

Boise Project Board of Control

Automation of the Bennett 3.5 Lateral



Application for:

WaterSmart Grants: Small-Scale Water Efficiency Projects

Notice of Funding Opportunity No. R24AS00059

January 14, 2025

Submitted by:

Boise Project Board of Control
2465 Overland Road
Boise, Idaho 83705-3155

Bob Carter, Project Manager
bcarter@boiseproject.org
Phone: 208-344-1141
Fax: 208-344-1437

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Executive Summary

Date: January 14, 2025
Applicant Name: Boise Project Board of Control
Applicant City, State: Boise, Idaho
Category: Category: A
Project Title: Automation of Bennett 3.5 Lateral
County of Project: Canyon County

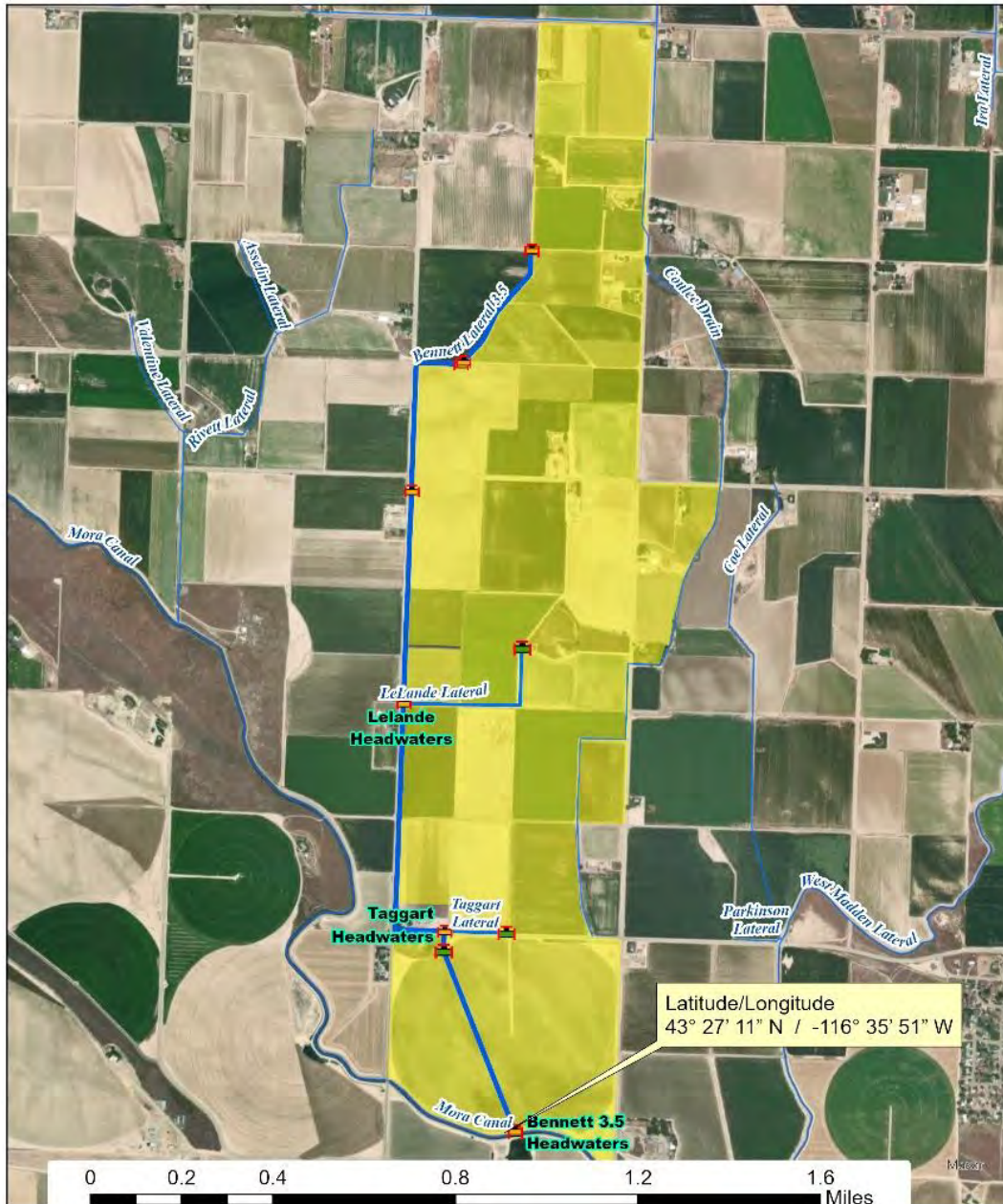
Boise Project Board of Control, located in southwest Idaho, proposes to upgrade and modernize the headwaters of the Bennett 3.5 Lateral by installing an automated gate and transducers. The gate will be connected to a Supervisory Control and Data Acquisition system to provide remote sensing and control of the gate operations, with monitoring of water levels.

