

Project Title:

**Eastern Snake Plain Aquifer
Ground Water Diversion
Automated Water Measurement**

Submitted to:

**United States Bureau of Reclamation
WaterSMART Grants: Small-Scale Water Efficiency**

Projects for Fiscal Year 2019

Proposal for Fiscal Year 2019

Funding Opportunity No.: BOR-DO-19-F005

CFDA #: 15.507

Submitted by:

Mud Lake Water Users, Inc.

1400 East 1500 North

Terreton, ID 83450

Submitted April 24, 2019

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Eastern Snake Plain Aquifer Ground Water Diversion Automated Flow Measurement

I. Technical Proposal and Evaluation Criteria

Executive Summary

Applicant

- Application Date April 24, 2019
- Applicant Name Mud Lake Water Users, Inc.
- City..... Terreton
- County..... Jefferson
- State..... Idaho

Summary

The purpose of this project is to acquire and install automated water measurement devices on the canals that receive the discharge from well fields that extract groundwater from the Eastern Snake Plain Aquifer. The flow meters will communicate wirelessly with the existing SCADA system with the intent of increasing the frequency and improving the accuracy of flow measurement. Better information regarding groundwater diversion will facilitate better decisions regarding water conservation. To date the volume of groundwater extracted is measured every fifteen days at specified locations in the canal system by the watermaster for the Groundwater District using portable velocity meters wherein the velocity profile is used to estimate the flow in a section of canal with a defined geometry. That estimate of flow every fifteen days is used to calculate the volume of groundwater diverted for the preceding fifteen days. This project proposes installation of in-channel area-velocity meters utilizing Doppler signals at five locations to measure the flow at fifteen minute intervals, transmitting that data via internet to the SCADA system, and reporting flow and cumulative volume to the MLWU and the Idaho Department of Water Resources, thereby enabling improved water management through increased accuracy in flow measurement. This real-time view of the groundwater diversion rate will enable more accurate water delivery to the customers, create a more efficient water distribution system that delivers water based on demand, and reduce labor and resources associated with water measurement.

Schedule

The project is slated to begin in November of 2019 and conclude in April of 2020.

Location

The project is not located on a Federal facility.

Background Data

Mud Lake Water Users, Inc.

Documents in the Idaho Department of Water Resources records reveal Owsley Canal Company, Holley Canal Company and Jackett Canal Company reorganized in March 1998 to form the Mud Lake Water Users (MLWU). As a result of the reorganization, the water rights for MLWU consist of twenty-six ground water rights, one wastewater right and forty-four surface water rights for irrigation storage in Mud Lake.

Source of Supply

Mud Lake, a natural closed basin in eastern Idaho, is used as a reservoir for storage of irrigation water. Mud Lake has been modified by the construction of dikes and levees to provide storage of approximately 64,200 acre feet. The water supply is furnished by surface runoff from Beaver Creek and Camas Creek and by artesian and pumped wells from the Snake Plain Aquifer.

