

2014 - a year of Record Fish Returns

Department of Energy photo

Sockeye salmon are returning to the Columbia and Snake rivers in record numbers!

On Oct. 3, Lower Granite Lock and Dam on the lower Snake River recorded 2,778 adult sockeye for the 2014 annual passage, surpassing the previous record of 2,201 set in 2010. On the same day, Bonneville Lock and Dam on the lower Columbia River counted 614,179 sockeye migrating. That shatters Bonneville's previous record of 515,673 from 2012 by almost 100,000 sockeye.

This year is the largest sockeye run since 1938 when Bonneville Dam was built. The numbers are even more impressive when compared to 1990 figures when no adult sockeye returned to Lower Granite. Snake River sockeye were listed as endangered under the Endangered Species Act in 1991.

Credit for the change comes from nearly 25 years of research, testing and implementing fish improvement efforts. "We're pleased to see the adult sockeye upstream returns trending upward" says LTC Tim Vail, commander of the Army Corps of Engineers Walla Walla District. "Although fish runs are variable due to a host of factors, including ocean conditions, this year's numbers appear to confirm that our fish improvement efforts are having a positive effect."

Some of those improvements include fish ladders being installed to assist adult salmon migrating upstream in 1953-1975 when McNary,

Ice Harbor, Lower Monumental, Little Goose and Lower Granite dams were constructed. The Corps started counting adult sockeye migrating upstream at Lower Granite in 1975 when 209 were tallied.

"The Corps and its federal, state, and Tribal partners are using the best available science to guide the implementation of fish passage improvements made at our dams," explains Anne Setter, Walla Walla District fish biologist. "As good environmental stewards, the Corps is committed to continuing to improve fish passage systems through the hydrosystem, and making structural improvements to increase overall fish survival as specified in the NOAA Fisheries' 2014 Biological Opinion."

NOAA Fisheries, is the lead federal agency for salmon recovery, works closely action agencies and regional partners on managing bird, fish, and marine mammal predators to improve fish survival..

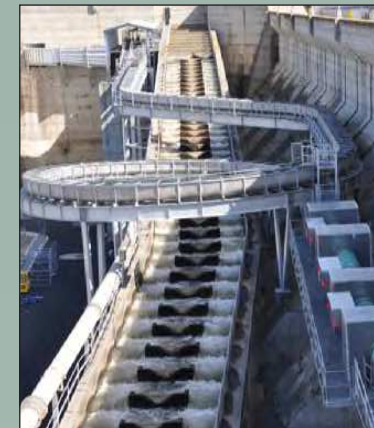
Juvenile salmon migrate downstream to the ocean; spend several years at sea, then return as adults to their upriver spawning grounds

More information about Federal salmon recovery efforts information is available at www.salmonrecovery.gov.

Columbia-Snake rivers fish counts are available at <http://www.nwp.usace.army.mil/Missions/Environment/Fish/Data.aspx>.



U.S. Army Corps of Engineers Photos



From 1990 to the present, the Corps and its Federal Partners including NOAA Fisheries, the Bureau of Reclamation, and Bonneville Power Administration continued improving fish passage for downstream-migrating juvenile salmon and upstream-migrating adults by:

- Installing juvenile bypass systems and constructing juvenile fish facilities at all Walla Walla District Snake and Columbia rivers dams from 1991-1996 (Lower Granite's bypass and Juvenile Fish Facilities were completed in 1975).
- Attaching spillway weirs to all five dams to assist juvenile fish migration downstream from 2001 to 2009.
- Installing spillway flow deflectors from 1998 to 2009 to reduce dissolved gasses and speed exit from the turbulent waters in the spillway stilling basin.
- Tailoring spill operations unique to each dam's configuration to optimize downstream passage of juvenile salmon.
- Using passive integrated transponder (PIT) tags and other tracking technology to assist research efforts.
- Relocating and improving bypass system outflow pipes, which return juvenile fish to the river, at Lower Monumental and McNary dams in 2012.
- Transporting juvenile fish on barges that bypass eight dams (first used during Operation Fish Run in 1977, barges are still an important part of annual fish operations).
- Developing avian predation deterrence measures.

Top, left: Fish barge at Lower Granite Dam. Top, center: PIT tag that can be inserted into fish for tracking their travels. Top, right: Little Goose Dam's fish ladder. Above, left: McNary Dam outfall pipe routes fish around the dam and puts them back into the river.

Left, and above: Spillway weirs were installed at Lower Granite, Lower Monumental and Ice Harbor dams on the lower Snake River. The spillway weir is attached to the upstream side of the dam and fitted into a spillbay, raising the spillway opening to the salmon's preferred depth. Juvenile salmon and steelhead are safely passed over a raised spillway crest, similar to a waterslide, more efficiently than with conventional spill while reducing migration delays at the dam. The first RSW was installed at Lower Granite Dam in 2001. The Corps installed an RSW at Ice Harbor Dam in 2005 and another at Lower Monumental Dam during 2008. Fish survival rates through spillway weirs is nearly 100 percent.