The goal of the project is to control flows and conserve water at the headworks of the Bennett 3.5 Lateral; to improve efficiency of use of the water in the irrigation system; and to prevent loss from spills and overflows. The SCADA system will provide real-time data to managers, which will control water loss, stabilize flows, prevent damage, and make correct deliveries to the water users on the Bennett 3.5 Lateral. The proposed project is expected to begin with planning and coordination in July 2026, procurement of supplies in August 2026; fabrication of the mounting frames, supports and gates in October 2026 off site; and installation onsite in March 2027, with completion by April 2027. The Bennett 3.5 Lateral is a USBR federal facility, operated and maintained by the Boise Project Board of Control. The project meets the goals of the Boise Project Board of Control Water Conservation Plan.



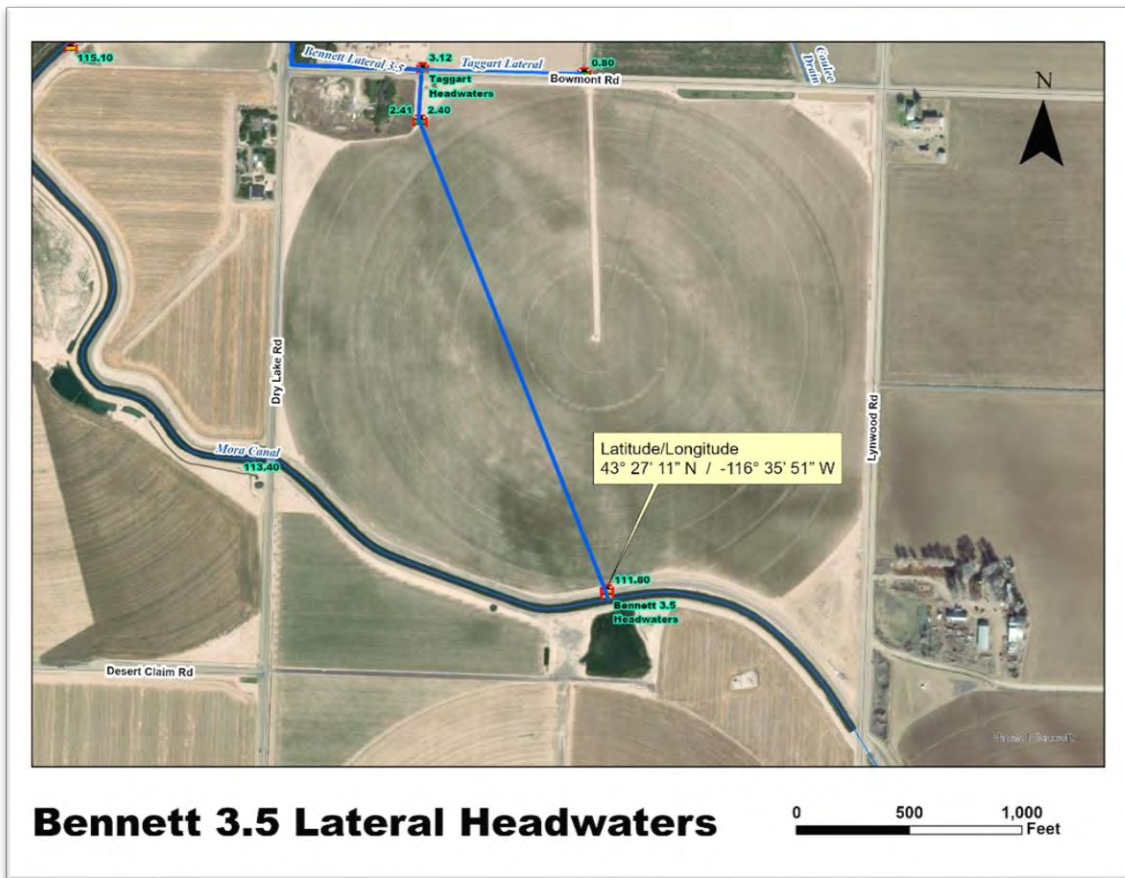
Bennett 3.5 Lateral

- Delivery Box
- Headgate
- Water Users



Project Location

The headworks of the Bennett 3.5 Lateral is in Canyon County, Idaho, 5.5 miles south of Nampa, Idaho. The project latitude is 43°27'11" N and longitude is -116°35'51" W.



Technical Project Description

The proposed project consists of installing automation on the headwaters of the Bennett 3.5 Lateral at the diversion point off the Mora Canal. The headgate consists of one 24-inch manually operated flat sided gate. A small concrete pad will be poured next to the headgate to install and stabilize the actuator, and for mounting the control boxes. A stilling well and transducer will be installed in the irrigation box. This measurement will provide real-time data to water management to verify the correct amount of water is being diverted into the Bennett 3.5 Lateral to prevent over deliveries and spills. A gage reader will also be installed at the tail end of the lateral for improved monitoring and water conservation.

Project planning, procurement and coordination efforts are scheduled to begin in July 2026, and procurement of supplies in August 2026. Shop fabrication of mounting frames, supports, and gate will take place in October 2026 off site. Field installation of the motors, stems, mounting frames, and supports will begin in February - April 2027. Programming, calibration of the communications, and final testing will be completed after the start of the 2027 irrigation season, approximately April 10, 2027.

