Fremont-Madison Irrigation District
Canal Automation and SCADA Project-Phase 3

Small Scale Water Efficiency WaterSMART Grant Proposal 2022

Funding Opportunity Number: R22AS00195

Enterprise Irrigation District Canal Headgate

APPLICANT:
Fremont-Madison Irrigation District
350 North 6th West
PO BOX 15
Saint Anthony, Idaho 83445

PROJECT MANAGER:
Aaron Dalling
aaron.fmid@myidahomail.com
(208) 624-3381

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Fremont-Madison Irrigation District Canal Automation and SCADA Project

Small-Scale Water Efficiency Projects FY 2022

Technical Proposal and Evaluation Criteria

Executive Summary

Applicant Info

Date: April 22, 2022

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

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

Project Manager:
Name: Aaron Dalling
Phone: 208-624-3381
Email: aaron.fmid@myidahomail.com

Project Funding Request: Small Scale Water Efficiency Projects- Total Cost $87,165.00. Fremont-Madison Irrigation District is requesting 50% funding from Reclamation or $43,582.50.

Project Summary

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. This information will be used to create a summary of your project for Reclamation's website if the project is selected for funding.

Fremont-Madison Irrigation District (FMID) proposes to install remote operating and automation equipment on three main water control structures and collect data and operate them from our existing supervisory control and data acquisition (SCADA) computer system in our office. This project is in partnership with three canal companies we deliver storage water too. They are Southeast Idaho Canal Company (SICC), Enterprise Irrigation District (EID) and Rexburg Irrigation Canal Company (RICC). This project will help manage water more efficiently on 14,855 acres of irrigated cropland, bolster partnerships, and promote conservation among water users within our service area. This project will be another concrete step towards implementing an alternative in the 2015 Henry's Fork Basin Study that was coordinated and completed with the help of several partners including the Bureau of Reclamation (Reclamation). In the study, canal automation was identified as one of the most economical means of conserving water in the Henry's Fork Watershed.

State the length of time and estimated completion date for the proposed project (month/year). Note: Proposed projects shall not have a construction start date that is prior to March 31, 2023. See Section C.7. Construction Start Date Restrictions for additional information.

The desired start date for the project is April of 2023, however this will depend on whether grant funds are obtained. The desired project completion is April of 2024.

This project is not located on a federal facility.

Project Location

Figure 2 (Attachment B) provides the geographic locations on a map.

Table 1. Locations of Automation/Remote Operations Equipment

Location Name	Latitude	Longitude	County/State
Enterprise Canal	43°59'57.50"N	111°31'18.78"W	Fremont/Idaho
Enterprise Canal Flow Measurement Station	43°50'51.72"N	111°39'2.42"W	Madison/Idaho
Twin Groves Canal (SICC)	43°58'36.42"N	111°36'34.76"W	Fremont/Idaho
Rexburg Irrigation	43°56'21.79"N	111°37'12.86"W	Madison/Idaho

Nearest Towns

The Enterprise Canal is located approximately 4 miles east of Chester, Idaho.
The Twin Groves Canal is located approximately 1 mile northeast of St. Anthony, Idaho
The Rexburg Irrigation Canal is located approximately 1 mile east of Rexburg.

Technical 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.

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 for 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.

FMID proposes to install automation equipment on existing diversion structures for three main canal diversions within our water delivery system and to install one measurement station at the end of the Enterprise Canal to monitor spill water. This automation equipment will be installed on one canal diversion that diverts water from the Farmers Friend canal just downstream of its diversion from the Henry's Fork River which is tributary to the Snake River, one canal diversion on the Fall River and one canal diversion on the Teton River. The Fall River and Teton River are both tributary to the Henry's Fork River. The proposed automation equipment will be connected in with our existing SCADA system. This will allow us to monitor flow data and make flow changes from the office. This equipment will also be capable of making changes automatically. For example, when flow in the river changes, it results in a change in head pressure on a canal's headgate. With the proposed automation equipment, the headgates will be capable of automatically adjusting to maintain a stable flow in the canal despite the change in pressure on the headgate.

This project is a continuation of a larger project we started with a WaterSMART grant in 2019 and received a second WaterSMART grant for in 2021.

The three main canal structures we plan to install automation equipment on their existing headgates are as follows:

The Twin Groves Canal Headgate- The Twin Groves Canal is one of the laterals within SICC. This headgate diverts between 50-100cfs depending on the time of year. The Twin Groves Canal diverts water from the Farmers Friend Canal. The Farmers Friend Canal's main headgate on the Henrys Fork is being automated as a part of a WaterSMART grant received in 2021. The Twin Groves Canal stretches roughly 4 miles and delivers water to 75 diversions. The Twin Groves Canal lateral alone delivers irrigation water to 3,068 acres.

The Enterprise Irrigation District Canal - This headgate diverts between 50 and 150cfs from the Fall River depending on the time of year. This canal stretches roughly 17 miles irrigating 5,918 acres. There are roughly 200 diversions.

