Henrys Fork Watershed including the Fall River is a world-renowned fly-fishing destination. The annual economic impact of the fishing industry in the Henry's Fork Watershed is roughly 50 million.
This project will result in more constant releases from the reservoir and thereby improve the conditions for fish and wildlife.

- Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area (e.g., impacts to agriculture, environment, recreation, and tourism)? Please explain.

This project will increase the water reliability for an irrigated agriculture economy that averages nearly 350 million dollars in crop sales per year in the three counties Fremont-Madison delivers water (2017 Census of Agriculture). These three counties are Fremont, Madison and Teton counties.

In tough water years, projects like this are critical to stretch a limited water supply and produce as much food and fiber as possible.

In addition to providing the water for our local agriculture economy, the Henry's Fork Watershed is a world-famous fly-fishing destination which contributes 50 million dollars to our local economy. This is in addition to 14 million in property tax revenue from second homes owned by anglers in Fremont County.

This project will help us maintain a more constant level in the reservoir and consistent releases into the river. This will improve recreation, benefiting recreation on the reservoirs

themselves including, boating, fishing, camping, etc. also benefiting the local economy.

Tourism will benefit as a result of the environmental and recreational improvements. Full reservoirs are also aesthetically pleasing which will benefit tourism and its economic impacts.

This project will also reduce noise in a wild and scenic atmosphere. Grassy Lake is located less than half a mile outside of Yellowstone National Park and serves as a trailhead for several hikes and trail rides. There is also a scout camp located nearby. Often, folks complain about how loud the generator is. This project will eliminate the need for the generator.

- Will the project complement work being done in coordination with NRCS in the area (e.g., the area with a direct connection to the districts water supply)? Please explain.

This project is not directly related to any one NRCS on-farm projects but will generally benefit the water supply for many NRCS on farm projects.

E.1.1. Evaluation Criterion B. Planning Efforts Supporting the Project (25 points)

Up to **25 points** may be awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review, or identified as part of another planning effort led by the Category A applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs. Note: Project specific planning and design for the project or other phases of the project are considered in Criteria C – Implementation.

Plan Description and Objectives: Is your project supported by a specific planning document or effort? If so, describe the existing plan. When was the plan developed? What is the purpose and objective of the plan?

Automation and flow measurement within Fremont-Madison is specifically identified in several planning efforts including the Henry's Fork Basin Study, Fremont-Madison Irrigation District Conservation Plan and in the Henry's Fork Drought Management Plan.

Plan Development: Who developed the planning effort? What is the geographic scope of the plan? If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.

Henry's Fork Basin Study-2015
Automation was identified as one of the most economical alternatives for conserving water on a per acre foot basis within Fremont-Madison in the 2015 Henry's Fork Basin Study.

Fremont-Madison Irrigation District Water Conservation Plan-2009
Fremont-Madison completed a Water Conservation Plan in 2009 with the assistance of Reclamation. One of the issues identified was our ability to measure water and know how much water is being diverted daily. One specific recommendation of the plan was to increase

water use data. This project helps us accomplish that recommendation.

Henry's Fork Drought Management Plan
Additionally, in 2005 we formed a Drought Management Planning Committee (DMPC) in the Henry's Fork Watershed. This Committee developed a Drought Management Plan (DMP). The DMP was completed in 2005 and signed by Fremont-Madison, North Fork Reservoir Company, Reclamation, Henry's Fork Foundation, Trout Unlimited, and The Nature Conservancy. In 2018 the committee revised the DMP and included automation as one of the most effective means of conserving water in the Henry's Fork Watershed, which will improve the management of the reservoirs benefiting the fishery and agriculture.

The DMPC has developed water management and availability models that have significantly improved management of Island Park Reservoir and increased carryover by roughly 20% in each of the last five years. However, further gains are limited by current irrigation infrastructure and the time and resources necessary to operate it. Installing this automation equipment will provide a means to conserve additional water in the reservoirs for all to benefit from.

Through the planning efforts of Fremont-Madison and the DMPC, automation has been identified as one of the most economical ways of conserving water within our irrigation district. The 2015 Henry's Fork Basin Study also identified canal automation as one of the most economical way of conserving water in our basin.

