

US Bureau of Reclamation  
WaterSMART Grants: Small-Scale Water  
Efficiency Projects for Fiscal Year 2018  
Funding Opportunity #: BOR-DO-18-F009  
CFDA #: 15.507

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Submitted:  
April 30, 2018

Project Title:  
Water Measurement for the Shoshone-Bannock Tribes;  
Fort Hall Irrigation Project



FY2018 Solicitation

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## Technical Proposal and Evaluation Criteria

### *I. Executive Summary*

**Date:** April 30, 2018

**Applicant:** Shoshone-Bannock Tribes

**Address:** P.O. Box 306, Pima Drive, Fort Hall, Bingham County, ID 83203

The intent of this project is to acquire additional surface water measurement devices with wireless telemetry data transfer capability and install the devices to improve the existing water monitoring system on the Fort Hall Irrigation Project (FHIP). The monitoring system's purpose is to provide better management of surface water use within the FHIP, which will in turn result in significant water conservation. The water monitoring system for the FHIP's federally-operated canal system will be improved by the procurement and installation of 9 measuring devices and supporting equipment. The Tribal Water Resources Department (TWRD) is requesting cost-share funds from the US Bureau of Reclamation (USBR) because the TWRD currently does not have funds to cover the capital costs of acquiring the monitoring equipment. Procurement, installation and setup of the monitoring network will be undertaken by the TWRD and is expected to take approximately seven months, finishing around May 2019. Once installed, the TWRD will operate the 9 measuring devices as part of its existing monitoring system without the need for further funding from the Federal Government. With the additional proposed measuring devices and network in place within the FHIP, a real time view of the irrigation system will be improved and allow for more accurate water deliveries, creating a more efficient distribution system that delivers water based on demand. Currently, water measurement within the FHIP is accomplished on only a small percentage of the canals/laterals and is completed using outdated equipment that requires significant time and resources to operate. In addition to conserving irrigation water resources, the proposed measurement devices will reduce labor efforts for water personnel time. Data collected from the measuring sites will be available to the TWRD to evaluate the effectiveness of the water delivery system and to help ascertain whether an equitable and beneficial volume of water is being diverted.

### *II. Background Information*

The Fort Hall Reservation was established by executive order on June 14, 1867, 1.C. Kappler 835-837 (1904). Interest in developing irrigation on the Reservation has been documented as early as 1889, and in 1894 Congress authorized the Secretary of the Interior to secure water supplies and develop the necessary infrastructure to develop irrigation on the Reservation. Since then, water supplies within and adjacent to the Reservation have been developed, and infrastructure has been developed for irrigation within the Reservation. The main irrigation projects, or units, associated with the Fort Hall Reservation today are the Fort Hall Unit, the Michaud Unit, and the Minor Units that include Lincoln Creek, Ross Fork Creek and Bannock Creek. These irrigation areas are shown on Figure 1 in Appendix A.

#### *Fort Hall Irrigation Project, Fort Hall Unit*

Water supply to the FHIP's Fort Hall Unit is provided primarily by natural flow from the Snake River and Blackfoot River and by storage releases from Blackfoot Reservoir and Grays Lake. The Reservation Canal serves to transport water from the Snake River to the Blackfoot River from which the water is diverted for use in the Project. The Blackfoot Reservoir has an active storage capacity of approximately 340,000 acre-feet. The reservoir and natural flows from the Blackfoot River serve the Fort Hall Unit. Storage releases from the reservoir must travel approximately 60 miles (approximately 36 hours) from the outlet works to the Project headworks. Upstream of the Fort Hall Main and North Canals, flow in the Blackfoot River is supplemented with Snake River water through the Reservation Canal. The Reservation Canal conveyed an average of 124,000 acre-feet for the years 2001 to 2005 from the Snake River to Blackfoot River. Per the Agreement, these water sources can be used to irrigate up to 53,828 present and future acres from the combined water sources. In 1982, approximately 35,250 acres within the Fort Hall Unit were irrigated.

An estimate average of 66,197 acres was irrigated throughout the entire FHIP in the period from 1994-2000. Major crops include potatoes, wheat, pasture, and alfalfa. The main conveyance structures of the Fort Hall Unit are the Little Indian Canal, Fort Hall Main Canal and the North Canal. These are open channel, unlined canals totaling approximately 48 miles in length. The headworks of the Little Indian Canal are located approximately 16 miles upstream of the Equalizing Reservoir. The canal diverts from the Blackfoot River and delivers water to an area to the southeast of the Blackfoot River. The headworks of the Main Canal are located at the Equalizing Reservoir. The canal flows south to Pocatello, draining into Pocatello Creek. The headworks of the North Canal are located approximately two miles downstream of the Equalizing Reservoir. This canal diverts from the Blackfoot River southwest across the upper portion of the FHIP. Drainage of the North Canal is provided by Spring Creek. Water is delivered to individual users through numerous smaller canals, laterals, and ditches that divert from the Little Indian, Main or North Canals. Lack of a comprehensive real time water monitoring network in the Fort Hall Unit has led to distribution inefficiencies and increased diversions.

