Return to Elwha

On the rugged Olympic Peninsula in Washington State, there is a river that salmon once called home. The Elwha River historically supported five different species of Pacific salmon. Each year, the fish would return to the river of their birth to spawn and then die. They were gifts from the sea – their bodies provided the foundation of the forest and were utilized by indigenous peoples, animals, and even the forest itself.

Early in the 20th century, two hydroelectric dams were built on the Elwha. The power they provided fueled a burgeoning timber industry and the Olympic Peninsula – the last bit of Wild West in the continental U.S. – began to boom. As the local economy grew, salmon runs plummeted. Each year, fewer and fewer fish would return, only to lull beneath the spillway of the 110-foot Elwha Dam. In 1927, Glines Canyon Dam, a towering 207-foot concrete arch, was erected upstream. Neither dam was equipped with a fish passage system.

Nearly a century later, the times have changed. The timber industry has dwindled and electricity is imported from elsewhere. Elwha and Glines Canyon Dams – the only blockade between salmon and the Elwha’s pristine headwaters in Olympic National Park – were deemed no longer necessary. Their removal is the largest in U.S. history, but in the minds of everyone familiar with the dams lays a question: can a river be reborn?

Return to Elwha is an interactive documentary website that utilizes visual storytelling to explore one of the greatest ecosystem restoration projects in U.S. history.
The Elwha River begins deep within Olympic National Park. It cuts through the mountains for forty-five miles before meeting the Strait of Juan de Fuca.

THE LOWER ELWAH KLA LLAM PEOPLE

The Klallam people have lived on the northern coast of the Olympic Peninsula since time immemorial. Today, the Native American tribe has a reservation at the mouth of the Elwha River. Salmon play a key role in Klallam life. The fish provide a source of food and income, but they also play an important role in traditional ceremonial practices.
TO RESTORE THE RIVER, THE DAMS MUST GO

The Lower Elwha Klallam, along with environmental groups, had been fighting to tear down the dams since the 1960s. In 1992, Congress passed the Elwha River Restoration Act. The law mandated the full restoration of the Elwha River ecosystem and its salmon. The $325 million project began in 2011. Elwha Dam was gone by summer 2012. Glines Canyon Dam was gone by spring 2014.

PART TWO

THE SALMON

THE LIFE OF A SALMON

Salmon are a keystone species. They deliver vital nutrients from the ocean to the ecosystem. Their life cycle has five stages:

Eggs - Salmon begin their lives in the gravel of a river as eggs.
Alevin - The eggs hatch and turn into alevins. These tiny fish have yolk sacs attached to their bellies and stay close to the gravel.
Fry - Fry emerge from the gravel. Each species behaves differently, but fry continue to grow in different parts of the river ecosystem.
Smolt - Young salmon turn silver during the smolting process and head downstream for the open ocean.
Adult - Salmon species spend from 18 months to 8 years in the ocean.
A RIVER FULL OF FISH

Most rivers in the Pacific Northwest only host a couple of salmon species. The Elwha River was once home to all five species of Pacific Salmon. Roll over each species to see their potential range once the dams are gone.

- **Chinook** (*Oncorhynchus tshawytscha*): Also known as King Salmon, Chinook are the largest Pacific salmon species.
- **Coho** (*Oncorhynchus kisutch*): When Coho salmon return to spawn, their jaws and teeth become hooked.
- **Sockeye** (*Oncorhynchus nerka*): Sockeye salmon spawn in lakes and there was a small population that returned to Lake Sutherland.
- **Pink** (*Oncorhynchus gorbuscha*): Pink are the smallest and most abundant species of salmon.
- **Chum** (*Oncorhynchus keta*): Chum salmon are also known as Dog or Keta salmon. They have the largest natural range of Pacific salmon.

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A LIVING EXPERIMENT

From high in the watershed all the way down to the nearshore environment, the removal of the Elwha River dams will transform the entire ecosystem. Restoration on a watershed scale provides scientists with a unique opportunity to study the transformation.
PART THREE
THE EXPEDITION

Day 8: Glines Canyon Dam

Glines Canyon Dam was scheduled to be demolished over the course of three years. When we passed the dam in August 2012, only 60 feet remained. The dam was completely gone in May 2014, opening two-thirds of the upper river to salmon migrating upstream.
EPILOGUE

In August 2012 - during the final few days of the expedition - biologists from Olympic National Park were surveying in Little River and Indian Creek. There, holding in the current, they found several Chinook Salmon. Both tributaries are above the Elwha Dam site. Salmon were beginning to find their way home.

In 2012, the Chinook run that returned to the Elwha River was the largest in decades.

Source List

• Robert Elofson, Lower Elwha Klallam Tribe
• Barb Maynes, National Park Service
• Pat Crain, National Park Service
• Anne Shaffer, Coastal Watershed Institute
• Sarah Morely, National Oceanic & Atmospheric Administration
• George Pess, National Oceanic & Atmospheric Administration
• Kinsey Frick, National Oceanic & Atmospheric Administration
• Jeff Duda, United States Geological Survey