



Eel River Dam Removal

RESTORING THE EEL RIVER AND NATIVE FISH WHILE SUPPORTING LOCAL ECONOMIES AND CULTURES

THE POTTER VALLEY PROJECT

Eel River Dams are part of a Pacific Gas and Electric hydroelectric project that diverts water from the Eel River to the Russian River.

The Eel River dams are part of a hydroelectric facility called the Potter Valley Project located about 20 miles northeast of Ukiah in Mendocino County, about two hours north of San Francisco. Pacific Gas and Electric Company (PG&E) operates the Project as a transbasin diversion exporting Eel River water to a powerhouse located in the East Branch of the Russian River in Potter Valley.

The Project consists of two dams: Scott Dam (138 ft. high, built in 1922) and Cape Horn Dam (63 ft. high, built in 1907). Cape Horn Dam impounds the small Van Arsdale Reservoir, which is a forebay for the diversion facility and tunnel. Scott Dam creates Lake Pillsbury twelve miles upstream, serving as the Project's storage facility. Neither dam is equipped with power generation turbines. Power generation only occurred at the powerhouse in Potter Valley until an equipment failure in 2021 rendered the facility obsolete.



Credit: Kyle Schwartz/CalTrout

Scott Dam blocks access to the Eel River headwaters

WHY REMOVE THE EEL RIVER DAMS?

Eel River dams harm fisheries, impair water quality, and create a seismic hazard for downstream communities. They no longer generate power or revenue for PG&E.

Built over 100 years ago, Scott Dam has no fish ladder and completely cuts off access to hundreds of stream miles of high-quality habitat for native salmon and steelhead populations. The Eel River is the third largest river in California and once boasted some of the largest salmon and steelhead runs on the North Coast; now, these populations are critically imperiled. Dams harm fisheries and water quality in several ways. Dams interrupt sediment transport, which degrades salmon spawning habitat downstream; reservoirs create anaerobic conditions that lead to accumulation of the toxin methylmercury; and impounded water heats up to unnatural temperatures that can be lethal to salmon. Because of these threats, the Eel River was listed by American Rivers as one of the ten [Most Endangered Rivers](#)[®] in 2023.

Because of the dams' impacts, The Round Valley Indian Tribes, the Wiyot Tribe, and other native tribes are denied access to salmon, a traditional subsistence food source. Many tribal cultural practices that depend on access to traditional foods have also been disrupted. Moreover, the collapse of commercial and recreational salmon and steelhead fisheries on the Eel has eliminated what once was a strong

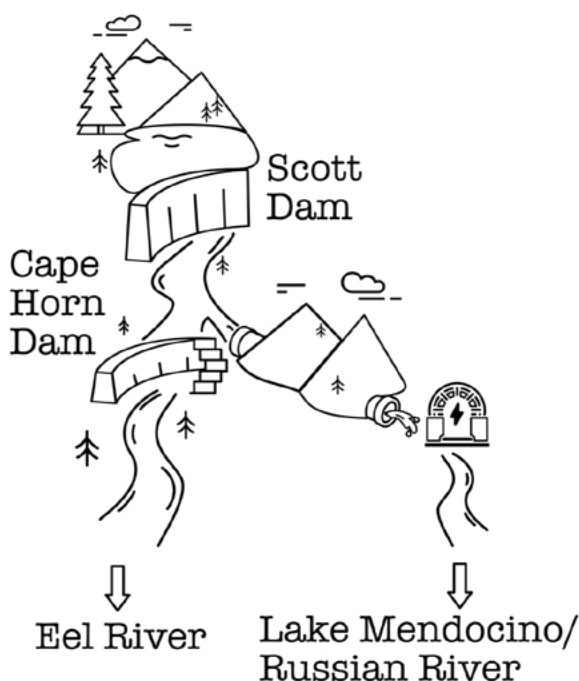
economic driver for North Coast communities. This collapse has contributed to the West Coast salmon fishery crash, which closed in 2023 due to low salmon populations. Eel River dam removal represents an unprecedented opportunity to re-create a salmon and steelhead stronghold on the Eel River and contribute to the recovery of West Coast fisheries.

