Klamath River Dam Removal:

THE LARGEST DAM REMOVAL EFFORT IN US HISTORY

Copco 1 Dam

AMERICAN RIVERS

CALIFORNIA TROUT
FISH · WATER · PEOPLE

FLY FISHERS INTERNATIONAL
NORTHERN CALIFORNIA COUNCIL

INSTITUTE FOR FISHERIES RESOURCES

SUSTAINABLE NORTHWEST

AMERICAN Whitewater

TROUT UNLIMITED

YUROK TRIBE
CONSTRUCTION CORPORATION

INTERNATIONAL RIVERS
people • water • life

KARUK TRIBE

NATIVE FISH SOCIETY

PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS
PCFFA
STEWARDS OF THE FISHERIES

SAVE CALIFORNIA SALMON

RIDGES TO RIFFLES
INDIGENOUS CONSERVATION GROUP

Klamath Dam Removal Overview

The Klamath River runs from southern Oregon into the northernmost portions of California. The Lower Klamath Hydroelectric Project, comprising J.C. Boyle, Copco No. 1, Copco No. 2 and Iron Gate Dams, was built between 1908 and 1962 by the California-Oregon Power Company. Until recently, the dams were owned and operated by PacifiCorp, a subsidiary of Warren Buffett's Berkshire Energy.

With no fish ladder on any of the lower three dams, the structures deny salmon access to hundreds of miles of historical spawning and rearing habitat. The reservoirs impounded by the dams allow water to warm to unnatural temperatures, impacting fish health by making them susceptible to disease, and propagating toxic algal blooms that are harmful to people and fish alike. The dams also starve the river of sediment, impacting ecosystems downstream.

Iron Gate Dam

The dams provide no irrigation diversions, no drinking water diversions, are not operated for flood control, and provide negligible flood control benefits. They generate a small amount of electricity, less than 2% of PacifiCorp's power portfolio. The federal license to operate the dams expired in 2006 and the utility understood the environmental impacts of the aging infrastructure would have to be mitigated before a new license could be issued. In 2016, PacifiCorp decided the best economic choice for their electric customers would be to enter into a dam removal agreement with federal, state and local governments, two Tribal nations, and nine conservation and fishing groups that would allow for dam removal while limiting the company's liability. It took the parties several more years to develop detailed plans for dam removal and navigate the regulatory process.

In 2022, the Federal Energy Regulatory Commission (FERC) granted approval for dam removal. As part of that process, the license and ownership of the dams was transferred jointly to the Klamath River Renewal Corporation (KRRC) and the States of California and Oregon. KRRC is the non-profit organization overseeing the removal of the dams and accompanying restoration activities.

Background: History of the Dam Removal Effort

Many factors have contributed to the overall ecological decline of the Klamath River, including dams, water diversions, mining operations, logging, poor fire management and an overstretched demand for limited water supplies. However, the lower four Klamath River dams may be the biggest single factor in the river's decline.

The Lower Klamath Hydroelectric Project was built between 1908 and 1962 by the California-Oregon Power Company. With no fish ladder on any of the lower three dams, the structures deny salmon access to hundreds of miles of historical spawning and rearing habitat. The dams disrupt transport of sediment, alter water temperatures, and create the perfect conditions for blooms of toxic blue-green algae.In 2002, the dams made the water quality conditions brought on by drought and water mismanagement much worse. Conditions on the river led to a massive fish disease outbreak that caused a fish kill on the lower Klamath River. An estimated 70,000 adult salmon died before they could spawn. The 2002 fish kill was a traumatic event for Klamath River tribal communities. In response, tribal members started a grassroots campaign with the goal of removing the lower four Klamath River dams as a requisite step toward restoring the watershed to health. The Bring the Salmon Home campaign called on PacifiCorp to surrender the lower four Klamath River dams for removal.

Toxic blue-green algae bloom in Iron Gate in 2021.

After years of protests, lawsuits and direct action, PacifiCorp, the States of California and Oregon, tribal governments, conservation groups, commercial and recreational fishing organizations, and counties reached a settlement agreement to remove the dams in 2016.

Signatories navigated the regulatory process from 2016-2022 to secure FERC approval for dam removal. Dam removal begins in 2023 and will conclude in 2024, with restoration activities and monitoring expected to last for several years after construction activity concludes.