E.1.1. Evaluation Criterion A—Project Benefits

Benefits to the Category A Applicant’s Water Delivery System.

- Will the project result in more efficient management of the water supply?

The Bennett 3.5 Lateral is diverted off the Mora Canal and meanders for 2.23 miles delivering irrigation water to 441 acres of pristine farmland until it flows into the Coulee Drain. The Bennett 3.5 also provides irrigation water to two laterals, irrigating a total of 642 acres. The installation of the automation on the Bennett 3.5 Lateral will allow BPBC management to make necessary changes to the height of the gate levels due to increase/decrease in water demand and deliveries, obstructions, or problems, and to monitor the water elevations and the changes. This will result in conserving water and making the conserved water available to water users for irrigation.

- Where any conserved water as a result of the project will go and how it will be used?

The proposed project will provide real-time data to the water managers to divert only the requested water into the canal system allowing the conserved water to remain in the reservoirs and extending the water season.

Explain the significance of the anticipated water management benefits for Category A applicant’s water delivery system and customers. Consider:

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

Southwest Idaho is currently experiencing a drought. BPBC’s customers are allowed to receive up to 3.75-acre feet of water per acre **if** the water is available. BPBC’s primary water supply is from both natural flow on the Boise River and storage rights from Arrowrock and Anderson Reservoirs. An allotment is set when more irrigation water is being pulled out of the reservoirs than what is flowing into the system. At this point managers assess the amount of water available in the reservoirs for the remainder of the irrigation season. See Table 1: Allotment which shows the amount of water allocated to our water users and the date allotment was set.

