MINIDOKA IRRIGATION DISTRICT
98 WEST 50 SOUTH
RUPERT, ID 83350
(208) 436-3188
"M.I.D. IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER"

WaterSMART
Small-Scale Water Efficiency Projects
Funding Opportunity Number R21AS00257

Minidoka Irrigation District's Piping of Lateral 39

Lateral 39 is part of Minidoka Irrigation District's older infrastructure. A portion of the lateral is a rock-lined ditch. Due to the nature of the materials, there is significant water loss in this area.The loss is equal to approximately 5.08 AF per day.
Installing 2,840ft of 18" 80PSI pipe will reduce the loss of water, not only saving the District a significant amount of water, it will allow the District to better serve their water users.

The Project Manager will be:
Shawna Adams
98 West 50 South
Rupert, Idaho 83350
midshawna@gmail.com
208-260-1097
SAM/DUNS Number: 081826240

Table of Contents

Executive Summary
March 9, 2021
Minidoka Irrigation District
City: Rupert
County: Minidoka & Cassia
State: Idaho

Minidoka Irrigation District is a Category A Applicant

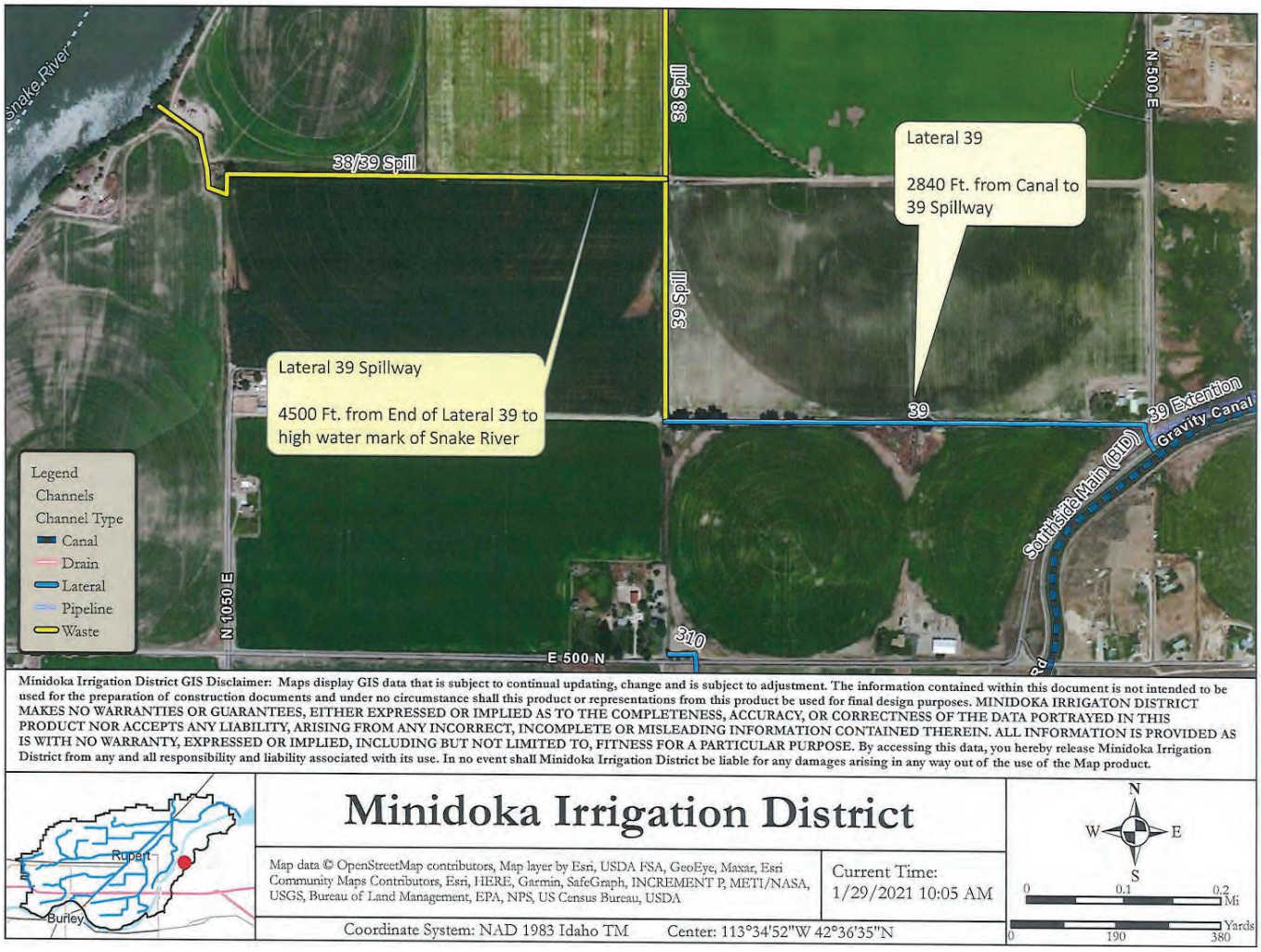
Minidoka Irrigation District (MID) serves approximately 1,300 water users with over 502 miles of canals, laterals, and drainage systems. MID receives storage water from the Minidoka, American Falls, Palisades, and Jackson Dams. Minidoka Irrigation District is part of the Minidoka Project, one of the Bureau of Reclamation's oldest projects in the entire United States. The District has functioned for many years without the necessary upgrades for the present and future needs of the District's customers. To continue to work towards their goals of water conservation and improving water delivery service, Minidoka Irrigation District will convert an existing open lateral to a 2,840' pipeline. Replacing the open lateral will not only prevent water loss due to seepage and rodent holes but also allow Minidoka Irrigation District to be proactive in mitigating potential property damage. Piping the lateral will allow MID to better manage the water flow, reducing waste and reallocating water to the system for crop production.