1990 Fort Hall Indian Water Rights Agreement

The Shoshone and Bannock Tribes (Tribes) have established and quantified its water rights through a settlement agreement with the State of Idaho and the United States, entitled the “Fort Hall Indian Water Rights Agreement” (Agreement). The United States Congress ratified the settlement Agreement on October 10, 1990 as Public Law 101-831. The Agreement settles all water rights of the Tribes of the Fort Hall Indian Reservation in the Upper Snake River basin. Under this Agreement, the Tribes, Tribal members, and Tribal allottees are entitled to receive 581,031 acre-feet of water per year (AFY) from the Snake River basin. The water supply is based on a combination of surface water (natural flow), groundwater, and federal contract storage water. Per the Agreement, Table 1 lists the water rights held by the Shoshone and Bannock Tribes.

**Table 1: Water Rights of the Shoshone-Bannock Tribes per 1990 Agreement.**

Right No.	Water Source	Water Asset	Amount (AFY)
A01-10223	Snake River/Sand Creek	Surface Water	115,000
A27-11373	Ross Fork Creek	Surface Water	5,000
A27-11374	Lincoln Creek	Surface Water	5,700
29-00466	Bannock Creek	Surface Water	3,095
29-00467	West Fork Bannock Creek	Surface Water	629
29-00468	Rattlesnake Creek	Surface Water	571
29-00469	West Fork Bannock Creek	Surface Water	190
29-00470	West Fork Bannock Creek	Surface Water	248
29-00471	Bannock Creek	Surface Water	248
29-00472	West Fork Bannock Creek	Surface Water	190
29-00473	West Fork Bannock Creek	Surface Water	190
29-00474	West Fork Bannock Creek	Surface Water	190
A29-12049	Bannock Creek	Surface Water	18,833
A29-12050	Portneuf River	Surface Water	970
29-00231	Toponce Creek	Surface Water	259.3
29-00238	Toponce Creek	Surface Water	282.5
A29-12051	Mink Creek	Surface Water	104.3
A27-11375	Blackfoot River	Surface Water	150,000
A27-02007	Blackfoot Reservoir	Storage	348,000
A25-02160	Grays Lake (Storage)	Storage	100,000
A27-11376	Within Reservation	Groundwater	125,000
A29-12052	Bannock Creek	Groundwater	23,500
--	American Falls Reservoir	Contract Storage	46,931
--	Palisades Reservoir	Contract Storage	83,900

As part of the Agreement and federal contract storage water rights held in trust by the United States for the benefit of the Tribes, the Tribes have the right to create a Shoshone-Bannock Water Bank in order to rent water for any beneficial use outside the Reservation. This includes storage water from Palisades Reservoir, provided it is rented and delivered for use within the Snake River Basin anywhere above Milner Dam and storage water from American Falls Reservoir, provided it is rented and delivered for use in the Snake River Basin anywhere in Idaho. The purposes of the Shoshone-Bannock Water Bank are to:

- Put the Tribal contract storage rights to beneficial use;
- Provide a source of adequate water supplies to benefit new and supplemental water users;
- Provide a source of Tribal funding for improving water user facilities and efficiencies;
- Provide a mechanism for the Tribes to realize the value of their storage rights; and,
- Provide for the continuation of good-faith cooperation among the parties to the Agreement.

#### Past working relationship with USBR

The TWRD has worked with the USBR in the past that provided opportunities to install 41 water measurement devices for the FHIP equipped with telemetry systems capable of transmitting real time flow data to the office of the TWRD. The TWRD has also worked with the USBR in the past on several cost-share opportunities to install flow meters on groundwater wells on the Reservation. Funding was provided over eleven years, 2006-2016, to install 152 electromagnetic flow meters on actively used wells. Other projects with the USBR include the Michaud Surface Water Measurement Program and Groundwater Measurement Telemetry Program. The USBR portion of the cost-share agreement came from the Development, Management, and Protection of Tribal Water Resources, and also Water Conservation Field Services funding opportunities. The TWRD also interacts with the local USBR office regarding the Tribes' water storage contracts in USBR Snake River reservoirs and coordinating the rental of water from the Tribes' Water Supply Bank. Finally, the TWRD completed a WaterSMART drought resiliency grant in 2017 to simulate drought scenarios. The TWRD and USBR continue to have an excellent working relationship.

### **III. Project Location**

Water monitoring and measurement is a chief component in effectively managing and operating an irrigation system. An improved monitoring network that has the capability to transmit real time water data instantaneously to system managers will reduce response times to problem areas, allow critical time sensitive decisions on water management to be made faster, and create a system that will deliver water more accurately and efficiently. Water measurement also provides water use data records that are critical to ensuring that water will be available for the use of the Shoshone-Bannock people throughout the future.