Although the removal of these four Klamath River dams is being hailed as the largest dam removal effort in US history, the reality is that dams, like all infrastructure, have a finite lifespan. Nationwide, dam removal has become a proven tool to restore river health, improve water quality, improve public health and safety, revitalize fish and wildlife populations, safeguard cultural values and reconnect communities to their rivers. According to the nonprofit organization American Rivers, more than 2,000 dams have been removed across the U.S.

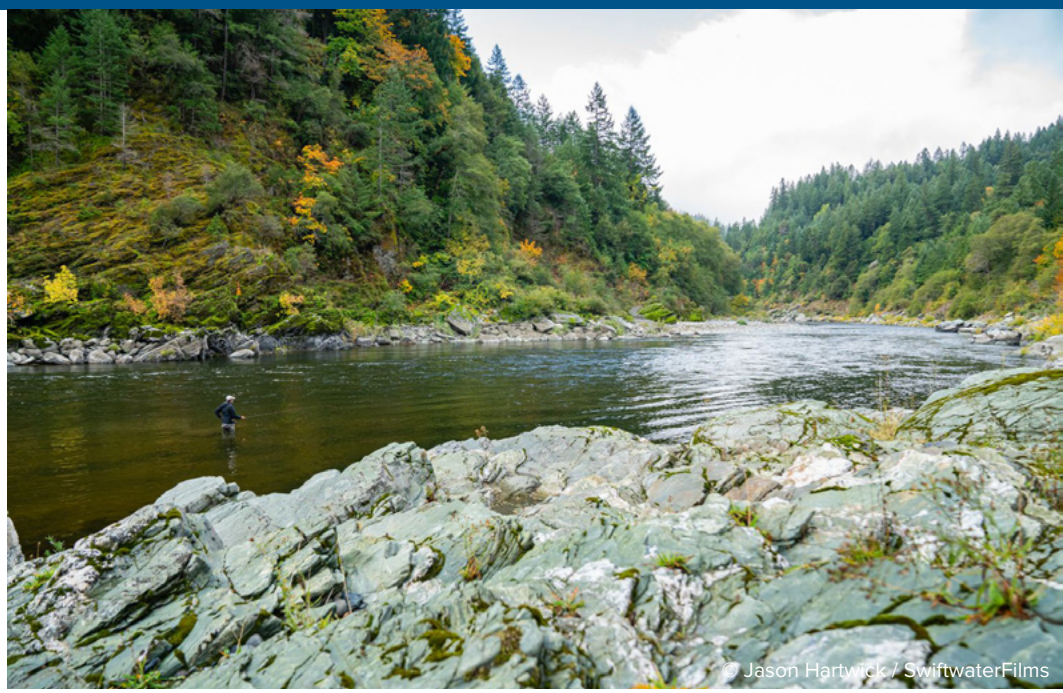
Klamath River Salmon: Tribal Significance and Economic Impact

The Klamath River is one of the most important rivers in North America for salmon and other native fishes, and its fisheries historically have sustained commercial, recreational, and tribal fisheries that are the cornerstone of numerous communities and cultures. Moreover, the Klamath watershed is one of the most biodiverse regions in the Northern Hemisphere. Since 1918, however, when the first dam was constructed on the Klamath River, populations of salmon, steelhead, suckers, and other native fishes have declined so dramatically that several runs and species are now listed under the Endangered Species Act, and water quality in the lower river is at times so poor that it becomes toxic for people and pets and causes catastrophic die-offs of salmon. The dams block more than 420 miles of historical fish habitat. The Klamath River was once the third most productive salmon river on the West Coast of the lower 48 states.

Historically, salmon runs averaged 880,000 annual returning spawners, while today, the runs of Klamath salmon are a small fraction of that number. Some species, such as chum and pink salmon, are now extirpated from the Klamath. Coho salmon are listed as threatened under the Federal Endangered Species Act, and spring-run Chinook are on the California Endangered Species List.

Traditional dip net fisherman Ron Reed catches a salmon at Ishi Pishi Falls, a fishing site the Karuk have maintained since time immemorial.

The decline of Klamath River salmon has led to periodic commercial and recreational fishing closures in the river and along the California-Oregon coast and have negatively impacted local tourism, fishing and related economic drivers. Low salmon populations can also increase regulatory burdens for water users, including irrigators upstream of the dams, due to required protections under the Endangered Species Act.

