

The Elwha Issue: A Fish Problem that Just Won't Die

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INTRODUCTION

Hydropower. A clean and free energy source—or is it? Viewed most simply as a gear turned by the planet's water cycle, hydropower once seemed a harmless and ingenious way to hitch a complimentary ride on a nature-powered wheel, no strings attached.

Of course, we've learned differently over the past few years. All forms of energy carry a price, hydropower included. The potential loss of the Snake River sockeye salmon, recently listed as an endangered species, is an alarming cost of hydropower. The plight of the sockeye is not unique. Effects of hydropower projects on fish, wildlife, and other resources are being described nationwide.

Since the days of their construction, two hydroelectric projects on Washington state's northern Olympic Peninsula have been a focus of public controversy. Eighty years ago, the Elwha River was enslaved to industry. The money-making scheme of an early-day entrepreneur cost the public dearly: a productive public resource harnessed for private gain, with no restitution paid. The controversy continues today as "a fish problem that just won't die."¹

¹ H. Fish and B. Adamire, "Elwha Fish Problem Just Won't Die," *The Chronicle* (Port Angeles, Washington), 20 November 1985, p. 1.

The Elwha River drains the largest watershed in Olympic National Park, covering approximately 175,000 acres. Headwaters of the river originate near the center of the park on Mount Olympus. The mainstem of the river is some forty-four miles long, draining into the Strait of Juan de Fuca at the reservation of the Elwha S'Klallam Tribe, just west of Port Angeles, Washington (Figure 1). Once a premier salmon river of the northwestern United States, the Elwha was one of the few rivers in the country (outside Alaska) which supported ten fish stocks (including all five species of Pacific salmon). Additionally, the Elwha was renowned for chinook salmon that sometimes reached 100 pounds in size. In the early 1900s, two hydroelectric dams were constructed on the Elwha River. Neither had provisions for fish passage, although this had been a requirement of Washington state law since 1890.

HISTORY OF THE ELWHA AND GLINES CANYON DAMS

With financial backing of a Chicago investment firm, and oversight by several influential Seattle businessmen, the Olympic Power and Development Company began construction of the Elwha Dam in 1910. Despite the 1890 state law, the Elwha did not provide for a salmon fishway when it was built, and still does not today. The state delivered reminders to the company, and even weak "ultimatums" regarding fish passage requirements. Nevertheless, the reminders went unheeded and the regulations unenforced.

Notwithstanding assertions of increased opportunities for growth and development afforded by the Elwha Dam, the northern Peninsula was not united in welcoming this type of "progress." Long-time observers of the river clearly saw its

fate in the futile jumping of thousands of salmon at the base of the dam:

Game Warden Pike and Sheriff Gallagher have been having their troubles this week over the shutting off of the salmon from their spawning grounds by the big dam at the Aldwell Canyon, the same being contrary to the statutes made and provided. True, there is a flume up which the fish may go, but the trouble is, they can't. Hundreds of them have gathered just below the dam during the last few days until they are packed in together like a school of herring, or sardines in a box. Every few moments a big fellow makes a jump clear of the water that shoots out of the flume as tho from a hydraulic nozzle and strikes square in the flume above, only to be thrown back to the pool below.²

Dismayed by what he saw, James Pike, game warden of Clallam County, anxiously notified the state fish commissioner, J. L. Riseland:

I have personally searched the Elwha River and Tributaries above the Dam, and have been unable to find a single salmon. I have visited the Dam several times lately . . . and there appear to be Thousands of Salmon at the foot of the Dam, where they are continually trying to get up the flume. I have watched them very close, and I am satisfied now that they cannot get above the Dam.³

The Elwha Dam presented quite a dilemma to Leslie Darwin, who succeeded Riseland. Early in his

2 "Power Company Will Fish with a Derrick," *Olympic Leader*, 11 September 1911.

3 Letter from Pike to Riseland (1911), quoted in Bruce Brown, *Mountain in the Clouds* (New York: Simon and Schuster, 1982), pp. 63-64.

