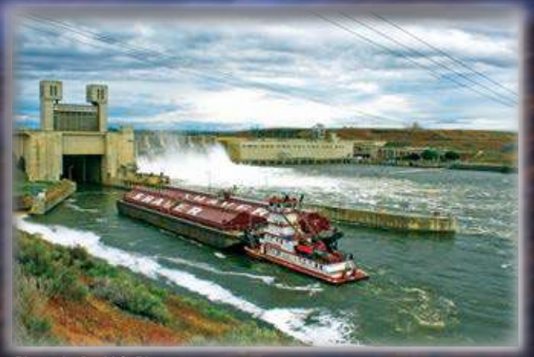
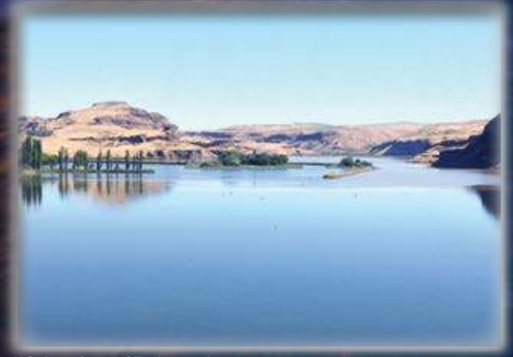
Snake River Dams

Ice Harbor, Little Goose, Lower Monumental, Lower Granite



Photos by David G. Rigg



U.S. Army Corps of Engineers photo

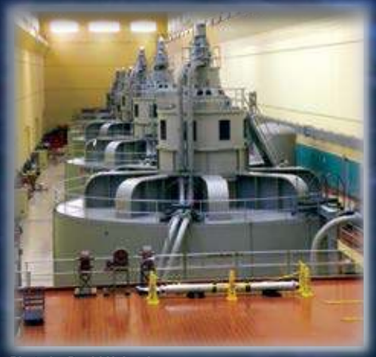


Photo by David H. Lewis

providing outstanding

Value to the Nation

By Joe Saxon

The U.S. Army Corps of Engineers operates the four lower Snake River dams, and the best available science and economic analyses clearly show the Snake River dams provide outstanding value to the Nation. Snake River dams deliver clean, renewable hydropower, an efficient marine transportation corridor, and valuable recreation opportunities. They provide these benefits at a very reasonable cost while successfully coexisting with fish and wildlife.

These projects generate about $200 million annually in electricity, and help move 3.5 million tons of cargo, worth $1.5 billion, to regional markets. In 2012, nearly 10 percent of the nation's wheat exports moved through this system. These dams also provide 2.8 million visitors a year with recreation opportunities.

They benefit the environment by avoiding carbon dioxide pollution that coal-fired power plants would emit to generate the same amount of power.

Snake River dams are able to meet peak power loads using turbines that can be adjusted in seconds. The flexibility of hydropower dams makes it possible to integrate highly-variable wind energy into the power grid. When the wind speed changes, some power source has to be immediately ready to add or reduce power to keep the grid stable; hydropower provides that capability. Coal and nuclear power plants require hours for their power output to be adjusted. The energy produced by the lower Snake River Dams is also relatively inexpensive.

The region experienced record fish returns during the past decade including in 2014 when Chinook and sockeye salmon had record fish returns past Bonneville Dam. Since 2009 there have been record returns for steelhead, sockeye and coho past Lower Granite Dam.

Some blame the decline of fish in the NW on the Snake River Dams, but fish runs were decimated in the Northwest starting in the 1800s due to pollution and silting from mining operations; habitat destruction from logging; and overfishing when Columbia River cannery operations grew from one cannery in 1866 to more than 50 by 1900. Also, numerous private and public dams cut off access to traditional fish spawning grounds because those dams don't have fish ladders, unlike the lower Snake River dams.

Corps scientists, biologists and engineers reduced the effects of dam building and operations by researching, designing, building and equipping the lower Snake River dams with the world's most advanced fish passage systems. Spillway weirs, which have a fish survival rate of 95-100 percent, help juvenile fish get downstream to the ocean. After spending two to five years in the ocean, adult fish return to their spawning grounds using fish ladders to swim through the lower Snake River dams. Adult fish survival through the Snake River dams' fish ladders exceeds 99 percent.

Corps scientists, biologists and engineers team with many partners to prove dams and fish can coexist and this science-based approach is working. The Walla Walla District is on track to meet performance standards of 96 percent survival for spring migrating juvenile fish and 93 percent for summer migrants through each lower Snake River dam.

The next generation power turbines are coming to Ice Harbor Dam starting this spring (below), while District staff upgrade the Lower Granite Dam's Juvenile Fish Facility (page 18).

The lower Snake River dams provide outstanding value to the Nation, and the Corps of Engineers is committed to ensuring these important national resources are well maintained to serve future generations in an environmentally responsible manner.

Next Generation Turbines

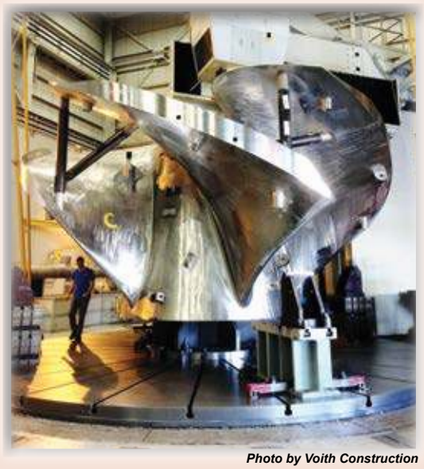


Photo by Voith Construction

New turbines like the one pictured above, will come online at Ice Harbor Lock and Dam's powerhouse starting this spring. The new turbines are more efficient and are safer for fish.

Top left: Ice Harbor Lock and Dam. Left: about 3.5 million tons of goods worth $1.5 billion transit Snake River Dam locks annually. Middle: Lyons Ferry. The Corps' recreational sites along the Snake River host about 2.8 million yearly visits. Right: These dams generate about $200 million in power each year.