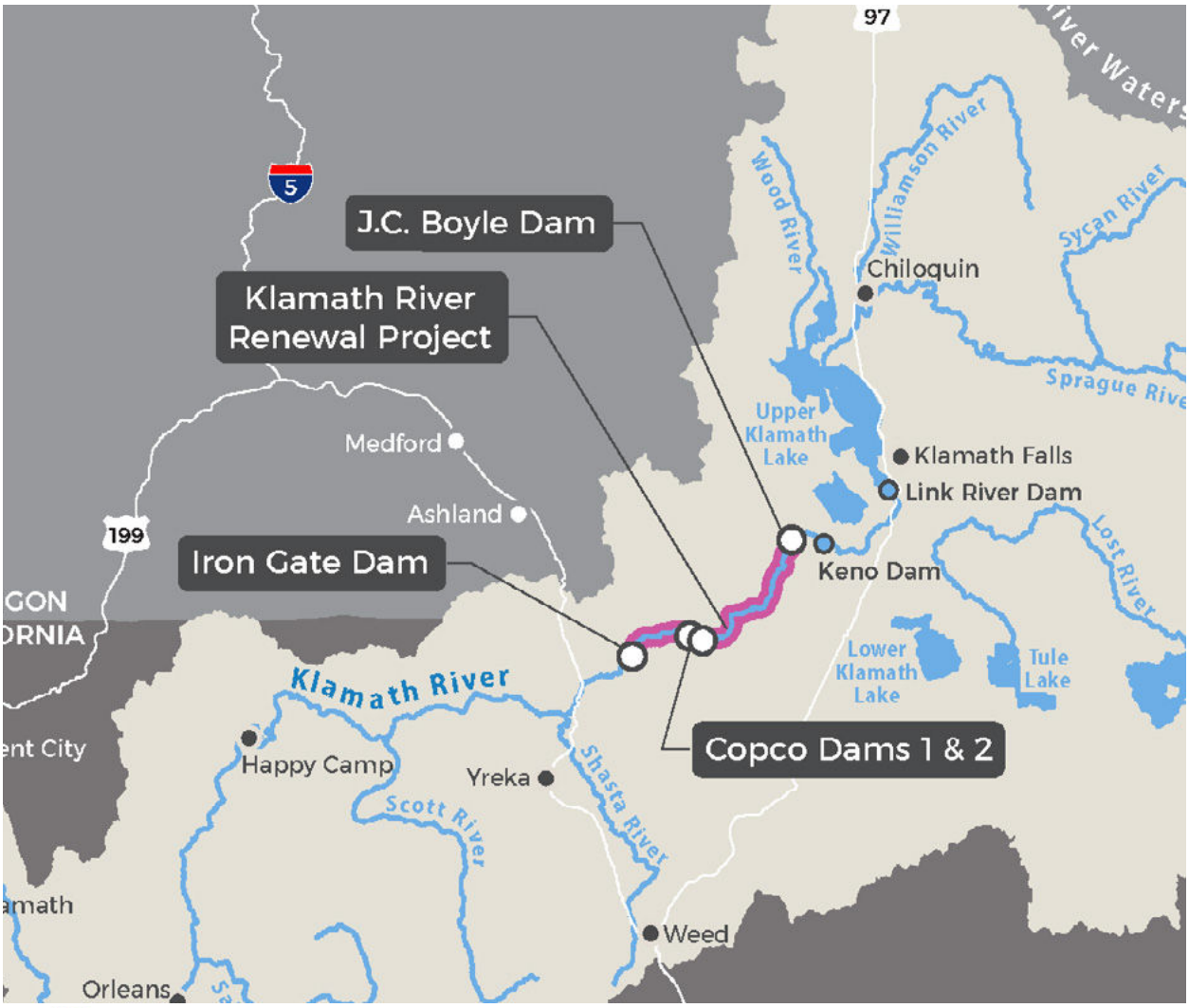


Fly fishing is a popular recreational activity on the Klamath River.

Klamath-origin salmon runs are critical to all ocean commercial and recreational salmon fisheries throughout northern California and southern Oregon, supporting thousands of rural, coastal fishing-related jobs and bringing in hundreds of millions of dollars to coastal communities. But when Klamath salmon runs have been seriously depressed in their abundance, as has happened much more frequently due to impacts of the dams, closures of whole ocean salmon fisheries under “weak stock management” constraints become necessary to protect these weakest stocks. The economic costs to salmon-dependent coastal communities of these periodic Klamath-triggered fisheries closures have been enormous.

A steelhead trout, caught by a fly fisherman.