Currently, water measurement within the FHIP is accomplished at 60 sites on the irrigation system. Flow data at these sites is transmitted real time to the office. These improvements have been made recently (2011-2017) with both, TWRD funds and USBR funds mentioned later in the narrative. A map of the FHIP is shown below in Figure 1, while the locations of the existing FHIP water measurement sites are shown in Figure 2 (see Appendix A).

### **IV. Technical Project Description**

#### Project Objective

The intent of this project is to improve the existing irrigation water monitoring network on the FHIP to be utilized by the staff of the TWRD. The improved monitoring system's purpose will be to increase monitoring capabilities and improve the management of surface water use within the FHIP. With increased effectiveness of water management, water that was previously lost through the system will now have the potential to be put to other beneficial uses or stored in water markets/ banks.

#### Work Plan

To achieve the above-mentioned objective of the project, the TWRD is proposing to purchase and install 9 water measurement devices for the FHIP equipped with telemetry systems capable of transmitting real time

flow data to the TWRD office. From more extensive surface water use quantification, the TWRD can then proceed with plans to implement improved irrigation management and water conservation practices. The work plan entails the tasks listed in Table 2.

**Table 2: Description and schedule of project activities for FY 2018-2019**

Task	Description	Approach	Evaluation	Timeline
1.0	Identify & select irrigation laterals on which water measurement devices/equipment will be installed	This task has been worked on by the TWRD in the past. Sites are in mind.	The sites with the greatest potential for water savings will be chosen.	Oct 2018 – Dec 2018
2.0	Procure water measurement devices and equipment. This is the only task for which the Tribes are requesting federal assistance; the purchase of the devices/equipment.	Pressure transducers have been selected as the standard surface water monitoring devices for the Tribe	Finalized and approved laterals will be selected for the installation	Dec 2018 – Mar 2019
3.0	Installation of water measurement devices and equipment by the TWRD	Physically install water measurement devices and equipment on selected laterals	Installation will begin once Tasks 2.0 and 3.0 are completed	Mar 2019 – May 2019

The Deputy Water Engineer employed by the TWRD will oversee this project and will carry out all manual labor with assistance from Water Technicians employed by the TWRD. The TWRD will be responsible for purchasing of supplies/materials and the installation of the water measurement devices and equipment. The installation process is not part of the proposal, it is only mentioned in the narrative to describe the ultimate goal of the project. After the project’s completion, annual operation and maintenance of the sites will be conducted by the TWRD.

**V. Evaluation Criteria**

*Evaluation Criterion A – Project Benefits*

What are the benefits to the applicant’s water delivery system? Based on the real time data collected from installed measurement devices, the TWRD will be able to better understand the irrigation system and know how to achieve peak efficiency. Benefits also include:

- Identifying at the system level the quantity of surface water used
- Improving the Tribes’ ability to estimate the usage of their surface water right
- Creating a baseline use quantity to monitor water use performance at the system level
- Aiding in the overall management of Reservation surface water resources by improving conservation, improving water use accounting, and potentially providing for more water to be used on the Reservation.

What is the extent to which the proposed project improves overall water supply reliability? The project will improve water supply reliability through more efficient usage and more accurate water right accounting. Real-time measurement will help to accurately determine amounts of water necessary to divert and charge to water rights. This will lead to more efficient and reliable delivery of water.

What is the expected geographic scope of benefits from the proposed project? The benefits from the proposed project will extend throughout the Fort Hall Irrigation Project. Project diversions will be conserved and used more efficiently as a result of real-time measurement of distribution system flows. More efficient use benefits all FHIP users through conservation of associated Project water rights.

What is the extent to which the proposed project will increase collaboration and information sharing among water managers in the region? The proposed project will allow for more thorough and accurate accounting of

water use within the FHIP. This will be valuable data that can be shared with other water managers to aid in future decision making regarding water resources or water rights.

Are there any anticipated benefits to local sectors and economies? The local agricultural economic sector is expected to benefit from the proposed project. Implementation of real-time measurement will enhance the reliability of water delivery in FHIP to address irrigation needs. More reliably addressing irrigation needs can help ensure good yields in FHIP farmland, which will help to support an important sector in the local economy.

What is the extent to which the project will complement work done in coordination with NRCS in the area. In the future the Tribes will use the water use data resulting from this project to identify and select on farm NRCS improvements and quantify their expected benefit.

