Modernizing Idaho's Water Infrastructure

An Ongoing Story Series on the Idaho Water Resource Board's Regional Water Sustainability Projects **Issue No. 5**

Twin Falls Canal Company Operational Efficiencies Project

Overview: The Twin Falls Canal Company (TFCC) was established in 1909 in Twin Falls, Idaho. TFCC diverts water out of the Snake River at Milner Dam under an October 11, 1900, natural flow water right of 3,000 cubic feet per second (cfs). TFCC also has two other natural flow water rights with later priority dates for an additional 780 cfs. TFCC holds storage rights in American Falls Reservoir and Jackson Lake for a total of 248,368 acre-feet of water.

TFCC provides water delivery to nearly 200,000 acres of farmland in Twin Falls County with over 110 miles of major canals and approximately 1,000 miles of smaller laterals. It serves 4,782 shareholders in the Murtaugh, Kimberly, Hansen, Filer, Buhl, Castleford, and Twin Falls areas – all south of the Snake River.

Below the diversion at Milner Dam, TFCC moves the irrigation water to Murtaugh Lake, and then the Forks Diversion splits water flows into the High Line Canal and Low Line Canal.

The Challenge: The High Line Canal experiences significant seepage losses in certain areas as it delivers water to irrigators. By lining a number of strategic portions of the Highline Canal and Laterial 1 Canal, TFCC could save a significant amount of water over a distance of 9.25 miles, officials said.

TFCC has been lining its canals since the early 1900s to reduce water losses. Lining projects were developed to not only increase efficiency, but also to address land use issues on neighboring fields.

Construction crews install HDPE liner in the Highline Canal. (Photo by Steve Stuebner/IWRB)

Over the years, TFCC has used a variety of liner materials, including concrete, clay and other impervious materials, to help reduce canal seepage. More recently, TFCC has been using HDPE liners, which have proven to provide the necessary advantages to help control seepage loss.

- ***Type of project:*** Water efficiency and water measurement project.
- ***Location:*** Highline Canal, Lateral 1 Canal and the Twin Falls Canal service area.
- ***Total project cost:*** $26.3M
- ***Start:*** October 2025
- ***Finish:*** March 2033 (provisional)

In 2019, TFCC installed the first mile of HPDE liner in the High Line Canal in the first phase of a multi-phase project. Two years later, TFCC installed HDPE liner on the Low Line Canal in an area of historical seepage. TFCC lined anotgher mile of the High Line Canal in 2023 with HDPE liner.

Over the past several decades, TFCC has spent millions of dollars to help

Twin Falls Canal Operational Efficiencies Project (cont.)

extend the water supply for its shareholders, officials said. In the summer of 2025, TFCC approached the Idaho Water Resource Board (IWRB) about funding a significant water-efficiency project at a time when there are more demands on Snake River surface water than ever before.

The TFCC Operational Efficiency Regional Water Sustainability Project has four main components:

1. Line approximately 9.25 miles of the High Line earthen canal in certain areas with a HDPE geomembrane liner to reduce seepage and conserve water.

2. Develop an aquifer-recharge basin in the project area.

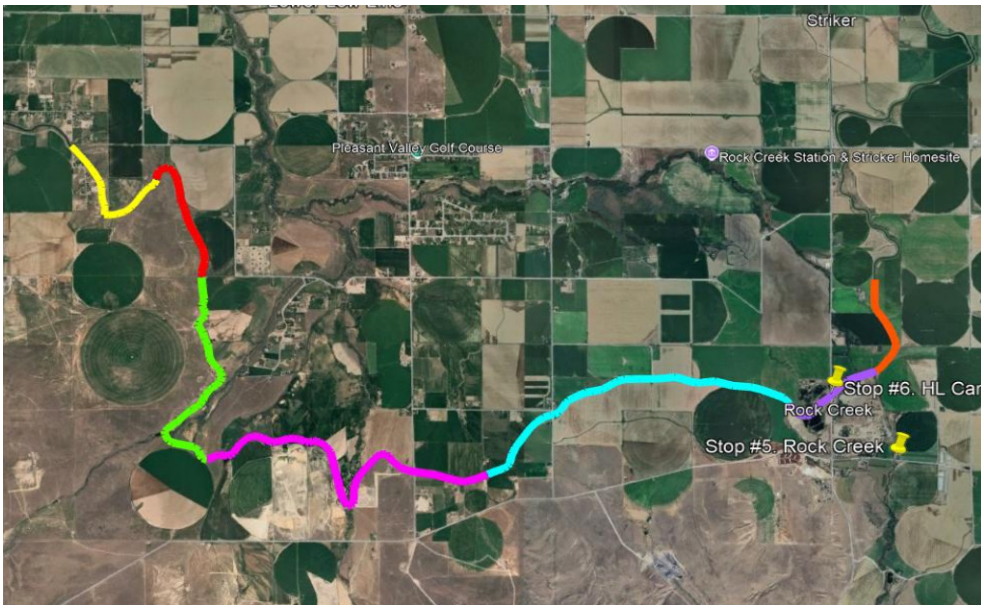
3. Enhance the return flow network to the Snake River with 28 concrete structures fitted with automated water-measurement and telemetry, allowing staff to monitor return flows 24/7.

"That will give us a much better idea how much water is coming back into the river," said Jay Barlogi, TFCC General Manager.

4. Lining and piping the Lateral 1 Canal on the far west end of the TFCC project.

The $26.3M project is estimated to take 5-8 years to complete. It will not reduce incidental recharge to the Eastern Snake Plain Aquifer (ESPA).

The operational efficiency project will provide improved water reliability for farmers that receive delivery downstream of the newly lined canal sections, which leads to better crop production and economic viability,



Color-coded map shows the different phases of the Operational Efficiency project, expected to take 5-8 years to complete. (Map courtesy TFCC)

Barlogi said.

At the IWRB meeting in July 2025 in Idaho Falls, Alan Jackson with the Bingham Groundwater District said his members were in favor of the TFCC efficiency project. "That's something to be applauded," Jackson said. "We support it."

The Operational Efficiency Project also will assist TFCC in meeting the terms of the 2024 Water Settlement Agreement – that's a key reason that IWRB members endorsed it, officials said.

Construction: Work has been split into 5 phases, with one phase being completed each year during the non-irrigation season in the winter months.

Project benefits: As a Surface Water Coalition member and holder of some of the most senior water rights in the ESPA region, TFCC can reduce the volume of water needed for the system via reduced seepage and improved return flow monitoring into urban areas, Barlogi said.

The HDPE liner material should stand up well for decades to come, he said.

Moreover, this project would provide the water user community time to address the sustainability and reliability of Snake River flows in the Blackfoot-Milner reach which relies directly on ESPA discharges during critical periods of the irrigation season.

Water savings from the TFCC operational efficiencies project are not intended to replace required mitigation actions upstream on the Snake River and ESPA, Barlogi noted.

For more information, contact the TFCC at 208-733-6731 or twinfallscanal.com