In our efforts to continue to implement a science-based approach this project is a necessary next step to achieve additional water conservation.

Support for the Project: Describe to what extend the proposed project is supported by the identified plan. Consider:

- Is the project identified specifically by name and location in the planning effort?

No, however automation/SCADA within our systems is called out.

- Is this type of project identified in the planning effort?

Yes, automation /SCADA is identified as one of the most economic means of conserving water in these planning efforts.

- Explain whether the proposed project implement a goal, objective, or address a need or problem identified in the existing planning effort?

The primary goal of each of the planning effects was to manage water more precisely in the Henry's Fork watershed. This project helps us do that.

- Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.

We have discussed this project at length in several board meetings and in our annual meeting with our spaceholders and identified this as a priority need.

We have also discussed this project with area and regional Reclamation staff. We all believe this is an essential project to meet management objectives and improve cooperation.

This project is also a priority due to safety concerns. In 2022 we needed to make a flow change after a significant storm in early June had caused the reservoir level to increase beyond historic high levels. There was still snow on the road and we had to attempt access to the dam via a side by side with tracks. In several locations there was water running underneath the snow. This is especially dangerous because the snow can collapse, and you can be swept away in the running water. This happened to Fremont-Madison staff several years ago, putting their lives in danger.

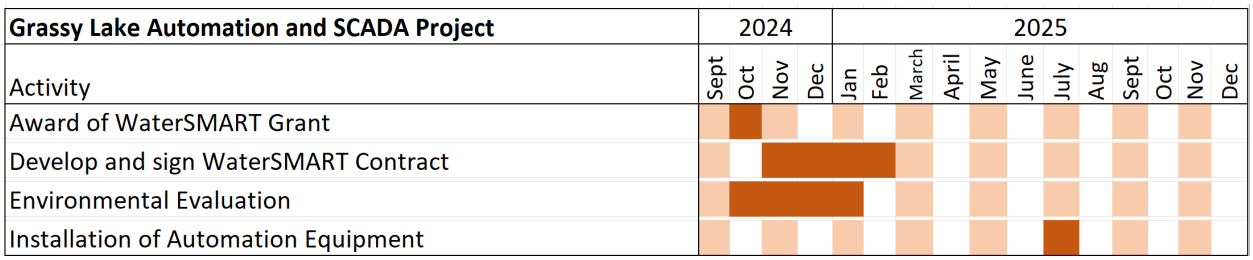
If we could have controlled the releases remotely, this would not have been a problem.

E.1.2. Evaluation Criterion C. Implementation and Results (20 points)

Up to **20 points** may be awarded based upon the extent to which the applicant is capable of proceeding with the proposed project upon entering into a financial assistance agreement. Applicants that describe a detailed 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.

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

This is a straightforward, simple project. If all goes as planned, we will be awarded this grant, complete the contracting and environmental work during the winter of 2024-2025. Construction would then be commenced as soon as the reservoir was accessible in 2025. The work will take less than 30 days once commenced.



- Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized under this criterion.

Budget Narrative

Personnel

Fremont-Madison has staff in place that will manage this project. Fremont-Madison will not

claim costs associated with personnel as a part of this grant application. We are willing to dedicate staff at our own expense to get the project done if Reclamation is able to help with the cost of the equipment and construction.

Fridge Benefits
Fremont-Madison will not claim cost associated with Fringe benefits as a part of this grant application (see above)

Travel
None

Supplies
None

Equipment
None

Supplies
None

Contractual
None

Construction

Construction Materials

In budget table 1 below it details the construction materials needed to complete the project. Historically we have installed Campbell equipment, which is common in our area and is the equipment used by the state of Idaho. This makes it easier to share information with our partners. There are several suppliers of Campbell equipment. If the project is funded through WaterSMART will find the most cost-effective supplier to purchase from.