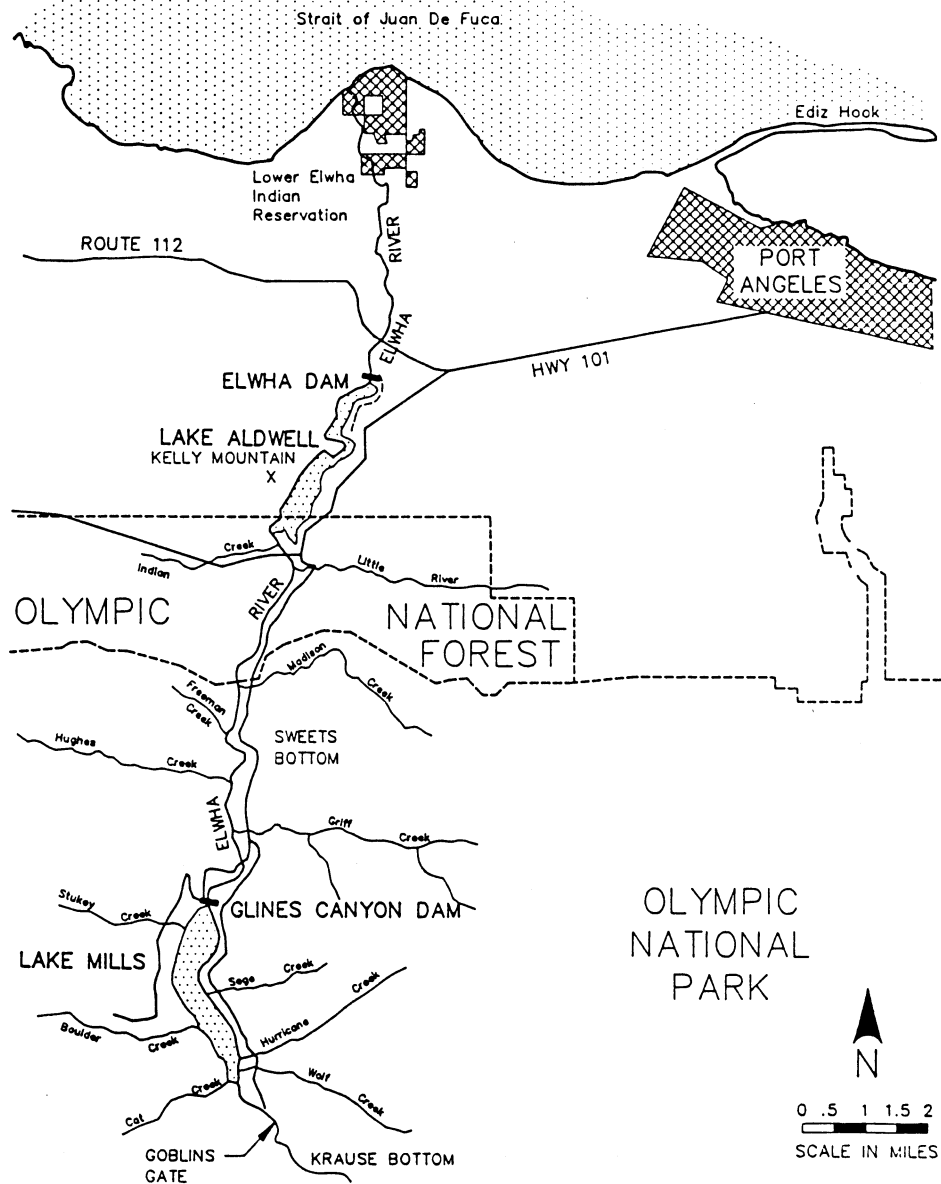


Figure 1. The Lower Elwha River & Vicinity

tenure, Darwin took a firm stand with the owner of a small mill dam on an Elwha tributary by requiring immediate construction of a fishway or removal of the dam. Yet the much larger Elwha dam, promoted as it was by influential Seattle businessmen, was another matter.