Table 1: Allotment

YEAR	ALLOTMENT (acre-feet per acre)	DATE
2012	1.90	August 1
2013	1.00	April 22
	1.40	June 5
2014	2.25	June 18
2015	1.65	April 16
	2.35	June 3
	2.95	June 12
2016	2.60	June 15
2017	2.45	July 14
	2.60	July 26
2018	2.65	June 15
2019	2.70	July 3
2020	2.75	June 25

2021	1.60	June 10
2022	1.20	April 22
2023	3.00	June 29
2024	2.60	June 19

BPBC adjusts the water being diverted from the reservoirs and within the canal system daily according to demand. During times of high demand, the carrying capacity of the Mora Canal is not enough to meet those demands, therefore BPBC limits the water deliveries to “inch-to-the-acre” – water users can only have one inch of water per acre. The limitations could last a week or up to a month, depending on the demand and weather conditions. As the Bennett 3.5 Lateral headwaters divert off the Mora Canal, the automation will verify the correct amount of water is being diverted into the Bennett 3.5.

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

This project has the potential to prevent lawsuits from the water users if the water levels fluctuate and overflow, causing extensive damage to crop and property. Not to mention loss of livestock and potential lives. It also has the potential to prevent crop damage/loss due to insufficient water.

- What are the consequences of not making the improvements?

The consequences range from too much or too little water diverted into the Bennett 3.5 Lateral, over or under deliveries, spills and overflows, damage to crops and property and loss of livestock and lives.

- Are customer water restrictions currently required?

As noted in the above Table 1: Allotment, water is restricted in low water years. An early allotment date indicates water is restricted to that amount for the remainder of the irrigation season. During the heat of the summer and demand for additional water, the canal system is not capable of carrying the requested water, water users in this area are restricted to “inch-to-the-acre” until the demand drops.

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

The biggest concern is water conservation, delivering water accurately and safely. Knowing where the water is at, and how much water is needed is the first step in water conservation. With only manual measuring devices on the Bennett 3.5 Lateral, this project will provide real time data information to help water managers know how much water is needed to divert out of the reservoirs and into the canals, conserving water and possibly eliminating water restrictions.

Broader Benefits

- Will the proposed project increase collaboration and information sharing among water managers in the region?

This project does increase collaboration and information sharing among the five irrigation districts the BPBC delivers water for on their behalf. Each district has at least one member on the Board of Directors.

- Is the project in an area that is experiencing, or recently experienced, drought, or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale?

As mentioned above, southwest Idaho has been experiencing drought conditions for several years. The proposed project will improve broader water supply reliability by preventing less waste of water due to over/under deliveries, overflows/spills, and conserves water in the reservoirs, with the hope of extending the water season.

- Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)?

The conserved water will remain in the reservoir systems longer which will help keep the reservoir temperatures cooler and water deeper for the fish, especially the Bull Trout. The Bull Trout is listed as a “Threatened” species under the Endangered Species Act and is part of the State of Idaho Bull Trout Conservation Plan 1996. The water savings received from the reduction in diversions will directly benefit the bull trout in the Boise River system i.e., Lucky Peak, Arrowrock and Anderson Ranch reservoirs.

- Will the proposed project positively impact/benefit various sectors and economies within the applicable geographic area (e.g. impacts to agriculture, environment, recreation, and tourism)?

The project will help stabilize the canal levels and decrease personal property and crop damage due to over/under deliveries, overflows and spills. With less water being drawn from the reservoirs, it will have an impact on recreation on the reservoirs. With boating and fishing on the Arrowrock, Anderson and Lucky Peak Reservoirs, along with Lake Lowell, the recreationists will receive the benefits of the conserved water remaining in the reservoirs and the lake, which also benefits the local economy and tourism.

- Will the project complement work being done in coordination with NRCS in the area?

No, this will not complement a current NRCS project.

E.1.2 Evaluation Criterion B – Planning Efforts Supporting the Project

Is your project supported by a specific planning document or effort? When was the plan developed? What is the purpose and objective of the plan?