The project is estimated to begin in November 2022, taking just under four weeks to complete, with an estimated completion date at the end of November 2022.

The project is not located on a Federal facility.

Project Location

Lateral 39 is located approximately 5.69 miles southwest of the Main southside diversion gate at the Minidoka Dam, in Cassia County in the State of Idaho. Please see the map below for a detailed depiction of the location.



Project Description and Milestones

This project will involve three separate and distinct phases:

Phase 1- Project Area Preparation (6 days)

This portion of the project will include the removal of the rock-lined ditch, digging down approximately three (3) feet where needed to ensure the pipe is able to be bedded appropriately. This portion of the project will also include the installation of the concrete box at the top end of the lateral, and allowing time for the concrete to cure properly.

Phase 2- Pipeline Installation (15 days)

This portion of the project will include ensuring the appropriate bedding material is in place, as well as laying the entire length of the pipeline and associated spurs or diversion points

Phase 3- Backfill and Project Cleanup (5 days)

This phase of the project includes backfilling the area, leaving a road surface on top. At this time, MID will also clean up the associated area, ensuring that the surrounding area is left in the same condition as when we began the project, if not better.

To complete this project, we will be using a 2.5 CY track excavator, a 1.5CY backhoe, and 12CY dump trucks, all currently owned by Minidoka Irrigation District.
Depending on what material is found below the surface, we may also need the use of a rock hammer. This would be rented for the duration of the project.
There is a fall of over seventeen feet through the length of this lateral. To ensure the fall and slope are within acceptable ranges, we will be installing a concrete box at the head of the lateral, after it crosses under the road. From that point, we will be installing eighteen-inch (18”), eighty (80) pounds per square inch (PSI) plastic irrigation pipe (PIP) polyvinyl chloride (PVC) pipe. The top end of the lateral will be dug down slightly, while the downstream end of the lateral will be consistent with the bottom of the existing ditch. We will not be using the dirt that is on-site to bed the pipe or backfill around the pipe, as it will be coming from a rock-lined ditch, therefore would not be suitable. We will be using dirt from other sources in the District to provide suitable, long-lasting bedding. We will be using the transit level frequently to ensure the slope and fall are within appropriate parameters.

