



Modernizing Idaho's Water Infrastructure

An Ongoing Story Series on the Idaho Water Resource Board's Aging Infrastructure Grant Program **ISSUE NO. 13**

Conant Creek Canal Co. - Henry's Fork Foundation water and energy efficiency project

Overview: Conant Creek Canal Company provides irrigation water from Conant Creek to 15 producers who raise crops on 3,200 acres of highly productive irrigated farmland near Ashton. Conant Creek originates in the Teton Mountain Range near the Idaho-Wyoming border and flows about 30 miles west before flowing into the Fall River.



A new diversion structure and headgates equipped with SCADA remote-control technology were installed on the Conant Creek Canal.

Primary crops grown in the Conant Creek Canal service area are seed potatoes, cereal grains and alfalfa hay. The Ashton area is one of the nation's largest potato seed-producing management areas. Sales from Ashton-area farms net approximately \$5 million per year.

The Conant Creek Canal is experiencing deterioration issues with aging irrigation infrastructure that's more than a century old. The Conant Creek Canal water- and energy-efficiency project provides a multi-faceted solution - lining 5.7 miles of canal, building a new concrete diversion structure and spillback gates, and increasing precision water delivery, utilizing SCADA remote-control headgate

technology.

Four years in the making, the Conant Creek water- and energy-efficiency project is a partnership between Conant Creek Canal Co., the Henry's Fork Foundation (HFF), Friends of the Teton River, Trout Unlimited, The Nature Conservancy, and Fremont-Madison Irrigation District (FMID).

The project has 4 goals:

- Increase the efficiency and precision of water

delivery to water users, saving at least an average of 1,987 acre-feet of storage water in Island Park Reservoir.

- Fix aging concrete diversion infrastructure and add remote control technology.

- Increase wild trout and native trout (Yellowstone cutthroat trout) populations in the Henry's Fork Watershed (Island Park Reservoir, Henry's Fork, Fall River, Conant Creek) through increased summer flow in Conant Creek and the resulting increase in Island Park Reservoir carryover.

- Implement innovative on-the-farm conservation practices to complement canal lining and remote-

- **Type of project:** New diversion and water efficiency project
- **Location:** Ashton, Idaho
- **Total project cost:** \$2,172,444
- **Idaho Water Resource Board AIG:** \$499,145
- **BOR WaterSmart WEEG grant:** \$1,122,902
- **Idaho DEQ AG BMP grant:** \$165,000
- **Two WQPA grants:** \$110,000
- **IWRB loan:** \$90,000
- **Start:** January 2022
- **Finish:** November 2024

For more information go to idwr.idaho.gov



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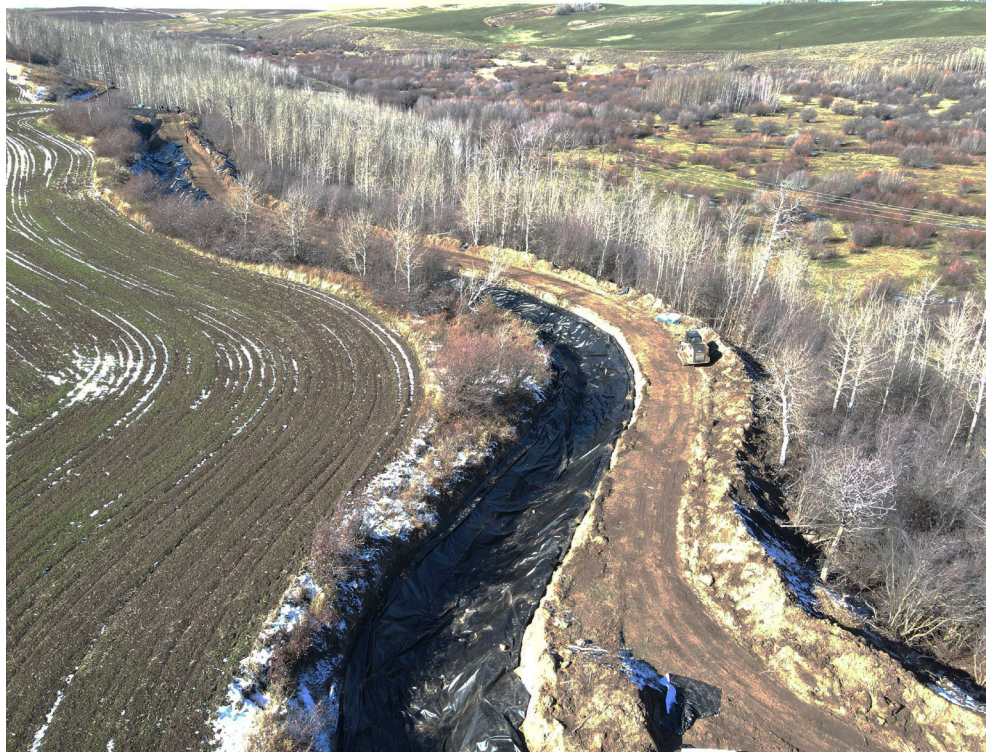
Conant Cr. Canal water and energy efficiency project (cont.)

control water management benefits.

Water savings: This water- and energy-efficiency project, in conjunction with on-farm Natural Resource Conservation Service (NRCS) water savings projects being simultaneously implemented on land serviced by the Conant Creek CC, will eliminate 2,850 acre-feet per year in canal seepage and increase flows in Conant Creek by 13 cubic feet per second (~39% increase during irrigation season). This will increase available water for ag producers currently pumping from the lower portions of the creek (up to ~4 cfs) and improve aquatic conditions for cold-water species in both Conant Creek, Fall River and the Henry's Fork River.

An additional ~9 cfs estimated to reach the confluence with Fall River is the basis for the projected 1,987 acre-foot per year storage savings in Island Park Reservoir. The project will increase streamflow in Conant Creek from mid-May until early October by an average of 13 cfs during the month of July, a 39 percent increase. Currently, a regulated streamflow of 0 cfs in Conant Creek from late June through mid-August occurs 25 percent of the time. This project is expected to keep at least 11 cfs in Conant Creek year round.

Put simply, this water- and energy-efficiency project eliminates canal seepage that was detrimental for farmers and fish, upgrades the irrigation infrastructure used by Conant Creek Canal, provides technology for precision water management, and meets multiple



Conant Creek Canal was lined with two layers of 30-mil low-density polyethylene. A non-woven geotextile layer was placed on the canal bottom for soil stabilization and another layer was placed on top for UV protection. (photo by Daniel Wilcox, HFF)

goals outlined by the Idaho Water Resource Board (IWRB) in the criteria for an Aging Infrastructure Grant.

For the on-farm component of this project, Conant Creek Canal will work with canal users to install flow meters on irrigation pumps. The flow meters are a critical first step in determining how future management and agricultural practices can reduce consumptive use of water, officials said.

Automating the canal diversion will reduce vehicle travel by about 4,000 miles annually. Lining the canal will reduce an excavator's diesel fuel consumption by 700 gallons annually. The reduced emissions from both vehicle and heavy equipment usage

will be complemented by a small-scale solar system that will power the telemetered remote-control headgate operation.

“This project will result in quantifiable and sustained water savings that have broader sustainability benefits, said Steve Reynolds, President of Conant Creek Canal Co. “We believe that collaboration between farmers, water delivery authorities, and conservation groups in the watershed will help us stretch and secure our water supplies for future generations.”

For more information, contact Daniel Wilcox, HFF Farms and Fish Program Manager, daniel@henrysfork.org.

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