The BPBC adopted a Water Conservation Plan in 2010 and is in the process of being updated to address many challenges from the current drought and an increase in population. The current plan addresses installation of appropriate water measurement devices to assure water is not being lost

to excess deliveries. This project implements a portion of the Project’s Water Conservation Plan, Objective #4.

Every year, the watermasters request projects to be completed in the upcoming year. The requests are prioritized by water conservation, operational efficiency, safety, and project costs. The Bennett 3.5 Lateral was chosen due to the inefficient headgate; the need to be notified when a major change in water level occurs; and most importantly to ability to verify the correct amount of water is being diverted out of the reservoir and into the delivery system and for water conservation.

Boise Project has installed over 42 SCADA automated sites to conserve water and provide quicker response times due to overflows and spills.

E.1.3. Evaluation Criterion C— Implementation and Results

- **Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.**

The preparation for the project will begin in July 2026 with planning, environmental study, and procurement of materials to be completed by September 2026. Fabrication of the mounting frames, security boxes, and battery boxes, will be done off-site during the fall/winter of 2026/2027. Once fabrication is complete, the actuator and electrical mechanics will be installed on site in early April 2027. Integration into the existing SCADA program will begin by April 2027 with final testing to be completed after the start of the 2027 irrigation season.

Table 2: Estimated Project Schedule

Milestone/Task	Planned Start Date	Planned Completion Date
1) Planning and coordination	July 2026	July 2026
2) Procurement	August 2026	March 2026
3) Fabrication of mounting frames, supports, security and battery boxes, off-site	October 2026	March 2027
4) Field installation of transducers, actuators and electrical work	March 2027	April 2027
5) SCADA integration	April 2027	April 2027
6) Final Testing & Site Operational	April 2027	April 2027
7) Beginning of Irrigation Season	April 2027	April 2027

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

With the project site entirely within BPBC and USBR facilities and easements, no permits are required.

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

All design work will be performed in-house by BPBC employees.

- **Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easement that are required for the project?**

With the project site entirely within BPBC and USBR facilities and easements, no additional easements are required.

- **Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs.**

Contact has been made with the local Reclamation office to discuss potential environmental and cultural resource compliance requirements. The local office has determined that there is No Potential to Effect and a cost of \$250.00 to complete.

E.1.4. Evaluation Criterion D—Nexus to Reclamation

- **Is the proposed project connected to a Reclamation project or activity?**

The irrigation districts served by the BPBC are parties to repayment agreements pursuant to the Water Supply Act of 1958 and thus are obligated under Section 210 to the Reclamation Reform Act of 1982 to plan and implement water conservation measures.

- **Does the applicant have a water service repayment, or operations and maintenance (O&M) contract with Reclamation?**