#### *Evaluation Criterion B – Planning Efforts to Support the Project*

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

The proposed project is part of an ongoing water measurement program that has been steadily updated over the years. The need for increased water measurement and accounting capacity was clearly identified in the Tribes' 2006 Water Conservation Reconnaissance Study. This study states that:

*“One of the most pressing needs of the Reservation is improved water measurement and accounting capabilities. At the present time, only flows entering the FHIP are known and the accuracy of these measurements is questionable. Flows distributed throughout the FHIP are known only intermittently at best. Without proper water measurements, the data are not available to account for water use and loss on the Reservation’s agricultural lands. Two types of water measurement are included as conservation measures: a turnout water measurement program and an increase in water measurement structures.”*

The measurement system has made some progress since the need was identified in this study, with more measurement devices installed in FHIP structures. The proposed project furthers this effort to provide accurate, real-time, distributed flow data within the water delivery system.

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

As stated in the above sub-criterion, measurement was deemed to be “One of the most pressing needs of the Reservation” with regard to water conservation and efficiency efforts. The 2006 Water Conservation Reconnaissance study also establishes installation of pressure transducer equipment as a priority in the Tribes' measurement program in FHIP structures. The report notes:

*“Monitoring with pressure transducer equipment can minimize human error and, coupled with a consistent calibration schedule, provides a much better record of daily flow rates than current BIA monitoring practices. By using pressure transducer gages with dataloggers, the number of locations monitored can be increased substantially with a minimal increase in monitoring staff.”*

This language as well as the tribes' activities in installing measurement equipment show the importance of water measurement to the TWRD plans for water efficiency and conservation.

#### *Evaluation Criterion C – Project Implementation*

Describe the implementation plan for the proposed project. The proposed project will be carried out by TWRD staff, mainly in the irrigation offseason following the 2018 irrigation season. Important dates and details of project implementation are provided in Table 2 in the preceding technical project description section.

Describe any permits that will be required, along with the process for obtaining such permits. No permits will be necessary for the completion of the proposed project.

Identify and describe any engineering or design work performed specifically in support of the proposed project. No engineering design work will be necessary for the proposed project. The TWRD has prior experience with installation of the same types of measurement equipment at other locations throughout FHIP.

Describe any new policies or administrative actions required to implement the project. No new policies or administrative actions will be necessary to implement the proposed project.

Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office? The Tribes' do not anticipate environmental compliance costs to be incurred by this project. The Tribes have carried out these activities before, and the installation of measurement equipment occurs on existing conveyance structures and is not invasive.

#### *Evaluation Criterion D – Nexus to Reclamation*

How is the proposed project connected to a Reclamation project or activity? The Tribes' storage rights in American Falls and Palisades reservoirs are Federal contract storage rights. They provide for a fixed percentage of storage accrual plus carryover in the Federal reservoir projects. The Palisades Dam was constructed in 1957 as principal features of the Bureau of Reclamation's Palisades Project. The American Falls Dam was originally built in 1928 and then reconstructed in 1978 by the Bureau of Reclamation.

Does the applicant receive Reclamation project water? The Tribes' storage rights in American Falls and Palisades reservoirs are Federal contract storage rights. The Tribes may divert this water directly to the Fort Hall unit or exchange a portion of these storage rights for the ability to pump water from the Portneuf River into the Michaud Canal for use by the Michaud Unit in the FHIP.

Is the project on Reclamation project lands or involving Reclamation facilities? Is the project in the same basin as a Reclamation project or activity? This effort may provide better monitoring of Reclamation project water resources and deliveries.

Will the proposed work contribute water to a basin where a Reclamation project is located? If greater irrigation efficiency is achieved as a result of implementation of the proposed project, the water savings will contribute water to the Snake River Basin, most significantly as the Tribes are able to build reliability in their water supplies available for leasing.

Will the project help Reclamation meet trust responsibilities to any tribe(s)? The United States holds in trust federal contract storage rights for water that accrues up to 2.8059% of the storage space in American Falls Reservoir and 6.9917% of the storage space in Palisades Reservoir for the benefit of the Tribes. This effort will install measurement devices which can be used to increase efficiency in irrigation water delivery. Through better informed irrigation water delivery practices, more water will be retained in the Upper Snake River reservoir system and, therefore, additional lower priority reservoir storage accrual, directly benefiting federally reserved Tribal storage water in Palisades Reservoir. This will build storage water reliability and increase Reclamation's ability to provide trust water to the Tribe.

#### *Evaluation Criterion E – Department of the Interior Priorities*

Describe how proposed project relates to the priorities of the Department of the Interior. The proposed project supports the department of interior priorities of conservation stewardship legacy, utilizing our natural resources,

restoring trust with local communities, and modernizing our infrastructure. The Tribes' measurement network will provide data necessary to more efficient and transparent utilization of water resources and water rights in the FHIP. The data provided from implementation of this project will also help operate the canal system in a modernized and efficient manner. Infrastructure maintenance needs will also be more evident from an increase in distributed flow data, allowing the water delivery infrastructure to be better maintained in the future.