Evaluation Criteria

Evaluation Criterion A—Project Benefits (35 points)

Up to 35 points may be awarded based upon an 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 in order to address water reliability concerns, including making water available for multiple beneficial uses and resolving water-related conflict in the region.

Describe the expected benefits and outcomes of implementing the proposed project.

Historically the rock-lined ditch in the area has been highly susceptible to water loss. Due to the loss of water in the area, water delivery suffers at times when demand is high. The road base and surrounding areas become oversaturated, leading to farm equipment getting bogged down, stuck, then damaging the field surface during recovery.
The benefit of installing the pipeline is primarily the prevention of water loss and damage to crops. With the installation of the pipeline, the stress on the system during times of high demand will be reduced drastically, leading to the neighboring farms being able to irrigate at the same time instead of on a rotational basis.
When looking at a simple cost to benefit ratio, by installing the pipeline, Minidoka Irrigation will be able to conserve an additional 914 acre feet of water per irrigation season. Other benefits include greater efficiency and drought resilience, as well as less demand on the storage system.When taking into account the amount of water that will not even be removed from the system, increasing conservation of resources, the benefit is immeasurable.

What are the benefits to the applicant's water supply delivery system?
The main benefit to the Minidoka Irrigation District by installing this pipeline is that we are able to use less water overall. We, on average, measure 7.24cfs passing through the headgate of the lateral. Of this, 4.68cfs is diverted to pumps, resulting in a loss of 2.56cfs, both through the loss due to the seepage, and the minimal amount of operational spill.
The loss of 2.56cfs is equal to 5.08AF per day. When converted to dollar figures, this results in $22,860 lost each 180 day irrigation season.
A secondary benefit of the pipeline is to reduce the ongoing conflict between neighboring water users, as they routinely dispute water availability. While the dispute does not escalate beyond verbal frustration, alleviating that would lead to each party being better neighbors overall.

If other benefits are expected explain those as well. Consider the following: Extent to which the proposed project improves overall water supply reliability
An additional benefit to piping Lateral 39 is the updates to the original infrastructure. The lateral has not been updated since it was originally installed, with the exception of pushing the banks back in or rebuilding them as they erode. While the infrastructure has served the District very well, even the best-made waterways need improvements after over one hundred years of use. We plan to install infrastructure that, barring unforeseen circumstances, will ensure the Minidoka Irrigation District the ability to provide water to the farm ground in the area for a long time to come.
One of the largest frustrations in farming, besides the weather, is the lack of reliable water delivery. Farmers rely on a reliable source of water when making their plans for this year, for next year, the next five, ten, or even fifteen years. Being able to provide that to them, when they need it, is crucial. The greatest fault with the rock-lined ditch at Lateral 39 is that it is unpredictable. Some seasons it may run with no concerns. Other years it has washed out, seeped enough water to damage crops, or leaks enough that farmers at the end of the line are not able to get water at all, resulting in damage to their pumps.
Installing a pipeline in place of the open ditch alleviates the majority of these concerns. The issue has never been getting the water to the head of the lateral, but instead to the bottom end farmers. With the pipeline, this will no longer be a concern, ensuring the area farmers are able to get their water to the crops when they need it, eliminating the frustration and damage that results from water being unavailable.

E.1.2. Evaluation Criterion B—Planning Efforts Supporting the Project (35 points)
Up to 35 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 applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs.
Describe how your project is supported by an existing planning effort.
Minidoka Irrigation District currently has an existing plan in place to reduce our water use by heightened water conservation through enhanced infrastructure. A component of this plan is to reduce the loss of water through leakage and operational spill. Installing this pipeline, as

previously mentioned allows all water pulled from the canal, and ultimately the river, to go exactly where it is intended with very little to no unwanted diversion.

Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?
The proposed pipeline addresses the need of eliminating water waste in the area, ultimately allowing Minidoka Irrigation District to divert less water from the river. This is in line with the goals of the District, and reduces our overall water withdrawal from the storage system.

Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.
The piping of Lateral 39 has been identified as a priority due to the frequent seepage, and potential for damage to crops and current infrastructure due to the softening of the ground. Due to seepage, the banks of the lateral are frequently saturated, and this has resulted in the lateral banks eroding and collapsing in the past. This project accomplishes the greatest amount of water savings with the least amount of time and financial resource investment.

E.1.3. Evaluation Criterion C—Project Implementation (10 points)
Up to 10 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.
Minidoka Irrigation District plans to break ground on the piping of Lateral 39 after the 2022 Irrigation Season. The District begins the water run-out process towards the end of October, meaning that by the first week of November the lateral should be drained down. The pipe for the project would have been ordered approximately six-eight weeks prior to groundbreaking, to allow for the manufacture and delivery of the order. The order for the pipe will be placed on or around September 1st, 2022.
The first milestone for the installation of the pipeline will be installing the concrete box near the head of the lateral. The box would be formed up, then the concrete placed on site. This should take approximately five days to complete. Once the box has been installed, and the forms removed, the excavation of the trench to lay the pipe would begin, on or around November 6, 2022. Depending on the soil condition under the base of the lateral, the Minidoka Irrigation District crew can excavate and lay between eight and twelve pieces of 18” pipe over the course of a day. The first few days would be excavating and laying pipe. Once there is a good length of pipe on the ground, crew can begin to backfill the previously laid pipe, creating a new road base for access and maintenance. Approximately 1200’ from the concrete box lays the first diversion point, and 20’ past that point would be the second point of diversion.

Once the two diversion points have been installed, the crew will proceed to lay the additional pipe until they reach the corner point. At the bottom end of the lateral, there are two pumps, requiring two diversion installations. The District will be installing a valve at the end of the pipeline, allowing for cleanout at the end of the irrigation season, and for other use as needed.

Describe any permits that will be required, along with the process for obtaining such permits. Identify and describe any engineering or design work performed specifically in support of the proposed project.
There will be no specific permits required to complete this project. The pipeline lies on private ground which Minidoka Irrigation District holds an easement allowing access. Design work for this specific project does not exist, as we are in the process of piping multiple open ditch laterals, all with the same general design.

Describe any new policies or administrative actions required to implement the project.
There will be no new policies or administrative actions required to implement the project.

E.1.4. Evaluation Criterion D— Nexus to Reclamation (10 points)
Up to 10 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?
The project is located in the Minidoka Project, one of the oldest Bureau of Reclamation Projects in the United States. The Minidoka project waters over one million acres of land on the Upper Snake River Plain in Idaho.

Does the applicant receive Reclamation project water?
Yes, Minidoka Irrigation District receives Reclamation water from Jackson Lake, Grassy Lake, Island Park Reservoir, American Falls Reservoir, and Lake Walcott.
Is the project on Reclamation project lands or involving Reclamation facilities?
Yes
Is the project in the same basin as a Reclamation project or activity?
Yes
Will the proposed work contribute water to a basin where a Reclamation project is located?
Yes
Will the project benefit any tribe(s)?
No

Project Budget

Funding Plan and Letters of Commitment

The non-federal share of the project budget will be furnished by Minidoka Irrigation District's Operations and Maintenance funds. The District is prepared to contribute $78,791.30 of the total estimated $153,791.30 needed to complete the project through in-kind contributions and use of District owned equipment. These funds will be available as soon as needed, as they are part of our continuing maintenance funding. There are no time constraints on the funding, and no other contingencies associated with the funding commitment.