PG&E is working with federal regulators to decommission the obsolete facilities. Recent equipment failures caused PG&E to suspend hydropower operations indefinitely. In March 2023, PG&E announced that Scott Dam is at a greater risk of damage during or after a seismic event than was previously understood, forcing them to permanently reduce the water level in Lake Pillsbury by 26%. These developments make it clear that maintaining the status quo for the Project is no longer an option.

PG&E has notified stakeholders that they will remove both dams as part of their license surrender and decommissioning plan. PG&E has stated a final plan will be submitted to federal regulators in early 2025 and that dam removal could start in 2028.

BACKGROUND: HISTORY OF THE DAMS AND WHAT'S NEXT

The Potter Valley Project was originally designed to provide electricity to the City of Ukiah. Though the Project's nominal generation capacity is rated at 9 megawatts (MW), in recent years the powerhouse rarely generated more than 4 MW. (By contrast, California has approximately 80,000 MW of electric generation capacity statewide). In 2021, an equipment failure shut down power generation altogether, and PG&E has stated it will not repair the facilities. PG&E no longer wishes to own the Project and is working with the Federal Energy Regulatory Commission (FERC) on a decommissioning plan. PG&E is expected to submit its draft decommissioning plan to FERC in early 2024, and the final plan in January 2025. Dam removal could begin by 2028.



The water diverted through the Project's tunnel below the powerhouse flows into the East Branch of the Russian River and into Lake Mendocino. Now that the Project no longer generates power, and with the reduction in storage volume in Lake Pillsbury due to dam safety concerns, diversions into the Russian River watershed are already significantly diminished compared to historic volumes.

Some Russian River water users would like to develop and operate new water infrastructure that would maintain Eel River diversions to the Russian River. This idea is controversial among fisheries advocates and Tribes. So far, no detailed plan for how such a diversion would be constructed, paid for, and managed into the future has emerged. If these water users are not able to identify a means to continue water diversions from the Eel to the Russian, they will end with PG&E's decommissioning of the Project. In either case, increased conservation and efficiency upgrades to portions of Sonoma and Mendocino County's water systems will be required.

Dam removal is expected to improve the health of the river and its salmon and steelhead fisheries, which would enhance the local economy by supporting river-based recreation. Also, the process of removing the dams would generate significant economic activity. A [recent economic analysis by the Bay Area Council Economic Institute](#) found that dam removal is predicted to result in approximately \$250 million in economic activity across the five-county area of study (Humboldt, Lake, Marin, Mendocino and Sonoma), including \$100 million in increased business activity and wages.

PG&E remains financially liable for the Project until federal regulators sign off on their decommissioning plan. This includes dam removal costs and potential restoration and mitigation costs.



SALMON SUCCESS STORIES

Dam removal is a relatively new technique in river restoration. Many dams across the West were built near the turn of the century and are aging out of their useful lives. Dams are removed for many reasons, but in the case of the Potter Valley Project, dam safety, economics, and the high costs of operating aging facilities are key drivers. The removal of four hydropower dams on the Klamath River, which got underway in 2023, will further inform how removal affects river ecosystems. Several dam removals have occurred in important salmon rivers in recent years.

Savage Rapids Dam

- Rogue River, Ore.
- Removed: 2009
- River miles restored: 500
- Evidence of success: In the stretch of river that used to be inundated behind the dam, 91 salmon redds were counted in 2010 and that number more than doubled just three years later as fish rapidly returned to the area.

Marmot and Little Sandy Dams

- Sandy River, Ore.
- Removed: 2007 and 2008.
- River Miles Restored: 280
- Evidence of success: Spring run Chinook salmon, winter steelhead, and coho salmon have all shown increases in 10-year average populations, particularly in the second generation of adult fish returns, after dam removal. Fall run Chinook salmon have unfortunately continued to decline for reasons that are not well understood at this time. Still, overall, Chinook populations have increased by 90 percent, coho populations by 137 percent, and steelhead populations by 123 percent. Further, the analysis comparing Sandy steelhead numbers with other steelhead populations in nearby dammed rivers show stronger growth in the Sandy following dam removal.

The Elwha and Glines Canyon Dams

- Elwha River, Wash.
- Removed: 2012 and 2014
- River miles restored: 70
- Evidence of success: Post dam removal, the Elwha has been a resounding success story for salmon and steelhead. Over the past decade, scientists have documented 2–4 times as many Bull Trout, rainbow trout, and Chinook salmon and hundreds of summer steelhead, which were previously very rare in the river. Additionally, the restoration of natural river processes and sediment transport has revitalized the Elwha River estuary, creating healthier habitat for ocean and estuarine species.

