



Cougar Dam Adult Fish Collection Facility

U.S. ARMY CORPS OF ENGINEERS

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The Corps recently completed construction of a permanent adult fish collection facility on the South Fork McKenzie River to move adult fish to high quality spawning habitat above Cougar Dam and Reservoir. Fisheries biologists believe that reconnecting fish to this high-quality habitat will substantially support recovery of endangered fish populations in this Willamette River subbasin. Biologists estimate the habitat above the dam once supported more than 4,000 returning adult spring Chinook. Initial returns to the trap in 2010 may reach several hundred fish and returns will build over time.



Facility overview and operation

The facility includes a fish ladder leading from the base of the dam to a fish collection and sorting area. From there, adult salmon, bull trout and other resident fish species are loaded onto trucks and transported to release locations above Cougar Reservoir. Facility design incorporates the best features of trapping facilities at other locations, including Bonneville Dam, and the Cowlitz river in southern Washington..

The Corps will operate and maintain the facility according to guidelines identified in the Willamette Fish Operations Plan, a document developed collaboratively between the Corps, Oregon Department of Fish and Wildlife and other fish agencies. ODFW determines which fish species, and how many, are moved above the dam for natural spawning. ODFW biologists are on site daily conducting research and monitoring during expected operational months of May through October, when spring chinook enter the South Fork McKenzie River.

Construction History

In April 2009, the Corps' contractor de-watered the area below the dam and installed a cofferdam immediately downstream of the construction site. Biologists from the Corps and Oregon Department of Fish and Wildlife rescued stranded fish in the construction area and released them into the South Fork below the cofferdam. Fish species included rainbow trout, juvenile spring Chinook, whitefish, dace and sculpin. The in-water work period ended in mid-August 2009.

Construction did not require lowering the reservoir or affect recreation on the lake. The Corps monitored water quality at the construction site and was ready to take action if needed to ensure the project did not affect downstream flows in the McKenzie River. Water from the reservoir flowed through the regulating outlets so there was no interruption in the river's flow.

During high flows through the regulating outlet, the Corps monitored levels of elevated dissolved gas that can negatively impact fish survival. Dam operators kept flow releases low enough to reduce dissolved gas, minimizing this risk.

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An Environmental Coordinating Committee worked with the Corps' Project Delivery Team to address issues throughout the planning, design and construction of the facility. They provided support to ensure that design was in accordance with current fish passage criteria and that the project was completed in a manner consistent with the National Environmental Policy Act, Endangered Species Act and all related environmental protection laws and regulations.

Total construction cost:
\$10.4 million

Contractor:
The Natt McDougall Company
Portland, Oregon

Background

The U. S. Army Corps of Engineers built Cougar Dam, located about 42 miles east of Eugene on the South Fork McKenzie River in the 1960s. Original construction included both adult and juvenile fish passage facilities to help move fish past the dam. However, due to downstream changes in river temperature resulting from the dam, adult fish no longer migrated to its base. The Corps abandoned the original adult and juvenile fish passage facilities because they proved to be ineffective.

The Willamette Temperature Control Facility, completed in 2005, draws water from differing depths within the reservoir, mixing it to a temperature that more closely replicates pre-reservoir downstream temperatures. With this benefit to fish and water quality, salmon now return to this area at the same time of the year that they did before dam construction.

This new collection facility, in combination with the Temperature Control Facility, supports a complete fish lifecycle over long stretches of the South Fork McKenzie River, a process obstructed by Cougar Dam.

While not part of the 2008 biological opinions issued by the National Marine Fisheries Service and U.S. Fish and Wildlife Service, the facility will help the Corps and other federal agencies meet requirements to prevent harmful impacts to spring Chinook salmon and bull trout listed under the Endangered Species Act.