Rexburg Irrigation Canal- This canal diverts between 100 and 250 cfs depending on the time of year supplying irrigation water to roughly 300 diversions. It splits into two main branches covering 16 total miles and irrigating 9,448 acres.

In all, these diversions supply irrigation water to nearly 600 diversions irrigating 14,855 acres of highly productive farmland. The primary crops grown in these areas include high quality potatoes, wheat, barley and alfalfa. These delivery systems are highly complex and increasing our precision in water management will be very beneficial. Table 2 details their combined water rights.

Table 2. Canal Company Water Rights

Canal	Natural Flow (CFS)	Storage (Acre Feet)
SICC	916.0	18,223.0
EID	199.2	26,876.5
RICC	307	4,501.5
Totals	**1,422.2**	**49,601**

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.*

***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:*

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

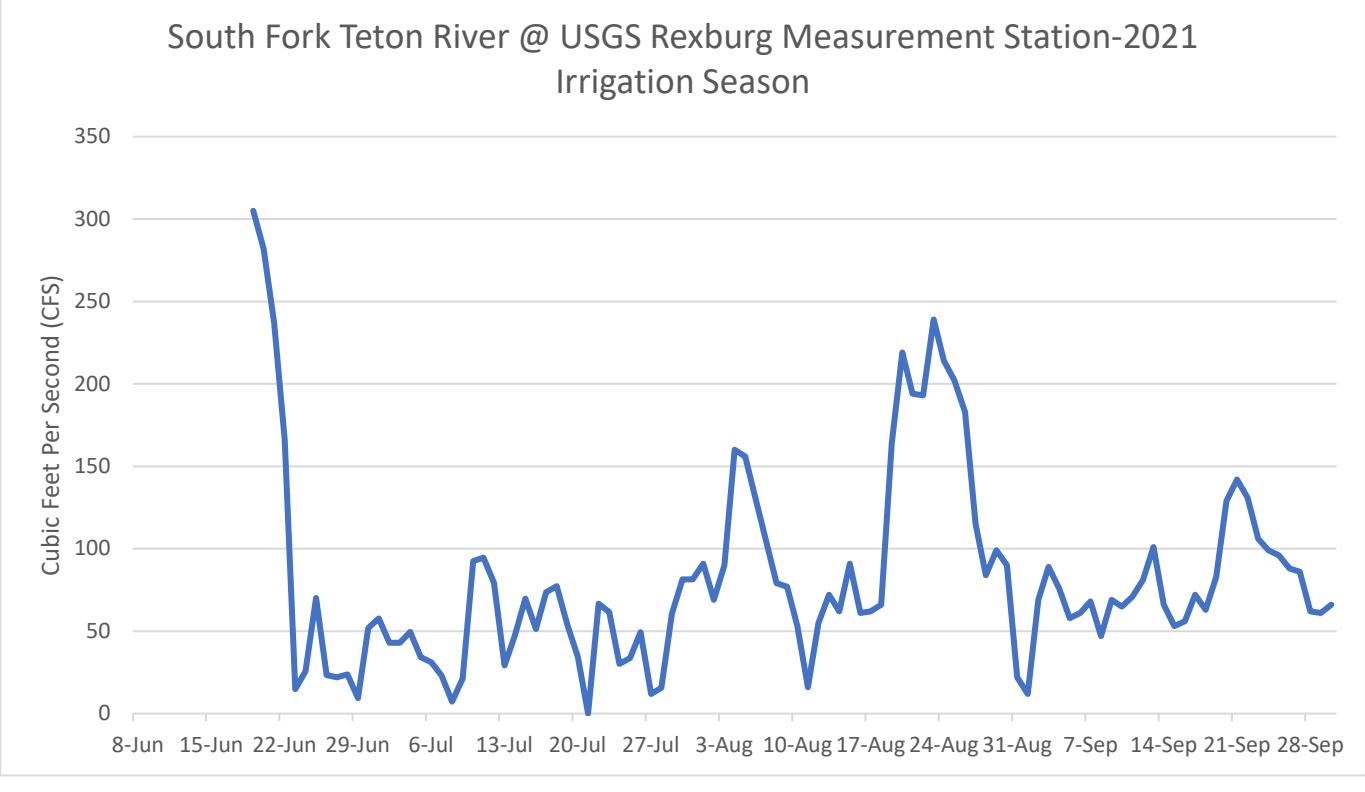
This project will help us conserve water. Based on our past experience with installing automation equipment on canal diversions we believe we can average between three and ten-acre feet of water savings every day during the peak of the irrigation season for each of the three canals the equipment is installed on. Using the peak dates of our irrigation season from June 1st to September 15th this equates to a total water savings for this project of between 1,281-acre feet and 3,210-acre feet.

This water savings will be recognized in Henry's Lake, Island Park and Grassy Lake Reservoirs. Keeping water in these reservoirs will benefit all water users in the Upper Snake Reservoir system and help us be more resilient in potential subsequent drought years. Keeping water in the reservoirs will also benefit fish

habitat in the Henry's Fork River. More water held in the reservoirs during the irrigation season directly results in higher winter flows in the river. These winter flows are critical for the Henry's Fork Fishery.