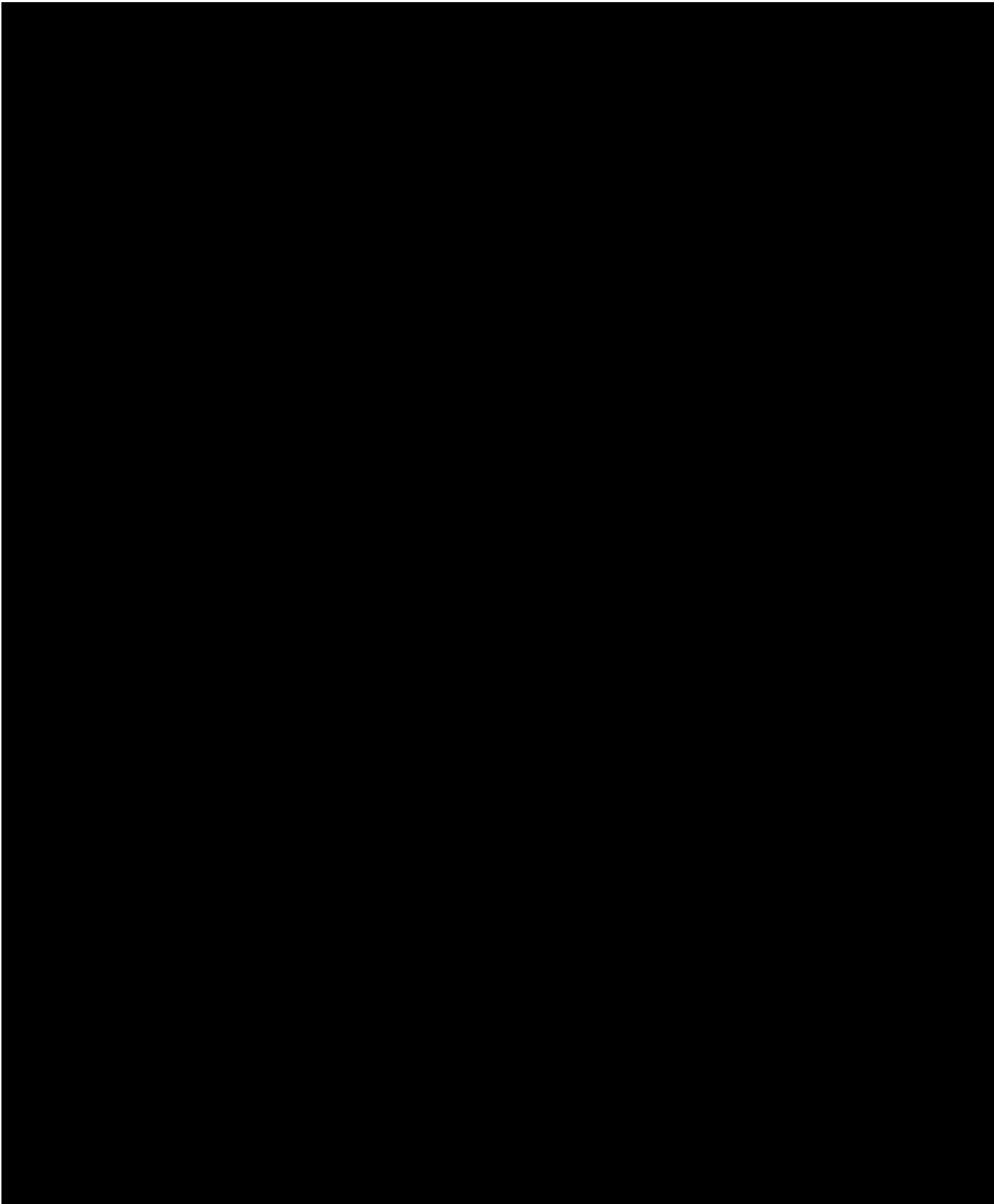
Boise Project Board of Control is the operating agent for five irrigations districts (New York Irrigation District, Boise-Kuna Irrigation District, Nampa-Meridian Irrigation District, Wilder Irrigation District and Big Bend Irrigation District). Its purpose is to manage the irrigation facilities and other works transferred by the USBR to these five irrigation districts and to deliver water to their landowners. These facilities are referred to as “transferred works.” The irrigation districts are parties to repayment agreements pursuant to the Water Supply Act of 1958.

- **If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?**

As noted above, BPBC receives its water through the five districts which holds the water rights for its patrons, and over 1,500 miles of laterals and canals are federal facilities.

- **Will the proposed work benefit a Reclamation Project area or activity?**

Yes, the proposed project will benefit a Reclamation project.



H.1 Environmental and Cultural Resource Considerations

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.

Modification of the headworks will have minimal earth disturbing construction and have little effect on the surrounding environment. All construction activities, including welding, will be off site or located within the canal and/or easements. The project will take place before the 2027 irrigation season while temperatures are lower and increased precipitation levels will help reduce the potential of dust. Should dust become an issue, BPBC will apply water applications to ensure dust abatement.

• 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?

There are no known endangered or threatened species on the project site.

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

Wetlands are not present within the vicinity of the proposed sites.

• When was the water delivery system constructed?

The water delivery system was constructed in 1908. Modifications to the headgate were done in the late 1990’s.

• 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.

Some minor modifications will occur to the structure, with the installation of the automation and a concrete pad to stabilize the actuator. The current structure will remain intact.

• Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

There are no buildings, structures or features listed or eligible for listing on the National Register of Historic Places in the project site.

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

There are no archeological sites within the project area.

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

No, the project will not have any effect on any population.

• Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

The project site is not within 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?

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

D.2.2.5. Required Permits or Approvals

No permits or approvals are required for this project, as all work will be done within BPBC and USBR easements.

D.2.2.6 Overlap or Duplication of Effort Statement

There is no overlap between the proposed project and any other active or anticipated proposals or projects. This proposal submitted for consideration under this program does not in any way duplicate any proposal or project that has been or will be submitted for funding consideration to any other potential funding source – Federal or non-Federal.

D.2.2.7 Conflict of Interest Disclosure Statement

There is no known conflict of interest by Boise Project Board of Control personnel with this project.

D.2.2.8 Uniform Audit Reporting Statement

Boise Project Board of Control was not required to submit a Single Audit report in our last fiscal year.

D.2.2.13 Official Resolution

The Board of Directors of the Boise Project Board of Control met on November 6, 2024, at which the Official Resolution was approved and signed by the Chairman of the Board. See Attachment B.

D.3 Unique Entity Identifier and System for Award Management

The BPBC is registered with System for Award Management (SAM). The Unique Entity Identifier is SWMGTWB1U2C3. Registration in SAM will remain active.

D.2.2.3 Project Budget

Narrative

Boise Project Board of Control is seeking \$18,666 in funding. The total project cost is estimated at \$37,332. The budget established for this project is based on a similar project performed in the Fall/Winter 2023/2024.

Table 3: Total Project Cost Table

Funding Sources	Funding amount
Costs to be reimbursed with the Federal Funding	\$18,666.09
Costs to be paid by the applicant	\$18,666.09
Value of third-party contributions	\$0
TOTAL PROJECT COST	\$37,332.18

Budget Proposal

The proposed budget for this project is presented in Attachment A. The budget established for this project is based on quotes received from vendors and a similar project performed in the Fall/Winter of 2023/2024.

Budget Narrative

Salaries & Wages

The following key personnel from BPBC will be charging time on this project:

- [REDACTED], Foreman – will oversee, procure materials, supervise the laborers, and take part in the fabrication and installation of project. The hourly rate is based on the 2025 rate. The hourly rate is based on the average of all personnel occupying this position. Compensation rates are consistently applied to Federal and non-Federal activities.

Task 1:	3 hrs Y1 x 29.17/hr + 0 hrs Y2 x 29.17/hr =	\$ 87.51	
Task 2:	5 hrs Y1 x 29.17/hr + 0 hrs Y2 x 29.17/hr =	\$ 145.85	
Task 3:	16 hrs Y1 x \$29.17/hr + 0 hrs Y2 x \$29.17/hr =	\$ 466.72	
Task 4:	51 hrs Y1 x \$29.17/hr + 0 hrs Y2 x \$29.17/hr =	\$1,487.67	
Task 5:	5 hrs Y1 x 29.17/hr + 0 hrs Y2 x \$29.17/hr =	\$ 145.85	
Total:	\$2,333.60	\$0 Y2	\$ 2,333.60

- BPBC full time laborers will provide the bulk of the labor for this project which includes all fabrication and installation. The hourly rate is based on 2025 rate. This hourly rate is based on average of all personnel occupying this position. Compensation rates are consistently applied to Federal and non-Federal activities.