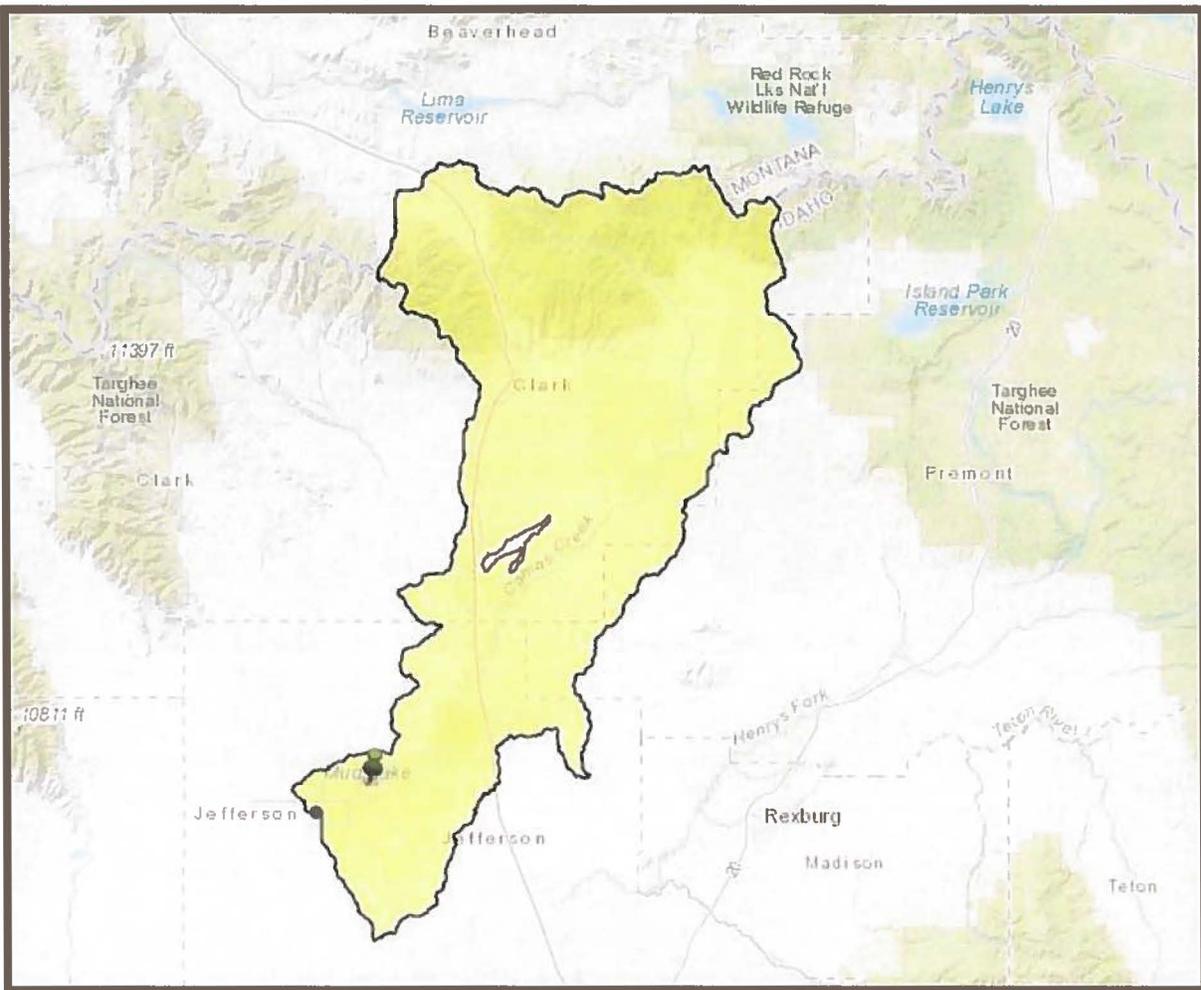


Figure 1 - Camas Creek Watershed Including Mud Lake. (EPA Waters GeoViewer)

Beaver Creek, with a drainage area of approximately 510 square miles is tributary to Camas Creek at a point near Camas, Idaho, and normally dries up in late spring. There are irrigation diversions on Beaver Creek above Camas Creek serving approximately 5,800 acres. Camas Creek drains an area of approximately 1130 square miles above Mud Lake and flows through the Camas Wildlife Refuge into Mud Lake through a regulating structure called the Bybee gates or Bybee structure. The gates at the Bybee structure can be closed to retain Camas Creek discharge in the refuge area or opened to fill Mud Lake. This watershed is labeled Groundwater District 31 by the Idaho Department of Water Resources.

The primary groups of users which utilize well water are the Independent Water Users and the Mud Lake Water Users. Historically, many of these wells flow under artesian conditions in the winter and spring and were pumped after the irrigation season began; however, most of the wells are now pumped during late winter and spring during most years. During the irrigation season, the watermaster allocates water according to a federal decree which includes all water users. Because of the relationships between surface water and ground-water systems and the complicated operation of artesian well systems, evaluation of the effects of changes in surface flows or utilization of wells on Mud Lake is not possible without a computer-based water balance model.

Service Area

A map depicting the land served by the MLWU along with the delivery system is presented in the following figure.