When we remove dams, we see clear results: a healthier river ecology, and native fish moving back into their historical habitats upstream. No other restoration action comes close in terms of helping migratory freshwater fish species reach spawning waters and rebuild their populations.

EEL RIVER SALMON AND STEELHEAD: ECOLOGICAL, CULTURAL, AND ECONOMIC IMPACT

The Eel River once hosted some of the largest salmon and steelhead runs in the state, with as many as a million adult fish migrating upriver to spawn every year. Today less than five percent of that historical abundance remains. California Coast Chinook salmon, Southern Oregon/Northern California Coast coho salmon, and Northern California steelhead all use the Eel River and are all listed as Threatened under the Federal Endangered Species Act. Summer steelhead in the Eel River are listed as endangered under the

California Endangered Species Act. Additionally, Pacific Lamprey, the Eel River's namesake and a species of concern and cultural importance are also present in the Eel. Removal of the Eel River dams is most likely to benefit Chinook salmon, Pacific lamprey and summer and winter steelhead.



Spawning Steelhead

Credit: ©Marcel Siegle



Eel River headwaters

Credit: Michael Wier

While several factors have contributed to the decline of these populations, Scott and Cape Horn Dams are clearly at the top of list. The dams not only block fish passage to the upper reaches of the river but also foster populations of non-native predatory fish populations including pikeminnow and largemouth and smallmouth bass that have spread throughout the river, and feed on juvenile salmon and steelhead. The dams degrade water quality and habitat health. Several studies show that full removal of the dams is by far the best solution to benefit the Eel River ecosystem and its native fish.

The water in the Eel River is listed as impaired under the Clean Water Act, indicating negative impacts on the region's Tribes and other water users. The Tribes in the region have suffered drastically reduced access to their fishery as well as destruction of many cultural practices from the damage to the Eel River ecosystem caused by the Potter Valley Project. Pacific lamprey (which look like eels to the untrained eye and gave the river its English name) migrate to the from the ocean, like salmon and steelhead. They are a culturally important fish species to the Round Valley, Wiyot and other local Tribes, and they are completely blocked from their historical upriver habitat by the dams. Dam removal would be an important act of environmental justice for the Indigenous peoples who have relied on native lamprey, salmon, and steelhead for millennia for sustenance and honor these fish as part of their cultural identity.

Removing Scott and Cape Horn Dams would make the Eel River California's longest free-flowing river and would reconnect salmon and steelhead with almost 300 miles of spawning and juvenile rearing habitat in the upper mainstem Eel River. The headwaters remain cold year-round, even in drought years, making them a refuge for juvenile salmon and steelhead as climate change pushes downstream water temperatures above tolerable levels for these cold-water fish. In fact, scientists recognize the Eel River as having the potential to become a stronghold and support the rebound of salmon and steelhead fisheries throughout the North Coast region.

Removing the dams would make it possible for the Eel River watershed to be restored to health. As the free-flowing river re-creates floodplains, wetlands, side channels and marshes, these varied habitats would help improve water quality and support healthier native plants and wildlife.



Noyo Harbor

Credit: C. Schneider

SUPPORTING ORGANIZATIONS

AMERICAN RIVERS



AMERICAN WHITEWATER

CALIFORNIA TROUT

CALIFORNIA SPORTFISHING PROTECTION ALLIANCE



THE CONSERVATION ANGLER

ENVIRONMENTAL PROTECTION INFORMATION CENTER

FLY FISHERS INTERNATIONAL



FRIENDS OF THE EEL RIVER

HUMBOLDT BAYKEEPER

INSTITUTE FOR FISHERIES RESOURCES



NATIVE FISH SOCIETY

PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS

REDWOOD EMPIRE TROUT UNLIMITED



SAVE CALIFORNIA SALMON

SIERRA CLUB REDWOOD CHAPTER

TROUT UNLIMITED

WILD STEELHEADERS UNITED



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APPROVED QUOTES FOR USE BY MEDIA

“This is a once-in-a-lifetime chance to put the Eel River on a path to recovery. Dam removal coupled with restoration on the Eel can make a difference for fish and also support the people that depend on the river for clean water, recreation, and subsistence.”