About The Klamath Basin



Project Vicinity Map
Klamath River Renewal Project

The Klamath Basin encompasses more than 15,000 square miles, about the size of Maryland. The watershed begins in the snow-capped peaks of Oregon's Cascade Mountains and Crater Lake. From there, the Klamath River flows through the marshes and wetlands of America's first national wildlife refuges, where it creates essential nesting and feeding grounds for millions of birds traversing the Pacific Flyway. The Klamath ends its journey to the Pacific in Northern California amid the tallest trees in the world.

The Klamath Basin is one of the most ecologically diverse regions in the United States. In addition to salmon, the Klamath hosts runs of winter and summer steelhead, Pacific lamprey and green sturgeon.

Approximately 263 miles in length, the Klamath River also boasts diversity in the communities that live along its banks and rely on its water and fisheries. The lower to middle regions of the Klamath are fairly remote, and communities are small. The

Karuk, Yurok, Shasta, Klamath and Modoc people have lived alongside the river and subsisted off its fisheries since time immemorial. Salmon remain a critical cultural and subsistence resource to the Indigenous people of the Klamath River to this day. Starting in the mid 1800s, resource extractive industries like timber and mining severely impacted both the landscape and Indigenous peoples of the mid-lower Basin. These industries also brought many other communities to the Klamath River. However, these industries are no longer lucrative, and most people who remain in the mid-lower reaches of the river are employed by schools, Tribes and the Forest Service.

Upper Klamath Lake and Mount McLoughlin.

In the Upper Klamath Basin, agriculture is a key economic driver. While there are water diversions from Upper Klamath Lake that provide water to numerous farms and ranches in the upper basin, these diversions are above the four dams slated for removal. The four lower dams do not provide any irrigation water for agriculture. Also, the dams were not designed for flood control and provide almost no flood control benefits.

The basin is also home to the oldest wildlife refuges in the United States. The Klamath Basin National Wildlife Refuge Complex provides a key stopping point for millions of birds that migrate along the Pacific Flyway each year.

The lower Klamath River right before it meets the Pacific.

Key Organizations in Dam Removal Implementation

Klamath River Renewal Corporation (KRRC): KRRC is a private, independent nonprofit 501(c)(3) organization formed by signatories of the amended Klamath Hydroelectric Settlement Agreement, or KHSA. KRRC is part of a cooperative effort to re-establish the natural vitality of the Klamath River so that it can support all communities in the basin. Signatories of the amended KHSA, including the States of California and Oregon, local governments, Tribal nations, dam owner PacifiCorp, irrigators and several conservation and fishing groups, appointed KRRC to take ownership and oversee removal of four hydroelectric dams on the river. KRRC's work is funded by PacifiCorp customer surcharges and California Proposition 1 water bond funds.

Kiewit Infrastructure West Co. (Kiewit): Kiewit has been selected to be the prime contractor for the Klamath River Renewal Project. It is tasked with the physical deconstruction of the dams.

Resource Environmental Solutions, LLC (RES): RES is the lead contractor overseeing the restoration activities to recover the river, streams and lands impacted by the former reservoirs. RES will also monitor the river's recovery over a much larger geographic area, reaching from the uppermost reservoir, created by the JC Boyle Dam in Oregon, all the way to the mouth of the Klamath River on the California coast. RES is leading this restorative effort in close collaboration with state and federal agencies, conservation groups and Indigenous tribes who have stewarded this ecosystem for millennia. The RES design team includes national and local experts in botany, ecology, geomorphology, fisheries, stream and river restoration, and project management.

PacifiCorp: The prior owners of the project, PacifiCorp, transferred ownership of the dams in late 2022 to KRRC, California, and Oregon after FERC issued the License Surrender Order. PacifiCorp will continue to manage the facilities associated with the project until dam removal begins.

State of California: Co-licensee and partial funder to carry out removal of the dams and fully implement the amended Klamath Hydroelectric Settlement Agreement. The State will also oversee a new fish hatchery after the current one on PacifiCorp lands is demolished.

State of Oregon: Co-licensee.

Yurok Tribe Construction Corporation: The Yurok Tribe Construction Corporation performs holistic, landscape-scale river restoration projects in multiple watersheds. Informed by western science and Traditional Ecological Knowledge, the tribally owned business transforms severely degraded aquatic ecosystems into highly productive habitat for salmon as well as many other native fish and wildlife species. The Yurok Tribe Construction Corporation has completed numerous projects in the Klamath and Sacramento River Basins. The Yurok Tribe Fisheries Department's multidisciplinary team of restoration biologists, hydrologists, ecologists, and engineers design many of these projects. The Yurok Tribe Construction Corporation and Fisheries Department are staffed by numerous Yurok people, who have an unending passion for bringing rivers back into balance.