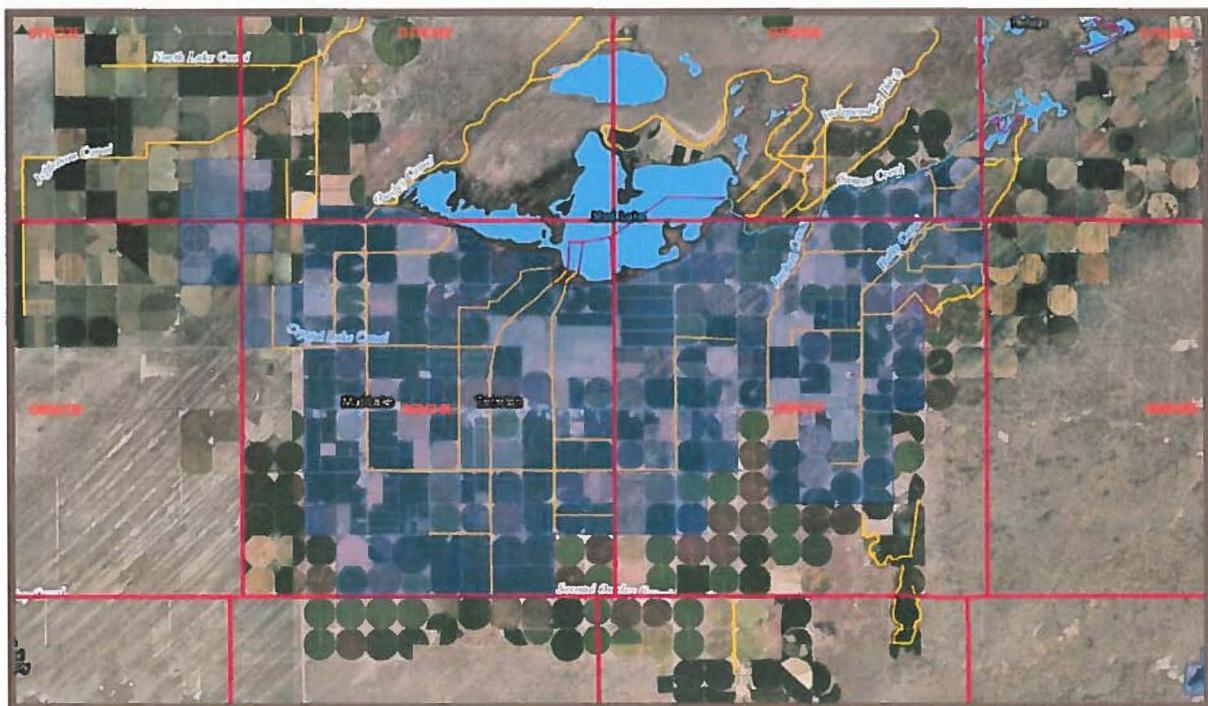


Figure 2 - Mud Lake Water Users Boundary and Delivery System. (IDWR Irrigation Systems Mapper)

Water Use

The MLWU is an irrigation company. The water is used for irrigation of crops; primarily alfalfa, potatoes, wheat, and barley.

Water Rights

A listing of the water rights owned by the MLWU relevant to this project is presented in the following table.

Table 1: Mud Lake Water Users Water Rights (IDWR).

Basin	Basis	Status	Priority Date	Diversion Rate (cfs)	Source	Water Use	Owner
31	Decreed	Active	10/3/1910	12	CAMAS CREEK, MUD LAKE	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	MUD LAKE WATER USERS INC
31	Decreed	Active	10/14/1940	110	GROUND WATER	DIVERSION TO STORAGE, IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	10/14/1940	100	GROUND WATER	DIVERSION TO STORAGE, IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	1/8/1932	50	GROUND WATER	DIVERSION TO STORAGE, IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	6/28/1936	80	GROUND WATER	DIVERSION TO STORAGE, IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	1/25/1930	24	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	1/25/1930		GROUND WATER	IRRIGATION STORAGE	MUD LAKE WATER USERS INC
31	Decreed	Active	4/27/1932	11.05	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	12/15/1932	17	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	9/10/1928	23	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	1/25/1930	40	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	5/22/1940	64.4	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	1/17/1969	10	WASTE WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	1/13/1949	3.2	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	2/14/1949	3.6	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	12/29/1949	6	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	9/24/1952	5.8	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	2/28/1953	8.08	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	10/27/1956	1.9	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	4/25/1953	1.92	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	9/3/1954	16	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	9/3/1954	16	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	9/3/1954	16	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	9/3/1954	16	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	9/3/1954	16	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	Decreed	Active	12/4/1967	13.26	GROUND WATER	IRRIGATION	MUD LAKE WATER USERS INC
31	License	Active	6/11/1997	113	CAMAS CREEK	GROUND WATER RECHARGE	MUD LAKE WATER USERS INC
31	Decreed	Active	12/31/1957	0.08	GROUND WATER	DOMESTIC	MUD LAKE WATER USERS INC
31	Decreed	Active	10/14/1940	427	GROUND WATER	STORAGE	MUD LAKE WATER USERS INC
31	Decreed	Active	9/3/1954	202.95	GROUND WATER	STORAGE	MUD LAKE WATER USERS INC
31	Decreed	Active	5/5/1969	617	CAMAS CREEK	GROUND WATER RECHARGE	MUD LAKE WATER USERS INC
31		Active	11/2/2018	0.04	GROUND WATER	COMMERCIAL	MUD LAKE WATER USERS INC

Water Delivery System

The water delivery system consists of a series of supply canals, two major pump stations that lift water into the major delivery canal (Owsley Canal), and multiple minor canals and ditches that convey water to the individual parcels comprising the service area. Most of the delivery canals are unlined open-channel conveyances. The individual irrigators typically pump from the canals into pressurized sprinkler systems for irrigation of crops.