Budget Table 1. Construction Materials

Item	Quantity	Unit Cost	Total Cost
CR-lO00X	1	$2,640.00	**$2,640**
Hughs-Mod	1	$2,925.00	**$2,925**
MOA-2	1	$1,520.00	**$1,520**
Sol-100	6	$200.00	**$1,200**
Sol-Mounts	6	$250.00	**$1,500**
Sol-Regulators	2	$300.00	**$600**
3 l series	6	$244.00	**$1,464**
12-Rly-250	1	$164.00	**$164**
Gtpos	1	$945.00	**$945**
Inclinometer	1	$525.00	**$525**

misc.	1	$1,200.00	**$1,200**
Hydrau-DC-4.5	2	$9,000.00	**$18,000**
Hydraulic lines	700	$10.00	**$7,000**
DC blower fan	1	$1,000.00	**$1,000**
DC LED lighting	1	$1,000.00	**$1,000**
enclosure	1	$1,350.00	**$1,350**
enclosure	1	$225.00	**$225**
Concrete	1	$1,000.00	**$1,000**
metal stand	1	$300.00	**$300**
		Subtotal	**$44,558**

Contractual Services

We had a company called Metcom bid on this project for the purpose of applying for this grant. If this project is funded we will put this out for a competitive bid process and select the lowest qualified bidder.

Budget Table 2. Contractor Construction Services

Contractor	Description of Work	Amount
TBD	Installation of automation equipment	**$9,000**
TBD	Programming of automation equipment	**$4,500**
TBD	Metal Work (welding of mounting stands etc)	**$2,000**
TBD	Contractor Travel to Remote Location	**$1080**
	Subtotal	**$16,580**

Other

One minimal other cost is for freight of the automation parts at $250.

Indirect Cost

none

Budget Narrative Summary

A summary of the total cost of the project and proposed funding source is below in budget table 3.

Budget Table 3.

Funding Source	Cost-Share	Percentage
Fremont-Madison	$30,694.00	50%
WaterSMART	$30,694.00	50%
Total Project Cost	**$61,388.00**	**100%**

- Describe any permits and agency approvals that will be required along with the process and timeframe for obtaining such permits or approvals

None

- Identify and describe any engineering or design work performed specifically in support of the proposed project. What level of engineering design is the project currently? If additional design is required, describe the planned process and timeline for completing the design.

The project is a simple project and does not require engineering.

Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project? If the applicant does not yet have permission to access the project location, describe the process and timeframe for obtaining such permission.

Yes, we have access to the Grassy Lake Reservoir gatehouse.

- Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? If a contractor will need to complete some of the compliance activities, separate line items should be included in the budget for Reclamation's costs and the contractor's costs.

We have contacted Reclamation but have not heard back. This is a simple project in regard to environmental and cultural resource compliance. There will only be very limited ground disturbance and in an area that was disturbed and filled with several feet of material at the time the dam was built.
We do not expect a contractor to need to complete any of the compliance activities.

E.1.3. Evaluation Criterion D. Nexus to Reclamation (5 Points)

Up to **5 points** may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Describe the nexus between the proposed project and a Reclamation project or activity, including:

Is the proposed project connected to a Reclamation project or activity? If so, how? Please consider the following:

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

Yes, Fremont-Madison is contracted with Reclamation for the storage water in Island Park and Grassy Lake Reservoirs. Fremont-Madison is also contracted with Reclamation for the Operations and Maintenance of Island Park and Grassy Lake Reservoirs.

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

Fremont-Madison is a Reclamation Contractor.

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

Yes, Grassy Lake Reservoir is a Reclamation Project. Reclamation is contracted with Fremont- Madison for the O&M of Grassy Lake Reservoir.

E.1.4. Evaluation Criteria E. Presidential and Department of the Interior Priorities (15 points)

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 E.O. 13985: *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government,* and the President's memorandum, *Tribal Consultation and Strengthening Nation-to Nation Relationships.* Points will be allocated based on the degree to which the project supports the priorities listed, and whether the connection to the priority(ies) is well supported in the application. Only address the sub-criterion that are relevant to your project.

E.1.4.1. Sub-criterion No. E1. Climate Change

Points will be awarded based on the extent the project will reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity. Address the following as relevant to your project.

Combating the Climate Crisis: E.O. 14008: *Tackling the Climate Crisis at Home and Abroad*, focuses on increasing resilience to climate change and supporting climate- resilient development. For additional information on the impacts of climate change throughout the western United States, see: www.usbr.gov/climate/secure/docs/2021secure/2021SECUREReport.pdf. Please describe how the project will address climate change, including the following:

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

Climate change results in more extreme storms, which can result in unprecedented changes in reservoir level and inflow. At the same time these unprecedented changes to inflow are occurring, the same storms make access to a high elevation location like Grassy Lake at worst impossible, and at best dangerous. With this project we can control reservoir releases remotely, completely alleviating the potential danger to the reservoir and the risk of attempting access.