Caught between the requirements of a definitive state statute, an industry declaring the required fishway to be unaffordable, and a governor endorsing hydropower, Darwin proposed a compromise. In 1913 he suggested to the Olympic Power Company that a fish hatchery might be accepted at the Elwha Dam instead of a fishway, but only if the hatchery adjoined the dam. In this circumstance, he reasoned, the dam would be an obstruction sanctioned by the state, its purpose being to impede fish for the taking of eggs to supply the hatchery. Although methods of artificial salmon propagation were largely unknown, Ernest Lister, the state governor, seized this idea as a way to untie the hands of industry and meet fish requirements. Lister successfully promoted the idea with the state legislature, and the law was changed to allow hatcheries to be constructed instead of fishways.⁴

This initiated a policy which ultimately affected wild salmon runs throughout the state: "The immediate attraction of the hatchery lieu law from the standpoint of [the Department of] Fisheries was that it increased the department's funding. The drawback, however, was that the state gave up most of its power to stop a dam for the sake of the wild salmon, as well as the interest in doing so, since the bulk of Fisheries' energy was increasingly directed toward building the hatchery system

that is today the largest on the Pacific Coast."⁵

Thus, instead of a fishway, the Olympic Power Company was required to provide the state Department of Fisheries with land and funding for a hatchery at the base of Elwha Dam. A hatchery was completed in 1915. During initial years of the hatchery's operation, many thousands of eggs were collected from salmon returning to the river. These were the remaining wild fish that had begun their lives upriver before construction of the Elwha Dam. Each year, fewer and fewer fish returned to the hatchery, and in 1922 the department abandoned it as a failure. The once-abundant wild fish runs were decimated. Adding insult to injury, title searches later revealed that, in fact, the Olympic Power Company never deeded the hatchery to the state as pledged.

In 1926, the Olympic Power Company (reorganized as the Northwestern Power and Light Company) built the Glines Canyon Dam eight miles upstream of the Elwha Dam. Partly located on lands that were then in a National Forest, Glines Canyon Dam was later encompassed by Olympic National Park. No fish passage was provided at the Glines Canyon Dam, since the Elwha Dam had cut off salmon runs more than a decade earlier.

CURRENT STATUS OF THE ISSUE

Standing 105 feet high and 450 feet across at the top, Elwha Dam impounds Lake Aldwell, a 265-acre reservoir. About 200 feet high and 150 feet across at the top, Glines Canyon Dam is a concrete arch structure impounding Lake Mills, a 415-acre reservoir. The Glines Canyon Dam is located on an inholding of approximately 160 acres within the boundaries of Olympic

⁴ Brown, p. 71.

⁵ *Ibid.*, p. 74.

National Park. However, 90% of the reservoir inundates park land.

Of seventy-five miles of available spawning habitat in the Elwha River, only the last five miles below the Elwha Dam are currently accessible to salmon. Obstructed upstream by the Glines Canyon Dam, sediment no longer moves the full river length; below Mile 13, the channel is hardened and depleted of spawning gravels. Today, several hundred chum salmon remain, fewer than a dozen pinks return, the status of spring chinook is unknown, and sockeye are absent (although a landlocked form, kokanee, still exists in a lake above the Elwha Dam). Runs of coho, summer steelhead, and fall chinook continue, being supported in the lower river by a tribal hatchery and state rearing facility. A naturally spawning steelhead population (winter run) still returns to the lower river.

Today, the sole recipient of power from the Elwha and Glines Canyon dams is the Daishowa America Company, a Japanese-owned paper mill in Port Angeles. The dams supply 30-40% (approximately 90 megawatts) of the mill's power needs. Constructed before passage of the Federal Water Power Act (now called the Federal Power Act), the Elwha Dam has never had a license to operate. The Glines Canyon Dam received a 50-year license in 1926. Since its expiration in 1976, the dam has operated on annual licenses. The owner of both dams, James River II, Inc., is currently pursuing licensing of the Elwha Dam, and relicensing of the Glines Canyon Dam through the U.S. Federal Energy Regulatory Commission (FERC).

