

US Bureau of Reclamation  
WaterSMART Grants: Small-Scale Water Efficiency  
Projects for Fiscal Year 2017  
Proposal for FY 2017  
Funding Opportunity #: BOR-DO-17-F011  
CFDA #: 15.507

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Submitted:  
March 24, 2017

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



FY2017 Solicitation

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## **Activity Narrative**

### ***I. Project Summary***

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 water monitoring system on the Fort Hall Irrigation Project (FHIP). The monitoring system's purpose will be to permit 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 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 USBR because the TWRD currently does not have funds to cover the capital costs of acquiring the monitoring equipment. Installation and setup of the monitoring network will be provided by the TWRD. Once installed, the TWRD will operate the 9 measuring devices as part of its existing monitoring system without 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measurement within the FHIP is accomplished on only a small percentage of the canals/laterals and is completed using outdated equipment that requires significant time and resources to operate.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 improving irrigation water use, the proposed measurement devices will help conserve personnel time and water resources. 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. With the proper amount of water being diverted, the excess water will also have the potential to be utilized by the Shoshone-Bannock water market or other beneficial users.

### ***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. The historic limits of these irrigation areas are shown on Figure 1 (see Appendix A).

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

Water supply to the FHIP Fort Hall Unit is provided primarily by natural flow from the Snake River and Blackfoot River and by storage releases from the 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. 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.

The main conveyance structures of the Fort Hall Unit are the Little Indian Canal, Fort Hall Main Canal and the North Canal. 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 2 lists the water rights held by the Shoshone and Bannock Tribes.

Table 2: 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	Surface Water	348,000
A25-02160	Grays Lake (Storage)	Surface Water	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

*Shoshone-Bannock Water Marketing*

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.

### ***III. Purpose & 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 51 sites on the irrigation system, accounting for only a small percentage of the canal system. Flow data at these sites is transmitted real time to the office. These improvements have been made recently (2011-2016) with both, TWRD funds and BOR funds mentioned later in the narrative. The locations of the existing FHIP water measurement sites are shown in Figure 2 (see Appendix A).

### ***IV. 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.

### ***V. Past Working Relationship with USBR***

The TWRD has worked with the USBR in the past that provided opportunities to install 32 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. 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. The TWRD and USBR have a good working relationship.

### ***VI. 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 following tasks:

FY 2016-2017

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.	Jun 2017 – Aug 2017
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	Aug 2017– Sep 2017
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 the irrigation system is off after the 2017 irrigation season	Sep 2017 – Feb 2018

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. Annual operation and maintenance of the sites will be conducted by the TWRD.

**VII. Evaluation Criteria**

- Improved Water Management of Tribal Water Resources
  - The proposed project will directly improve the ability to manage the Tribal Water Resources available for the Fort Hall Irrigation Project. Through improved management of the system, surface water diversions into the canal system will be optimized, resulting in excess spill out of the system being minimized.
  - Metering of the surface water use will provide data to identify areas of excessive surface water loss, which may be the result of leaky pipes, broken equipment, or field areas that are prone to excessive seepage.
- Development of Tribal Water Resources
  - The proposed project will enhance the water supply for the irrigation project as a whole in two ways: (1) provide more water overall by identifying areas of excessive surface water loss, and (2) provide better information on how much surface water is being used by the project, which can be compared to the Tribes’ surface water rights.
  - The proposed project will promote more efficient use of irrigation supplies by identifying areas of excessive surface water losses, and reducing those losses through repairs and conservation measures.
  - The proposed project will improve the reliability of water supplies for surface water users by allowing an accurate accounting of surface water use relative to the estimated surface water available or remaining.

- The proposed project will help to improve irrigation system efficiency by providing irrigation system managers with data on their current surface water levels. These data can be used by the managers to identify if water use differs from what was planned, and measures can then be taken to try to match desired water levels with actual surface water levels.
- By identifying and reducing excessive surface water losses, a portion of the Tribes' surface water rights and the surface water resources may be freed up to be used for other beneficial purposes.