#### **VI. Expected Results**

The objective of the TWRD is to promote and achieve good water management practices within the FHIP. Advanced water management technologies such as the development of a surface water monitoring system would help moderate the complexities involved with fair and equitable water distribution and water conservation practices. Data collected will be flow data recorded in cubic feet per second (CFS) and a total volumetric quantity in acre-feet (ac-ft). Based on the real time data collected, the TWRD will be able to better understand the irrigation system and know how to achieve peak efficiency. Data will also be compiled in a report at the conclusion of each irrigation season to track surface water use through the irrigation system.

#### **VII. Contacts for Further Information**

Name: Spence L. Ward, Interim Tribal Water Engineer  
Company: Shoshone-Bannock Tribes Water Resources Department  
Phone: (208)239-4581  
Email: sward@sbtribes.com

### **Project Budget**

#### **Funding Plan and Letters of Commitment**

How will you make your contribution to the cost-share requirement, such as monetary and/or in-kind contributions and source funds contributed by the applicant? The Tribes will contribute our entire cost-share requirement as a monetary contribution of \$20,668 from the Tribal Water Resources General Fund.

Describe any in-kind costs incurred before the anticipated project start date that you seek to include as project costs. There will be no in-kind costs incurred before the anticipated project start date for this project.

Provide the identity and amount of funding to be provided by funding partners, as well as the required letters of commitment. There is no funding to be provided by funding partners for this project. Accordingly, letters of commitment are not required.

Describe any funding requested or received from other Federal partners. There is no funding requested or received from other Federal partners for this project.

Describe any pending funding requests that have not yet been approved, and explain how the project will be affected if such funding is denied. There are no pending funding requests for this project.

Please include the following chart to summarize your non-Federal and other Federal funding sources. See Table 3 below.

**Table 3: Summary of Non-Federal and Federal Funding Sources.**

Funding Sources	Funding Amount
Non-Federal Entities	
1. Shoshone-Bannock Tribes	\$20,668.00
Non-Federal Subtotal	\$20,668.00
Other Federal Entities	
Other Federal Subtotal	\$0.00
Requested Reclamation Funding	\$20,000.00
Total Project Funding	\$40,668.00

**Budget Narrative**

*Salaries and Wages*

An estimated \$2,110 of total project funds will be used for salaries and wages for work performed by TWRD personnel as part of the proposed project. This includes 40 hours of work by a Deputy Water Engineer at an hourly rate of \$34.28 per hour and 40 hours of work by Water Technicians at an hourly rate of \$18.48 per hour.

*Fringe Benefits*

An estimated \$662 will be used for fringe benefits for TWRD personnel.

*Travel*

Travel costs will not be incurred as part of this project.

*Equipment*

No new equipment will be purchased as part of this project.

*Materials and Supplies*

Materials and supplies make up the bulk of budgeted costs for this project at an estimated total of \$36,511. Details of the materials and supplies and their costs are provided in Table 4, provided in the Budget Proposal section below.

*Contractual*

No contractual costs will be incurred as part of the project budget.

*Environmental and Regulatory Compliance Costs*

There are no environmental or regulatory compliance costs as part of this project.

*Other Expenses*

There are no other expenses, which may include additional travel and mileage, as part of this project.

*Indirect Costs*

This project does not include any indirect costs.

*Total Costs*

The total cost of this project will be \$40,668.00.

**Budget Form**

The completed SF-424C, Budget Information – Construction Programs is attached in Appendix C.

## Budget Proposal

The following table represents the Budget Narrative. The budget narrative was developed assuming that 9 water measurement devices and equipment would be purchased and installed. The USBR and TWRD will participate in a cost share program, presented in Table 4.

**Table 4: Proposed budget for project.**

Budget Item Description	Quantity	Price Each	Recipient Share	Reclamation Share	Total
<b>Personnel</b>					
Deputy Water Engineer	40 hrs	\$34.28/hr	\$1,371		\$1,371
Water Techs.	40 hrs	\$18.48/hr	\$739		\$739
Fringe Benefits (personnel)			\$662		\$662
<b>Supplies &amp; Materials</b>					
RF451: Spread-Spectrum Radio	9	\$695		\$6,255	\$6,255
CR1000: Data Logger	9	\$1,530	\$25	\$13,745	\$13,770
COAXNTN-L: Antenna Cable 20'	4	\$83	\$332		\$332
14201: Yagi Antenna	9	\$145	\$1,305		\$1,305
SP20: Solar Panel	9	\$299	\$2,691		\$2,691
ENC12/14: Enclosure	7	\$317	\$2,219		\$2,219
7AmpHr Battery	9	\$20	\$180		\$180
CS451: Pressure Transducer	8	\$781	\$6,248		\$6,248
31314: Surge Suppressor Kit	9	\$215	\$1,935		\$1,935
6186: External Battery Cable	9	\$29	\$261		\$261
COAXNTN-L: Antenna Cable 10'	5	\$63	\$315		\$315
Additional Materials*			\$1,000		\$1,000
Shipping/Freight			\$650		\$650
<b>TOTAL DIRECT COSTS</b>			\$19,993	\$20,000	\$39,993
<b>INDIRECT COST</b>					
26.35% Personnel & Fringe			\$735		\$735
<b>TOTAL COSTS</b>			\$20,668	\$20,000	\$40,668

\*Additional Materials includes: 1 1/4" pipe, 1 1/4" couplings, tees, and caps, 1" pipe, 1" caps, u-bolts, grounding rods, hose clamps, concrete, pavers, conduit, screws and bolts, padlocks, etc.

