



Modernizing Idaho's Water Infrastructure

An Ongoing Story Series on the Idaho Water Resource Board's Aging Infrastructure Grant Program **ISSUE NO. 20**

Twin Falls Canal Co. Tap 64 and Clover Rubicon water measurement projects

Overview: The Twin Falls Canal Company (TFCC) was established in 1909. It diverts water out of the Snake River at Milner Dam and provides irrigation water to local farms covering 203,000 acres in the Magic Valley. TFCC serves water users in Murtaugh, Kimberly, Hansen, Filer, Buhl, Castleford, and Twin Falls.

TFCC has over 110 miles of major canals, approximately 1,000 miles of smaller laterals, 5,300 service gates (turnout gates) for on-farm delivery.

Water delivery and measurement:

The majority of TFCC's delivery structures are equipped with industry-standard measuring devices such as rectangular weirs, Cipolletti weirs, v-notch weirs, and our unique double panel gates.

Each of these measurement devices have specific applications in which they regulate and measure flow to our shareholders. In order for these devices to work properly, they require a progressive fall or decrease in the water surface elevation to provide consistent and accurate measurements.

Out of the whole delivery system, there are roughly 10,000 irrigated acres on the TFCC tract that do not have the progressive fall necessary to properly measure water flow. These areas typically are located where the irrigated ground is higher than the water surface elevation in the canal system, and require a pond to pump



Contractors pour concrete for Rubicon water measurement device in the Clover Tract served by the Twin Falls Canal Co., southwest of Filer. (photo courtesy Twin Falls CC).

- **Type of project:** Two enhanced water measurement projects
- **Location:** Hansen and Filer, Twin Falls Canal Co.
- **Total project cost:** \$239,297 (for both projects)
- **Idaho Water Resource Board Aging Infrastructure Grants:** \$51,332 and \$20,457
- **Start:** December 2023
- **Finish:** March 2025

water to the acreage.

TFCC recently has installed three Rubicon structures to improve water measurement along the Highline Canal – one near Hansen and two in the Clover area, southwest of Filer.

“In our Water Management and Conservation Plan, finding ways to better measure and accurately deliver water is one of the major goals,” said Jason Brown with the Twin Falls Canal Co. “As the West and Southern Idaho continue to experience drought conditions, it is critical that TFCC manages water sustainably.”



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Twin Falls Canal Co. Rubicon water measurement projects (cont.)

At the Hansen TAP 64 site, a custom frame and 48 x 48-inch Rubicon Slip Meter were built and installed at an existing concrete measurement structure. Once the slip meter was installed, Rubicon officials helped program the meter. The slip meter technology allows for automated control and delivery of irrigation water, ensuring not only accurate flow measurements, but it also prevents over-delivery of water at these locations, thus conserving available water supplies, Brown said.

For the TAP 64 project, TFCC requested and received a \$20,457.23 Aging Infrastructure Grant from the Idaho Water Resource Board to complete this project. The total project cost was \$68,191. The work was completed in the winter of 2024-25.

Clover Phase II Rubicon project:

In the second phase, TFCC built two new diversion structures and installed two Rubicon SlipMeters in the Clover area. The Rubicon meters help provide precise flow control and water delivery using ultrasonic pulse technology. The funding from this grant will help TFCC continue its goal of installing modern flow and measurement devices where needed.

The total project cost for the Clover project was \$171,106; the IWRB Aging Infrastructure Grant requested and awarded was \$51,332.

The construction work was completed in the winter of 2023-24.

The TFCC High Line Canal is designed to operate at 1,400 cubic feet per second. Throughout the irrigation season, the flow through the

High Line Canal can range from 1,050 cfs to 1,450 cfs depending on demand. The new Rubicon measurement devices help TFCC maintain consistent and accurate measurements and control throughout the irrigation season. The benefits that are expected from implementation of the proposed project are the ability to constantly measure, manage, limit, and monitor water delivery to approximately 4,000 acres out of the 6,000 high-ground acres.

This also allows TFCC to meet the goals of its Water Management and Conservation Plan by providing fair and equitable water distribution and delivery throughout the tract by removing any ability to divert more water than is appurtenant to the land, Brown said.

Clover tract water efficiency project: Beyond the new Rubicon SlipMeter projects, TFCC has worked with the Twin Falls Soil and Water Conservation District and the Idaho Soil and Water Conservation Commission to convert the Clover tract to a more water-efficient irrigation system. In 2023-24, the project converted an old, open-canal gravity system to an enclosed, pressurized underground pipeline system for the Clover Tract's 4,000 irrigated acres, saving water, energy and reducing sediment flows.

"By doing it, we're going to save



SlipMeter installed in existing concrete control structure near Hansen. (courtesy TFCC)

about 4,000 acre-feet a year, from ditch loss, evaporation and spill water," said Larry Meyer, a Twin Falls Soil and Water Conservation District supervisor and a third-generation farmer in the Clover Tract. The project will also bring a power savings of about 25 percent, he said.

For more information, contact Jason Brown with TFCC, jbrown@tfcanal.