The MLWU have a SCADA system that monitors the pumps for the two major pump stations. The SCADA system utilizes the wireless internet for transmitting data from the pump stations to the PLC and main panel at the Company office.

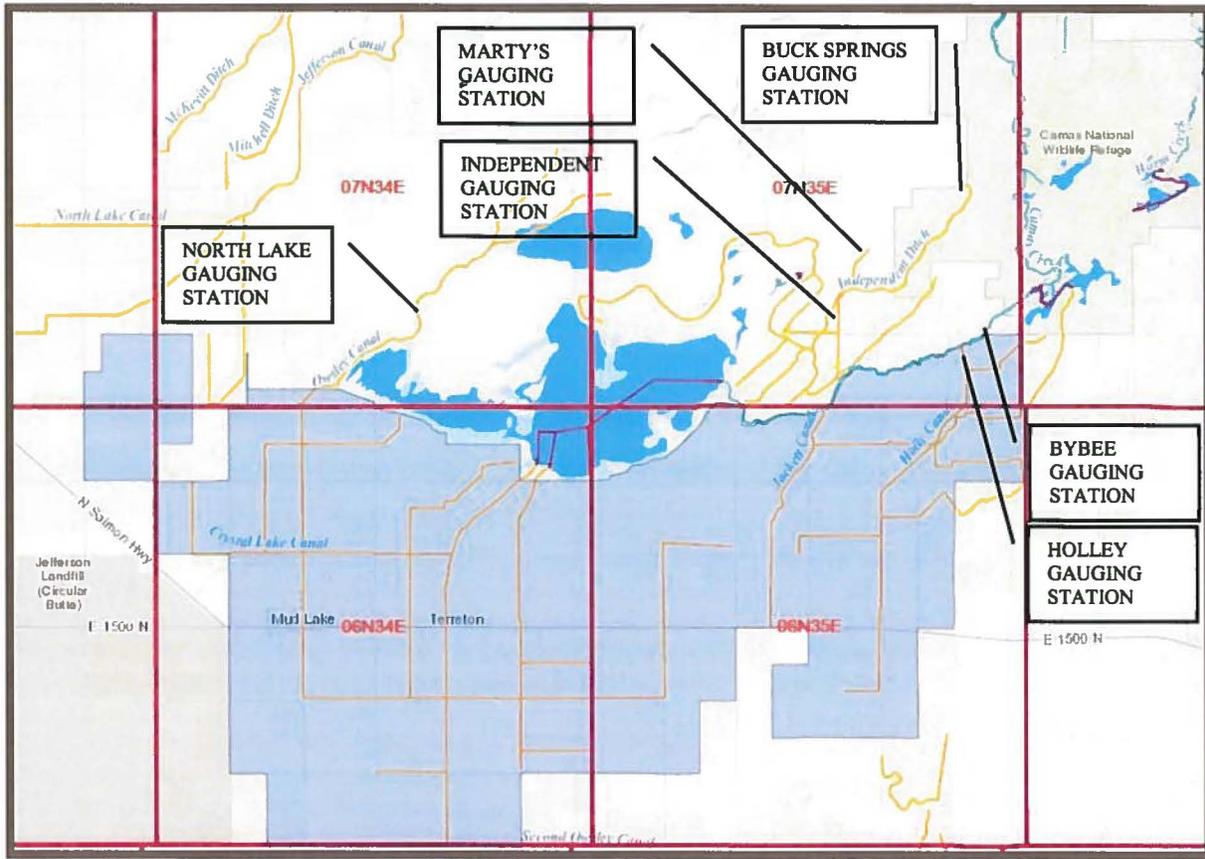


Figure 3 - Mud Lake Water Users Delivery System.

Project Location.

The project is located in Jefferson County, Idaho just north of the communities of Terreton and Mud Lake. The area is 40 miles north of Idaho Falls and is situated in Township 07 North Range 34 East and 35 East and in Township 06 North 34 East and 35 East; Boise Meridian.