Curtis Knight
Executive Director, California Trout.

“The Eel River was legendary for its salmon and steelhead fishing, but their populations are now hanging on by a thread. The headwaters above Scott Dam contain some of the best habitat in the entire watershed, with cold, year-round flow even in drought years. Reconnecting this habitat is the single biggest thing we could do to help bring back the Eel River’s legendary runs of salmon and steelhead.”

Brian Johnson
California Director, Trout Unlimited.

“Removing the two Eel River dams is the single best opportunity to advance fisheries recovery in the third largest watershed in California. Hundreds of miles of cold-water habitat have been locked away for over a century. It’s time to allow our native fish to return home, and transform the Eel into the longest free-flowing river in the state.”

Alicia Hamann
Friends of the Eel River

“The return of Eel River wild salmon and steelhead is of the utmost importance to California. This river and its fish were once the foundation for both recreational and commercial salmon fishing off our Northern California Coast. Since the Cape Horn and Scott dams were put into the river, all of that history has been lost, and both salmon & steelhead are on the verge of extinction in this river. Removing these two dams is critical to the river’s health, and the health of our North Coast community’s economies”

Dr. Mark Rockwell
Fly Fishers International, Northern California Council

“PG&E’s decision to remove both obsolete Eel River Dams provides an immense opportunity to recover fisheries, restore 100 years of damage to the Eel River watershed, address historic wrongs to Tribal Nations that depend on the Eel River, and resolve dam safety and water quality issues. A commitment to remove Scott and Cape Horn dams, accompanied by watershed-wide restoration, is a critical milestone for this 2023 Most Endangered River.”

Meghan Quinn
American Rivers

Dam removal is imperative in accessing our waters, protecting its inhabitants, revitalizing our indigenous culture, and the rematriation of our broken ecosystems. We, Tribal members, must introduce “Energy Justice” initiatives for our Justice Impacted communities and protections for our cultural resources to sustain the areas where these resources originate. Tribal Water Rights are implicit to our fish dependent communities affording inclusion in all project proposals around our waterways in relation to tribal beneficial uses, sacred site protection and designation of ancestral territories. “

Nikcole Whipple
Save California Salmon

“The Potter Valley Project dams and water diversions have been disastrous for our once-abundant northern California salmon fisheries. The Eel River was once the fourth largest salmon-producing river in the continental US, averaging at least 450,000 returning Chinook salmon each year. Now -- thanks to 100 years of devastation from the dams and their water diversions -- Eel River Chinook salmon as well as Coho and steelhead are all on the brink of extinction. Our fisheries losses alone are estimated at about \$80 million/year -- each and every year the current situation continues.”

Glen Spain
Executive Director, Pacific Coast Federation of Fishermen’s Associations (PCFFA)

“Removal of the two antiquated dams on the Eel River offers the best hope we have for the restoration of the runs of salmon and steelhead that once thrived there. It’s time for everyone involved to stop struggling against the inevitable outcome and instead to hasten a removal and restoration plan that promotes fish recovery and is otherwise environmentally advantageous, includes wildfire resilience strategies and other benefits for affected landowners, and promotes healing for both the land and the community.”

Victoria Brandon
Chair, Sierra Club Redwood Chapter

“The removal of the Eel River’s dams will help restore the health of this amazing river system and create new opportunities for river-related recreation. A free-flowing river will emerge where dams and reservoirs have blocked the river for more than a century. There will be no better way to witness its transformation back to health than by visiting its banks or floating its waters.”

Scott Harding
American Whitewater

“Some of the most beautiful winter fishing in the world is in the redwood groves of the Eel River. But the Main Eel upstream of the South Fork has been closed to fishing for decades. Removal of Scott and Cape Horn dams is the gateway to the restoration of the Eel River salmon and steelhead and the incomparable experience of fishing for them.”

