



## Restoration is a Blast!

### Project Permitting Case Study

#### *Project Summary*

The Jenny Creek Barrier Removal Project eliminated a concrete diversion structure located 1.5 miles upstream of the former Iron Gate Reservoir on Jenny Creek, a tributary of the Klamath River. The barrier, constructed in the 1960s to divert water to a nearby campground, was never used and had become a complete fish passage obstruction. The project area spanned lands owned by the Klamath River Renewal Corporation (KRRC) and adjacent private property, requiring coordination with both landowners. The project reopened approximately 0.5–1 mile of upstream habitat, expected to benefit Klamath Mountains Province Steelhead and potentially Coho and Chinook Salmon and Pacific Lamprey. Implementation was completed in 2025 using controlled blasting to remove the barrier, followed by hand crew removal of debris. The project represents one of the first tributary barrier removals implemented in tandem with the historic Klamath River dam removals, demonstrating how even small-scale restoration actions can rapidly expand habitat access in newly reconnected watersheds. This case study will elaborate on the details of the Jenny Creek project, focusing on the permitting experience to bring the process to completion.

#### *Project at-a-Glance*

**Title:** Jenny Creek Barrier Removal Project

**Applicant:** Trout Unlimited

**Partners:** Landowners - Klamath River Renewal Corporation and Marie Server, Resource Environmental Solutions, Yurok Tribe, Shasta Indian Nation, Karuk Tribe, Modoc Nation, Klamath Tributary Working Group, CDFW Yreka Fish Habitat Improvement Shop

**Project Funding Provided By:** CA Department of Fish and Wildlife, U.S. Fish and Wildlife Service, National Fish Habitat Partnership – CA Fish Passage Forum



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#### Species Benefitted

- Klamath Mountains Province Steelhead (*Oncorhynchus mykiss*)
- Chinook Salmon (*Oncorhynchus tshawytscha*)
- Coho Salmon (*Oncorhynchus kisutch*)



## Permitting Approach

The project required a coordinated suite of state, federal, and tribal approvals. Early coordination meetings with CDFW, NOAA Fisheries, the U.S. Fish and Wildlife Service, and the State Water Resources Control Board helped the team identify appropriate pathways, including CDFW's Habitat Restoration and Enhancement Act (HREA) and the General Water Quality Certification for Small Habitat Restoration Projects (SHRP). Federal ESA compliance was supported through consultation with NOAA and USFWS. Because the project spanned KRRC and private land, landowner authorization was also required. Finally, tribal approval, particularly from the Shasta Indian Nation, was essential before permits could be finalized and construction could proceed.

## Biological Impacts

The historic removal of the Iron Gate Dam, and the removal of the barrier on Jenny Creek will allow for the return of Chinook Salmon, coho salmon, and steelhead to Jenny Creek for the first time since Iron Gate Reservoir was constructed in 1964. The barrier removal will be especially important for Coho Salmon because of declining populations in California, where they are listed under the California endangered Species Act and nationally under the Federal Endangered Species Act. Modeling efforts suggest that Jenny Creek has the potential to support 18,100 summer rearing Coho Salmon and 51 redds. Jenny Creek is unique because it is the only creek in the hydroelectric reach that contains moderate to high gradient riffle habitat, with several large pools that could be optimal for salmonid rearing.

***Jenny Creek is the largest tributary in the hydroelectric reach of the Klamath, and one of the first to see returning Chinook after the largest dam removal project in US history.***



## Table 1: Project Details

For more information see [Jenny Creek Barrier Removal Project Web Page](#)

Name	Date	Treatment	Pathways Used	Funding
Jenny Creek Barrier Removal Project	2025	Controlled blast to remove concrete diversion structure and hand removal of debris	CatEx 15333 SHRP HREA USACE 27 NMFS/USFWS PBOs	Total funding: \$444K CDFW - \$130K for design USFWS - \$154K for implementation; \$60K for implementation Forum/NFHP - \$100K for implementation

## Permitting Pathways Used

The permits required by any restoration project depend on the nature of the project, its size, likely impacts, species present in the area, and the location. This project could take advantage of the “Small Project Bundle” for CEQA and state permitting and used programmatic federal pathways.