Technical Project Description and Milestones

Identify the Problem

The Idaho Department of Water Resources issued a Final Order in 2016 requiring measuring devices for groundwater diversions in portions of several water districts in Eastern Idaho overlying the Eastern Snake Plain Aquifer including District 31 which encompasses the Mud Lake Water Users. The Final Order was a consequence of a settlement agreement between the Surface Water Coalition and the Idaho Ground Water Appropriators as part of a mitigation plan pursuant to the Department's *Rules for Conjunctive Management of Surface and Ground Water Resources*. The Settlement Agreement acknowledges a decades-long declining trend in ground water levels measured in the Eastern Snake Plane Aquifer. One provision of the Settlement Agreement is the installation of flow meters on all remaining unmeasured ground water diversions of implicated ground water users.

Specifically, Water District 31, must:

Water District No. 31 ("WD31") includes both surface water and ground water rights in Basin 31. Approximately thirty ground water rights within WD31 authorize diversion of ground water into Mud Lake. The watermaster for WD31 historically administered these ground water rights and wells. The water rights are subject to the Agreement of Water Right Owners Regarding Delivery of Mud Lake Water, dated April 17, 2001 ("Mud Lake Agreement"), which is filed in the records of the Department and the Clerk and Recorder of Jefferson County, instrument number 307626. The Mud Lake Water Users, Inc., Independent Water Users of Mud Lake, Inc., and Dobson Ranch Partnership, hold the ground water rights and wells that are administered pursuant to the Mud Lake Agreement. (Final Order)

The Mud Lake Water Users have historically measured flow using portable velocity meters as previously described. They must comply with the Final Order and update their flow measurement practices as described in the order using electronic flow measurement devices compliant with IDWR standards.

Solution

The proposed project entails design, procurement, installation, and commissioning of flow meters at five locations as required by the Idaho Department of Water Resources and in compliance with an order from the IDWR for increased flow monitoring for groundwater diversions from the Eastern Snake Plain Aquifer.

Permitting

Consultation with the ACOE and IDWR suggests no permitting will be required.

Environmental Compliance

The project has minimal impact on the environment as the flow meter is installed in man-made canals with no anticipated impact on wildlife, scenic rivers, wetlands or other aquatic resources. However, an environmental overview will be conducted to ensure compliance with Federal environmental and cultural resource laws.

Preliminary Design

Preliminary design is described by an initial evaluation of each gauging station to ascertain the channel geometry and flow regime followed by an evaluation of appropriate flow measurement devices. In some cases, a measurement device, likely an area-velocity meter, will be installed in the historical gauging station in an open channel configuration while in other locations the gauging station may be moved to a location with a more defined geometry before installation of the meter.

Final Design

During final design, selection of the flow measurement device will be concluded, drawings will be prepared depicting installation of the meter, process & instrumentation diagrams, remote power, and SCADA integration.

Construction

Each gauging station will feature a flow meter, control panel mounted in a NEMA 4 enclosure, solar panel and battery for independent power supply, and telemetry equipment for wireless connectivity the existing SCADA system.

Expected Outcome

The expected outcomes include:

- Compliance with the Final Order issued by IDWR.
- Increased frequency of flow measurement leading to improved accuracy of flow measurement and water production.
- Increased efficiency of water delivery consistent with water rights and water shares held by each irrigator.
- Conservation of water as a consequence of increased accuracy of flow measurement.

Evaluation Criteria

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 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.

What are the benefits to the applicant's water supply delivery system?

Benefits to the water supply delivery system are:

- Increased accuracy in flow measurement – The increased accuracy of flow measurement will result in increased efficiency for water delivery.
- Improved water management – As a result of better understanding the volume and timing of water flow, the MLWU will be able to better manage the entire irrigation system beginning with the supply from ground water diversion to optimization of delivery.
- Identify water loss – More accurate metering will provide better information regarding water loss in the system.

If other benefits are expected explain those as well. Consider the following:

Extent to which the proposed project improves overall water supply reliability

The project improves water reliability by assuring all stakeholders that the MLWU are in compliance with regulations associated with water rights and their permitted diversions from ground water.

The expected geographic scope benefits from the proposed project (e.g., local, sub-basin, basin)

Because of the conjunctive relationship between ground water and surface water and the connectivity of the ESPA with water supply throughout southern Idaho, the benefits of increased accuracy in water management accrue through all of Southern Idaho.

Extent to which the proposed project will increase collaboration and information sharing among water managers in the region

The flow information will be provided to IDWR and subsequently shared with all stakeholders, inherently increasing collaboration among stakeholders and imbuing trust.

Any anticipated positive impacts/benefits to local sectors and economies (e.g., agriculture, environment, recreation, tourism)

The agriculture interests in the area will see greater reliability in water delivery and thus reduce risk for crop production.