## Environmental and Cultural Resources Compliance

*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 measuring devices and telemetry within the FHIP will be installed within the area of disturbance of existing ditches and not within any natural watercourses. Therefore, the Shoshone-Bannock Tribes of the Fort Hall Reservation have determined that the environmental impacts from implementation of the proposed project are considered to be either minimal or non-existent and would fall under a Categorical Exclusion NEPA classification. Consequently, the Tribes have not solicited input from the U.S. Fish and Wildlife Service, U.S. Army Corp of Engineers, or other state or federal regulatory agencies. However, if during the implementation of this project any environmental or regulatory compliance issues are uncovered, the Tribes would take action to contact the appropriate agency to file any required notices, acquire or review environmental impact statements, obtain required legal permits, or take whatever action is deemed necessary.

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? Species listed or proposed to be listed as a Federal threatened or endangered species will not be affected by any activities associated with the proposed project. Designated critical habitat in the project area will also be unaffected by the proposed project.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States?” If so, please describe and estimate any impacts the proposed project may have. No wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as “Waters of the United States” will be impacted by the proposed project.

When was the water delivery system constructed? Development of the water delivery system began around 1894.

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. There will be no modifications to the individual features of the irrigation system.

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 site of the original Fort Hall (National Register of Historic Places Reference Number 66000306) is located 11 miles west of Fort Hall, Idaho on the Fort Hall Indian Reservation.

Are there any known archeological sites in the proposed project area? No archeological sites will be disturbed with this project.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations? The proposed project will not have a disproportionately high and adverse effect on low income or minority populations. It will add benefit to all water users in the region.

Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands? The proposed project will not limit access to or ceremonial use of Indian sacred sites or result in other impacts on tribal lands.

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? This project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area