Chris Shutes
California Sportfishing Protection Alliance

ADDITIONAL RESOURCES

PHOTOS AVAILABLE FOR USE BY MEDIA

<https://tinyurl.com/FTEmedia>

INFORMATIONAL RESOURCES

Websites and other online resources

- [Free the Eel](https://freetheeel.org)
(freetheeel.org)
- Friends of the Eel River: [Potter Valley Project](https://eelriver.org/projects/potter-valley-project)
(eelriver.org/projects/potter-valley-project)
- Congressman Jared Huffman's Ad Hoc process: [Potter Valley Project](https://pottervalleyproject.org)
(pottervalleyproject.org)
- California Trout: [Top 6 California Dams Out: Eel River Dams](https://caltrout.org/campaigns/eel-river-dams)
(caltrout.org/campaigns/eel-river-dams)
- American Rivers: [America's Most Endangered Rivers: Eel River](https://mostendangereddrivers.org/river/eel-river)
(mostendangereddrivers.org/river/eel-river)
- Two-Basin Solution Partnership [website \(outdated\)](https://www.twobasinsolution.org)
(www.twobasinsolution.org)

Relevant videos

- [PPIC: Eel River—Reconnecting Salmon and People](https://ppic.org/blog/video-eel-river-reconnecting-salmon-and-people)
(ppic.org/blog/video-eel-river-reconnecting-salmon-and-people)
- [California Trout: Eel River Vimeo video collection](https://vimeo.com/showcase/6555307)
(vimeo.com/showcase/6555307)
- [Eel River Dams – California Trout Top 5 Dams Out](https://youtube.com/watch?v=TxomCnUhlEo)
(youtube.com/watch?v=TxomCnUhlEo)
- [America's Most Endangered Rivers® of 2023: The Eel River](https://youtube.com/watch?v=0Upfrb8iaZ8&t=1475s)
(youtube.com/watch?v=0Upfrb8iaZ8&t=1475s)

REPORTS

Economics

- In 2022, The Bay Area Council Economic Institute studied the economic benefits of removing both Eel River dams.
[Bay Area Council Economic Institute \(pdf\)](https://freetheeel.org/wp-content/uploads/2023/02/BACEI_PotterValley_2.2.2023_FINAL-1.pdf). (https://freetheeel.org/wp-content/uploads/2023/02/BACEI_PotterValley_2.2.2023_FINAL-1.pdf)

Habitat Studies

- Historical review of Eel River anadromous salmonids, with emphasis on Chinook salmon and steelhead. Yoshiyama & Moyle, UC Center for Watershed Sciences, 2010.
[Yoshiyama & Moyle \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Yoshiyama-Moyle_Historical-Review-of-Eel-River-Anadromous-Salmonids-Final-Report-2010.pdf)
- Salmonid habitat and population capacity estimates for steelhead trout and Chinook salmon upstream of Scott Dam in the Eel River, California. Cooper et al., Northwest Science, 2020.
[Cooper et al. \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Cooper-et-al-2020.pdf)
- Physical and biological constraints on the capacity for life-history expression of anadromous salmonids: an Eel River, California case study. FitzGerald et al., Canadian Journal of Fisheries and Aquatic Sciences, 2022.
[FitzGerald et al. \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Fitzgerald-et-al-2022.pdf)

Other Background Documents

- On the ecology and distribution of steelhead in California's Eel River. Kannry et al., Journal of Heredity, 2020.
[Kannry et al. \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Kannry-et-al-2020.pdf) Upper
- Eel River temperature monitoring, 2015 & 2016. Native Fish Society.
[Native Fish Society](#). (nativefishsociety.org/campaigns/eel-river-monitoring)
- The Eel River Action Plan. Eel River Forum members, 2016.
[Eel River Action Plan \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Eel-River-Action-Plan-2016.pdf)
- Capital Modifications reports. Sonoma County Water Agency.
[Cover letter \(pdf\)](#) (freetheeel.org/wp-content/uploads/2022/07/Cap-Mod-report-cover-letter.pdf)
- Potter Valley Project capital modifications feasibility study report. McMillen Jacobs Associates, 2018.
[Final report \(pdf\)](#) (freetheeel.org/wp-content/uploads/2022/07/Capital-modifications-feasibility-report-2018.pdf)
- Evaluation of sediment stabilization measures. EnviroAnalytics Group, 2018.
[Evaluation of sediment stabilization measures \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Evaluation-of-Sediment-Stabilization-Measures-2018.pdf)
- [Congressman Jared Huffman's Ad Hoc Working Group](#)
- [Two Basin Partnership – Phase 1](#)
- [Two Basin Partnership – Phase 2](#)

Mercury Study

- Mercury study memo.
[Geosyntec Consultants, 2020 \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Mercury_memo_Eel_River_20200401_FINAL.pdf)
- Eel River sedimentation evaluation.
[Geosyntec Consultants \(pdf\)](#). (freetheeel.org/wp-content/uploads/2022/07/Lake-Pillsbury-Mercury.pdf)

THE POTTER VALLEY PROJECT



FAQS

BENEFITS OF REMOVING THE DAMS

Why should the Scott and Cape Horn Dams be removed?

