

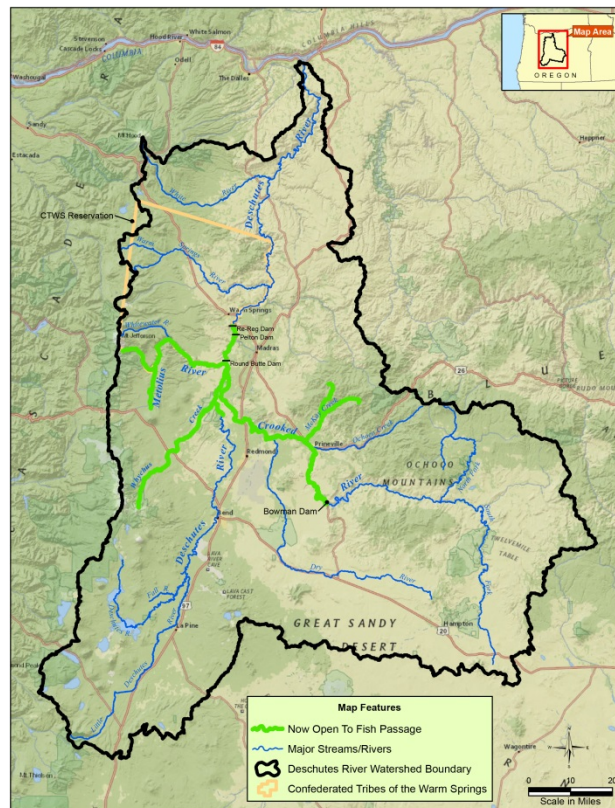
Restoring Fish Passage on the Deschutes

For the first time since 1968, adult salmon and steelhead are now swimming their way up the Metolius, Crooked and upper Deschutes Rivers to complete their natural life cycles. Through a unique partnership, PGE and the Confederated Tribes of the Warm Springs Reservation of Oregon restored fish passage around the Pelton and Round Butte dams on the Deschutes River. As co-owners of the dams, PGE and the Tribes spent several years developing a plan to restore this section of the Deschutes and its tributaries, and improve habitat for the fish.

An underwater tower

When Round Butte Dam was built in 1964, it included a fish passage system—a gondola/tramway for the upstream journey and an intake/collection system for the downstream migration. But unforeseen changes in the river currents and temperatures made it impossible for the fish to find their way downstream. Eventually the system was abandoned and a fish hatchery was built below Round Butte Dam instead.

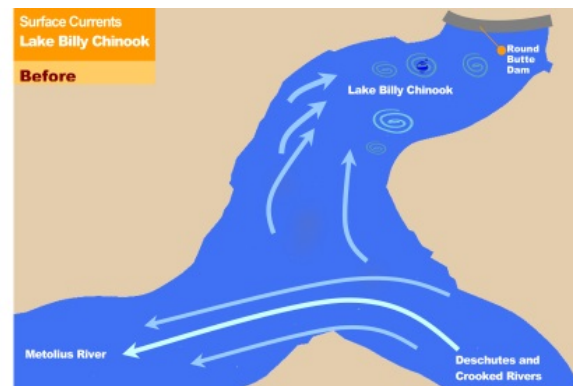
The new 273-foot underwater tower modifies the currents and temperature to mimic the natural conditions of the river. With the new collection station, the fish can be efficiently transported downstream so they can continue on to the Columbia River and out to the ocean. On their return to the river, the fish are transported by truck above Round Butte Dam to reach the upstream areas to spawn and complete their migration cycle. This opens 226 stream miles to salmon and steelhead migration.



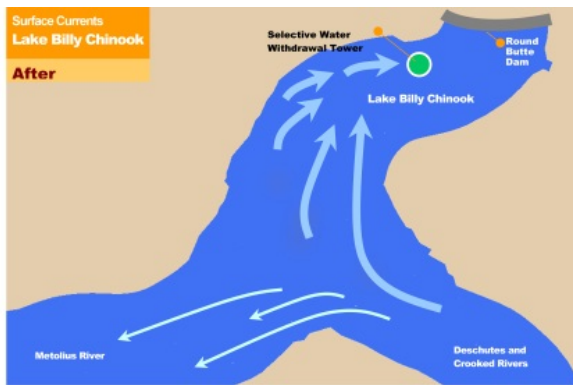
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This massive structure is truly unique—its one-of-a-kind design combines fish collection and water flows for power generation. The design makes Pelton Round Butte an important source of green energy for Oregon. Referred to as a "Selective Water Withdrawal Tower," the structure draws water both from the warmer surface and from the colder bottom layer of Lake Billy Chinook, accomplishing several things:

- Changes the currents to attract fish into the fish collection facility.
- Lowers the temperature of Lake Billy Chinook, providing healthier conditions for the fish.
- Modifies the temperature of the lower Deschutes River to more closely match what it was before the dams were constructed.
- Improves the water quality both in the reservoirs and in the river.
- Screens 100 percent of all powerhouse flows to protect the fish.