The automatic adjustment of the gates will be especially beneficial for RICC. This canal is the last diversion on the South Fork of the Teton River. Flows in the river vary significantly on a daily basis based on upstream diversion changes and reservoir releases delivered through the Crosscut Canal. They can range from zero cfs remaining in the South Fork of the Teton River below Rexburg Irrigation to several hundred cfs (See Chart 1 Below). This results in significantly different head pressures on the headgate for RICC that can change several times even within the same day. This results in the need to make several adjustments on a daily basis. This is very labor intensive and still yields subpar results. By installing this automatic equipment which can adjust the gate every 15 minutes, it will not only save travel time and vehicle wear but make RICC's water deliveries much more reliable and constant while reducing the threat of potential flooding in the canal system.

Chart 1. South Fork of the Teton River Flows Below Rexburg Irrigation Canal Diversion



Consider:

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

Yes, FMID customers will likely not receive a full allocation to their storage space in 2022. This year it looks like FMID will only receive a 50-60% allocation of storage water in Island Park and Grassy Lake Reservoirs. More than half of that is water we were able to carry over from 2021. This project will help us conserve water in the current year and allow us to carry additional water into subsequent dry years. If this project had been installed in previous years, we would have had more water to allocate to customers this year.

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

Yes, this project will result in a more efficient, timely and fair delivery of water to irrigators. As such it will prevent non-delivery lawsuits against the canal companies and/or FMID.

o What are the consequences of not making the improvement?

If this project is not implemented these diversions will continue to manage water in an inefficient manner. Consider the Enterprise Canal. It is an hour-long trip for the watermaster to travel to the bottom of the canal and then back to the top if a flow adjustment is needed. Because of the travel time the watermaster is unable to make precise management adjustments to the canal's diversion. If the project is implemented the watermaster will have the flow at the bottom of the canal readily available on his/her phone. They will also be able to make flow adjustments remotely. This can all be done in a few minutes several times a day significantly increasing the precision of water management.

o Are customer water restrictions currently required?

Yes, in 2022 FMID will likely only be able to deliver a 50-60% allocation of total storage water held by each of these canals.

o Other significant concerns that support the need for the project.

This project will save FMID and each of the canal companies significant time, vehicle wear and result in an overall reduction in our carbon footprint. These canals stretch a total of 36 miles from their river diversions to their respective ending points. By installing the proposed project, the water-masters will have access to current flow data without physically seeing it. They will also be able to adjust flows without traveling to the physical locations. We believe this will reduce vehicle travel by up to 50 miles per day. Looking at the irrigation season from April 1st to October 1st this project will reduce vehicle travel each irrigation season by roughly 10,000 miles.

The real time data this project will generate will aid in future modeling and precision management efforts. With the help of a local non-profit, the Henry's Fork Foundation, we have undertaken a significant modeling effort. This project in conjunction with our modeling will help us develop better daily, weekly and irrigation season plans resulting in better water management.

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?

Yes, this project will benefit the Henry's Fork Watershed in addition to the entire Upper Snake River Watershed. Water rights in our area are administered by Water District 01 which reaches from Henry's Lake on the North to Milner Dam on the south and west. If we are able to implement this project, it will aid in efficient water management. If we use less water, it will benefit all junior water rights within Water District 01 or the Upper Snake River Basin.

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

Yes, this project is built out of collaboration. This project is FMID collaborating with the three canal companies to improve water efficiency. The SCADA system will provide significantly more data for these canals and FMID then has previously been available. This will allow the entities to work closely making timely and informed decisions that will benefit the end users.

• 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.

Yes, this project will increase the water reliability for an irrigated agriculture economy that averages nearly 350 million in crop sales per year in the three counties FMID delivers water (2017 Census of Agriculture). These three counties are Fremont, Madison and Teton counties. Currently, the world is facing a limited food supply, resulting in significant food inflation and potential food shortages. 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 is a world-famous fly-fishing destination. This project will result in reduced outflow from the reservoirs during the irrigation season, allowing for increased flows in the winter which will more closely mimic nature. This increased winter flow is critical for trout habitat.

Reducing outflow from the reservoirs during the irrigation season will benefit water quality in the rivers. Water quality in the rivers will be improved during the summer when most of the fishing occurs. Benefiting overall habitat in this way will increase trout populations bringing in additional anglers and thereby benefiting the local economy.

It will also maintain higher levels in the reservoirs 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.

• 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.

Yes, NRCS programs have provided significant benefit on each of these canal systems by helping individual farmers convert from flood to sprinkler irrigation. Now, as many of the on-farm systems have been converted to sprinkler irrigation we need to modernize the delivery systems by updating to automation to ensure we receive the full benefit of the NRCS programs.

• Will the project help address drought conditions at the sub-basin or basin scale? Please explain. Please note, on-farm improvements

Yes, the proposed project will specifically benefit the Henry's Fork Basin. It will also benefit the entire Upper Snake River Basin. This project will result in less water diversion from the river. This will allow us to stretch our water supply further into the growing season in drought years and provide additional water to carry over into subsequent drought years.