## Small Project Bundle of State Pathways

### *State Water Resources Control Board (Water Board) - Clean Water Act Section 401 General Water Quality Certification for Small Habitat Restoration Projects ([SHRP](#))*

The project used the Small Project Bundle and received 401 water quality certification through the SHRP. Eligibility for SHRP requires projects to be eligible for CatEx 15333 (although other CEQA analyses may be used), and to not exceed a maximum project size of five acres or a cumulative 500 linear feet of stream bank. Projects must be voluntary (not mitigation), and the construction period cannot exceed five years. Project proponents notify the Water Board of their CEQA exempt project by filing a Notice of Intent (NOI) (i.e., application) and Monitoring Plan (required) at least 60 days prior to the proposed discharge if the project is enrolled under the SHRP. The applicant will receive a Notice of Applicability (NOA), indicating that project activities are authorized under this Order. Following receipt of the NOA, the applicant may submit the 1653 Request Checklist including a copy of the NOA to CDFW to apply for Habitat Restoration and Enhancement Act (HREA) authorization instead of a standard lake and streambed alteration agreement.

Here are some resources to help you understand the SHRP process:

- [Water Board Amended Order for Clean Water Act Section 401 SHRP](#)
- [Sustainable Conservation SHRP Web Page](#)

## ***California Environmental Quality Act (CEQA) Categorical Exemption 15333 – Small Habitat Restoration Projects (CatEx 15333)***

Projects up to 5 acres in size that “assure the maintenance, restoration, enhancement, or protection of habitat for fish, plants, or wildlife” can be exempted from the [CEQA](#) through CatEx 15333. The CEQA lead agency must file a Notice of Exemption (NOE) including a brief project description; the location of a project; a finding that the project is exempt from CEQA, including a citation to the appropriate exemption (e.g., CatEx 15333); and a brief statement of the reasons to support the finding that the project is exempt.

Below are some resources to help you determine if your project is eligible for CatEx 15333 and what the exemption process entails:

- [California Governor’s Office of Planning and Research CEQA 101](#)
- [Sustainable Conservation CEQA Web Page](#)
- [Sustainable Conservation CEQA CatEx 15333 Web Page](#)



*(Above) View of the concrete barrier on Jenny creek.*

## ***CDFW Habitat Restoration and Enhancement Act (HREA)***

For small-scale habitat restoration projects throughout California, the HREA provides a faster and simpler process with one single approval from CDFW. Like the SHRP, eligible projects must not exceed a maximum project size of 5 acres or a cumulative disturbance of more than 500 linear feet, must be voluntary, and be eligible for CEQA CatEx 15333, but other CEQA pathways may be used. The HREA process can be especially helpful for those qualifying projects that would otherwise need *both* a Section 1600 Lake and Streambed Alteration Agreement ([LSAA](#)) and California Endangered Species Act ([CESA](#)) authorization. However, projects that require authorization for take of fully protected species should consider instead applying for CDFW’s [Restoration Management Permit](#). A map and list of projects that have used HREA can be found on [CDFW’s website](#).

There are two pathways available under HREA. Most projects use Section 1653, which is the pathway this project used:

- \* Section 1652 - This pathway is appropriate for projects that have not received 401 SHRP certification from the Water Board. CDFW has 60 days to determine if a 1652 request is complete and eligible for coverage under the HREA.
- \* Section 1653 - This pathway is appropriate for projects that have received 401 SHRP certification. CDFW has 30 days to determine if a 1653 request is complete and eligible for coverage under the HREA.

Here are some resources to help you understand if the HREA permitting pathway is the correct one for your project:

- [CDFW HREA website](#)
- [Sustainable Conservation HREA web page](#)
- [Sustainable Conservation Video Series on HREA eligibility and processes](#)



*(Above) View of the pool above the concrete barrier on Jenny Creek*

## Federal Permitting Pathways

### ***U.S. Army Corps of Engineers (USACE) [Nationwide Permit 27](#) (Aquatic Habitat Restoration, Enhancement, and Establishment Activities)***

The USACE Nationwide Permit 27 is a programmatic permit that covers activities associated with the restoration, enhancement, and establishment of aquatic habitats and is a more efficient way of obtaining Section 10 and 404 permits.