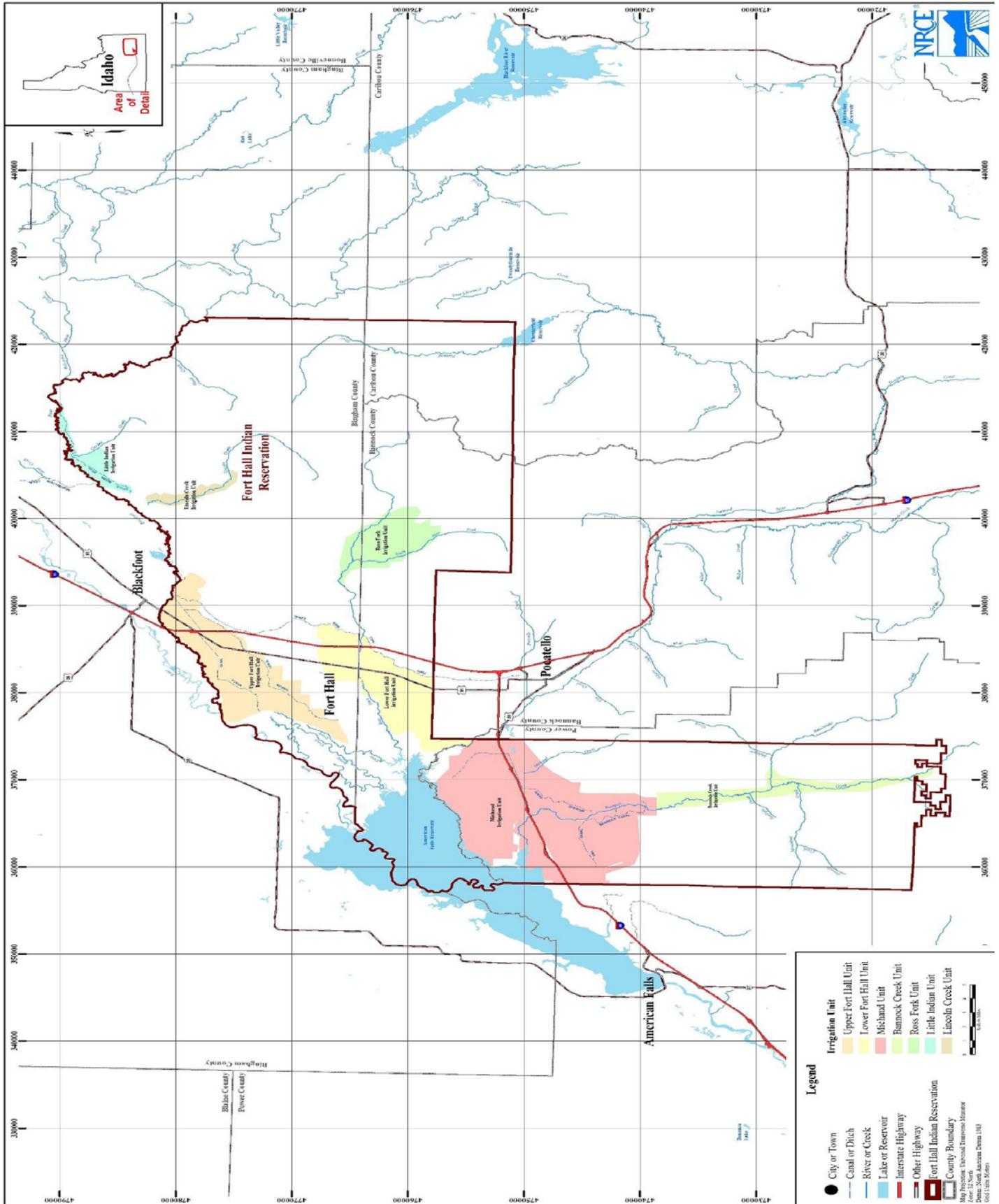
### **Required Permits or Approvals**

No permits or approvals will be necessary in order to implement the proposed project.

### **Official Resolution**

The official resolution from the Tribes’ governing body for the proposed project is attached in Appendix B.