Timeline and Milestones Pertaining to Klamath Dam Removal

1855 The Yurok Reservation was created by executive order that vested the Tribe's federally reserved fishing and water rights.

1864 Klamath Tribes sign a treaty that includes salmon fishing rights.

1918 Copco 1 Dam becomes operational, effectively cutting the Klamath River in half and blocking salmon from reaching the Upper Klamath Basin.

1925 Copco 2 Dam becomes operational.

1958 Big Bend Dam – later known as J.C. Boyle Dam – is completed.

1962 Iron Gate Dam is completed.

1983 U.S. v. Adair upholds Klamath Basin Tribes' right to enough in-stream water to support fishing and hunting on former reservation lands but does not quantify the amount of water.

1997 Coho salmon in the Klamath are listed under the Federal Endangered Species Act.

2000 PacifiCorp begins federal relicensing process for the Klamath Hydroelectric Project Dams.

2002 The federal government reverses its decision to curtail irrigation diversions to protect fisheries and allows farmers to divert more water from the Klamath River than was recommended by federal scientists. As many as 70,000 salmon die before spawning in the lower Klamath River because of low flows.

2004 PacifiCorp files a dam license application with FERC and includes no provisions for fish passage around dams or for dam removal.

2004 Tribes, fishermen, and NGOs go to Scotland to demand dam removal from PacifiCorp parent company Scottish Power.

2005 Scottish Power sells PacifiCorp to Warren Buffett's Berkshire Energy.

2006 The Karuk Tribe reports that blooms of toxic algae in reservoirs exceed World Health Organization guidelines by nearly 4,000-fold. 700 miles of coastline is closed to commercial salmon harvests because of low returns to the Klamath; many commercial fishermen go bankrupt amid protests. PacifiCorp's second federal license to operate the dams expires, forcing PacifiCorp to rely on annual one-year extensions while deciding whether or not to retrofit them to modern standards or decommission them.

2007 The California Energy Commission concludes that Klamath dam removal is even more favorable for PacifiCorp customers than relicensing. Environmental analysis required by federal regulators concludes that relicensing dams under prescribed terms and conditions would result in a project that operated at a $20 million annual deficit.

2008 Tribes, fishermen and conservationists protest Berkshire Hathaway Shareholder meeting in Omaha, Nebraska. The EPA lists Klamath as "impaired" by toxic algae.

Signatories gather to sign the Amended KHSA in 2016

2009 Oregon Governor Kulongoski signs SB76 into law, which allows for $180 million to be collected from PacifiCorp customers for purposes of dam removal.

2010 After eight years of negotiation, a broad group of parties sign the first iteration of the Klamath Hydroelectric Settlement Agreement and a companion agreement that set the terms for widespread environmental restoration (the Klamath Basin Restoration Agreement, or KBRA). The agreements called for a process that would have avoided FERC review and approval and required Congressional approval before they expired in 2015.

2011 California PUC approves collection of $20 million from PacifiCorp ratepayers for purposes of dam removal.

2015 Congress fails to pass legislation then necessary to implement the Klamath Settlement Agreements.

2016 A subset of the parties to the 2010 KHSA sign the Amended KHSA, which outlined a process by which PacifiCorp would transfer the four lower dams to the Klamath River Renewal Corporation (KRRC). This process eliminated the need for Congressional approval and defaulted to the standard FERC process for decommissioning hydroelectric facilities.

2016 PacifiCorp and KRRC file the License Transfer Application and License Surrender Application with FERC.

2020 In response to FERC concerns, Parties further amend the KHSA such that the States of Oregon and California become co-licensees upon the acceptance of transfer of the federal hydroelectric license, for the purposes of providing a financial backstop to KRRC during dam removal and restoration.

2022 FERC issues a License Surrender Order for the four lower Klamath dams.

2023 Pre-dam removal construction begins. Copco 2 dam will be removed.

2024 Copco 1, J.C. Boyle and Iron Gate reservoirs will be drained and dams and appurtenant facilities will be removed. Resource Environmental Solutions (RES) begins restoration activities in earnest.

2025 & Onward RES will continue implementing and monitoring restoration activities.