This project will allow us to keep more water in Island Park Reservoir, Grassy Lake Reservoir and Henry's Lake Reservoir during the irrigation season making them easier to fill each winter. Once these reservoirs are full, the excess water spills into American Falls Reservoir and fills it. This is one of the benefits to the entire Upper Snake River Basin.

Evaluation Criterion B—Planning Efforts Supporting the Project (30 points)

*Up to **30 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.*

***Plan Development:** Describe how your project is supported by an existing planning effort. Identify the planning effort and who developed it. If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.*

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

Address the following:
• Is the project identified specifically in the planning effort?

Canal automation and flow measurement within FMID 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.

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

Henry's Fork Basin Study-2015
Canal 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
FMID 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 FMID, North Fork Reservoir Company, Reclamation, Henry's Fork Foundation, Trout Unlimited, and The Nature Conservancy. In 2018 the committee revised the DMP and included canal 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 four 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 conserving additional water in the reservoirs for all to benefit from.

Through the planning efforts of FMID and the DMPC, canal 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 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.

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.

The schedule provided below outlines timing of the major tasks and milestones for the proposed project. The environmental evaluation will be simple and straight forward as there is no ground disturbance associated with this project. Once the environmental evaluation is complete construction can begin. Ideally, if the WaterSMART grant is awarded and environmental work is completed the construction phase of the project will begin in April of 2023 and be complete by April of 2024. This is a shovel ready project. We are only waiting for funding.

SCADA and Automation Project	2022				2023											
Activity	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Award of WaterSMART Grant																
Develop and sign WaterSMART Contract																
Environmental Evaluation																
Installation of Structure and Automation Equipment																

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

There are not any required permits for this project. All equipment to be installed will be installed on privately owned water control structures with no ground disturbance.

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

This project does not require any design engineering. The engineering work necessary for the installation of the equipment is included in the proposals relied upon for budget calculation.

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

There are no new policies or administrative actions that will need to be implemented. The proposed project will enhance the ability to manage water under current policies and administrative mechanisms, without requiring new policies or changes in administration.

• Describe the timeline for completion of environmental and cultural resource compliance.

The timeline for completing the environmental and cultural resource compliance for this project should be relatively simple with no ground disturbance or modification of existing structures.

Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?

We did inquire of the local Reclamation office on the environmental and cultural compliance. We have not yet heard back but consulted with them on a similar project last year and this is what they said then. "For installation of automation equipment and no ground disturbance occurring there is typically just CE (Categorical Exclusion) Environmental Compliance done. The cultural effort could take as few as a

couple of hours of time…. Total turnaround time for this type of project could be done within a week if Reclamation staff have availability. Based on priorities for work it can likely be moved up to get done sooner rather than later and should be a pretty easy process….”

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:

Yes, this project is a part of Reclamations Minidoka Project, FMID is contracted with reclamation for the storage space in Island Park and Grassy Lake Reservoirs. Each of these canals receive storage water from these two reservoirs. The Enterprise Canal also receives water via exchange from American Falls Reservoir and Jackson Lake Reservoir.

o Does the applicant receive Reclamation project water?

Yes, FMID and FMID member canal companies receive all the storage water in Island Park and Grassy Lake Reservoirs.

o Is the project on Reclamation project lands or involving Reclamation facilities?

The project will be located on lands that are a part of the Minidoka Project, serving land irrigated with water from Island Park and Grassy Lake Reservoirs. The project will not be installed on Reclamation facilities but will benefit the overall operations of Island Park and Grassy Lake Reservoirs which are reclamation facilities.

o Is the project in the same basin as a Reclamation project or activity?

Yes, the proposed project will better manage water resources within the Henry’s Fork Basin by providing better water management ability and better water use data to FMID. This project is expected to conserve water allowing us to keep it in the reservoirs thereby reducing impacts of potential subsequent drought years.

o Will the proposed work contribute water to a basin where a Reclamation project is located?

Yes, the proposed project will be performed within FMID, which is a part of Reclamation’s Minidoka Project. It will therefore benefit the District and Reclamation through better management of water resources and reduce overall demand.

Evaluation Criterion E—Presidential and Department of the Interior Priorities (10 points)

*Up to **10 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, 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. **Without repeating benefits already described in previous criteria, describe in detail how the proposed project supports a priority(ies) below.***

***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: https://www.usbr.gov/climate/ secure/docs/2021secure/2021SECUREReport.pdf. Please describe how the project will address climate change, including:

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

In addition to a reduction in our carbon footprint as detailed in Evaluation Criterion A which will benefit climate change; this project will reduce our dependance on the reservoirs helping us combat climate change. Climate change has reduced the amount of water that is stored in the mountains in the form of snow. This increases the need for water conservation and projects like this one, so that we don't continually overdraft our reservoirs. This overdraft degrades habitat in the reservoirs and rivers and limits our ability to manage the impacts of drought.

• 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?