**VIII. Benefits & Performance Measures**

The proposed project intends to purchase and install 9 measuring devices and supporting equipment over an approximate one year project time frame to improve the surface water monitoring system on the FHIP. The anticipated benefits and performance measures for installation of these measuring devices and the monitoring system in general are as follows:

- 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
- Aid 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.

**IX. 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.

**X. Contacts for Further Information**

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## **USBR Criteria with Sub-Criteria Elements**

The proposed project falls under the USBR Criteria B – Implementation of Efficiency Measures. The following sub-criteria responses illustrate how the proposed project meets the goals of the WaterSMART Grants: Small-Scale Water Efficiency Projects.

### ***Sub-Criteria #1: Association with Reclamation Project Water Supplies***

- How is the proposed activity connected to a Reclamation Project? The goal of the proposed project is to install additional monitoring gage stations on irrigation canals within the FHIP, which is directly connected to the Michaud Flats project and immediately upstream of the American Falls Reservoir.
- Does the applicant receive Reclamation Project water? Yes. The Shoshone-Bannock Tribes hold storage space in Palisades Reservoir and American Falls Reservoir. In addition, Reservation lands are located within the Minidoka and Michaud Flats Projects.
- Is the proposed activity on Reclamation Project lands or involve Reclamation facilities? Yes. The proposed project aims to install gage stations on irrigation canals within the FHIP which is directly connected to the Michaud Flats project.
- Is the proposed activity in the same basin as a Reclamation Project or activity? Yes. The proposed project aims to install gage stations on irrigation canals within the FHIP which is directly connected to the Michaud Flats project.
- How will the proposed activity improve water availability in a basin where a Reclamation Project is located? An improved water monitoring network throughout the FHIP will result better water management practices and increased water usage efficiency.

### ***Sub-Criteria #2: Extent to Which Water Management Plan is Complete and Updated***

The TWRD completed a water conservation study in 2006, and the proposed project follows one of the recommendations provided in the study.

- Is there a current Water Conservation Plan, as required under the Reclamation Reform Act, and if so, has the plan been updated within the past 5 years? The TWRD completed a water conservation study in 2006 as part of a Comprehensive Water Development Study, funded by the Department of Health and Human Services, Administration for Native Americans. This study included several recommendations to improve water management and enable water conservation on the Reservation's irrigated lands. One of the recommendations in the study was to improve water measurement of the irrigation facilities on the Reservation. The proposed project addresses this recommendation. In addition, the Shoshone-Bannock Tribes are currently working on an Integrated Resource Management Plan to provide overall interdisciplinary planning guidance to Tribal departments so that Fort Hall Reservation resources are managed in an integrated and sustainable way to meet the needs of current and future generations of the Tribes.

### ***Sub-Criteria #3: Reasonableness of Costs***

Costs associated with the proposed project are provided in the Budget Narrative.

### ***Sub-Criteria #4: Extent to Which the Proposed Activity is Expected to Improve Water Use Efficiencies***

The proposed project is expected to significantly improve water use efficiency within the FHIP.