Laborers:

Task 3:	50 hrs Y1x \$21.91/hr + 0 hrs Y2 x \$21.91/hr =	\$1,095.50	
Task 4:	48 hrs Y1 x \$21.91/hr + 0 hrs Y2 x \$21.91/hr =	\$1,051.68	
Total:	\$2,147.18 Y1	\$0 Y2	\$ 2,147.18

Laborer Two:

Task 5: 2 hrs Y1 x \$32.76/hr + 0 hrs Y2 x \$32.76/hr = \$65.52

Task 6: 2 hrs Y1 x \$32.76/hr + 0 hrs Y2 x \$32.76/hr = \$65.52

Task 7: 1 hr Y1 x \$32.76/hr + 0 hrs Y2 x \$32.76/hr = \$32.76

Total: \$165 Y1 \$0 Y2 \$163.80

- Reporting requirements: 10 hours – Hourly rate is based on 2025 rate. Compensation rates are consistently applied to Federal and non-Federal activities.
- As required by the NOFO, this certifies the labor rates include in the budget proposal represent the actual labor rates as of January 1, 2025. Furthermore, these rates are consistently applied to Federal and non-Federal activities.

Fringe Benefits

Fringe benefits include payroll taxes and retirement.

Payroll taxes – Social Security/Medicare: 7.65%

Retirement: 13.53%

Equipment

None

Materials and Supplies

Please see Construction for a list of materials and supplies.

Contractual

None

Construction

One gate actuator will be purchased at an estimated cost of \$16,394. The cost is based on the quote received from the vendor.

Third-Party In-Kind Contributions

None

Environmental and Regulatory Compliance Costs

A Compliance Application has been submitted to the local Bureau of Reclamation. A quote of \$250 was received for completing the Environmental Compliance.

Other Expenses

None.

Indirect Costs

Boise Project does not have a current Federal negotiated indirect cost rate agreement so indirect costs were calculated using the 10% de minimis rate against MTDC as detailed below.

Personnel	\$ 4,980.58
Fringe Benefits	\$ 1,051.55
Equipment	N/A
Supplies	N/A
Construction	N/A
Other Direct Costs	N/A
Total	\$6,032.13 x 10% = \$603.21

Attachment B – Official Resolution

FRED BUTLER
CHAIRMAN OF THE BOARD

RICHARD MURGOITIO
VICE CHAIRMAN OF THE BOARD

ROBERT D. CARTER
PROJECT MANAGER

THOMAS RITTHALER
ASSISTANT PROJECT MANAGER

APRYL GARDNER
SECRETARY-TREASURER

MARY SUE CHASE
ASSISTANT SECRETARY-
TREASURER

BOISE PROJECT BOARD OF CONTROL

(FORMERLY BOISE U. S. RECLAMATION PROJECT)

2465 OVERLAND ROAD
BOISE, IDAHO 83705-3155

OPERATING AGENCY FOR 167,000
ACRES FOR THE FOLLOWING
IRRIGATION DISTRICTS

NAMPA-MERIDIAN DISTRICT
BOISE-KUNA DISTRICT
WILDER DISTRICT
NEW YORK DISTRICT
BIG BEND DISTRICT

TEL: (208) 344-1141
FAX: (208) 344-1437

OFFICIAL RESOLUTION FOR WATERSMART GRANTS: SMALL-SCALE WATER EFFICIENCY PROJECTS NOFO No. R24AS00059

WHEREAS, The U. S. Bureau of Reclamation is seeking proposals from irrigation districts who want to leverage their money and resources by cost sharing with Reclamation on small-scale on-the-ground projects that seek to conserve, better manage, or otherwise make more efficient use of water supplies.

WHEREAS, the Boise Project Board of Control desires to apply for funding through Reclamation's WaterSMART Grant Program;

NOW THEREFORE BE IT RESOLVED that the Board of Directors of the Boise Project Board of Control agree and authorize the following:

1. The Board has reviewed and supports this proposal for modifying the headgates of the Bennett 3.5 Lateral with solar powered automation with connectivity to SCADA program.
2. The Boise Project Board of Control is capable of providing the amount of funding and/or in-kind contributions as specified in the funding plan; and
3. If selected for the WaterSMART Grant, the Boise Project Board of Control will work with Reclamation to meet established deadlines for entering into a cooperative agreement.
4. Bob Carter, Project Manager, has the legal authority to sign and enter into the agreement

Passed and adopted by the Board of Directors of the Boise Project Board of Control during its regular meeting on the 6th day of November 2024.



Fred Butler
Chairman of the Board