# Appendix A: Figures



**Figure 1: Irrigation Units of the Fort Hall Indian Reservation**

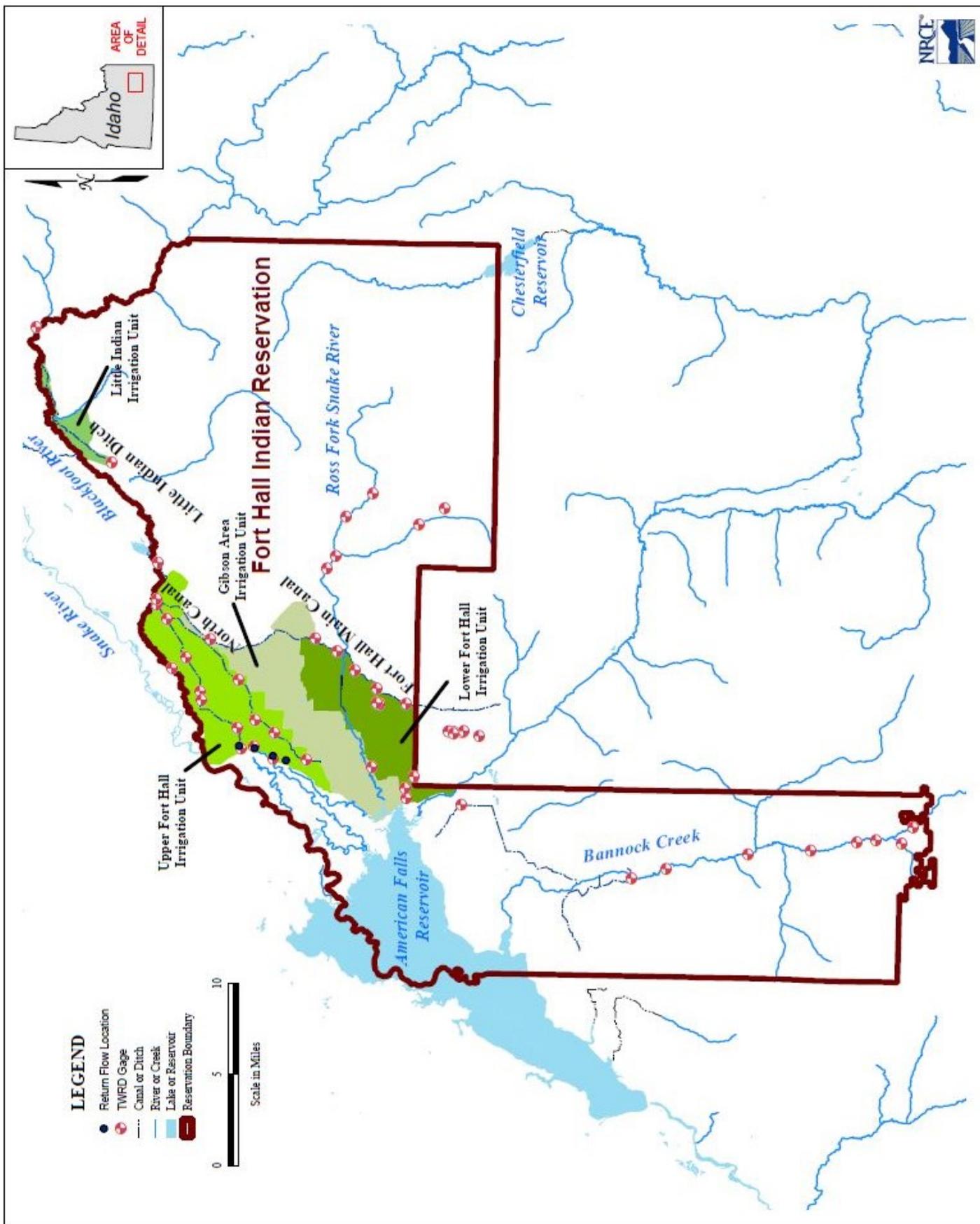


Figure 2: Current FHIP Water Measurement Sites

## Appendix B: Tribal Resolution

### RESOLUTION

**WHEREAS**, the Fort Hall Business Council has the ultimate responsibility for budget approvals and overseeing the administration of all Tribal funds, as well as those funds awarded to the Shoshone-Bannock Tribes through contracts, grants, cooperative agreements, regardless of source; and

**WHEREAS**, the Tribal Water Resources Department (TWRD) is in the process of implementing the "1990 Fort Hall Water Rights Agreement"; and

**WHEREAS**, to effectively administer water resources a surface water measurement program was developed that will assist the Tribal Water Resources Department in quantifying surface water; and

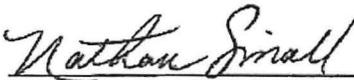
**WHEREAS**, the Tribal Water Resources Department is seeking funds from the U.S. Bureau of Reclamation's WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2018 cost share program solicitation to enable the TWRD to promote and achieve good water management practices within the Fort Hall irrigation unit with the objective to install nine (9) flow monitoring stations on the Fort Hall Irrigation Project;

**NOW, THEREFORE, BE IT RESOLVED BY THE BUSINESS COUNCIL OF THE SHOSHONE-BANNOCK TRIBES**, that the Tribal Water Resources Department is hereby authorized to submit the Small-Scale Water Efficiency Projects for Fiscal Year 2018 cost share program, \$20,000 from the BOR, approximately \$20,668 from the TWRD for a total project amount of \$40,668 to continue the development of the surface water measurement program; and

**BE IT FURTHER RESOLVED**, the Tribal Chairman or official designee is authorized to sign the Bureau of Reclamation's (BOR) WaterSMART Grant submittal and other subsequent documentation required for submittal of this application.

Authority for the foregoing resolution is found in the Indian Reorganization Act of June 18, 1934 (48 Stat, 984) as amended, and including, but not limited, to Article VI, Section 1 (a, g, r) of the Constitution and Bylaws of the Shoshone-Bannock Tribes of the Fort Hall Reservation of Idaho.

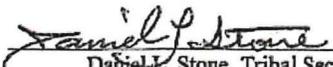
Dated this 24th day of April 2018.

  
Nathan Small, Chairman  
Fort Hall Business Council

S E A L

### CERTIFICATION

**I HEREBY CERTIFY**, that the foregoing resolution was passed while a quorum of the Business Council was present by a vote of 4 in favor, 2 absent (NS, LJT), and 1 not voting (DS) on the date this bears.

  
Daniel L. Stone, Tribal Secretary  
Fort Hall Business Council

CTRT-2018-0332

# Appendix C: Federal Forms

OMB Number: 4040-0008  
Expiration Date: 01/31/2019

<b>BUDGET INFORMATION - Construction Programs</b>			
<i>NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.</i>			
COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
2. Land, structures, rights-of-way, appraisals, etc	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
3. Relocation expenses and payments	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
4. Architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
5. Other architectural and engineering fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
6. Project inspection fees	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
7. Site work	\$ <input type="text" value="2,110.00"/>	\$ <input type="text"/>	\$ <input type="text" value="2,110.00"/>
8. Demolition and removal	\$ <input type="text" value="662.00"/>	\$ <input type="text"/>	\$ <input type="text" value="662.00"/>
9. Construction	\$ <input type="text" value="735.00"/>	\$ <input type="text"/>	\$ <input type="text" value="735.00"/>
10. Equipment	\$ <input type="text" value="37,161.00"/>	\$ <input type="text"/>	\$ <input type="text" value="37,161.00"/>
11. Miscellaneous	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
12. SUBTOTAL (sum of lines 1-11)	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
13. Contingencies	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
14. SUBTOTAL	\$ <input type="text" value="40,668.00"/>	\$ <input type="text"/>	\$ <input type="text" value="40,668.00"/>
15. Project (program) income	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ <input type="text" value="40,668.00"/>	\$ <input type="text"/>	\$ <input type="text" value="40,668.00"/>
<b>FEDERAL FUNDING</b>			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.			\$ <input type="text" value="20,000.00"/>
Enter eligible costs from line 16c. Multiply X <input type="text" value=".4918"/> %			