This project absolutely strengthens water sustainability and resiliency in regard to climate change. This project will allow these canals to take only what they need from the river and reservoirs on a daily basis. Making precise adjustments in diversion will conserve water in the reservoirs and make it available for use in future years. This will help us prepare for and mitigate the impacts of drought and extreme weather patterns caused by climate change.

Sub-criterion No. E2. Disadvantaged or Underserved Communities *Points will be awarded based on the extent to which the Project serves economically disadvantaged or underserved communities in rural or urban areas.*

• Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.

The community this project services is not designated as disadvantaged or historically underserved. However, this project benefits to recreation and wildlife will provide some opportunity for economic growth. These industries provide several different types of jobs that could benefit disadvantaged or historically underserved people.

• Please describe in detail how the community is disadvantaged based on a combination of variables that may include:

o Low income, high and/or persistent poverty

The average income for our area is above the poverty line. Having said that, projects like this one that improve economic growth opportunities in the areas of agriculture, recreation and tourism may have some benefit to those in our area that do struggle and fall below the poverty line.

o High unemployment and underemployment

Our area has a low unemployment rate. This project will help improve the local economy and may therefor further benefit the unemployment rate. This project will also provide an opportunity for technical work, which is limited in our area. This may provide an opportunity for those who may be underemployed.

o Racial and ethnic residential segregation, particularly where the segregation stems from discrimination by government entities o Linguistic isolation

I don't know of examples of residential segregation or discrimination by government in our area.

o High housing cost burden and substandard housing

If funded this project will bring additional money into our local economy benefiting companies and their employees that are seeking affordable housing.

Budget Proposal

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 1) to summarize all funding sources. Denote in-kind contributions with an asterisk (*).

FMID or its partners will fund all non-federal contributions entirely with operating revenues. FMID officially committed to fund the non-federal share of the project in its official resolution.

The total cost of the project is $87,165.00. FMID is requesting $43,582.50 in WaterSMART grant funding.

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

Funding Source	Amount
1. Fremont Madison Irrigation District	$43,582.50
Non-Federal Subtotal	$43,582.50
Requested Reclamation Funding	**$43,582.50**

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 2). Table 2.

Budget Table 2. Total Project Cost Table

Source	Amount	% of Total Projects Cost
Cost to be reimbursed with the requested Reclamation funding	$43,582.50	50%
Cost to be paid by Fremont-Madison	$43,582.50	50%
3rd Party Contributions	$0.00	0%
Total Project Cost	**$87,165.00**	**100%**

Unit costs must be provided for all budget items, including the cost of services or other work to be provided by consultants and contractors. Applicants are strongly encouraged to review the procurement standards for Federal awards found at 2 CFR §200.317 through §200.326 before developing their budget proposal. If you have any questions regarding your budget proposal or eligible costs, please contact the grants management specialist identified in Section G. Agency Contacts.
It is also strongly advised that applicants use the budget proposal format shown in Table 2 or a similar format that provides this information. It is also strongly advised that applicants use the budget proposal format shown in Table 3 or a similar format that provides this information. If selected for award, successful applicants must submit detailed supporting documentation for all budgeted costs.

Budget Table 3-Budget Proposal

Budget Item Description	COMPUTATION		Quantity Type	Total Cost
	$/Unit	Quantity		
Salaries and Wages				
none	$0.00	0	Hours	$0.00
Fringe Benefits				
none	$0.00	0	Hours	$0.00
Contractual				
Twin Groves Canal				
Automation and remote operation Equipment and installation	$23,902.00	1	EA	$26,573.00
Rexburg Irrigation Canal				
Automation and remote operation Equipment and Installation	$26,145.00	1	EA	$27,332.00
Enterprise Irrigation District Canal				
Automation and remote operation equipment and installation	$27,826.00	1	EA	$27,826.00
Install Flow Measurement Station with Telemetry	$5,434.00	1	EA	$5,434.00
			Total Project Cost	$87,165.00

A full breakdown of the project cost is included in Attachment C.

Budget Narrative Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal. The types of information to describe in the narrative include, but are not limited to, those listed in the following subsections. Costs, including the valuation of third-party in-kind contributions, must comply with the applicable cost principles contained in 2 CFR Part §200. In addition, please identify whether the budget proposal includes any project costs that may be incurred prior to award. For each cost, describe:

• The project expenditure and amount

The project expenditures and amounts are illustrated in table 3 and further detailed in Attachment C. We have tried to make this as straight forward as possible by not including wages and fringe benefits etc. All the work will be completed by a contractor. The contractor bid the automation/remote operations equipment, flow measurement equipment and installation together.

Final selection of the contractor will be completed in accordance with Idaho laws for Irrigation Districts and any additional requirements of the WaterSMART grant program.

• The date of cost incurrence

All of the costs will be incurred only if the grant is awarded and after the contract is finalized.

• How the expenditure benefits the project

All of the expenditures are directly related to the installation or equipment needed to automate the canal headgates and measure the flow.