Budget Proposal

Budget/Item Description	Qty	Unit/Price	Total
Salaries and Wages-Position title x hourly wage/ salary x est. hours for assisted activity			
Manager	15	$36.76	$551.40
Watermaster	15	$25.75	$386.25
Foreman	120	$25.75	$3,090.00
Supervisor	50	$25.75	$1,287.50
Project Manager	40	$19.21	$768.40
Administrative Assistant	20	$25.75	$515.00
Laborer	200	$19.21	$3,842.00
Mechanic	15	$25.75	$386.25
Laborer	960	$19.21	$18,441.60
Total			$29,268.40
FRINGE BENEFITS			
Manager	15	$16.71	$250.65
Watermaster	15	$16.71	$250.65
Foreman	120	$16.71	$2,005.20
Supervisor	50	$16.71	$835.50
Project Manager	40	$14.59	$583.60
Administrative Assistant	20	$16.71	$334.20
Laborer	200	$14.59	$2,918.00
Mechanic	15	$16.71	$250.65
Laborer	960	$14.59	$14,006.40
Total			$21,434.85
MILEAGE/TRAVEL-dates; location of travel; method of travel x estimate cost; who will travel			
Travel to/from yard/shop to project location (100 trips x 20/miles RT)	2000	$0.54	$1,070.00
			$0.00
Total			$1,070.00
EQUIPMENT-leased Equipment use rate + hourly wage/salary x est. hours for assited activity			
Volvo EC200 EL 2018 #67 Track Excavator (FEMA #8283)	128	$158.86	$20,334.08
Dump Truck (loads) (FEMA #8722)	105	$79.62	$8,360.10
Hyster Tilt-Deck #54 1973 Trailer (FEMA #8600)	4	$16.71	$66.84
Transport Tractor (FEMA #8799)	4	$42.33	$169.32
John Deer 310 Backhoe (FEMA #8572)	80	$43.46	$3,476.80
Rock Hammer Rental (Thorton Construction)	48	$200.00	$9,600.00
Rock Hammer Transport	2	$150.00	$300.00
Jumping Jack Compactor	20	$84.00	$1,680.00
Drum Compactor	1	$240.00	$240.00
Total			$44,227.14
SUPPLY/MATERIALS-Describe all major types of supplies/materials, unit price, # of units, to be used on activity			
18" 80psi PVC	2840	$14.10	$40,044.00
Series 400 PW Line Gate 18"	4	$2,498.23	$9,992.92

48" Extension with 2.5" cover shield	4	$87.98	$351.92
18*18*18 Gasketed T	5	$658.98	$3,294.90
C Channel	2	$67.80	$135.60
1/2 20' Rebar	30	$5.85	$175.50
Bar T Grating	28	$60.93	$1,706.04
Snap Ties 8"	270	$0.45	$121.50
Chairs	22	$0.50	$11.00
Tie Wire	500	$0.01	$5.00
Form Oil (Gallon)	1	$9.00	$9.00
Concrete	7	$128.00	$896.00
Hot Water	7	$5.50	$38.50
Non-calcium Chloride	7	$7.00	$49.00
Commercial Fiber	7	$7.00	$49.00
15" by 6' tall	2	$488.03	$976.06
15" 100psi PVC	40	$10.40	$416.00
15" Starter Coupler	2	$140.77	$281.54
Hilti 500 Adhesive	1	$55.00	$55.00
Anchor Bolts	12	$1.11	$13.32
Static Mixing Straw	1	$5.95	$5.95
Unshrinkable Grout	1	$12.36	$12.36
Total			$58,640.11
TOTAL ESTIMATED PROJECT COST			**$154,640.50**
Federal Grant Contribution			75,000.00
Minidoka Irrigation District's Contribution			79,640.50

Budget Narrative

This project is a significant undertaking for Minidoka Irrigation District.

Total wages and benefits for the project would be $49,854.05. This includes wages and benefits for anyone included in the project: managers, supervisors, mechanics, laborers, as well as the project manager.

Fringe benefits included for employees include FICA, Medicare, PERSI retirement, and Insurance. The average breakdown is as follows:

	Minidoka Irrigation District- Current District Salaries		Dec 2020
	Average Cost with Benefits		
Hourly			
	Wage		$19.21
	FICA	4.20%	$0.81
	Medicare	1.45%	$0.28
	PERSI	11.94%	$2.29
	Insurance	$1,943.00	$11.21
	Total		**$33.80**
Salary			
	Wage		$31.91
	FICA	4.20%	$1.34
	Medicare	1.45%	$0.46
	PERSI	11.94%	$3.81
	Insurance	$1,943.00	$11.21
	Total		**$48.73**

There will be numerous trips to the site while the project is underway, to transport not only crew, but also equipment and tools. The estimated total for these trips will be $1,070.00.