Scott and Cape Horn Dams were built more than a hundred years ago to generate hydropower, but because of aging of the facilities and costs, they are no longer in operation. The dams now threaten native fish populations, harm the watershed ecosystem, and pose a threat to human health and safety.

The dams block fish access to critical habitat. They also alter the Eel's natural flow, prevent the river from transporting sediment and nutrients, and slow and warm the water, which encourages the growth of algae and the proliferation of non-native species that prey on the native fish. The dams have transformed the ecology of the Eel River, negatively impacting fish, wildlife, and the people who rely on the services the river provides.

Removing the two dams would make the Eel River California's longest free-flowing river and would reconnect salmon and steelhead with almost 300 miles of high-quality spawning and juvenile rearing habitat in the upper mainstem Eel River, giving these imperiled populations a chance to come back from the brink of extinction. Pacific lamprey, a culturally important fish species to the local Tribes, would also benefit.

Rebounding salmon and steelhead populations would rejuvenate the North Coast's commercial and recreational fisheries, while a healthy river would generate recreation-based economic activity.

What is special about the Eel River and its native salmon and steelhead populations?

The Eel River is California's third largest river. It once hosted some of the largest salmon and steelhead runs in the state, with as many as a million adult fish migrating upriver to spawn every year. Removing Scott and Cape Horn Dams would reconnect salmon and steelhead with almost 300 miles of high-quality spawning and juvenile rearing habitat. The headwaters of the Eel run cool all year round, even in the hottest parts of summer. The Eel River has the potential to become a stronghold for North Coast Chinook salmon, coho salmon, and steelhead populations in this time of accelerating climate change.

Why would restoring access to the Eel River above Scott Dam be so important for salmon and steelhead populations?

Threatened and endangered native salmon and steelhead populations would benefit significantly if they could access the Eel River's headwaters habitat. Because this water remains cold year-round and the habitat is relatively pristine, the Eel River's headwaters are disproportionately important for young salmon and steelhead compared to other reaches of the river. Additionally, much of the watershed above the dams is public land and protected from future development as part of Mendocino National Forest and the Berryessa Snow Mountain Wilderness. Restoring the Eel River to a free-flowing state offers the very real potential to establish a salmon and steelhead stronghold on the North Coast, a refuge for these fish as climate change progresses and lower-elevation river waters heat up across the state.

Which native fish species would benefit from dam removal?

The Eel River is home to five migratory native fish species. The salmon and steelhead are all listed as Threatened under the federal Endangered Species Act.

- [California Coast Chinook salmon](#) are vulnerable to extinction in the next 50 to 100 years if coastal stream conditions continue to deteriorate.
- [Southern Oregon/Northern California Coast coho salmon](#) are critically vulnerable to extinction within the next 50 to 100 years, with a 95% or more decline in numbers since the 1960s.
- [Northern California summer steelhead](#) are also vulnerable to extinction by 2050 because they are reliant on cold water during the warmest months and therefore are critically susceptible to climate change. This exceedingly rare and unique life history of steelhead is listed as endangered under the California Endangered Species act.
- [Northern California winter steelhead](#) are in a state of long-term decline over much of their range.
- [Pacific lamprey](#) are a California State Species of Special Concern and a federal Species of Concern. This native fish has suffered severe declines over the last 50 years. Pacific lamprey are [culturally important](#) to the local Tribes, providing subsistence, ceremonial, and medicinal food.

How would dam removal affect other wildlife?

Revegetated areas in the areas currently inundated by reservoirs would provide wildlife habitat, and the restoration of salmon runs would provide food and nutrients to the upper Eel River ecosystem that it has been deprived of for a century. When adult salmon die after spawning, their bodies transfer marine-derived nutrients including carbon, nitrogen and phosphorus to the surrounding ecosystem. Decomposing salmon carcasses provide a food source for fish, wildlife and birds like bald eagles and osprey. Salmon are a keystone species and are known to benefit more than 100 other species.