Salaries and Wages

Aaron Dalling is the project manager and the Executive Director of FMID however no Fremont-Madison salaries or wages will be included. FMID's staff time will be over and above the cost of the project and will not be counted toward the project cost.

Fringe Benefits

Identify the rates/amounts, what costs are included in this category, and the basis of the rate computations. Federally approved rate agreements are acceptable for compliance with this item.

None

Travel

Travel related expenses are not eligible for reimbursement under this NOFO and should not be included within the proposed budget.

None

Equipment

If equipment will be purchased, itemize all equipment valued at or greater than $5,000. For each item, identify why it is needed for the completion of the project and how the equipment was priced. Note: If the value is less than $5,000, the item should be included under materials and supplies.
If equipment is being rented, specify the number of hours and the hourly rate. Local rental rates are only accepted for equipment actually being rented or leased. If the applicant intends to use their own equipment for the purposes of the project, the proposed usage rates should fall within the equipment usage rates outlined by the United States Army Corps of Engineers (USACE) within their Construction Equipment Ownership and Operating Expense Schedule (EP 1110-1-8) at https://www.usace.army.mil/Cost-Engineering/EP1110-1-8/.

Note: If the equipment will be furnished and installed under a construction contract, the equipment should be included in the construction contract cost estimate.

None

If the proposal is selected for award and the awarding Grants Officer determines that the proposed rates fall within those outlined within the USACE publication, no further documentation for this item of cost shall be requested during budget negotiations.

Materials and Supplies

Itemize supplies by major category, unit price, quantity, and purpose, such as whether the items are needed for office use, research, or construction. Identify how these costs were estimated (i.e., quotes, past experience, engineering estimates, or other methodology). Note: If the materials/supplies will be furnished and installed under a contract, the materials/supplies should be identified as a contractual cost in the budget proposal. 19

Contractual

Identify all work that will be accomplished by subrecipients, consultants, or contractors, including a breakdown of all tasks to be completed and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. For each proposed contract, identify the procurement method that will be used to select the consultant or contractor and the basis for selection. Please note that all contracts with an anticipated value of $10,000 or more must use a competitive procurement method. Only contracts for architectural/engineering services can be awarded using a qualifications-based procurement method. If a qualifications-based procurement method is used, profit must be negotiated as a separate element of the contract price. See 2 CFR §200.317 through §200.327 for additional information regarding procurements, including required contract content.

If the proposal is selected for award and the awarding Grants Officer determines that the contractual engineering services costs for design engineering and/or construction management costs within the budget proposal do not exceed 8 percent of total project construction costs, then no further documentation for this item of cost shall be requested during budget negotiations.

The work will be completed by a contractor. We follow Idaho Law for irrigation districts in regard to selecting a contractor. We will also adhere to 2 CFR 200.317 through 200.327. A breakdown of tasks and costs are detailed in Attachment C.

Third-Party In-Kind Contributions

Identify all work that will be accomplished by third-party contributors, including a breakdown of all tasks to be completed and a detailed budget estimate of time, rates, supplies, and materials that will be required for each task. Third-party in-kind contributions, including contracts, must comply with all applicable administrative and cost principles criteria, established in 2 CFR §200, and all other requirements of this NOFO.

Environmental and Regulatory Compliance Costs

Prior to awarding financial assistance, Reclamation must first ensure compliance with Federal environmental and cultural resources laws and other regulations ("environmental compliance"). Every project funded under this program will have environmental compliance activities undertaken by Reclamation and the recipient.

None

Depending on the potential impacts of the project, Reclamation may be able to complete its compliance activities without additional cost to the recipient. Where environmental or cultural resources compliance requires significant participation by Reclamation, costs incurred by Reclamation will be added as a line item to the budget during development of the financial assistance agreement and cost shared accordingly (i.e., withheld from the Federal award amount). Any costs to the recipient associated with compliance will be identified during the process of developing a final project budget for inclusion in the financial assistance agreement.

None

Other Expenses

Any other expenses not included in the above categories shall be listed in this category, along with a description of the item and why it is necessary. No profit or fee will be allowed.

None

Indirect Costs

Indirect costs that will be incurred during the development or construction of a Project, which will not otherwise be recovered, may be included as part of the applicant's Project budget. Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the applicable cost principles for the recipient's organization. It is not acceptable to simply incorporate indirect rates within other direct cost line items.

If the applicant has never received a Federal negotiated indirect cost rate, the budget may include a de minimis rate of up to 10 percent of modified total direct costs. For further information on modified total direct costs, refer to 2 CFR §200.68. If the applicant does not have a federally approved indirect cost rate agreement and is proposing a rate greater than the de minimis 10 percent rate, include the computational basis for the indirect expense pool and corresponding allocation base for each rate. Information on "Preparing and Submitting Indirect Cost Proposals" is available from the Department's Interior Business Center, Office of Indirect Cost Services, at https://ibc.doi.gov/ICS/icrna. If the proposed project is selected for award, the recipient will be required to submit an indirect cost rate proposal with their cognizant agency within 3 months of award.