Key Players in the Klamath Dam Removal and River Restoration Effort

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Approved Quotes for use by Media

"We are about to witness healing on a major scale. Dam removal is the best way to bring a river back to life. The Klamath is significant not only because it is the biggest dam removal and river restoration effort in history, but because it shows that we can right historic wrongs and make big, bold dreams a reality for our rivers and communities." - Dr. Ann Willis, California Director, American Rivers

"As the second largest river in California, the Klamath River represents a huge opportunity to realize salmon and steelhead abundance in a way that we haven't seen for many decades. CalTrout has been actively involved with Klamath restoration efforts for over 20 years. We are proud to work with the Tribes and so many others to realize one of the largest dam removal and river restoration projects in the world. Tribal leadership has been a central component of this effort. The Yurok, Karuk and other Klamath Basin Tribes have led the effort to restore part of their cultural heritage and subsistence fishing for salmon and lamprey. The project also provides economic benefits and jobs to local communities. The $450M restoration project will involve years of construction jobs, and a restored river with improved access will bring greater tourism dollars." - Curtis Knight, Executive Director, California Trout

"The Klamath dam removal represents hope for rivers and the triumph of Indigenous communities in their efforts to wrest control of their freshwater resources. Their victory has global implications. The rivers of the world are choked by thousands of obsolete dams, and it's past time they come down. Meanwhile, dam construction globally has slowed over the past 10 years and the pipeline for new dams continues to shrink. The Klamath victory shows that the future is bright for restoring rivers, and this is just the beginning." - Josh Klemm, Co-Director, International Rivers

"This is the biggest salmon restoration project in history. And it's desperately needed. Fewer and fewer salmon return each year. If we don't act now, we may lose them all. Dam removal gives me hope that my grandchildren will be able to fish for the family dinner the way I did when I was a kid." - Russell 'Buster' Attebery, Chairman, Karuk Tribe

"Back in the mid 1900's the Klamath River was known as the single most revered fly fishing river in California. Energetic steelhead & salmon swam this river from September to April and brought thousands of families to camp & fish. Fly fishers came from all over the U.S. and other countries to experience the historic fishery. All that was lost because of the dams and the damage & disease they brought to the river. The fly fishing community is excited about dam removal and restoration of the river & fishery. Many granddads & moms today learned to fly fish with their parents on this river, and they are now looking forward to the opportunity to bring their grandkids to the 'new, Klamath to once again experience its greatness." - Mark Rockwell, Northern California Council, President & VP Conservation, Fly Fishers International

"Dam removal represents a monumental achievement. As we look beyond this historic moment, Sustainable Northwest will continue partnering in the Klamath basin to build on this success to improve water quality and meet water demands that support Tribes, farmers, ranchers, and native wildlife." - Greg Block, President, Sustainable Northwest

"Dam removal is essential for the survival of Indigenous cultures in the Klamath Basin. Their presence in the river is a reminder of the centuries of colonization that have nearly destroyed the lifeblood of my people, the Klamath River. The removal of the dams is a result of the Yurok people's unwavering commitment to protecting and restoring the river for future generations. It is a sign of hope and healing: we are making real progress toward restoring balance to our environment." - Amy Cordalis, Yurok Tribal member and Principal, Ridges to Riffles

"In my own lifetime, I have seen the Klamath River dams negatively impact our healthy ecosystems and Indigenous communities... but we decided we would not stand by and watch. I have dedicated my life to the health of the Klamath River and the protection of our Indigenous cultures that have relied upon these lands since time immemorial. The removal of the dams will help restore fish populations, improve water quality and bring long-term benefits to the watershed and its people and I am so proud to be a part of this historic movement toward healing the river. Klamath dam removal is a symbol of renewal, of hope and of a brighter future for our children, our communities and all the life within the basin." - Molli Myers, VP of operations, Ridges to Riffles

"The Klamath River is legendary among anglers for its salmon and steelhead runs, which have sustained Indigenous cultures for thousands of years. Over the last century, however, as dams choked off the migrations of Klamath salmon and steelhead, their populations have crashed, leading to severe restrictions on or closures to fishing. Thanks to the dedication of tribes in the Klamath watershed to recovering their salmon heritage, and strong advocacy from the commercial and recreational angling communities, the Klamath dams will be gone by the end of 2024. We can expect salmon and steelhead to move above the former dam sites immediately. The major investments TU and others have made in improving water quality, fish passage and habitat in the upper Klamath Basin will help them return to their historic spawning and rearing habitat in the headwaters. We salute the tribal, state, utility, and federal leaders who helped get us here, for their commitment to bringing the Klamath back to life. The Klamath's native fish – and many of its human residents -- have waited a long time for this." - Brian J. Johnson, California Director, Trout Unlimited