- How will the proposed activity directly improve water use efficiencies? The proposed project will provide detailed time-series data on canal diversions. Periodic manual measurements of canal diversions taken by the local BIA office indicate that current diversion rates in the canals are high relative to the actively irrigated acreage under each canal. Improved water management and water use efficiency is dependent upon understanding the inefficiencies, which the proposed project aims to address.
- How will the proposed activity directly or indirectly improve water supply reliability? The proposed project would provide accurate time-series data of canal diversions. Any interruptions in delivery service due to flow fluctuations, headgate malfunctions, or canal obstruction would be visible by the TWRD through the radio communications equipment.
- How will the proposed activity reduce diversions or reduce irrigation return flows? One of the end goals of the proposed project is to better understand the quantity of current canal diversions, how they fluctuate, and how they relate to the intended delivery schedule of the BIA, such that water management can be improved and diversions can be reduced to eliminate excessive spills and canal seepage.
- How will the proposed activity prevent conveyance losses from operational spills, seepage, and evaporation? Canal flow data collected under the proposed project will help the TWRD to determine how to manage canal diversions better, to reduce conveyance losses that are known to exist in the canals.
- If the proposed activity will reduce conveyance losses, provide an estimate of the anticipated annual water savings. While the proposed project will provide additional baseline data that will allow better water accounting and management to take place in the FHIP, it is part of a much larger comprehensive monitoring effort. The 2006 Water Conservation Plan estimates that 21,757 AF/yr could be saved by better monitoring, operation and management while 29,010 AF/yr would be saved by improved diversion calculation procedures. The proposed activity is assumed to represent 3% of this much larger effort and therefore would result in an estimated water savings of 1523 AF/yr.

***Sub-Criteria #5: Extent to Which Federal Funding Would Promote Completion of an Activity that Might Otherwise be Delayed or Postponed.***

- Has the proposed activity been delayed or postponed due to past funding constraints? If so, for how long? The proposed project has been desired by the TWRD for many years, due to findings from the 2006 Shoshone-Bannock Water Conservation Study. The TWRD has not been able to fund the capital costs of installing these nine additional monitoring sites, and therefore is seeking cost-share assistance from the USBR.
- If this is a newly proposed activity and if funds were not awarded, would that cause the completion of the activity to be delayed or postponed? If so, for how long? The award of funds to the TWRD to complete the proposed project would ensure that the project would be completed within a calendar year. If funds were not awarded, the proposed project would likely be delayed indefinitely while the TWRD seeks to secure outside funding to assist with the capital costs.
- Explain why funds awarded under this Funding Opportunity would help you to accomplish the proposed activity. The funds awarded under this USBR funding opportunity would reduce the costs to the TWRD of acquiring and installing flow monitoring equipment within the FHIP.
- What is the extent of need for Federal funds in order for you to complete the proposed activity? The Budget Narrative details the Federal funds sought under this proposal.
- Would the proposed activity be accomplished at some point in the future without Federal funding assistance? It is possible that the proposed project might be accomplished in the future without Federal funding assistance. The TWRD may be able to conduct the proposed

project without Federal assistance by acquiring funding assistance from another entity, such as State or private parties.

***Sub-Criteria #6: Amount and Sources of Non-Federal Funding (Cost Share)***

The TWRD will fund the cost-share requirement of the proposed project from its annual budget. The Budget Narrative details the proposed cost-share.

***Sub-Criteria #7: Likelihood that any Environmental and Cultural Resources Issues Associated with the Proposal can be Addressed at low Cost and in a Timely Manner***

The TWRD does not expect to encounter significant environmental or cultural resource issues in accomplishing the proposed project. The installation of the nine flow monitoring stations should cause minimal disturbance to the irrigation project, and no disturbance to the natural landscape. The TWRD has successfully installed 51 monitoring locations to date without encountering any environmental and cultural issues.