This project will also eliminate an old and inefficient propane generator, with significant emissions. The generator will be replaced with energy provided via solar panels and a battery pack, eliminating emissions.

- Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?

Absolutely, referring to figure 3 during early August of 2021 and 2022, if we had been able

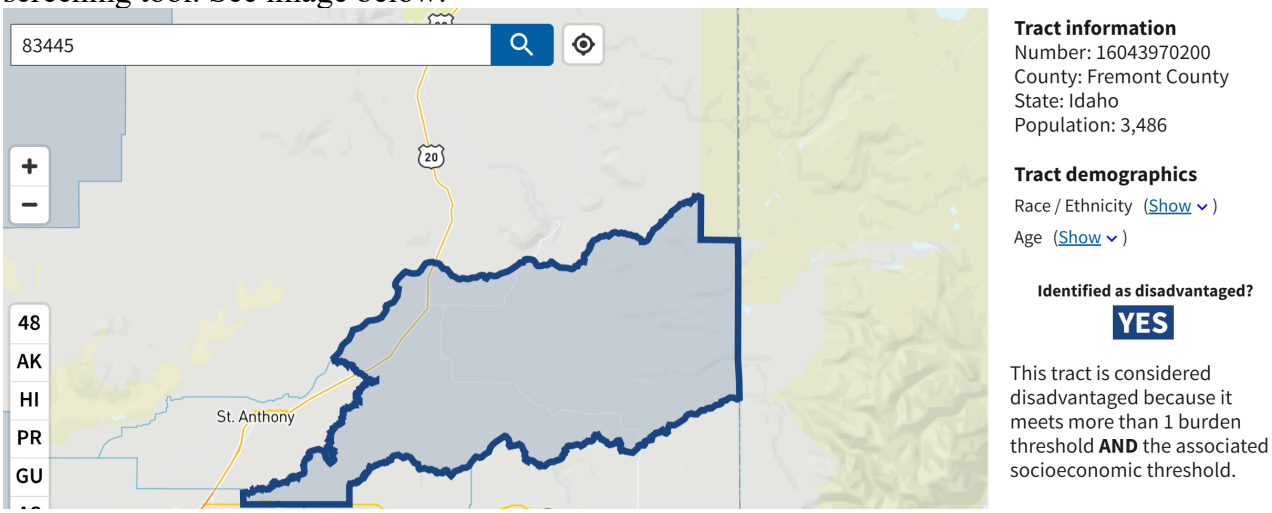
to control the release remotely during rainstorms, we could have reduced reservoir released for a period of time to hold more water in the reservoir until it was needed. This is especially important on the Fall River with very limited storage water available.

E.1.4.2. Sub-criterion No. E2. Disadvantaged or Underserved Communities

E.O. 14008 and E.O. 13985 affirm the advancement of environmental justice and equity for all through the development and funding of programs to invest in disadvantaged or underserved communities. For the purpose of this criterion, Tribes and insular areas (Guam, American Samoa, the Northern Mariana Islands, and the Virgin Islands) are considered disadvantaged.

- Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool, available online at Explore the map – Climate & Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify any disadvantaged communities that will benefit from your project.

The Fall River watershed does fall within a disadvantaged community as identified on the screening tool. See image below.



- If applicable, describe how the project benefits those disadvantaged or underserved communities identified using the tool. For example, does the project increase reliability of water supplies, improve water quality, provide economic growth opportunities, improve or expand public access to natural areas or recreation, or provide other benefits in a disadvantaged or underserved community?

The project will reduce potential flooding for a disadvantaged or underserved community. It will also improve water reliability. Agriculture is the economic backbone of this area. In years of the water shortage, less crops are produced, resulting in fewer jobs and support for the local economy.