Tule Elk were introduced into the Gravelly Valley area in the 1970s and have become popular with hunters and for wildlife viewing. To date, no studies have looked at how dam removal would impact elk herds and negative impacts should not be assumed. More study will be needed to both better understand these animals, how changes to the Project may affect them and how biologists can best manage this iconic species.

Removal of Scott Dam will likely benefit Foothill Yellow Legged Frog (a species of special concern) populations because Lake Pillsbury fragments a historically continuous population and promotes proliferation of non-native aquatic predators. Dam removal would allow fragmented frog populations to reconnect, promoting genetic diversity and population resilience.

How would local economies benefit from dam removal?

Removing Scott and Cape Horn Dams would support river-based recreation in Lake, Mendocino and Humboldt Counties by improving river health and recreational fisheries. Dam removal would likely also support a rebounding commercial fishery on the North Coast. The multi-year process of removing the dams and related infrastructure would also bring millions of dollars to the local economies in the form of construction jobs and other business activity. [A recent economic analysis](#)

by the [Bay Area Council Economic Institute](#) has shown that the benefits of dam removal to local communities are predicted to result in approximately \$250 million in economic activity over the five-county region of study (Humboldt, Lake, Marin, Mendocino, and Sonoma).

How would removing the dams benefit the local tribes?

The Round Valley Indian Tribes and the Wiyot Tribe have suffered drastically reduced access to their historical fishery over the past century. Many of their cultural practices that depend on access to cultural resources and traditional foods, especially the Pacific lamprey, have also been disrupted. Removing the dams would be an act of environmental justice. It would be the first, necessary step to restoring the Eel River to health, including restoring the native fish populations these Tribes once depended on for sustenance and cultural practices.

IMPACTS FROM THE DAMS

How do the dams harm native fish?

Scott Dam completely blocks fish passage to 288 stream miles of steelhead habitat and 89 stream miles of Chinook salmon habitat in the upper basin ([Cooper et al 2020 \(pdf\)](#)). In addition to preventing fish from migrating to spawning grounds, the dams impede downstream movement of sediment, gravel and large woody debris (such as tree root wards), key drivers of healthy river habitat. Dams interrupt important ecological processes like nutrient cycling that can change food webs, ultimately impacting habitat suitability for miles downstream.

The smaller Cape Horn Dam has a fish ladder and counting station, but the facility would need significant upgrades to reliably and safely allow fish to pass. The fish ladder is closed during high flows to prevent sediment from filling it, often closing for a week or more in the middle of the annual steelhead run. Predation by otters is also a problem at the fish ladder because it creates an unnatural pinch point for migrating fish.

The dams slow and warm river water, creating habitat that benefits non-native pikeminnow and largemouth and smallmouth bass, predators that feed on juvenile salmon and steelhead which were introduced into the Lake Pillsbury Reservoir

The dams also prevent the passage of culturally important Pacific lamprey that migrate from the ocean to reproduce like salmon. Scott Dam is a complete barrier to lamprey. In recent years, enterprising biologists at Cape Horn Dam invented a [temporary tube system](#) to allow lamprey to pass over the dam, but this is a stop-gap measure at best.

Don't the dams help provide year-round water for fish in the Eel?

Dam operations will never be able to replace the habitat lost by blocking fish from the headwaters. The water released by Scott Dam is often too warm in the summer to support young salmon and the 12 miles of marginal habitat between the dams is a predator hot spot for non-native species that prey on juvenile salmon.

Isn't logging/water diversion/cannabis plantations/non-native pikeminnow predation etc. the real cause of salmon decline in the Eel River?

Each of these issues (and more) are partially to blame for the decline of salmon and are the focus of ongoing restoration efforts. *Nevertheless, studies show definitively that no single action would benefit Eel River salmon and the health of the river as much as dam removal.* Scientists from

the National Marine Fisheries Service recently described the basin above the dams as having “substantial salmonid capacity relative to the rest of the watershed” that “could provide an important cool-water refuge during warm years and from pikeminnow,” making these headwaters a critical area to reconnect.

Will the Eel River run dry without the dams?

