



Modernizing Idaho's Water Infrastructure

An Ongoing Story Series on the Idaho Water Resource Board's Aging Infrastructure Grant Program **ISSUE NO. 14**

West Indian Cove Water Company Installs New Irrigation Pipeline, Pumphouse and Pumps

Overview: West Indian Cove Water Company, Inc., is replacing its aging irrigation infrastructure so it can provide a long-term sustainable water supply to its water users and farm producers.

The project also will make the irrigation system more reliable, and economically and environmentally friendly, officials said.

West Indian Cove Water Co. is located east of Bruneau Sand Dunes State Park and south of the Snake River. It has eight water users and serves about 715 acres of farmland.

Producers in this area raise a variety of crops including potatoes, wheat, barley, hay, sugar beets, seed, onion, beans and mint. In addition, given Indian Cove's unique location in Idaho, farms are able to grow more specialty crops such as peppers and watermelons.

In 2017, Owyhee County reported \$273 million in farming revenue. A portion of this activity and revenue can be attributed to West Indian Cove's water users, officials said.



The Spinkler Shop Irrigation Co. installs new irrigation pipe in the West Indian Cove irrigation system. (photo by Dale Hooley)

Aging infrastructure: The West Indian Cove pumphouse and canal system were installed in 1941. Their diversion is on the Snake River. Two miles of unlined canal delivers water to producers in the area. Seepage losses in the canal have been occurring on an ongoing basis.

"The canal system was dug by-hand or with horses, with the exception of a very small portion dug by a diesel-powered shovel," said Dale Hooley, board secretary of West

Indian Cove Water Co.

"The pumphouse has slipped-off its foundation entirely," Hooley said. "Much of the roof is now gone due to wear-and-tear. Certainly, any weather event that regularly occurs in Idaho may cause the house to fall down entirely."

West Indian Cove has been working with the original pumps and electric breaker boxes dating to 1941.

"Repairs are incredibly difficult and expensive," he said. "Thus, not only is it obsolete but its age means it's inefficient and costly to run."

- **Type of project:** New pump house, new pumps and two miles of irrigation pipeline.
- **Location:** Indian Cove, Idaho
- **Total project cost:** \$1.6 million
- **Idaho Water Resource Board AIG:** \$545,000
- **NRCS funding:** \$899,999
- **SWC WQPA grant:** \$150,000
- **Start:** December 2024
- **Finish:** April 2025



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West Indian Cove new pumps and water efficiency project (cont.)

“The natural result of all of this, we are limping along with long-outmoded infrastructure that likely consumes much more water from the Snake River than is delivered to end users. Certainly, as it stands, West Indian Cove is unable to plan for any future growth or contingencies. Clearly all of this is not only uneconomic but inefficient and unsustainable.”

Project cost: The total cost of the West Indian Cove project is estimated to be \$1.6 million.

The Idaho Water Resource Board provided a \$545,344 Aging Infrastructure Grant. The Natural Resources Conservation Service (NRCS) contributed a \$899,999 grant for the project, plus design-engineering services. The Idaho Soil and Water Conservation Commission awarded a \$150,000 Water Quality Program for Agriculture (WQPA) grant as well through the Bruneau River Soil Conservation District.

West Indian Cove water users will cover the remaining cost.

New irrigation infrastructure:

West Indian Cove is building a new pumphouse on the Snake River with three pumps to convey water to its water users via two miles of buried 24-inch PVC pipe in its existing canal. The new water pipeline will connect to each producer in the West Indian Cove's irrigation system.

Construction got under way in December 2024. Hooley plans to complete the project by early April, in time for the 2025 irrigation season. The Sprinkler Shop Irrigation Co. is the contractor working on the



Trenches are dug and ready for new irrigation pipe to be installed. (photo by Dale Hooley)

project.

Out of the three new pumps being installed, one of them will be fitted with variable frequency drive technology. Variable frequency drive (VFD) water pumps offer significant benefits, including energy savings by adjusting pump speed based on demand, reduced wear and tear due to softer starts and stops, improved flow and pressure control, minimized maintenance needs, and overall increased operational efficiency. Essentially, VFD technology allows the pump to operate at its optimal level based on water demand.

Water savings: The project is expected to reduce West Indian Cove's water use by about 23 percent overall or by an average of 1.14675 acre-feet of water per water user per year, Hooley said.

Project benefits: Water savings from

the new buried water pipeline will leave more water in the Snake River for other uses. “West Indian Cove will be able to leave approximately thousands of acre feet of water in the Snake River every single year,” Hooley said.

The Idaho Soil and Water Conservation Commission found that by converting the current canal system to a closed system will result in the following water quality benefits to the Snake River:

- 1,323 tons of sediment reduced per year.
- 2,249 pounds of nitrogen reduced per year.
- 1,125 pounds of phosphorus reduced per year.

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