



# Modernizing Idaho's Water Infrastructure

An Ongoing Story Series on the Idaho Water Resource Board's Aging Infrastructure Grant Program **ISSUE NO. 4**

## Bannock Feeder Canal new headgate

### **Project description:**

The Bannock Feeder Canal Inc. is jointly owned by three entities: Reid Canal Co., Texas Slough Irrigation Co., and Liberty Park Irrigation Co.

The new headgate project was sponsored by all three entities and funded by two grants from the Idaho Water Resource Board, a Water Board loan and an Idaho Soil and Water Conservation Commission Water Quality for Ag Program grant.

The old Bannock Feeder Canal headgate along the South Fork of the Snake River in Archer, Idaho was originally built in the early 1900s. The old headgate had eroded and deteriorated to the point where water flow could not be controlled as headgates were always open and could not be closed.

The Bannock Feeder Canal diversion is integral to the Snake River Flood Control District Levee. If it were to wash out, the levee would fail and cause catastrophic flooding north of the Snake River. The Bannock Feeder Canal currently places a coffer



- **Type of project:** New headgate with automation to provide real-time water flow information; water conservation.

- **Location:** Archer, Idaho

- **Total project cost:** \$885,110

- **AIG:** \$250,000

- **IWRB Flood Management Grant:** \$200,000

- **IWRB loan:** \$335,110

- **SWC Water Quality for Ag grant:** \$100,000

- **Other partners:** Madison Soil and Water Conservation District

- **Start date:** November 2022

- **End date:** May 2023

dam yearly to prevent the structure from failing in spring flooding and removes the dam for the irrigation season. The diversion is essential to all three canal companies and the farms supported by the water they deliver.

The three canals serve a total of 16,829 acres of

farmland.

**Construction:** Work started in late October 2022 to remove the old headgate and install the new one. More than 300 yards of concrete were used to construct the new headgate, including the installation of 13-foot-high concrete walls to funnel water flows to the headgate. A trash collection gate was placed in front of the outlet works, which will significantly reduce the amount of debris congesting the new headgate and ensure continuous water flow.

**Project benefits:** This project will provide multiple benefits with a new, safe, reliable and modern canal headgate.



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## Bannock Feeder new headgate (cont.)

With the new headgate in place, an automation system will be installed to control water flows remotely in real-time.

The canal headgate is designed for a continuous flow of 600 cubic feet per second. It has a capacity of up to 1,000 cfs to assist with flood control, as needed.

The Bannock Feeder diversion has a double-barreled culvert at the entrance to enable access from both sides. The double-barreled culvert will also collect debris before it enters the diversion. A bridge over the top of the headgate maintains continuity for levee maintenance.

The diversion is fitted with two vertical-slide automated headgates, powered with solar electricity to improve water efficiency. Erosion control measures were put in place at the entrance and outlet of the structure to reduce sediment loads and improve water quality.

For more information about the Bannock Feeder Canal headgate project, contact Nick Jensen, 208-709-7625.



*Top, the old headgate. Below, excavation work begins in October 2022 to prepare for removing the old headgate and installing the new one. (courtesy Bannock Feeder Canal Co.)*