- Will the proposed activity impact the surrounding environment (soil, air, water, animal habitat, etc.)? If so, please explain the impacts and any steps that could be taken to minimize the impacts. The proposed project will not significantly impact the surrounding environment. Construction of the monitoring stations, including digging a stilling well and placing sub-surface piping is temporary and minimally disruptive. The size of the permanent station is small and not obstructive to the natural environment. Indirect benefits of the proposed project, such as anticipated water efficiency improvements, should benefit the riparian environment of nearby natural water ways by reducing unnecessary diversions and retaining higher flows.
- Are you aware of any endangered or threatened species in the proposed activity area? No. The TWRD is not aware of any endangered or threatened species in the FHIP.
- Are there wetlands inside the proposed activity boundaries? If so, please estimate how many acres of wetlands there are, and describe any impact your activity will have on the wetlands. Wetlands and other jurisdictional waters exist within the FHIP; however, the proposed project is not anticipated to cause any disturbance to wetlands.
- If the proposed activity will affect individual features of an irrigation system, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features. The proposed project will temporarily affect the earthen canals of the FHIP as the monitoring stations are installed. The installation will take place outside of the irrigation season. No permanent impacts to the irrigation system features are anticipated, with the exception of the possibility that a weir or flume be installed to create a control section in the canal. These canals were originally constructed as part of the Fort Hall Irrigation Project, which was initiated around 1891. The exact date the canals were constructed is not known.
- Are any buildings, structures, or features in the project area that are listed or eligible for listing on the National Register of Historic Places? No, there are no buildings or structures in the proposed project area that are listed or are eligible for listing. Eligible structures and buildings do exist downstream of the proposed project area, but these will not be impacted by the proposed project.
- Are there any known archeological sites in the proposed activity area? No, no known archeological sites are in the canals of the FHIP.
- Explain the likelihood that environmental and cultural issues associated with the proposed activity can be addressed in a cost effective and timely manner. It is highly likely that no environmental and cultural issues will exist for the proposed project, and therefore such

issues can be handled quickly and inexpensively. The TWRD has successfully installed 51 monitoring locations to date without encountering any environmental and cultural issues.

***Sub-Criteria #8: Extent to Which Proposal Demonstrates a Sound Implementation Strategy.***

The TWRD is experienced in monitoring site installation, and is confident that the project can be completed within a four to five month period outside of the growing season. A specific schedule is not considered necessary in order to describe the implementation of the proposed project.

- Does the activity provide a schedule clearly indicating schedule to completion? Yes. The project will commence once funding is received. The TWRD has previously installed 51 of these monitoring locations and is therefore very knowledgeable about the equipment and installation required for this project.
- Does the activity proposal outline any potential causes for delays or cost overruns? Delays or cost overruns are unlikely for the proposed project. Delays are possible as a result of problems with equipment acquisition or equipment defects or bad weather during installation. Cost overruns are possible as a result of accidental equipment damage during installation or unforeseen problems encountered in stilling well construction.

***Sub-Criteria #9: The Applicant's Strategy for Monitoring Performance and Reporting and Disseminating Results***

The anticipated benefit of the proposed project is to have an additional 9 operational flow monitoring stations measuring canals within the FHIP. This benefit is easily assessed following project completion. The indirect benefits of improved water accounting and management within the irrigation unit will be implemented by the TWRD once a sufficient dataset is available.

***Sub-Criteria #10: Ancillary Benefits***

The proposed project is likely to have additional natural resource benefits by improving flow conditions in regional natural waterways during the growing season. The data provided by the proposed project will allow for better water management and a reduction in unnecessary diversions into the canals of the FHIP. Undiverted flows will be an ancillary benefit to downstream riparian areas.

- Does the proposed activity help to improve water quality by reducing soil erosion or reducing the quantity of poor-quality irrigation return flows to drains and streams? Yes. At the present time, there are believed to be significant tail-end spills and seepage water as a result of un-utilized canal diversions in the FHIP. The improved water accounting and management that are anticipated as a result of the proposed project will help to reduce unnecessary canal diversions and canal return flows. Soil erosion is not likely to be reduced as a result of the proposed project.
- Does the proposed activity help to improve fish and wildlife habitat, by helping to improve in-stream flows, reducing water temperatures, or improving in-stream water quality? Yes. At the present time, there are believed to be significant tail-end spills and seepage water as a result of un-utilized canal diversions in the FHIP. The improved water accounting and management that are anticipated as a result of the proposed project will help to reduce unnecessary canal diversions, which will be a direct benefit to in-stream flows in natural waterways during the growing season.
- Does the proposed activity help to improve any wetland habitat through enhanced water quantity or quality? No. The proposed project will likely have no effect (neither positive or negative) on wetlands in the FHIP. It is possible that improved streamflows in nearby natural

waterways that are anticipated as a result of the project will help to sustain existing wetlands located downstream of the FHIP.