Over two dozen intervenors have joined in the licensing proceedings. A core group of intervenors, the Joint Fish and Wildlife Agencies, has participated in the licensing proceedings for over six years. The

group consists of the USNPS (Olympic National Park), U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Bureau of Indian Affairs, Elwha S'Klallam Tribe, Point No Point Treaty Council, and the Washington state Department of Wildlife. This interagency consortium is bound together by a common objective: restoring the Elwha ecosystem. Ironically, the state Department of Fisheries cannot intervene in the proceedings, having forfeited that right in an earlier legal agreement.

Two scientific studies specific to the Olympic Peninsula and the Elwha River proved to be quite important to the positions ultimately taken by the agency and conservation intervenors. In the late 1980s, a study of the fate of spawned-out salmon in the Peninsula's watersheds noted a minimum of twenty-two species of birds and mammals feeding directly on salmon carcasses.⁶ Carcasses were found to remain in the watershed of their spawning, generally drifting less than 610 feet from their original location. These findings (and those of other studies) have shown that salmon play a crucial role in food webs and nutrient cycling, serving as a primary conduit for the return of nutrients from the sea to the land.

For eight years the USNPS and the U.S. Fish and Wildlife Service researched what type of fish passage facilities would allow upstream and downstream salmon migration around the dams. If the dams are allowed to remain, at best five of the original ten fish stocks might be restored—and the prospects for doing

⁶ C. J. Cederholm *et al.*, "Fate of Coho Salmon (*Oncorhynchus kisutch*) Carcasses in Spawning Streams," *Canadian Journal of Fishery and Aquatic Science* 46:8 (1989), pp. 1347-1355.

that are only poor to fair (Table 1). If the dams are removed, and using the fish stocks that remain (or the most closely related ones from other areas), prospects of restoration are good to excellent for all but the sockeye (due to a lack of suitable brood stock).

In 1990, the USNPS, U.S. Fish and Wildlife Service, U.S. Bureau of Indian Affairs, National Marine Fisheries Service, Point No Point Treaty Council, and Elwha S'Klallam Tribe determined that sufficient research had been completed to provide a sound scientific basis for decisions regarding these projects. They concluded that only through the removal of both dams could meaningful restoration occur. Feasibility studies commissioned by the Elwha S'Klallam Tribe showed dam removal to be viable. These agencies, along with the conservation intervenors, formally recommended to FERC that the dams be removed. In 1991, the U.S. Department of the In-

terior concurred in the recommendation.

In February 1991 FERC released a draft Environmental Impact Statement (EIS) on the relicensing of the dams. The document analyzes four alternatives ranging from retaining the dams (with fish passage provided for) to removing them. No preferred alternative was indicated. The draft EIS states that the cost of electric power from the dams to Daishowa America (after the required mitigation is added) will be equivalent to the price that would be paid if the power were purchased from the Bonneville Power Administration grid. This utility has stated that it can provide replacement power to Daishowa America if the dams are removed. A final EIS (which will give a preferred alternative) is expected in 1992. Regardless of the recommendation in the final EIS, the decision is expected to be challenged by one side or the other in court, with a resolution years away.

Table 1. Prospects for Restoration of Salmon Stocks Native to the Elwha River

	If dams remain with fish passage	If dams are removed
fall chinook	poor	excellent
spring chinook	poor	good
coho	fair	good/excellent
winter steelhead	fair	excellent
summer steelhead	fair	good
pink	poor/none	good
chum	poor/none	good
sockeye	poor/none	fair
cutthroat	unknown	good
Dolly Varden	unknown	good

A significant aspect of the relicensing issue is a question of jurisdiction over the Glines Canyon Dam. In April 1991 FERC issued an order asserting jurisdiction over the Glines Canyon project. The Department of the Interior Solicitor's Office maintains that because the dam is within Olympic National Park, FERC has no authority to issue a license. This too is going to court, with a resolution likely at least two years away.

The staffs of two U.S. senators have recently drafted legislation regarding the Elwha issue. In effect, this legislation constitutes a negotiated settlement which opens the way to dam removal, an approach advocated by the fish and wildlife agency consortium of intervenors. The legislation is supported by the entire Washington delegation to Congress, and is to be introduced for consideration in 1992.