Equipment used for this project will primarily be equipment currently owned by the District, with the exception of a rock hammer. The rock hammer will be rented from a local construction company for the amount of time necessary to complete the project. The unit price per hour are numbers that have been pulled directly from the FEMA Schedule of Equipment Rates, where applicable. The total for equipment usage will be $44,227.14.

The supplies and materials needed for this project include the actual pipe, valves and fittings needed to construct the pipeline, as well as items needed to construct the box at the head of the lateral, including concrete and rebar. The total for all supplies and equipment needed for this project is $58,640.11.

The grand total for piping Lateral 39 is $153,791.30, with Minidoka Irrigation District prepared to fund $78,791.30 of the project.

Piping this lateral will save the District approximately 1,553.4 acre feet of water each season.

Resolution

RESOLUTION OF THE BOARD OF DIRECTORS OF THE MINIDOKA IRRIGATION DISTRICT BUREAU OF RECLAMATION WATER SMART GRANT

Whereas, the Board of Directors of the Minidoka Irrigation District (MID) desires to apply for a Bureau of Reclamation Water Smart Grant, also known as a financial assistance award, for the purpose of contributing to the cost of installing a pipeline and making other water efficiency improvements to Lateral 39 owned, operated and maintained by MID, and

Whereas, the estimated cost of the project is $153,791.30 and the Board of Directors desires to apply for a financial assistance award in the amount of $75,000.00, and

Whereas, the Bureau of Reclamation requires the Board of Directors of MID to adopt a resolution containing certain information in order to apply for and obtain a financial assistance award,

Now, therefore, upon motion made, seconded and carried, **it is resolved** by the Board of Directors of MID:

- The Chairman of the Board of Director of MID, Ronald Kowitz, is authorized to enter into and sign agreements and other documents on behalf of MID committing MID to the financial and legal obligations associated with the receipt of a financial assistance award.

- The Board of Directors of MID has reviewed and supports the application for a financial assistance award submitted by MID.

- MID has funds on deposit and employees and equipment that can provide the amount of funding and/or in-kind contributions as specified in the funding plan.

- MID will work with the Bureau of Reclamation to meet established deadlines for entering into a grant, financial assistance award or cooperative agreement.

Dated March 9, 2021

Minidoka Irrigation District

By Ronald Kowitz

Ronald Kowitz, Chairman of the Board of Directors

Attest: Ruth S. Bailes

Ruth S. Bailes, Secretary to the Board of Directors

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE MINIDOKA IRRIGATION DISTRICT
BUREAU OF RECLAMATION WATER SMART GRANT

Whereas, the Board of Directors of the Minidoka Irrigation District (MID) desires to apply for a Bureau of Reclamation Water Smart Grant, also known as a financial assistance award, for the purpose of contributing to the cost of installing a pipeline and making other water efficiency improvements to Lateral 39 owned, operated and maintained by MID, and

Whereas, the estimated cost of the project is $153,791.30 and the Board of Directors desires to apply for a financial assistance award in the amount of $75,000.00, and

Whereas, the Bureau of Reclamation requires the Board of Directors of MID to adopt a resolution containing certain information in order to apply for and obtain a financial assistance award,

Now, therefore, upon motion made, seconded and carried, **it is resolved** by the Board of Directors of MID:

- The Chairman of the Board of Director of MID, Ronald Kowitz, is authorized to enter into and sign agreements and other documents on behalf of MID committing MID to the financial and legal obligations associated with the receipt of a financial assistance award.

- The Board of Directors of MID has reviewed and supports the application for a financial assistance award submitted by MID.

- MID has funds on deposit and employees and equipment that can provide the amount of funding and/or in-kind contributions as specified in the funding plan.

- MID will work with the Bureau of Reclamation to meet established deadlines for entering into a grant, financial assistance award or cooperative agreement.

Dated March 9, 2021

Minidoka Irrigation District

By Ronald Kowitz

Ronald Kowitz, Chairman of the Board of Directors

Attest: Ruth S. Bailes

Ruth S. Bailes, Secretary to the Board of Directors