### ***NOAA Fisheries / National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) Programmatic Biological Opinions***

A Programmatic Biological Opinion (PBO) is a pre-approved, broad-scale ESA consultation that covers multiple similar restoration actions across a region or statewide. The USFWS PBO used for the project was the [California Statewide Restoration Programmatic](#). This covers all listed and proposed species in the state. The two primary species of concern for this project based on habitat types, ranges, and presence, were the Western Pond Turtle and Grey Wolves. The [NMFS North Coast PBO](#) was used for Steelhead, Coho and Chinook Salmon.

### ***Section 106 National Historic Preservation Act***

USFWS employees submitted the project to regional archeologists for determination of effect/no effect under section 106 of the National Historical Preservation Act (NHPA)

Here are some resources to help you understand the federal permitting process:

- [USACE Nationwide 27 Permit \(2021 version\)](#)
- [Nationwide Permits](#)
- [Sustainable Conservation USACE Nationwide 27 Web Page](#)
- [USFWS California Statewide Restoration Programmatic](#)
- [NOAA Fisheries ESA Consultations Web Page](#)
- [USFWS ESA Consultations Web Page](#)
- [GSA NHPA Web Page](#)



## The Permitting Experience

### *Permits that Accommodated Multiple Implementation Scenarios Were a Necessity*

Because TU did not initially know how the barrier would be removed, they needed permits that fully addressed multiple implementation scenarios from the start. Early in the design process, they evaluated three distinct approaches—manual demolition using hand crews and jackhammers, mechanical removal using heavy machinery, and explosive demolition supported by CDFW’s specialized crew—and completed permitting compliance for both a primary and secondary method. This meant each permit described how both options would be carried out and what factors would determine the final choice, creating a comprehensive regulatory package that avoided lastminute amendments. Rather than modifying permits later, TU simply notified all permitting entities once the final method was selected and provided the date it would occur. This approach ensured that whichever method ultimately proved feasible, they would remain fully compliant and ready for implementation.

**Tip: Obtaining permits that cover multiple implementation methods is a good strategy to prevent the need for mid-process amendments and keeping the project on schedule.**

### *Meaningful Consultation with Indigenous Communities is Imperative*

Although multiple tribes including the Yurok Tribe, Karuk Tribe, Klamath Tribes, and Modoc Nation were engaged early and were generally supportive; securing approval from the Shasta Indian Nation emerged as one of the most consequential steps in the project’s permitting timeline. Because the barrier sits within their ancestral lands, their approval was essential before any implementation or permitting could proceed. TU had several productive meetings with the tribes and followed up with a site visit with a Shasta Indian Nation tribal elder that highlighted the importance of removing the barrier. As Evan explained, “Once we followed up with a site visit, showing them the proposed methods and cultural and ecological benefits, everything started moving really quickly,” underscoring how in-person engagement transformed the tribe’s perspective and moved the project forward for mutual benefit.

**Tip: Engage with tribal partners at the beginning of project planning. Their input is valuable and essential.**



## *Remote Site Conditions Require Adaptive Planning*

The Jenny Creek site's extreme remoteness shaped both permitting and implementation. Although early desktop planning suggested multiple access routes and removal methods, each site visit revealed new constraints that shifted the project's direction. Heavy-equipment removal was ruled out because regardless of the access route, getting the equipment to the barrier would alter the stream and they wanted to focus on doing more good than harm. These conditions directly influenced the permitting process because the team could not predict which removal method would be feasible. Remote conditions also shaped tribal coordination because critical site visits were more difficult.

**Tip: Don't depend on desktop analyses of site conditions. Get out there and see it early for best results.**

## *You Usually Can't Pick Your Landowners but Sometimes You Get Lucky*

Having the Klamath River Renewal Corporation (KRRRC) as a primary landowner was a major advantage. Because KRRRC is responsible for the removal of the four Klamath River dams, they were already deeply invested in restoring fish passage and ecological function throughout the basin. Their ownership of the land where the barrier was located meant the project team had a supportive partner from the outset. As Evan noted, the barrier sat "primarily on property owned by KRRRC" who was "excited to see this thing go," ensuring smooth access and no landowner related delays. KRRRC's existing contractual relationship with Resource Environmental Solutions (RES), whom TU partnered with on implementation and monitoring, allowed seamless integration with ongoing restoration in the former reservoir.