We have not included any Indirect Costs

Environmental and Cultural Resources Compliance

Please answer the questions from *Section H.1. Environmental and Cultural Resource Considerations* in this section.

There will be no ground disturbing work associated with this project. We will only be retrofitting existing structures with automation equipment. The impact to any resources including soil, air, water quality and quantity and animal habitat will be nil.

This project will have very little impact on the surrounding environment. If there is any impact it will be positive by limiting traffic, emissions etc. This project will benefit natural resources and the surrounding environment.

Required Permits or Approvals

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

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

There will not be any required permits or approvals for this project.

Letters of Support and Letters of Partnership

Please include letters from interested stakeholders supporting the proposed project. To ensure your proposal is accurately reviewed, please attach all letters of support/partnership letters as an appendix. Letters of support received after the application deadline for this NOFO will not be considered in the evaluation of the proposed project. Category B applicants must include a letter from the Category A partner, stating that they are acting in partnership with the applicant and agree to the submittal and content of the proposal (see Section C.1. Eligible Applicants). Letters of Partnership must be received by the application deadline for this NOFO—otherwise the applicant will be considered ineligible and the proposed project will not be evaluated. 21

See Letter of Support on pages 17-20.

Official Resolution

Include an official resolution adopted by the applicant's board of directors or governing body, or, for state government entities, an official authorized to commit the applicant to the financial and legal obligations associated with receipt of 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*
- *The capability of the applicant to provide the amount of funding and/or in- kind contributions specified in the funding plan*
- *That the applicant will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement*

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

See Official Resolution on page 21.

Conflict of Interest Disclosure

Per the Financial Assistance Interior Regulation (FAIR), 2 CFR §1402.112, applicants must state in their application if any actual or potential conflict of interest exists at the time of submission.

(a) Applicability.

(1) 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.

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

(b) Notification.

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

(2) Recipients must establish internal controls that include, at a minimum, procedures to identify, disclose, and mitigate or eliminate identified conflicts of interest. The recipient 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 subrecipients.

(c) 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 U.S.C. 1352. 22

(d) 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.

(e) 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 §200.338, Remedies for noncompliance, including suspension or debarment (see also 2 CFR §180).

There are no conflicts of interest. We will not use these funds for lobbying.

D.2.2.16. Uniform Audit Reporting Statement *All U.S. States, local governments, federally recognized Indian Tribal governments, and non-profit organizations expending $750,000 in U.S. dollars or more in Federal award funds in the applicant's FY must submit a Single Audit report for that year through the Federal Audit Clearinghouse's Internet Data Entry System, in accordance with 2 CFR §200 subpart F. 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.* ***D.2.2.17.***

Certification Regarding Lobbying *Applicants requesting more than $100,000 in Federal funding must certify to the statements in 43 CFR §18, Appendix A-Certification Regarding Lobbying. If this application requests more than $100,000 in Federal funds, the Authorized Official's signature on the appropriate SF-424, Application for Federal Assistance form also represents the entity's certification of the statements in 43 CFR §18, Appendix A.*

Unique Entity Identifier and System for Award Management

We have registered with SAMS and will maintain it for the life of the agreement.

Our DUNS number is 184839868 and SAMS cage code is 5UB95.

April 19th, 2022

Small Scale Efficiency WaterSMART Grant Proposal 2022
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 Efficiency WaterSMART program. For over 28 years, our two organizations have collaborated with one another to advance the science and practice of watershed management. In fact, HFF has worked closely with FMID to develop and execute similar projects in the hopes that precision management of water resources will result in benefits to both irrigation entities and the wild trout fishery.

This grant proposal takes another step toward implementing some of the alternatives developed through the 2015 Henry's Fork Basin Study. Fremont-Madison Irrigation District (Fremont-Madison) proposes to install remote operating and automation equipment on control structures and collect data and operate them from their existing SCADA (Supervisory Control and Data Acquisition) computer system in their office. This project is in partnership with three canal companies FMID delivers storage water to each year. The partners are Enterprise Canal Company, Rexburg Irrigation Company, and Twin Groves Canal Company. The project will help manage water more efficiently, bolster local partnerships, and promote conservation among water users within our service area. In the Henry's Fork Basin Study, canal automation was identified as one of the most economical means of conserving water in the Henry's Fork Watershed. After official release of the final Basin Study document in 2015, HFF's Board of Directors directed staff to find the appropriate role in pursuing implementation of alternatives in the Basin Study, as well as related actions that ensure sustainability of water resources for all uses, including irrigation and fish and wildlife habitat. This project proposal by FMID further implements site-specific actions that will increase annual carryover in Island Park Reservoir which provides many regional benefits and builds off of work that HFF has been more directly involved in. In fact, precision management of the system by FMID has resulted in 20,000 additional acre-feet of carryover in each of the last four years. 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.

