



Modernizing Idaho's Water Infrastructure

An Ongoing Story Series on the Idaho Water Resource Board's Aging Infrastructure Grant Program **ISSUE NO. 15**

Boise City Canal Company builds New Headgate, Deepens Canal

Overview: The Boise City Canal Company (BCCC) is one of the oldest institutions in Boise, with an 1866 water right for 36 cubic feet per second (cfs).

The non-profit canal serves 700 small-acreage urban shareholders and many of Boise's landmarks including Warm Springs Golf Course and Julia Davis Park. The canal runs through the West End, Sunset, Collister and North End neighborhoods in the City of Boise and irrigates approximately 300 acres in Boise parks. The canal is also a major contributor to the Veolia drinking water purification plant adjacent to the golf course.

"Tens of thousands of Boiseans derive benefit from our canal," said Mike Harrison, Water Manager for BCCC. "We date back to the Territorial Days. We irrigated Tom and Julia Davis' apple orchards and George Collister's Italian plums. Our future depends on a reliable water supply."



New headgate for the Boise City Canal Company is ready for the 2025 irrigation season. The headgate is located on the eastern edge of Warm Springs Golf Course. Goodwin Dam on the Boise River diverts water to the headgate for BCCC. (photo by Steve Stuebner/IWRB)

The Challenge: In 2021, BCCC was forced to end the irrigation season more than a month earlier than usual. Despite having a water right in priority, they weren't able to physically divert enough water from the river. BCCC had the legal right to divert 24 cfs from the Boise River, but they could divert only 11 cfs. Part of the problem had to do with the level of BCCC's headgate, officials said.

"The level of the Boise River at the

BCCC headgate is largely determined by the amount of water requested by large downstream users, such as the Pioneer or Riverside Irrigation Districts," Harrison said. "When those users shut down, the elevation of the river drops and the BCCC headgate is unable to deliver enough water to serve its users. The problem was particularly acute in late summer of 2021 when the downstream users were curtailed early. With climate change expected to cause more similar summers, BCCC wants to

- **Type of project:** New headgate and deepened canal.
- **Location:** East Boise
- **Total project cost:** \$366,000
- **Idaho Water Resource Board AIG:** \$122,000
- **IWRB loan:** \$200,000
- **Start:** January 2025
- **Finish:** March 2025



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Boise City Canal builds new headgate, deepens canal (cont.)

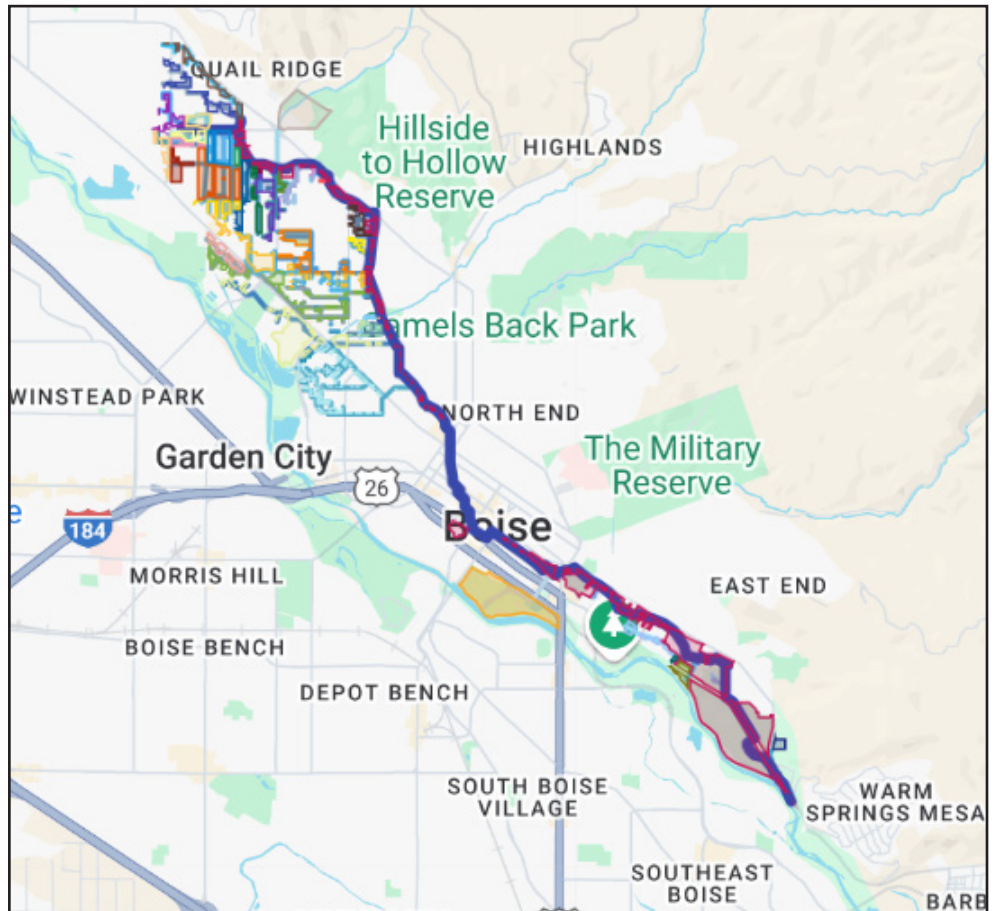
ensure it can access its water right.”

The Solution: By modifying the headgate structure and deepening the canal, BCCC can solve the problem, officials said. With a \$122,000 Aging Infrastructure Grant from the Idaho Water Resource Board, BCCC is making the following improvements:

1. Lower the floor of the existing intake structure by 16 inches, then pour a new concrete floor.
2. Replace the two existing automated metal headgates.
3. Replace the damaged return weir and install two automated metal gates.
4. Lower a large culvert (used to access the headgate) by 16 inches.
5. Excavate 300 feet of canal to match the new headgate elevation.
6. Install communication equipment to report real-time water usage to Water District 63.

“In addition to allowing BCCC to access its water right during times of drought, these modifications will improve flow reliability during the entire irrigation season,” Harrison said. “This project would allow BCCC to access its full in-stream and storage rights during times of low river flow. In other words, this proposal would more than double BCCC’s capacity during times of low river flow.”

BCCC’s headgate is located on the north bank of the Boise River, upstream from Warm Springs Golf Course and across Warm Springs Avenue from the old Gate City Steel



Map shows the areas of the City of Boise served by the BCCC canal. (Courtesy BCCC)

facility and Warm Springs Mesa subdivision. The BCCC diversion dam, known as Goodwin Dam, provides an exciting water slide for river floaters and play-boaters in the summer.

Project cost: The total project cost is \$366,000. IWRB grant is \$122,000. The balance is being funded by BCCC.

Construction began in January 2025. The project is expected to be completed by March 2025.

Project benefits: Besides being able to deliver its full water right, the project will have broad benefits for the Boise community, officials said.

Drought resilience: Flood irrigation, especially in the Sunset and Collister neighborhoods, recharges the shallow aquifer and ensures wells don’t dry up.

Future development: With a reliable late-summer flow, the Boise City Canal is considering extending service to the Idaho Botanical Garden, Eagle Rock Park, Kristen Armstrong Park, and Quail Hollow Golf Course, officials said.

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