IMPLICATIONS OF THE ELWHA ISSUE

Will the decision on the Elwha issue set a precedent? Yes and no. Yes, to the degree that a *component* of other like issues might resemble a *component* of the Elwha case. And yes, surely a decision on jurisdiction will affect some other national parks containing dams. But a proper response to the question of precedent is, largely, "no." That any other dam issue will combine circumstances similar to those on the Elwha is highly unlikely. The uniqueness of the Elwha issue lies in a distinctive combination of circumstances: the Glines Canyon Dam is within a national park; a majority of the river habitat is pristine (i.e., not subjected to logging or agriculture); if the dams are removed, prospects for fish restoration are good to excellent; a Native American tribe having treaty harvest rights lives at the mouth of the river; the amount of

power produced by the dams is relatively small and goes to a single recipient; and replacement power is available. The notion that removal of the Elwha and Glines Canyon dams would set a national precedent is clearly erroneous.

However, the Elwha issue provides evidence of an evolving public sentiment. The misconception of conservation as being quite apart from, or even the opposite of, development and progress was in full operation during the building of the two dams, as demonstrated in this article written just as the Glines Canyon Dam neared completion:

It's either trees or industry, folks. Trees cannot stand if mills must run. Rivers cannot go unbridled unless we want nothing but the solitude of their canyons and open places. We've asked for industry and population, and with hardly no effort on our part, it is here. Let us take care we do not drive future work away. . . . Men died to make that 216 foot dam at Glines Canyon. We who have done little but watch, should mark its establishment fittingly.⁷

This view of conservation as "anti-development" remains common today. Full acknowledgment in law and policy of the precept "What is good for the land is good for us" may be years away. Yet this recognition is occurring on some fronts, as shown (incrementally) by some of our laws (such as the Electric Consumers Protection Act of 1986, which amended the Federal Power Act by requiring "equal consideration" of fish and wildlife needs). The change in outlook is also evident if one reviews newspaper head-

⁷ Quote dates from 7 April 1927, source unknown; found in archives at the Museum of the Clallam County Historical Society.

lines regarding the issue. From 1927: "Romance Hovers About Great Construction Job At Glines Canyon To Be Completed Soon . . . On A Spot Where Two Engineers Planned Work But Short Time Ago, Great Concrete Structure Is Being Completed To Furnish Power For Wheels Of Industry."⁸ In 1978, a different tone appears: "Compensation? The Elwha River's Lost Salmon Runs." It becomes more emphatic in recent years: "Dam Removal Prescribed for Ill Elwha" and "Take Down The Dams: Nature First, Power Second."⁹

CONCLUSION

Bound in an economic web and infrastructure created by default as much as by design, individuals and corporations often seem unwilling to volunteer the apparent "sacrifices" required by conservation. If individually we feel we cannot afford the costs, perhaps as a people together, we can. And ultimately, we cannot afford *not* to pay the "price" of conservation.

Far-reaching statutory decisions accompanied the building of the Elwha and Glines Canyon dams. Unique statutory or court decisions may accompany their removal. Whatever the outcome, the Elwha decision will tell a bit more about ourselves as a people, and where we are on the road to conservation.

POSTSCRIPT

After struggling through numerous false starts, I ultimately concluded that the history and implications of this issue are far more important than all the details, however fascinating, that lie between. Having chosen this objective, I must say that the bulk of the Elwha River story belongs to the Elwha S'Klallam Tribe and to the wilderness resources of Olympic National Park. If the Elwha story were fully written, they would be the principal authors. This article therefore represents one paragraph, or a single page at most, of the extensive story that is "the Elwha issue."

⁸ *Ibid.*

⁹ Bruce Brown, "Compensation? The Elwha River's Lost Salmon Runs," *Seattle Post-Intelligencer*, 16 October 1978; Sandi Doughton, "Dam Removal Prescribed for Ill Elwha," *Tacoma News Tribune*, 3 September 1991; Joel Connelly, "Take Down The Dams: Nature First, Power Second," *The New York Times*, 4 January 1992.