Sincerely yours,

Brandon Hoffner
Executive Director

PO Box 550, Ashton, ID 83420 Tel: 208.652.3567 henrysfork.org

FRIENDS OF THE tetonriver

208 354 3871
www.tetonwater.org

18 North Main Street, Suite 310
PO Box 768
Driggs, Idaho 83422

April 19, 2022

WaterSMART Grant Program
U.S. Bureau of Reclamation
Policy and Administration
Denver, CO 80225

Dear WaterSMART Grant Program Reviewers,

On behalf of the Friends of the Teton River (FTR), I would like to express my support for the grant proposal being submitted by the Fremont Madison Irrigation District (Fremont-Madison) to the WaterSMART Grant Program. Their proposed project is an excellent complement to work that Friends of the Teton River is doing to conserve water in the Teton Basin. Fremont-Madison's project is also directly in line with the goals of the Henry's Fork Watershed Council, of which FTR is an active participant.

The mission of Friends of the Teton River is to restore and conserve the Teton River Watershed, ensuring a lasting legacy of clean water, healthy streams, and a thriving wild fishery. We implement programs and projects founded on sound science, community education, and cooperation with landowners, citizens, and agency partners. As such, the proposed project is directly in line with our mission. Friends of the Teton River staff will continue to actively participate in the Henry's Fork Watershed Council during the project period.

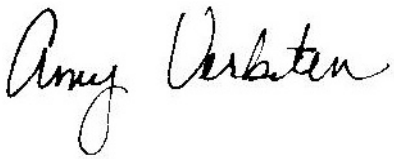
This project will continue to build on the Bureau of Reclamation's highly successful investment in the broader Henry's Fork Watershed, and particularly the priority alternatives that were identified in the Henry's Fork Basin Study. Canal automation was identified in the Basin Study as one of the most economical means for conserving water in the Henry's Fork Watershed, and is widely supported by agricultural and conservation partners.

Additionally, this project will build on the strong track record broad BOR support in the broader Henry's Fork Watershed, including recent BOR-supported work in the Teton River sub-watershed. FTR and our partners founded the Teton Water Users Association under a WaterSMART Cooperative Planning Phase I Grant, and utilized the WaterSMART Cooperative Planning Phase II funding program to support implementation of its phase I planning efforts. We recently partnered on BOR-supported work in the Canyon Creek drainage, successfully utilizing WaterSMART funding to act on the goals and priorities identified in the Henry's Fork Basin Study.

As a participating organization in the Watershed Council and a partner in watershed-wide water conservation, we believe that Fremont-Madison is in a unique position to meet agricultural water needs while completing projects that help to conserve Idaho's native trout species. The current grant proposal will help manage water more efficiently, bolster partnerships, and continue to promote a culture of conservation among water users within the watershed.

In summary, we support Fremont-Madison's application because it will improve water management for the benefit of all stakeholders in the broader Henry's Fork Watershed, and thus complement the BOR-supported work that is being done in the Teton River Watershed.

Sincerely,



Amy Verbeten
Executive Director
Friends of the Teton River
208.354.3871 ext. 13
amy@tetonwater.org

Mike Crapo
United States Senator
239 Dirksen Senate Office Building
Washington, D.C. 20510

James E. Risch
United States Senator
483 Russell Senate Office Building
Washington, D.C. 20510

IDAHO CONGRESSIONAL DELEGATION

Mike Simpson
Member of Congress
2084 Rayburn House Office Building
Washington, D.C. 20515

April 1, 2022

Bureau of Reclamation
Attn: Commissioner of Reclamation
P.O. Box 25007, MS 84-27133
Denver, CO 80225

Dear Commissioner,

We write in support of the grant application submitted by Fremont-Madison Irrigation District (FMID) to the Bureau of Reclamation WaterSMART program. Well managed, available water is central to Idaho's economic sustainability and growth.

FMID was established in 1935 and includes over 285,000 irrigated acres in three Idaho counties. Since the mid 1990's FMID has worked through the Henry's Fork Watershed Council to improve river and reservoir management in the Henry's Fork Watershed. This project will be another concrete step forward in conserving water for various interest and stakeholders in the region.

The Snake River water supply has many competing demands including irrigation, municipal, recreation, ecological and industrial uses. These various demands and potential solutions to water availability bottlenecks were addressed in the Henry's Fork Basin Study hosted by the Henry's Fork Watershed Council. Completed in 2014 and funded by Reclamation and the Idaho Water Resource Board, the Henry's Fork Basin study identified canal automation as one of the most economical ways of conserving water in the Henry's Fork. If awarded, funding will allow FMID to install automation and remote control on 4 main water control structures helping to secure Idaho's water for the future.

We strongly support FMID's efforts to conserve this critically valuable resource and ask that you give their application full and fair consideration.

Sincerely,

Mike Crapo
United States Senator

James E. Risch
United States Senator

Mike Simpson
United States Congressman

Fremont-Madison Irrigation District

Official Resolution 2022-01

In the matter of the proposed WaterSMART application to United States Bureau of Reclamation (Reclamation) for canal 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 on 3 main water control structures within the district, 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 19 day of April, 2022

Fremont-Madison Irrigation District

By: Jeff Raybould, Chairman

Fremont-Madison Irrigation District

By: Aaron Dalling, Executive Director