

BRINGING RIVERS TO LIFE



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## The Elwha River: *Restoration on a grand scale*

**On the web:**

[www.AmericanRivers.org/elwha](http://www.AmericanRivers.org/elwha)

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### Imagine a river literally coming back to life.

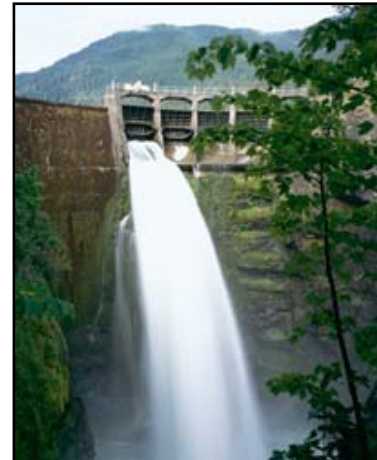
In 2009, the most significant river restoration effort of our time will begin on Washington's Elwha River. Two large dams will be dismantled to restore the river's once-legendary salmon runs, and to revive an entire ecosystem from the mountains to the sea. The river's Glines Canyon Dam (210 feet) will be the tallest dam ever removed in our country.



### The river

The Elwha is a short, steep river, tumbling 45 miles from the mountainous heart of Olympic National Park down to the Strait of Juan de Fuca. It once supported six species of Pacific salmon and steelhead, and has been the home of the Lower Elwha Klallam tribe since time immemorial.

The construction of Elwha Dam (1913) and Glines Canyon Dam (1927) devastated the river's salmon runs, cutting off all but five miles of habitat in the lower river. Fish populations plummeted and have been on life-support ever since. Without the annual infusion of marine nutrients that salmon bring upriver from the ocean, the wildlife and ecosystem have suffered. Additionally, the dams prevent the downstream flow of important silt and other sediments, causing steady beach erosion at the river's mouth and the loss of important historic clam beds.



### A river reborn

Dismantling the Elwha and Glines Canyon dams will allow the river to flow freely for the first time in nearly 100 years. Salmon and steelhead will gain renewed access to over 70 miles of pristine, protected habitat in the river and its tributaries.

A host of birds and wildlife will benefit from the increased salmon runs. The river will once again be able to transport gravel, silt and sediment to replenish river and beach habitat. Trees and other vegetation will grow in the areas around the former reservoirs, creating habitat for Roosevelt elk and other forest wildlife.



*Images: Stretch of the free-flowing Elwha by Scott Church;  
Glines Canyon Dam by Scott Church; Pink salmon by Manu Esteve.*

## Five ways dams damage rivers

### 1) Dams block rivers

Dams prevent the flow of plants and nutrients, impede the migration of fish and other wildlife, and hinder recreation on a river.

### 2) Dams slow rivers

Many fish species, such as salmon, depend on steady flows to flush them downriver early in their lives and guide them upstream years later to spawn. Stagnant reservoir pools disorient migrating fish and significantly increase the duration of their migration.



### 3) Dams change a river's natural flow

By withholding and then releasing water to generate power for peak demand periods, dams can alternately dry up, then flood, downstream stretches of river. These irregular releases destroy natural seasonal flow variations that trigger natural growth and reproduction cycles in many fish and wildlife species.

### 4) Dams hold back silt, debris, and nutrients

Great quantities of silt, sand, and gravels can accumulate in the reservoir behind a dam, depriving the downstream ecosystem of this important sediment.

### 5) Dams hurt fish

Dams prevent fish and other aquatic life from moving upstream and downstream. Following currents downstream, fish can be injured or killed by hydropower turbines.

## Elwha River timeline

**1913** -- Elwha Dam construction completed (108 feet tall)

**1927** -- Glines Canyon Dam construction completed (210 feet tall)

**1938** – Olympic National Park established

**1992** -- Elwha Act passes directing the Department of Interior to study the best way to restore Elwha ecosystem and its salmon

**1994** – The Department of Interior's Elwha Report concludes dam removal is the best alternative

**2006-2009** – Water quality protections and other mitigation completed for the City of Port Angeles and Lower Elwha Klallam Tribe

**2009-2011** – Deconstruction of the dams occurs during winter, to minimize disturbance to salmon.

**2030** – Salmon are expected to be healthy and thriving in the restored Elwha River



## Did you know?

- Chinook salmon in the Elwha once grew to 100 pounds.
- More than 130 species of wildlife depend on salmon for nutrients.
- 83% percent of the Elwha River is protected within Olympic National Park.
- More than 250 dams have been removed from our nation's rivers in the last 20 years.

### In his own words...

*" When salmon are in their own river, things are whole again, and all the good things that come with salmon can start to happen."*

-- Dick Goin, Elwha Valley resident and ex- Rayonnier Pulp Mill employee, quoted in High Country News, September 2001