

What's Happening

IN CALIFORNIA ?

BY LAWRENCE GABLE

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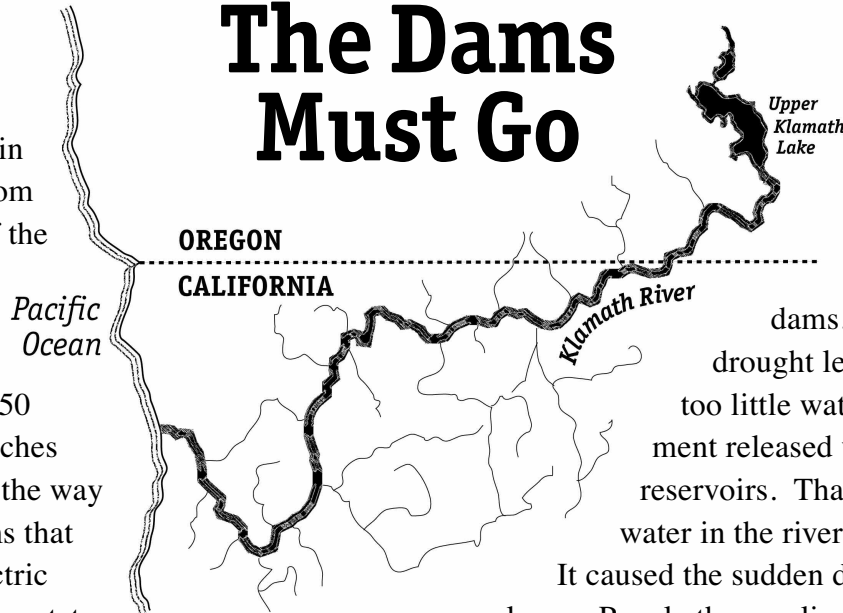
The Dams Must Go

The Klamath River starts in Oregon. From the eastern side of the Cascade Range it crosses into California. It flows more than 250 miles before it reaches the ocean. Along the way there are four dams that produce hydroelectric power. Now the two states are planning to remove those dams.

For thousands of years Native Americans depended on the river. They fished for salmon. Many of their traditions related to the return of the fish every year. Things changed when the first dam opened in 1918. Since then the salmon have not been able to get past the dams and reach their spawning grounds.

The power company built the dams before people paid much attention to the environment. The dams have provided electricity, but they have harmed salmon and the water. The water in the reservoirs behind the dams barely moves, so it absorbs heat. The warm water can kill fish. It also holds fertilizers from farmland upstream. They poison the water and help algae to grow that rob oxygen from it.

The power company, PacifiCorp, ran into trouble in 2000. It needed to renew its licenses to operate the dams. The U.S. government told the company that it would have to clean the water. The company also would have to build ladders for the fish at each dam. PacifiCorp decided that those changes would cost too much.



It became clear then that the company would consider removing the dams. Then in 2002 a drought left farmers with too little water. The government released water from the reservoirs. That left too little water in the river downstream.

It caused the sudden death of 68,000 salmon. People then realized that the Klamath's water was not serving anyone well.

In recent years fishermen, farmers, local communities and Native Americans have met with PacifiCorp and the government. In 2009 they all agreed to remove the four dams in 2020. In May 2011 California allowed PacifiCorp to increase its prices for power. That extra money will help pay for the dams' removal. Officials also are making plans for tearing down the dams, supplying new power, and restoring the natural environment.

The Klamath used to be the third-largest source of salmon in the lower 48 states. Now the number of salmon has fallen by 90 percent. Their numbers will grow when the dams are gone. Struggling communities along the river will benefit from tourist dollars when rafters and fishermen return.

This will be the biggest dam removal and river restoration project in the world. For years the Klamath River has not been healthy. Without the dams the clean, cool waters will rise again. That is good news for the salmon and the people who live near this once mighty river.

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BIOGRAPHY

STEVE ROTHERT

CALIFORNIA REGIONAL DIRECTOR, AMERICAN RIVERS

As a boy Steve Rothert always was active outdoors. He played all sorts of sports. He also raised chickens and looked for frogs in local streams. As he grew up he became passionate about water's role in people's lives. Now he is the California director for the environmental organization American Rivers.

A few things led to that interest in water. An early one was being at streams. Another was a rafting trip that his family took down the Colorado River. Yet another happened in Nepal when he was 20. There he saw how cutting down forests upstream had ruined the river for villagers downstream.