- Does the proposed activity directly or indirectly benefit any non-ESA listed fish and wildlife or State-listed species? Yes. The proposed project is anticipated to have direct benefits to any fish populations in natural waterways, and other riparian wildlife, by increasing streamflows during the growing season through better management and accounting of canal diversions.
- Does the proposed activity help improve energy efficiency or provide energy savings? No. The proposed project is not anticipated to provide energy savings.
- Does the proposed activity help to improve recreation conditions or opportunities? Yes, it is possible that undiverted water would be available to increase the aesthetic value of riparian zones for park recreation and the quality of aquatic life habitat to improve fishing.
- Can conserved water from the proposed activity be placed in a water bank for enhancing stream flows, hydropower, irrigation, or other uses? Any water conserved under the proposed project is available for use downstream, outside of the FHIP. If not utilized, the conserved water flows into American Falls Reservoir. Storage water in American Falls Reservoir can be used for a number of uses, including instream flow enhancement, hydropower, irrigation, and others.

## **Environmental & Regulatory Compliance**

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.

# Appendix A: Figures

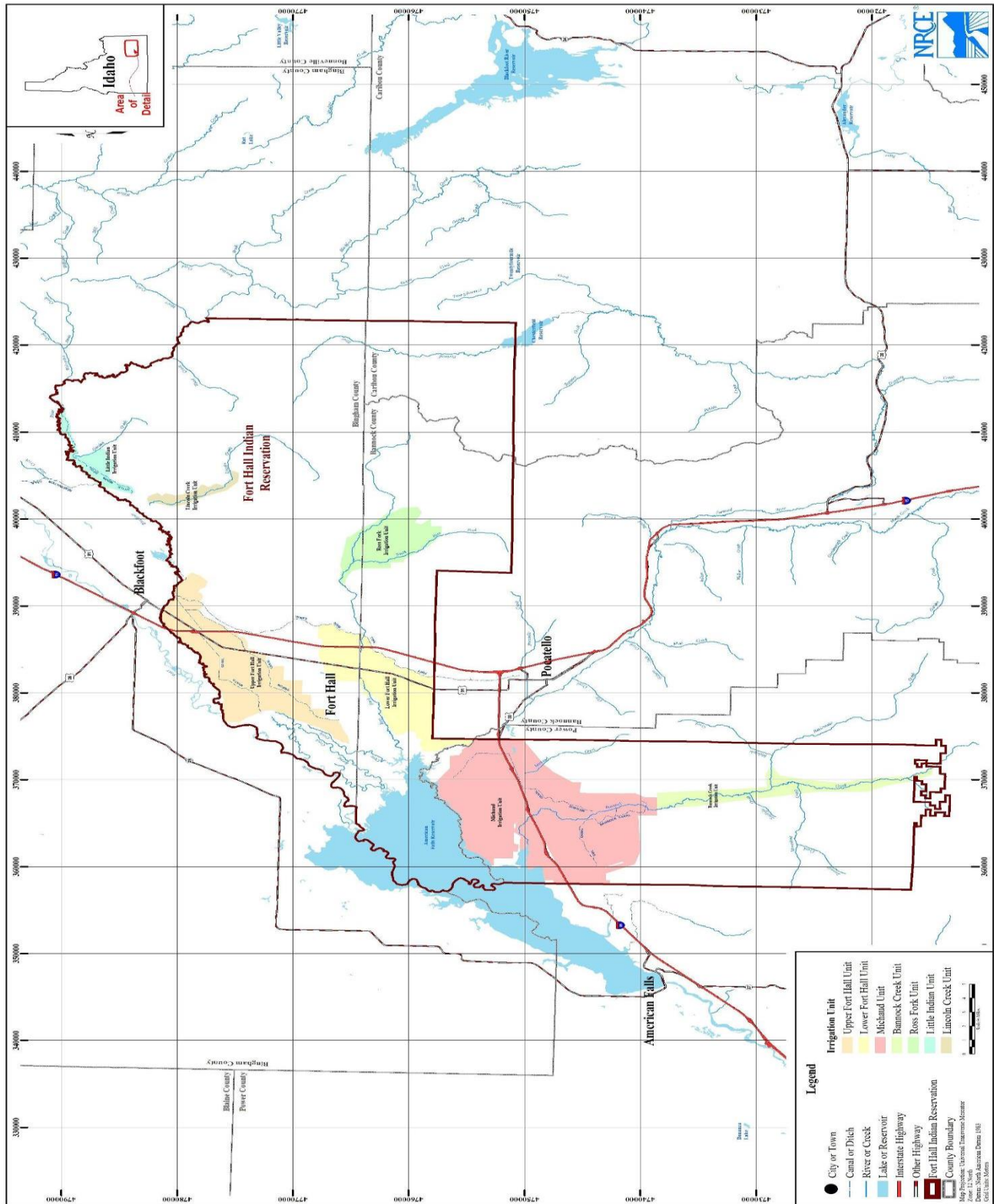


Figure 1: Irrigation Units of the Fort Hall Indian Reservation

Bureau of Reclamation WaterSMART Grants: Small-Scale Water Efficiency Projects for FY 2017 Shoshone-Bannock Tribes of the Fort Hall Reservation, Idaho