Extent to which the project will complement work done in coordination with NRCS in the area (e.g., with a direct connection to the district's water supply). Describe any on-farm efficiency work that is currently being completed or is anticipated to be completed in the future using NRCS assistance through EQIP or other programs.

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 (SOR), 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.

The MLWU prepared a water management plan within the last three years and submitted it to the Idaho Department of Water Resources in conjunction with the Final Order on ground water measurement for ground water users withdrawing water from the ESPA. The proposed project is consistent with the MLWU current water management that plan.

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

•Water measurement has been identified as an point of concern and subsequent goal in the source and delivery of water within the MLWU system. The proposed project fulfills one aspect of that goal.

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

Evaluation Criterion C—Project Implementation (10points)

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. Please also see Section C.3.3. Length of Projects.

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.

Activity	A	M	J	J	A	S	O	N	D	J	F	M	A	M
Application	X													
Grant Award				X										
Environmental						X	X							
Preliminary Design							X							
Final Design								X	X					
Bidding										X				
Construction											X	X		
Commissioning														X

Figure 4 - Anticipated Project Schedule

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

Consultation with the ACOE and IDWR suggests no permitting will be required.

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

The MLWU designed and installed an area-velocity meter at one of their gauging stations in 2018-2019.

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

No new policies anticipated.

Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office?

The estimate for environmental compliance was estimated based on similar effort for developing an environmental overview consistent with Federal and State guidance for similar projects. The compliance costs have not been discussed with the local Reclamation office.

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? If so, how? Please consider the following:

Does the applicant receive Reclamation project water?

No, the applicant does not receive Reclamation project water.

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

No, the project is not on Reclamation project lands or involve Reclamation facilities.

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

No, the project is not in the same basin as a Reclamation project or activity unless one considers a larger basin, whereupon the project may be considered part of the Upper Snake River Basin.

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

Not directly.

Will the project benefit any tribe(s)?

A tribe does not directly benefit locally from the project, but in the larger picture, the project may contribute to better measurement accuracy and thus result in more water in the ESPA or Snake River which would indirectly benefit one of several tribes.

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

Up to 10 points may be awarded based on the extent that the proposal demonstrates that the project supports the Department of the Interior priorities. Please address those priorities that are applicable to your project. It is not necessary to address priorities that are not applicable to your project. A project will not necessarily receive more points simply because multiple priorities are addressed. Points will be allocated based on the degree to which the project supports one or more

of the Priorities listed, and whether the connection to the priority(ies) is well supported in the proposal.

1. Creating a conservation stewardship legacy second only to Teddy Roosevelt

Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;

The project contributes water to Mud Lake and as a result fosters access to public lands and balanced stewardship.

Identify and implement initiatives to expand access to DOI lands for hunting and fishing;

The project contributes to provision of water into Mud Lake which is a common destination for hunting and fishing.

Shift the balance towards providing greater public access to public lands over restrictions to access.

Mud Lake is managed jointly with the Idaho Department of Fish and Game which provided public access to the water and surrounding wetlands and uplands. The project encourages a continued partnership with that agency.

2. Utilizing our natural resources

None noted

3. Restoring trust with local communities

Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;

Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.

As stated previously, Mud Lake is managed jointly with the Idaho Department of Fish and Game. The project enhances the communication and cooperation between private landowners and the public agencies.

4. Striking a regulatory balance

Reduce the administrative and regulatory burden imposed on U.S. industry and the public;

The project brings the MLWU in compliance with a regulatory fiat.

5. Modernizing our infrastructure

Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure;

The project expands the use of technology to modernize the water supply and delivery infrastructure within the MLWU service area.

Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs;

The project provides much needed financial partnership enabling the MLWU to modernize their water measurement.

Prioritize DOI infrastructure needs to highlight:

1. Construction of infrastructure;

The project results in construction of improved infrastructure, particularly with modernization of water measurement.

II. Project Budget

Funding Plan and Letters of Commitment

Applicant's Source of Funds

The applicant will use cash reserves to fund their portion of the project.

Costs Incurred Prior to Award

The project does not include any project costs that were incurred prior to the award.