"We owe an enormous debt of gratitude to the generations of Indigenous people, who sacrificed so much to make dam removal a reality. Without them, none of this is possible. In addition to restoring the interconnected river ecosystem, we are removing the dams from our culture and our way of life." - Yurok Vice Chairman Frankie Myers

"For many the removal of these dams has been a dream on the horizon for more than a generation. The tenacity of Tribal Nations, NGOs, and anglers has kept this effort from failing time and time again. This is a huge step forward to reviving abundant wild fish in the Klamath, and it is prime fuel to keep our own fires burning for a future with wild abundance across the Pacific Northwest." - Mark Sherwood, Executive Director Native Fish Society

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Preparations for Klamath Dam Removal Underway: First Dam to Be Removed in 2023, Rest to Come Out in 2024

Klamath Basin, Ore./Calif. Border – The Klamath River Renewal Corporation (KRRC) has announced preparations are underway for the removal of four aging hydroelectric dams from the mainstem Klamath River. KRRC is the non-profit corporation formed to oversee dam removal and related restoration activities. Federal regulators granted approval for dam removal in November 2022.

The Klamath River dams slated for removal include J.C. Boyle, Copco No. 1, Copco No. 2 and Iron Gate. J.C. Boyle Dam is located in Oregon and the remaining three are in California. The smallest of these dams (Copco No. 2) will come out in 2023, likely in late summer or early fall. The remaining three dams will be removed in 2024. Preparations for habitat restoration on the lands that are currently inundated by the dam's reservoirs have been underway for years, and planting activities will begin immediately after the reservoirs are drained.

KRRC has selected Kiewet Corporation as its primary contractor for all construction activities related to dam removal. Resource Environmental Solutions (RES) is the primary contractor overseeing all restoration-related activities, including soil stabilization, ensuring connectivity to tributaries along the lower Klamath River after the dams come out, and planting of native vegetation in the areas along the river. Both Kiewet and RES are working with local community members to complete much of the construction and restoration work associated with the project, either as employees or subcontractors. Kiewit estimates that the construction-related activity for dam removal alone will inject $17.5 million into the local Klamath Basin economy, with a total economic impact of $73.5 million.

Dam removal will restore access to approximately 400 miles of habitat for migratory fish native to the Klamath Basin, including several runs of salmon and steelhead. Restoring the river to a free-flowing state is also expected to significantly improve water quality. Much of the river regularly suffers from toxic algal blooms in the warmest months. Stagnant water resulting from dam operations provides ideal habitat for fish disease. Between restored fish passage and improved habitat along and within the river, scientists expect salmon and steelhead populations to significantly rebound following dam removal.

The dam removal and restoration activities are projected to cost approximately $450 million. The former dam owner, PacifiCorp, is contributing $200 million to the effort, which was collected as ratepayer surcharges. The State of California is contributing the remaining $250 million from voter-approved bond funds allocated for the project. PacifiCorp and the States of California and Oregon have also agreed to contribute up to an additional $15 million each (for a total of $45 million) to cover any unanticipated cost overruns. In the extremely unlikely event costs exceed even this contingency fund, the States and the utility have agreed to cover such overruns.

Although dam removal is not a silver bullet for bringing the entire Klamath Basin ecosystem back to health, the removal of the dams is expected to be a significant step in the right direction in that effort.

For more information, see KRRC's website.

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Additional Resources

PHOTOS AVAILABLE FOR USE BY MEDIA

https://drive.google.com/drive/folders/1Vwif5L8NOTzyMXYnYG6JlYi8O1OT2xD_?usp=sharing

INFORMATIONAL RESOURCES

Websites, StoryMaps, and resources with helpful information about the challenges facing the Klamath Basin and related recovery efforts:

