



# Modernizing Idaho's Water Infrastructure

An Ongoing Story Series on the Idaho Water Resource Board's Aging Infrastructure Grant Program **ISSUE NO. 17**

## Big Lost Irrigation District completes Burnett Canal Water Efficiency Project

**Overview:** The Burnett Canal is owned and managed by the Big Lost River Irrigation District. It serves 51 water users in the Big Lost River watershed with a 16-mile unlined canal that has been experiencing significant water losses due to seepage.

The Big Lost Irrigation District was formed in 1931 to handle the irrigation needs of the Lost River Valley. Water users and farmers in the Big Lost area were instrumental in the construction of Mackay Dam and reservoir in 1918. The dam stores 45,000 acre-feet of water in Mackay Reservoir.

The Big Lost District manages the irrigation water from the reservoir.

About 32,000 acres is irrigated in the Big Lost Valley, where the main crops are alfalfa, wheat, barley, and potatoes. Farmers and ranchers also raise cattle in the valley.

**The Problem:** An estimated 85 percent of the irrigation water conveyed through the Burnett Canal is being lost to seepage, officials said. Years of lower than average snow pack, and droughts in the summer have led to surface water shortages in the basin and given urgency to



New HDPE pipeline installed in the Burnett Canal by contractors for the Big Lost Irrigation District. (photo courtesy Moj Broadie)

the need to address inefficiencies in water conveyance.

Undeliverable surface water rights in this arid environment led to crop stress and failure. Many producers supplement their surface water rights with groundwater pumping, which increases during surface water shortages.

The drought summers of 2020 and 2021 prompted the Big Lost Irrigation District to look into solutions to conserve their water.

"We had to do something," said Moj Broadie, President of Big

Lost Irrigation District. "Now, with some farmers in their second year of getting water from a pipe, they say that we should have done this 20 years ago. The water pressure is good, too."

Broadie said the pipeline projects "will help the whole valley. Water is so valuable and such a big concern that the more efficient, the better off we all will be."

**The Solution:** Big Lost Irrigation District lined the first five miles of the Burnett Canal with funding from local water users and the

- **Type of project:** Water efficiency project.
- **Location:** Big Lost River Valley
- **Total project cost:** \$6.4 million
- **Idaho Water Resource Board AIG:** \$900,000
- **NRCS:** \$2.9 million
- **INL:** \$500,000
- **Start:** November 2024
- **Finish:** April 2025





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## Lost River Irrigation District Burnett Canal water efficiency project (cont.)

Natural Resources Conservation Service (NRCS). That project was completed in 2023. Phase II of the project, currently under construction, is converting eight miles of the canal from an open ditch to an enclosed High Density Polyethylene (HDPE) pipeline. The project will be completed prior to the beginning of the 2025 irrigation season.

The contractor is Darland Skid Steer Services in Arco. They are installing about 800 to 1,000 feet of pipeline per day, depending on winter weather.

It takes about 15 minutes for an automated fusion machine to weld together two 53-foot-long sections of 30-inch diameter pipe. When 20 pieces of pipe are fused together, they stretch 1,060 feet long, about one-fifth of a mile, officials said.

### **Water savings**

If Big Lost Valley surface water irrigators can stretch their water supplies farther with the water-efficiency projects, there will be less of a need for farmers to turn on groundwater pumps for water. That will leave more water in the local groundwater aquifer, officials said.

Estimated water savings from the existing and new pipelines in the Burnett Canal are expected to save about 28,000 acre-feet of water per year, according to Natural Resources Conservation Service officials.

"If we can stay on canal water and save 50 days of groundwater pumping, that will save billions of gallons of water in the local aquifer," said Jesse Fullmer with NRCS.



HDPE pipeline staged and ready for placement in the Burnett Canal. (Courtesy BLRID)

Construction of the Burnett Canal liner and pipeline has spurred water users in the area to pursue more options for water-efficiency projects in the future, officials said.

For more information about the Burnett Canal project contact the Big Lost Irrigation District, 208-833-1447, [blridgm@atcnet.net](mailto:blridgm@atcnet.net).