Budget Proposal

LINE NO.		DIVISION	ITEM DESCRIPTION	QTY.	UNIT	UNIT PRICE	TOTAL PRICE	
Civilize, PLLC								
Management and Engineering				ENGINEER'S OPINION OF PROBABLE COST				
				Eastern Snake Plain Aquifer Ground Water Diversion				
				Summary				
				Bybee, Holley, Buck Springs, Marty's, and Independent Gauging Stations				
Project No:		01-17-0026			Date:			22-Apr-19
Project:		Flow Measurement ESPA Ground Water Diversion			Prepared by:			BEC
Client:		Mud Lake Water Users						
CONSTRUCTION COSTS								
1	0 - Bidding		Mobilization, Bonding, Insurance, Bidding, Etc.	10%			\$ 8,000	
2	1 - General		Shop Drawings, O&M Manuals, Startup, Construction Facilities	5%			\$ 4,000	
3	2 - Earthwork		Excavation	0	CY	15.00	\$ -	
4	2 - Earthwork		Granular Borrow	0	CY	40.00	\$ -	
5	2 - Earthwork		Aggregate Base Course	0	CY	25.00	\$ -	
6	3 - Concrete		Mounting Pad	0	CY	600.00	\$ -	
7	5 - Metals		Posts and Racking for Enclosure and Panel	5	LS	1,500.00	\$ 7,500	
8	11 - Equipment		SonTek IQ Plus Area-Velocity Doppler Flow Meter w/mounting brackets, USB-RS232 serial adaptor, tool kit, dummy plug kit, power supply and memory drive.	5	LS	6,000.00	\$ 30,000	
9	11 - Equipment		20-meter power and Modbus communications cable	5	LS	400.00	\$ 2,000	
10	11 - Equipment		SonTek IQ Flow Display	0	LS	1,500.00	\$ -	
11	11 - Equipment		Panel/Enclosure - NEMA 4X w/12v/200ah battery,	5	LS	2,000.00	\$ 10,000	
12	11 - Equipment		300 water solar panel, panel mount, and solar regulator	5	LS	1,500.00	\$ 7,500	
13	11 - Equipment		Installation of Meter, Post, Enclosure	3	LS	6,000.00	\$ 18,000	
14	16 - Electrical		Electrical	20%			\$ 6,000	
15	16 - Electrical		Controls	30%			\$ 9,000	
SUBTOTAL CONSTRUCTION COST							\$ 102,000.00	
Round to nearest \$10,000							\$ 110,000.00	
Confidence Factor 90%							\$ 11,000.00	
TOTAL CONSTRUCTION COST							\$ 121,000.00	
ENGINEERING AND CONSTRUCTION OBSERVATION								
1			Design Services				\$ 14,000	
2			Bid Services				\$ -	
3			Construction Observation/Inspection				\$ 7,000	
4			Post Construction Services				\$ -	
SUBTOTAL ENGINEERING AND CONSTRUCTION OBSERVATION COSTS							\$ 21,000	
OTHER PROJECT COSTS								
				0				
1			Permitting				\$ -	
2			Surveying				\$ -	
3			Geotechnical Investigation				\$ -	
4			Environmental Clearance				\$ 7,000	
5			Hydraulics Report and Scour Analysis				\$ -	
6			Meter Calibration				\$ -	
7			Contract Administration and Funding Support				\$ 3,000	
8			Legal, Bonding and Audit				\$ -	
SUBTOTAL OTHER PROJECT COSTS							\$ 10,000	
SUBTOTAL ENGINEERING, CONSTRUCTION OBSERVATION, AND OTHER PROJECT COSTS							\$ 31,000	
PROJECT CONTINGENCY								
					10.00%		\$ 5,000.00	
TOTAL ENGINEER'S OPINION OF PROBABLE PROJECT COST							\$ 157,000	

Figure 5 - Engineer's Opinion of Probable Cost.

Budget Narrative

Salaries and Wages

Salaries and wages are not included in the budget proposal.

Fringe Benefits

Fringe benefits are not included in the budget proposal.

Travel

Travel is not included in the budget proposal.

Equipment

Equipment is not included in the budget proposal.

Materials and Supplies

Materials and supplies are not included in the proposed project budget.

Contractual

The purchase and installation of the project will be completed by a Contractor selected through a competitive bid process. The design work will be completed by a Consultant based on Idaho Code regarding Qualifications Based Selection (QBS)

Third-Party In-Kind Contributions

None anticipated.

Environmental and Regulatory Compliance Costs

The environmental compliance effort will be performed by the Consultant and reviewed by the BOR. The estimated cost is \$7,000 as detailed in the project budget.

Other Expenses

None anticipated.

Indirect Costs

None anticipated.

III. Environmental and Cultural Resources Compliance.

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants should consider the following list of questions focusing on the NEPA, ESA, and NHPA requirements. Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. The application should include the answers to:

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

The project does not include earth disturbing work or work that will affect the air, water, or animal habitat in the project area.

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?