No. Even in drought years the upper Eel River flows year-round, though it has a natural low flow season due to Northern California’s Mediterranean climate. The cool, perennial tributaries above the dams are what make the headwaters important habitat for young salmon and steelhead in a changing climate. This area would provide a refuge for juvenile fish in warmer months.

Are the Potter Valley Project dams seismically safe?

A number of dam safety concerns have been raised, including the fact that Scott Dam is built directly on top of the Bartlett Springs Fault complex and the potential for low reservoir levels and accumulating sediment to clog the dam’s only outlet valve. Since dam safety information is protected as confidential by the federal government, safety concerns related to the Project are often downplayed, but they are significant. PG&E recently announced that removing Scott Dam would solve some of these safety and liability concerns and is no longer filling the reservoir to capacity to reduce the chances of dam failure in an earthquake.

How much power do the dams generate?

None. In 2021, PG&E notified stakeholders that the transformer bank associated with the powerhouse failed, making power generation impossible. PG&E has indicated it does not intend to repair the transformer bank and instead will surrender their license to operate the Project and cease operating it.

When it was operational, the powerhouse located in Potter Valley could generate a maximum of 9.2 megawatts, though it rarely has operated above 50% capacity in recent years.

THE DAM REMOVAL PROCESS

What happens to the reservoirs after dam removal?

Dam removal is just the first step in restoring the Eel River headwater ecosystem. Our Coalition is engaged in a number of studies and efforts to support Eel River headwater restoration. Initially, after dam removal, extensive sediment management and revegetation will be needed to reduce erosion. PG&E is responsible for doing this work as part of their obligations for decommissioning the Project. Longer term, nature-based solutions such as riparian and wetland restoration and efforts to enhance beaver populations already found in the area will improve water quality and help slow and store water on the landscape. Additional efforts to decommission or upgrade road networks to reduce sediment supply are also needed, as is forest health work to improve fire resilience in the area. In short dam removal is just the beginning of efforts to improve the health of the broader ecosystem to support the plants, animals and people that live and recreate near the dams.

Why is PG&E decommissioning the Potter Valley Project?

The Potter Valley Project is not viable as a business venture for energy production and would be prohibitively expensive to retrofit to accommodate federally mandated fish passage. PG&E tried to sell the Project but no willing buyers stepped forward. PG&E has since said the project is unprofitable, losing \$5 to \$10 million per year in operations and maintenance costs. With no party willing to pay for the needed upgrades and continued operation of the project, PG&E is developing a plan to decommission the Project. PG&E is developing a plan to decommission the Project and has informed the public that they intend to remove both Scott and Cape Horn dams.

Who pays for dam removal?

The owner of the Potter Valley Project, PG&E, is responsible for all costs associated with decommissioning the Project, including studies, facilities removal, potential mitigation measures and any restoration activities included in the decommissioning plan.

WATER DIVERSION

Where does the Eel River water go after it passes through the Potter Valley Project?

Water that leaves the hydroelectric turbines is diverted into the East Branch Russian River in Potter Valley, where some of it is used for agriculture before draining into Lake Mendocino. From Lake Mendocino the water is released into the Russian River watershed. All the hydroelectric facilities are located in the powerhouse in Potter Valley, neither dam generates electricity directly.

How much water is diverted from the Eel River into the Russian River?

Water diverted from the Eel River to the East Branch Russian River in Potter Valley has averaged about 60 thousand acre-feet per year over the last decade, but historically was around 150 thousand acre-feet. Current water releases more closely mimic historical natural flows in the Eel River below the dams, but they still result in a significant net loss of fish habitat. Recent dam safety concerns and the lack of hydropower generation have reduced diversions further to around 30 thousand acre-feet per year.

What are the options for a continued water diversion if the dams are removed?

Several alternatives to maintain a wet season diversion into the Russian River watershed have been assessed in recent year. The Eel Russian Project Authority – a JPA created to maintain a potential diversion – recently selected a pumped diversion alternative to move forward to 60% design. This design would allow the river channel to naturally evolve through the site of Cape Horn dam once it is removed and use a pump station located on side of the river channel to move winter water into the diversion tunnel.

Water users must now determine if it is financially viable to secure future diversions and develop a mechanism for funding the water supply, they have benefitted from. Maintaining such a diversion is controversial as many Eel River advocates assert that the Eel River fisheries cannot afford such diversions given the uncertainties of climate change.