

Freeing the Elwha

A Story of Dam Removal and Restoration

Olympic National Park
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National Park Service
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The Story Begins

For millennia the Elwha River ran freely through towering forests sheltering a rich wildlife community. The river produced hundreds of thousands of fish—coho, pink, chum, Chinook and sockeye salmon, as well as steelhead, char and cutthroat trout.

When two dams were built in the early 1900s, that abundance plummeted. But the story didn't end. In 1992, with support of the dams' owner, local leaders, the Elwha Klallam Tribe, the National Park Service, legislators, conservation groups and other agencies, Congress passed the Elwha River Ecosystem and Fisheries Restoration Act, requiring restoration of this altered watershed. The process has begun.

Early Life on the River

Imagine life along the Elwha River 100 years ago. Salmon crowd upstream, while common mergansers and harlequin ducks dive for stray salmon eggs. A herd of elk crosses the river while mice and chipmunks scurry from a hungry bobcat. A mink searches for food along the river bank.

Downstream, an Elwha Klallam child may be searching for sweet berries while her father harvests life-giving salmon. Generations of Klallam people have lived in the valley, depending on its plants, wildlife, and fish, as well as shellfish at the river's mouth. Up valley, a homesteader may be cutting hay or guiding tourists into the wilderness.

But the scene was changing. Entrepreneur Thomas Aldwell saw the river and its canyons as an economic opportunity. Between 1910 and 1927, his Olympic Power and Development Company built two dams on the lower river. Despite a state law requiring fish passage facilities, none were built. But the power generated fueled growth as far away as the shipyards in Bremerton, and brought electricity to homes and businesses throughout the region.

Look closely to discover the diversity of plants and animals in these renditions of the restored Elwha watershed, from its headwaters in the Olympic Mountains to its estuary in the Strait of Juan de Fuca.



Changing Values

When legal challenges to dam licensing arose in the 1980s, Congress settled the issue by passing the Elwha River Ecosystem and Fisheries Restoration Act in 1992. The act authorized dam removal if necessary. Years of research revealed that dam removal is the only way to mend the valley's ecological health, including restoring the variety of fish runs.

Mending the Web

At Glines Canyon Dam, engineers plan to draw down the lake and progressively notch and lower the dam. At the Elwha Dam, the river will be redirected down the western spillway while the dam is removed. Treatment facilities to protect area water supplies from sediment must be completed first—that construction began in 2008 and will be finished in 2010.

Mending the Web

Restoring a tattered ecosystem is more than removing dams. Communities with species as diverse as banana slugs and black bears or tiny pink Calypso orchids under towering Douglas-fir, are complex. For baseline data biologists are conducting research throughout the watershed.

The Elwha Reborn

Studies include snorkeling surveys, mammal and amphibian surveys, radio-tracking bears and bull trout, vegetation transects and shoreline research. To restore former reservoir sites, researchers are analyzing soils, collecting seeds, propagating plants and removing invasive non-native plants.

The Elwha Reborn

Removing the dams will not only free the Elwha River to meander, redistributing fallen trees and gravels, but will also restore a missing part of the community—salmon. Throughout their life cycle, salmon nourish their neighbors—at least 137 species, from dippers snagging eggs to bears and eagles feasting on spawned out carcasses. Even

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aquatic insects, young fish and streamside forests benefit from the influx of marine nutrients in the form of spawning salmon. Salmon are truly a gift to the ecosystem, just as restoration of the Elwha is a gift to future generations. We invite you to follow the evolving story of this wild river's rebirth at www.nps.gov/olym.