E.1.4.3. Sub-criterion No. E3. Tribal Benefits

Points will be awarded based on the extent to which the Project will honor the Federal government's commitments to Tribal Nations. The Department of the Interior is committed to strengthening Tribal sovereignty and the fulfillment of Federal Tribal trust responsibilities. The President's memorandum, "Tribal Consultation and Strengthening Nation-to-Nation Relationships," asserts the importance of honoring the Federal government's commitments to Tribal Nations.

- Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe?

The project does not directly impact water management for a Tribe.

- Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?

This project has general benefits to water supply in the Upper Snake River Reservoir Systems. It could help prevent unnecessary spills at Milner Dam while Grassy Lake has unfilled space due to more precise management. This could improve water available for flow augmentation as a part of the Snake River Water Rights Agreement with the Nez Perce Tribe.

- Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?
-

This project could improve water available under the Snake River Water Rights Agreement with the Nez Perce Tribe for flow augmentation.

Other Information

The following is a brief overview of NEPA, NHPA, and ESA. This information is only relevant to proposals that include measurement, monitoring, and field work. While these statutes are not the only environmental laws that may apply, they are the Federal laws that most frequently do apply. Compliance with all applicable environmental laws will be initiated by Reclamation concurrently, immediately following the initial recommendation to award a financial assistance agreement under this NOFO. The descriptions below are intended to provide you with information about the environmental compliance issues that may apply to your projects.

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.

Earth work will be extremely minimal. The extent of it will be with hand shovels to smooth out an area to install a small cement pad for the solar panels. This will all be done on land that has been previously disturbed during the building of Grassy Lake Reservoir.

- 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?

No, we are not aware of any species or critical habitat in the project area.

This project will have no negative impact on any species. This project could have benefits to wildlife by eliminating the need to operate a very load generator. This project will also eliminate emissions from the generator. We will also not be required to travel during times of the year we would be the only human disturbance to wildlife.

The project will result in more consistent flows in the fall river, benefiting wildlife.

- 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.

No, there is no impact to wetlands.

- When was the water delivery system constructed?

Grassy Lake was constructed in the late 1930's. This project will only be retrofitting the existing structure.

- 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.

No, there will be no modifications to existing features.

- 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.*

No

Environmental and Cultural Resource Considerations

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

No

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

No, any impact on these types of populations would be positive.

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

No

- 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?

No

Sams Information

Unique Entity ID:
NA11CPDP3QY5

CAGE/NCAGE:
5UB95

December 28, 2023

USBR WaterSMART Grants
Small-Scale Water Efficiency Program FY24/25

Letter of support for application of Fremont-Madison Irrigation District

Dear Grant Selection Committee:

As a nonprofit organization whose mission is to conserve, restore and protect the unique fish and wildlife resources of the Henry's Fork of the Snake River, the Henry's Fork Foundation (HFF) fully supports the grant proposal of Fremont-Madison Irrigation District (FMID) to the US Bureau of Reclamation's Small-Scale Water Efficiency program. For 30 years, our two organizations have collaborated with one another to advance the science and practice of watershed management, with particular emphasis on precise management of the watershed's extensive system of irrigation reservoirs, canals, and pumps. The centerpiece of this system is Island Park Reservoir, a Reclamation facility that has large influence over water quality and fish populations in most popular recreational reaches of the Henry's Fork. Much of the collaboration between our two organizations has occurred through our co-facilitation of the Henry's Fork Watershed Council, which celebrated its 30th anniversary earlier this month.

Since 2018, HFF has worked closely with FMID and other irrigation entities to develop and execute precision water management projects similar to that proposed here, with the intent of saving irrigators time, money, and administrative water while also benefitting the watershed's wild trout fishery. Several of these projects have been funded by Reclamation WaterSMART grants. Analysis performed by HFF's science and technology team and presented at the Henry's Fork Watershed Council's annual conference a few weeks ago showed that these collaborative water management projects have resulted in substantial savings in both physical water and administrative water. When compared to the period 2001-2017—years of similar water supply and irrigation practices—physical reservoir carryover in the Henry's Fork watershed was 28,000 ac-ft (19%) greater in irrigation years 2018-2022, resulting in measurable improvements in fish populations, water quality, and functional hydrologic regimes in the Henry's Fork. Further, administrative carryover was 22,642 ac-ft (24%) greater in 2018-2022, saving storage-rights users money and providing greater insurance against low water supply in subsequent years. These are substantial and meaningful water savings to both irrigators and aquatic ecosystems and demonstrate the effectiveness of science-based collaboration and Reclamation's WaterSMART funding program.