Sports were always important to Steve. Soccer was his passion. He also played baseball, tennis, rugby and even a little lacrosse. When he went to college at UCLA, he wanted to study sports medicine. However, he did not like all of the science courses. He was miserable, got bad grades and needed to make a change. So he took a year away from college.

He started by working three jobs. Then he and three friends bought around-the-world airline tickets. They could fly as much as they wanted to, as long as they continued westward. First they flew to Hong Kong. After that they went to places like Malaysia, Thailand, Nepal, Egypt and Germany. He returned a different person.

Back at UCLA Mr. Rothert studied

Ecology. He learned whatever he could about water and soil. Then he joined the Peace Corps and went to West Africa. For two years he lived in Sierra Leone and worked on water issues and fisheries. Those years showed him how people in a different culture live. They also showed how water affects the quality of people's lives. When he returned to the U.S. he worked and studied even more.



"Water issues are nearly the same wherever you go."

Jobs took Mr. Rothert to different places. First he worked in Washington, D.C. Then he spent another four years in southern Africa. Then in 2001 he convinced American Rivers that it should have an office in California. He has been its director ever since, and has worked on the pro-

ject to remove the Klamath's dams for ten years.

Mr. Rothert has seen all sides of the Klamath and its dams. He has been to the four dams many times. He has talked with fishermen, communities, Native Americans and farmers. There are still things to work on with the U.S. government. The dam removal project probably will occupy him full-time for another two years.

Steve Rothert has rafted the rapids along the Klamath. He also has taken a kayak on the calm waters downstream. When the first explosions tear the dams apart, he will be there for that too. It will be an especially happy day for him when the water flows freely again and life returns to the river.

Background Information

PacifiCorp operates the dams. It supplies power to 45,000 customers in California.

The names and construction dates of the dams: Copco No. 1 (1918); Copco No. 2 (1925); J.C. Boyle (1958); and Iron Gate (1962). The name Copco comes from California-Oregon Power Company.

The removal project may cost \$450 million. The California Energy Commission says that keeping the dams would have cost ratepayers \$100 million more than removing them will. A national analysis of the project said it would have cost \$210 million more.

The California Public Utilities Commission granted PacifiCorp a 2 percent rate increase to its customers. Over the next nine years it should grow to \$13.8 million that will help to pay for removal.

Renewable sources of energy like wind and solar will replace the hydroelectric power from the dams.

Removing dams usually involves drawing down the reservoir, removing the sediment from behind the dam and removing the structure through controlled explosions and heavy demolition equipment.

In 2010 the governors of Oregon and California joined in an agreement to restore the Klamath Basin.

Chinook salmon once swam all the way up to Upper Klamath Lake in Oregon.

Each fish caught on the Klamath River produces about \$200 in economic activity to communities along the river.

Farmers in the Upper Klamath Basin are getting a guarantee that they will either get enough water for their crops or compensation if they do not.

The U.S. government protects some species of salmon that are near extinction.

There are approximately 76,000 dams in the US Army Corps of Engineers' National Inventory of Dams. More than 600 dams have been removed since 1912, most of them after 1980.

All four of PacifiCorp's dams are within just a few miles of the Oregon-California border.

Topics for Discussion and Writing

Pre-reading:

- What is the purpose of dams on a river?

Comprehension:

- How have the dams on the Klamath affected salmon?

Beyond the Text:

- Why are the traditions of Native Americans so closely related to nature?
- Give a few examples of how tourists will spend their dollars in communities along the Klamath.
- List some sources of power other than dams.

Vocabulary

Article-specific: dam; hydroelectric; salmon; spawning grounds; reservoir; algae; drought

High-use: to remove; tradition; environment; to absorb; fertilizer; oxygen; license; to release; to restore; source

Sources

San Francisco Chronicle *May 5, 2011;*
September 30, 2009

Siskiyou Daily News October 27, 2010

Times-Standard (Eureka) October 16, 2010

The Oregonian February 18, 2010

Klamath Riverkeeper www.klamathriver.org

American Rivers www.americanrivers.org

CA Curricular Standards (4–12)

English - Language Arts

Reading 1.0 Vocabulary Development
2.0 Comprehension (Informational Materials)

Writing 1.0 Writing Strategies
2.0 Writing Applications

ELD—Intermediate and Advanced

Reading Vocabulary Development / Comprehension
Writing Strategies and Applications
Listening and Speaking

Science

4.3; 5.3; 6.2
Ecology; California Geology