**Tip: Lean on experienced partners for smooth implementation.**



## ***Local Working Groups Can Provide Support You Didn't Know You Needed***

The Klamath Tributary Working Group provided essential regional coordination and support. This multi-partner group holds a \$15 million programmatic grant intended to implement fish passage and habitat restoration across key Klamath tributaries. Jenny Creek was already identified as one of their priority projects, which validated the project's ecological importance and helped reinforce its urgency. Although the Jenny Creek barrier was removed outside of the Working Group's implementation schedule, their involvement ensured the project fit within a larger, coordinated watershed strategy. When TU was weighing the costs of different removal methods, they consulted the Working Group for their opinion. Their basin wide perspective helped integrate the project into the broader post dam removal recovery framework.

**Tip: Find out if there is a local working group in the area of your project.**



*Arial view of the concrete barrier on Jenny creek before demolition (above), and after demotion (below)*



## More Permitting Resources

[\*Sustainable Conservation Webpage of Pathways Listed by Agency or Authority\*](#)

[\*Sustainable Conservation ESSENTIAL GUIDE for Accelerated Restoration Permitting\*](#)

[\*Sustainable Conservation Web Page of Pathways Listed by Agency or Authority\*](#)

[\*Sustainable Conservation Essential Guide for Accelerated Restoration Permitting\*](#)

[\*Sustainable Conservation USACE Nationwide Permit 27 Web Page\*](#)

## Sustainable Conservation

Sustainable Conservation advances the collaborative stewardship of California's land, air, and water for the benefit of nature and people.

Sustainable Conservation developed Accelerating Restoration, a website designed to help restoration project proponents in California find and understand how to use efficient permitting pathways for their aquatic and riparian habitat restoration projects.

- [Permitting pathways by agency](#)
- [Alphabetical list of all accelerated pathways](#)
- [Examples of projects that used accel-](#)

## The California Fish Passage Forum

The California Fish Passage Forum is a collaborative partnership formed among federal and state agencies, and non-profits to protect and revitalize anadromous fish populations in California by promoting collaboration among public and private sectors for fish passage improvement projects and programs.

The Forum supports anadromous fish populations by directly funding barrier removals, habitat enhancements, fish passage assessment, monitoring and research projects, facilitating collaboration between agencies and restoration nonprofits, and guiding the development and support of science and data products related to fish passage restoration, such as the California Passage Assessment Database (PAD). Learn more about the Forum at [cafishpassageforum.org](http://cafishpassageforum.org)



**CALIFORNIA FISH  
PASSAGE FORUM**



**Sustainable Conservation**



**Cutting the  
Green Tape**

This case study was produced by the California Fish Passage Forum in partnership with Sustainable Conservation.

## NFHP by the Numbers

The NFHP Projects and accomplishments dashboard records the impact of the NFHP program and 20 FHPs since 2006. As of 2026, those are:

- 1,744 projects supported
- \$71,223,384 in direct funding
- \$351,492,841 in additional leveraged funds
- 12,127 habitat enhancements
- 12,018 river miles conserved
- 126,207 acres conserved
- 3,434 science products produced

## The National Fish Habitat Partnership

The California Fish Passage Forum is one of 20 Fish Habitat partnerships recognized under the National Fish Habitat Partnership. The mission of the National Fish Habitat Partnership is to protect, restore, and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people. NFHP supports the work of the diverse network of fish habitat partnerships, and produces independent data products to assess the state of America's freshwater and marine fish populations and habitats through the National Assessment.

Fish Habitat Partnerships operating on the Pacific coast include the California Fish Passage Forum, Pacific Lamprey Conservation Initiative (PLCI), the Pacific Marine and Estuarine Partnership (PMEP), and the Western Native Trout Initiative (WNTI). Learn more at [www.fishhabitat.org](http://www.fishhabitat.org)



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