- History of the Klamath Basin Project - An in-depth history of the Klamath Basin, put together by Portland State University and the Oregon Historical Society.
- Historical Spawning Habitat of Salmon - This StoryMap illustrates the historical spawning habitat of Coho and Chinook in the Klamath Basin.
- Preparing the Klamath Basin for Dam Removal – A StoryMap spotlighting collaborative efforts to enhance fish passage in the Klamath River Basin in Honor of World Fish Migration Day 2020.
- Wetlands, Waterbirds, and Water - A visual journey through a century of change and the impact to waterfowl in the basin. Created by Oregon State University.
- Case Study: Klamath Basin - Learn how the communities negotiated agreements to seek the resolution of many conflicts regarding water rights, fisheries and power generation. From the National Geographic Resource Library.
- Klamath Parcel B Options Feasibility Study - ECONorthwest, with support from GreenWorks and project^, prepared this report for the Klamath River Renewal Corporation (KRRC) and its partners.
- Bring the Salmon Home StoryMap - A history of the grassroots organizing and initiatives that lead to Klamath dam removal.
- Reconnect Klamath - Website with relevant information about nature, communities and economic activity throughout the Klamath Basin.
- Reconnect Klamath on Facebook • Instagram • YouTube

Relevant films and videos:

- Guardians of the River - A short film that gives an overview of activism on the Klamath River and how tribal communities have fought to protect their fisheries.
- Restoring Balance - An informational video outlining the preparation and collaboration involved in preparing for the environmental restoration of the Klamath River post-dam removal.
- Restoring the Upper Klamath: Habitat - A film created by Trout Unlimited about preparing the Upper Klamath Basin for return of salmon and steelhead through habitat restoration
- Restoring the Klamath: Water Quality - A film created by Trout Unlimited about preparing the Upper Klamath Basin for return of salmon and steelhead through water quality improvement projects.

FAQs

Why is the removal of the four lower Klamath dams being called the largest dam removal in US history?

The roughly simultaneous removal of the four dams that constitute the Lower Klamath Project, with a combined height of 411 feet, makes it the largest dam removal project in United States history.

What happens after the dams are removed?

The ecological restoration of the soon-to-be-exposed reservoir bottoms will begin as soon as the drawdown is complete (anticipated spring or early summer of 2024). Resource Environmental Solutions,the organization tasked with restoring the project area, will prioritize revegetating the area with appropriate native species. More than 11 billion native seeds have been collected and propagated in anticipation of this project. All sites will be monitored for several years to ensure revegetation success, oversee the control of invasive species, and take other necessary actions to restore the landscape.

How will the earth and concrete from the dams be disposed of?

At Iron Gate Dam, much of the earthen material will be placed where the material was first excavated to build the dam. Much of the material at JC Boyle Dam will be used to fill a gigantic scour hole, which is an unnatural, unsightly and even dangerous feature of the JC Boyle Dam. Some earth will be deposited on the slopes of the JC Boyle reservoir footprint. All the reservoirs will be extensively revegetated. Material that is not suitable for fill will go to various landfill sites where tipping fees will be paid on waste material.

Is the sediment built up behind the dams toxic?

The Oregon Department of Environmental Quality (ODEQ) found that there are NO significant toxins in those sediments above and beyond natural background levels. ODEQ also concluded that most of the sediments released through the dam removal process will be naturally washed through the system to the sea within about 24 months. The sediment composition is predominantly dead algae and fine material.

ODEQ's analysis of the sediment loads expected from removal of the J.C. Boyle dam concludes that impacts to fish will be both short-term and minor, compared to the long-term gains expected from the project. The California State Water Resources Control Board reached similar conclusions when it issued a Clean Water Permit (401) for the Klamath dam removal project.

How is this project funded?

The project is fully funded, with $450 million available from two funding sources. The first source of project funding is PacifiCorp customer surcharges of $200 million. The second source of funding is up to $250 million in Proposition 1 water bond funds (with any excess funds being returned to the State). The States of California and Oregon and PacifiCorp have agreed to provide additional contingency funds if needed to ensure the successful completion of the project.

How will the power lost through dam removal be replaced?

The four dams slated for removal produce less than 2% of PacifiCorp's power portfolio. PacifiCorp's 2017 Integrated Resource Plan (IRP), which maps out resource procurement over the next twenty years, describes a strategy of increased energy efficiency, investment in renewable energy sources, modest natural gas investment, and major coal retirements (3,600 MW). In this plan, PacifiCorp assumed that Klamath hydroelectric facilities would be decommissioned in 2020. The California State Water Resources Control Board concluded in the project's Environmental Impact Report (EIR) that dam removal is not expected to significantly increase carbon emissions, either directly (from deconstruction work) or indirectly (from replacement power) and it will not conflict with state policies capping carbon emissions or requiring certain quantities of renewables.