According to the United States Fish and Wildlife Service, five species are either endangered or threatened including the yellow-billed cuckoo, the bull trout, Ute ladies' tresses, the gray wolf, and the North American wolverine. None are known in the project area except for possibly the yellow-billed cuckoo. The project activity should not affect that species.

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

Wetlands are in the project area, but not on the specific project site. The canals are not considered waters of the United States.

When was the water delivery system constructed?

•The water delivery system was initially constructed in the early 1900s and subsequently expanded and improved in subsequent decades.

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 individual features will be modified.

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.

•The project does not implicate any historical structures or features.

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

There are no known archeological sites in the proposed project area as the specific sites have been previously disturbed for construction of the canals. This project does not include any additional excavation.

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

It will not.

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.

IV. Required Permits or Approvals

No permits or approvals are required.

Exhibit A

Letters of Project Support



State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

June 17, 2016

Re: Final Order Requiring Measuring Devices for Ground Water Diversions in the Portions of Water District Nos. 31, 34, 100, 110, 120, 130 and 140 Overlying the Eastern Snake Plain Aquifer

Dear Water User,

The Idaho Department of Water Resources ("IDWR") has issued the enclosed Final Order ("Order") requiring installation of measuring devices for ground water rights and diversions overlying the Eastern Snake Plain Aquifer¹ ("ESPA"). The enclosed Order is a final order pursuant to Section 67-5246, Idaho Code. Any party may file a petition for reconsideration of a final order as explained in the enclosed information sheet.

Please note that flow meters must be installed on ground water irrigation diversions by the start of the 2018 irrigation season, and on non-irrigation diversions by January 1, 2018. The Order excludes the following ground water uses and diversions unless further notified by the Department:

- a. Domestic and stockwater uses as defined by Section 42-111, Idaho Code;
- b. Diversions for irrigation uses less than or equal to five (5) acres; and
- c. Non-irrigation uses with a total rate of diversion less than or equal to 0.24 cubic feet per second (approximately 108 gallons per minute).

Please refer to the enclosed documents "*Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices*" and "*List of Approved Closed Conduit Measuring Devices*" for information on types of IDWR acceptable measuring devices. These documents and other information on the topic are available on IDWR's website at the following address:

http://idwr.idaho.gov/WaterManagement/WaterMeasurement/water_measurement.htm

If you have questions concerning the Final Order or IDWR's water measurement standards, please contact the IDWR State office (208-287-4800), Eastern Regional office (208-525-7161), or Southern Regional office (208-736-3033).

Respectfully,

Tim Luke
Water Compliance Bureau

Encl: *Final Order; Explanatory Information to Accompany a Final Order; Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices; List of Approved Closed Conduit Measuring Devices*

¹ The Eastern Snake Plain Aquifer is: [T]he aquifer underlying the Eastern Snake River Plain as the aquifer is defined in the report, Hydrology and Digital Simulation of the Regional Aquifer System, Eastern Snake River Plain, Idaho, USGS Professional Paper 1408-F, 1992 excluding areas south of the Snake River and west of the line separating Sections 34 and 35, Township 10 South, Range 20 East, Boise Meridian. IDAPA 37.03.011.50.

Exhibit B

Official Resolution

RESOLUTION

Whereas, the Mud Lake Water Users Board of Directors has responsibility for managing and approving the administration of funds collected from assessments to the Customers as well as any funds awarded to the Mud Lake Water Users (MLWU) through contracts, grants, and agreements, regardless of source; and

Whereas, to effectively manage the water resources of the MLWU, both surface water and ground water, including implementing water measurement in compliance with the Final Order of the Department of Water Resources (IDWR); and

Whereas, the MLWU is requesting grant funds from the U.S. Bureau of Reclamation's WaterSMART program for Fiscal Year 2019 to facilitate implementation of more accurate water measurement and more frequent reporting of water flow at five gauging stations; and

Whereas, the MLWU is requesting \$75,000 in grant funds to match \$85,000 in matching funds from the reserves of the MLWU for a total project cost of \$160,000;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE MUD LAKE WATER USERS, that the President is hereby authorized to submit a request to the U.S. Bureau of Reclamation WaterSMART program for funding in the amount of \$75,000; and

BE IT FURTHER RESOLVED, the MLWU cost share in the approximate amount of \$85,000 from cash reserves is approved; and

BE IT FURTHER RESOLVED, the MLWU President is authorized to sign the request for funding and any related documentation for this project.

Dated this 15th Day of April 2019.

Steve Shively, President
Mud Lake Water Users

Exhibit C

Mandatory Federal Forms