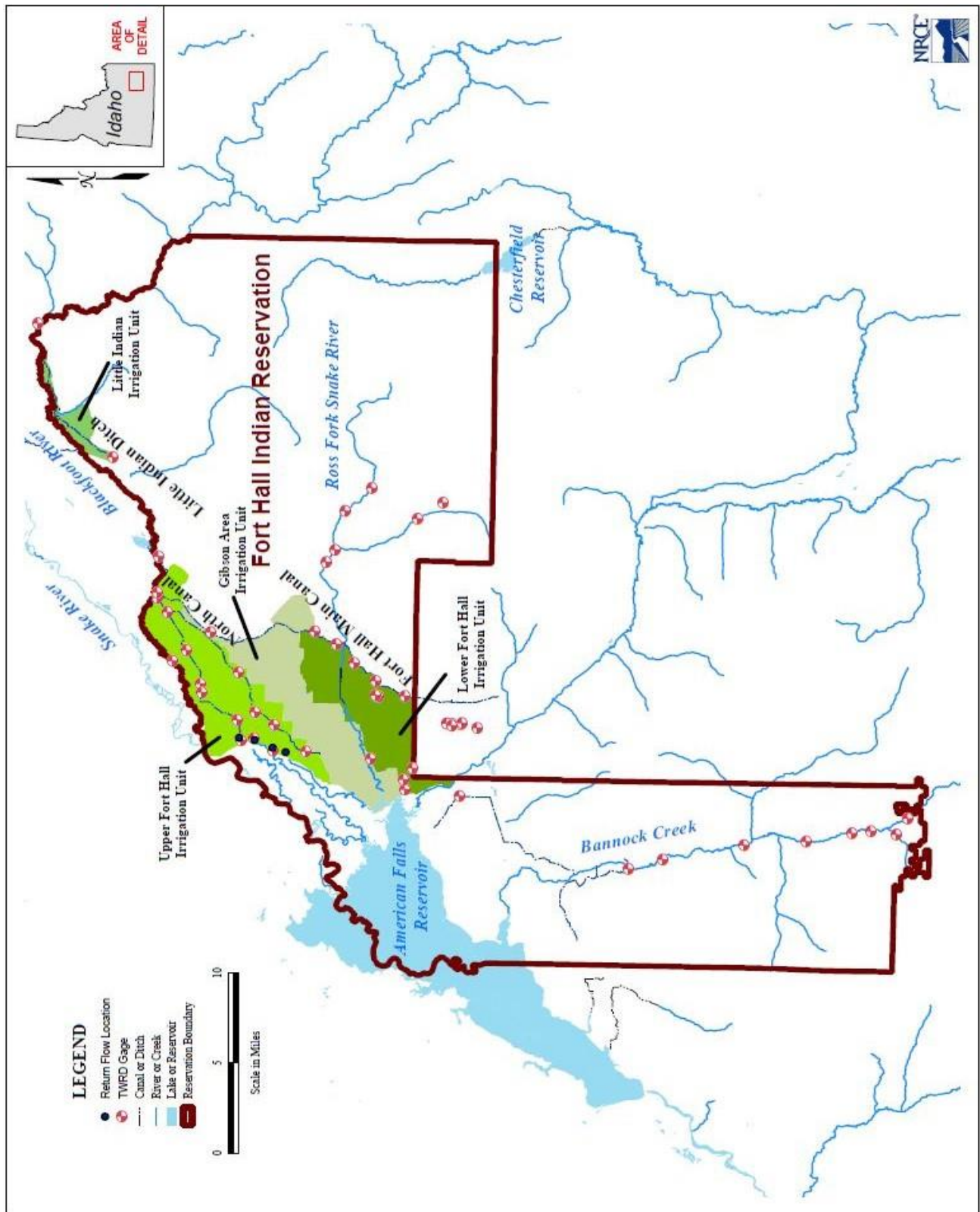


Figure 2: Current FHIP Water Measurement Sites



**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, and 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 TWRD in quantifying surface water; and

**WHEREAS**, the TWRD is seeking funds from the U.S. Bureau of Reclamation’s Water Conservation Field Services Cost Share Program solicitation for FY2017 to enable 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; and

**WHEREAS**, TWRD seeks authorization to submit a request for funding to the U.S. Bureau of Reclamation’s Water Conservation Field Services Cost Share program for \$20,000.00 and a Tribal (TWRD program share) cost share in the approximate amount of \$20,495.00, for a total project amount of \$40,495.00 to continue the development of the surface water measurement program;

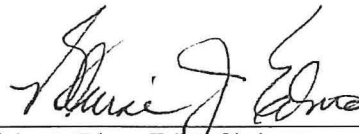
**NOW, THEREFORE, BE IT RESOLVED BY THE BUSINESS COUNCIL OF THE SHOSHONE-BANNOCK TRIBES**, that the Tribal Water Resources Department is hereby authorized to submit a request to the U.S. Bureau of Reclamation Water Conservation Field Services Cost Share program funding in the amount of \$20,000.00; and

**BE IT FURTHER RESOLVED**, the Tribal (TWRD program share) cost share in the approximate amount of \$20,495.00 from Tribal budget line-item #10000-32-00; and the total project amount including the Tribal cost share equals \$40,495.00 in efforts to continue the development of the surface water measurement program is approved; and

**BE IT FURTHER RESOLVED**, the Tribal Chairman or official delegate is authorize to sign the TWRD request for funding and any subsequent documentation to this project.

Authority for the foregoing resolution is found in the Indian Reorganization Act of June 18, 1934 (48 Stat., 984) as amended, and under Article VI, Section 1 (a, g, r) of the Constitution and Bylaws of the Shoshone-Bannock Tribes of the Fort Hall Indian Reservation of Idaho.

Dated this 19<sup>th</sup> day of January 2017



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Blaine J. Edmo, Tribal Chairman  
Fort Hall Business Council

**S E A L**

**CTRT-2017-0035**

**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 (BJE, TB), and 1 not voting (DS) on the date this bears.

  
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Marcus Coby, Tribal Secretary  
Fort Hall Business Council