Metolius river current flows under the Deschutes and Crooked river currents



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Re-establishing runs of steelhead and Chinook salmon to the Upper Deschutes, Metolius and Crooked Rivers is a historic undertaking. PGE and the Tribes are dedicated to the success of this project over the long term.

Habitat improvement

PGE and the Tribes are working on ongoing supporting projects that will enhance the river both upstream and downstream:

- Large trees that fall naturally into Lake Billy Chinook are being transported below the dams so they can continue their way down the river and provide streamside habitat as they did before the dams were built. Their movement down the Deschutes River is being monitored annually.

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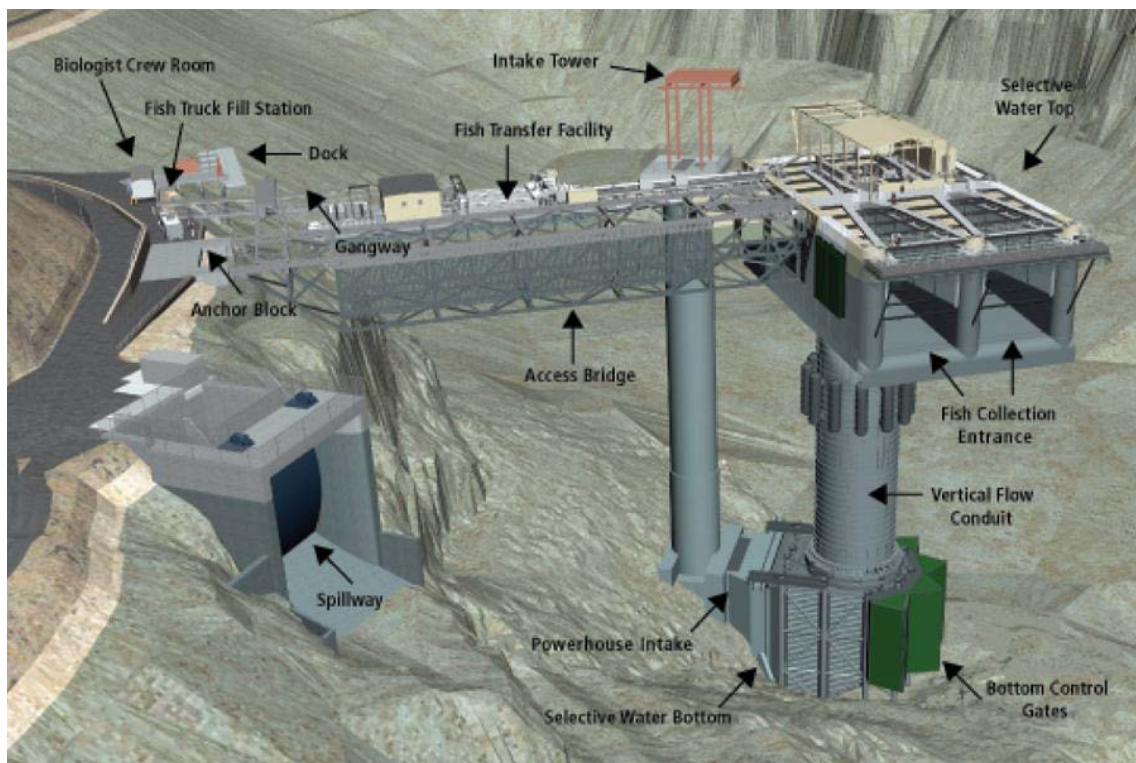
- Nearly two miles of stream bed on Trout Creek, a steelhead spawning stream, have been restored. Trout Creek is located 11 miles downstream of the re-regulating dam.
- Gravel beds below the dams are being studied and more gravel has been deposited for fish habitat.

In addition to these projects, PGE and the Tribes have established the [Pelton Round Butte Fund](#) to assist the efforts of local watershed and conservation groups and public agencies. This fund of more than \$20 million supports various fish passage and habitat improvement measures in the Deschutes Basin. PGE and the Tribes will continue to monitor the whole fish passage project to determine how well the salmon and steelhead are doing and what is needed to support their return to the upper reaches of the rivers.

How it works

As fish move into the fish collection facility, they're collected and sorted by size.

Larger fish (bull trout and kokanee) are returned to the lake. The smaller fish are further sorted and tagged on an adjacent floating Fish Transfer Facility. The juvenile Chinook salmon and steelhead are then trucked and released downstream to continue their migration to the sea. Returning adults are captured at the Pelton trap, trucked and released upstream at a new adult release facility into Lake Billy Chinook.



A computer-generated model shows the underwater tower and fish collection station at Round Butte Dam.