This grant proposal takes another step in improving the precision of water management in the Henry's Fork watershed by replacing aging infrastructure and outdated technology at Grassy Lake, one of the three irrigation storage facilities in the Henry's Fork watershed. Grassy Lake is a Reclamation facility that stores 15,180 ac-ft of water in the headwaters of Fall River, one of two major tributaries to the Henry's Fork. As described in the grant proposal, Grassy Lake Dam is in a remote part of the watershed, accessible by gravel road only seasonally and by snow machine or tracked vehicle the rest of the year. Outflow must be adjusted manually using outdated technology, requiring two person-days of staff time to make each adjustment. The proposed project will install remote-controlled outflow infrastructure at the

dam, allowing adjustments of precise magnitude to be made at any time. Similar equipment at Henry's Lake Dam and at numerous points along the canal system has contributed substantially to the water savings documented above.

In the case of Grassy Lake, remote-controlled equipment will allow precise management during snowmelt, ensuring adherence to Reclamation flood-management and infrastructure safety procedures while maintaining full pool in the reservoir until needed for irrigation. Precise springtime management at Grassy Lake will also contribute to Reclamation's management objectives across the whole upper Snake River reservoir system, namely meeting flood-control obligations along the Snake River while minimizing the amount of water spilled past Milner Dam at the bottom of the system. Further, precise management of Grassy Lake during peak irrigation demand will maintain more consistent streamflow in Fall River, to the benefit of irrigators, boaters, and the fishery. Lastly, remote control of Grassy Lake outflow will allow FMID to maintain streamflow targets in the lower watershed during periods of high demand with a more precise mix of Grassy Lake and Island Park Reservoir releases, ultimately reducing outflow from Island Park during mid-summer, which has quantifiable benefits to water quality and the fishery.

We are grateful to FMID and partners for continuing to expand on work that has proven to be beneficial for a broad spectrum of watershed stakeholders and commit to continuing to work with these partners and provide supporting science and data.

Sincerely yours,

Rob Van Kirk, Ph.D.
Science and Technology Director

Fremont-Madison Irrigation District

Official Resolution 2024-01

In the matter of the proposed WaterSMART application to United States Bureau of Reclamation (Reclamation) for automation/remote operations for Fremont-Madison Irrigation District.

WHEREAS, Reclamation's Small-Scale Water Efficiency Grants provide funding to non-federal entities to implement actions to increase water supply reliability through investments in existing infrastructure; and

WHEREAS, Reclamation requires that Small-Scale Water Efficiency Grant applicant adopt a resolution verifying (I) the identity of the official with legal authority to enter into agreement, (2) the board of directors, governing body, or appropriate official who has reviewed and supports the application submitted, (3) the capability of the applicant to provide the amount of funding and/or in-kind contributions specified in the funding plan, and (4) that the applicant will work with Reclamation to meet established deadlines for entering into a cooperative agreement; and

WHEREAS, FMID desires to apply for a Small-Scale Water Efficiency Grant to assist the District with installing automation equipment at Grassy Lake Reservoir, a project designed to improve water use efficiency; and

WHEREAS, The FMID Board of Directors have reviewed the WaterSmart Grant proposal and supports the grant application; and

NOW, THEREFOR, BE IT RESOLVED that FMID authorizes application to Reclamation for a WaterSMART grant and authorizes Jeff Raybould, Chairman to enter into an agreement with Reclamation for the WaterSMART grant; and

FURTHER IT BE RESOLVED, that FMID recognizes that Jeff Raybould, Chairman will represent FMID as its legal entity in the cooperative agreement; and

FURTHER IT BE RESOLVED, that FMID agrees to the WaterSmart funds and will work cooperative with Reclamation to meet established deadlines for entering into a cooperative agreement; and

FURTHER IT BE RESOLVED, that FMID shall provide or ensure the non-federal portion of the project costs.

Dated this 3rd day of January 2024

Fremont-Madison Irrigation District

By: Jeff Raybould, Chairman

Fremont-Madison Irrigation District

By: Aaron Dalling, Executive Director

Attachment A

Location Map