

THE ELWHA DAM

Economic Gain Wins Out Over Saving Salmon Runs

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The Elwha River dams have been the center of much discussion over the last several years and under the passage of the Elwha Restoration Act in 1992, removal of the two dams on the river located six miles west of Port Angeles on the Olympic Peninsula appears likely. The Elwha was the first dam built on the river in 1913. Situated five miles upriver from the Strait of Juan de Fuca, the dam destroyed the Elwha's prodigious salmon and steelhead runs—runs that once numbered close to 400,000 and now stand at about 3,000. When this dam was built, however, local community leaders envisioned it as the centerpiece of an evolving economy and expanding civilization. What was seen as key to the growth of the community in the early 20th century not only wreaked havoc on the river's salmon runs but triggered a conflict between the builder of the Elwha Dam, Thomas Aldwell, and the newly appointed conservationist state fisheries commissioner, Leslie Darwin. Within the contours of their debate over how nature was to be used and managed we can find the roots of the current divisive discussions regarding the value of salmon versus dams.

In 1890 a young Canadian emigrant, Thomas T. Aldwell, disembarked from the *George E. Starr* and cast his ambitious eyes upon the muddy but growing town of Port Angeles. In his autobiography, *Conquering the Last Frontier*, Aldwell retrospectively described his vision of the potential metropolis:

...That harbor rimmed with vital industry with payrolls expanding, houses being built, and streets being laid. The raw material was here; raw materials that called for the minds and hands of builders who would think of this as a home to make for their children and their grandchildren and their great grandchildren. I felt I had met a challenge to help build a happy and prosperous community and I decided to accept it. Whatever I would do in life was now tied to a ragged, sprawling, ambitious little town called Port Angeles.

Casting himself in the light of the heroic pioneer, Aldwell explained that he envisioned his own future irrevocably interwoven with that of a Port Angeles destined to grow and boom and move beyond its rustic beginnings; with this idea in mind he began to work his changes upon the landscape.

Aldwell chose a propitious year to move to Port Angeles. Due to recent population growth, a land boom starting in 1889, and speculation surrounding the anticipation of a railroad being built to Port Angeles, the town was brushed with a roseate bloom as the residents anticipated a bright future of industry, development, and prosperity. This anticipation and sense of impending growth and prosperity was furthered by another event occurring soon after Aldwell's arrival. Port Angeles residents embarked on a campaign to pry loose 3,100 acres from the federal preserve designated at the original townsite. Residents resented the land being controlled by

the federal government and argued that the reserve was blocking the town's natural growth; a later booster pamphlet published in 1898 by the Clallam County Immigration Association, a local booster organization, referred to the reserve land as "locked up."

The campaign's strategy was a model in simplicity. Members of the community moved illegally into the preserve and began "proving up" on home sites. Following this step, the well-organized squatters flooded their congressman, John L. Wilson with letters and telegrams demanding he introduce a bill releasing the desired and squatted-upon federal land. He proved amenable, and with a few well-timed trips to Washington, D.C., by Port Angeles residents, the squatters were able to take title to the land in early 1894. Aldwell claimed and improved two lots, paid the appraisal fee, and thus gained title. He also bought several lots from squatters who could not afford the appraisal fee. This marks the beginning of Aldwell's career in land speculation, which not only allowed him to accrue capital but also to make the necessary connections for raising funds and generating support for the later construction of the Elwha Dam.

Aldwell perceived land as both place and commodity. "There is something about belonging to a place. You want to control more and more of it, directly or indirectly...land was something one could work with, change, develop." The principle of working with, changing, and developing the land resided firmly in Aldwell's attitude about land—it existed to serve human needs. He found himself increasingly drawn by the allure of land speculation and soon discovered a small claim on the Elwha River. "The view was magnificent from that hilltop claim...and it would have been my claim except that...I decided to go on down to [another] cabin." This claim was situated in a deep canyon, through which the Elwha roared, with vine maples surrounding the cabin and a spring running in front of it. "The scintillating rays of sun were coming through the branches and sparkling on the water...suddenly that spring embodied all of life and beauty I thought I'd ever want." Transcendental moments aside, it was here that Aldwell later built the Elwha Dam.

Aldwell was not alone in his desire for hydroelectricity in Port Angeles. A booster pamphlet published by the Clallam County Immigration Association titled, "Port Angeles, the Gate City of the Pacific Coast," identified hydroelectricity as the key to profitably harvesting nature's bounty:

The situation of Port Angeles from a commercial and from an industrial point of view is, indeed, most advantageous. Its shores are washed by one of the grandest commercial waterways of the world; the soil of its valleys and of its foot hills [sic] is very rich and very productive.... For the utilization of these varied matchless resources, nature has provided Port Angeles with a magnificent water power, the possibilities of which are almost unlimited.

After discussing the potential power available through hydroelectricity, the authors of the pamphlet elucidated the various ways in which harnessed power could assist in extracting resources and converting nature's wealth to liquid capital:

And what would be the possibilities of that power? It would turn the wheels of state; it would provide sufficient power for the manufacturers, the electric lighting, the street car service of a large city; it would furnish the power for the operation of an electric railway to the lakes, to Dungeness, an electric logging railway into the mountain regions, the power for the manufactures of the city and then not be entirely utilized.

Truly, a grand destiny is ours.

The booster literature did not limit the benefits of hydroelectricity merely to financial ones. The refrains of populist utopian rhetoric arose in one article extolling the need for and benefits of hydroelectricity:

Should any considerable portion of that enormous power ultimately be developed and utilized, who will attempt to foretell the innumerable benefits which will accrue therefrom to mankind? It would completely revolutionize economical industrial conditions. The cost of living would be greatly reduced. Not only the necessities but the luxuries of life would be easily within the reach of the poor as well as of the rich. With the many electrical appliances already invented for the use, convenience, and benefit of mankind, and with the inventions an inventive age will produce for the betterment of humanity, Bellamy's ideal commonwealth may not be as far in the future as the pessimist might imagine.

To the boosters and civic leaders of Port Angeles, hydroelectricity promised to be the tool through which they could not only amass wealth but also improve American society.

Aldwell began buying up land for building the dam and reservoir. With investment and assistance Aldwell purchased the necessary land over a period of 12 years. In 1910 Aldwell organized the Olympic Power and Development Company. Investment and support were garnered locally, much of it from lumber interests, and the capital stock for the company was set at \$1 million. The company had one hurdle to clear before obtaining the franchise for a dam from the Port Angeles City Council. The Port Angeles mayor preferred a plan for a power plant on the Little River supported by Seattle investors. The council overrode the mayor's veto, however, and awarded the franchise to Aldwell's Olympic Power and Development Company.

In the franchise meeting Aldwell promised 50,000 kilowatts, as opposed to the mere 500 kilowatts that were to be generated by the proposed Little River Dam. Local boosters sought investment in their economy and likely concluded that an abundant power source would engender increased investment and, thus, growth. As one Port Angeles newspaper article stated, "Commercial bodies in all cities now recognize this and encourage in every way the development of large water powers, which have a capacity sufficient to supply cheap power to large manufacturing concerns...a large constant flow of water is essential to have sufficient power to develop economically." The boosters sought power generation in order to supply electricity for the anticipated next generation of industrial manufacturing.

It was not long before Aldwell began seeking additional investment for the dam project. For this he headed east because, as he wrote, "Power in the West had to be financed in the East." On a trip to Chicago and New York Aldwell struck gold by convincing the investment firm of Peabody, Houghteling, and Company to sink substantial capital into the project.

The investment in the dam by this Chicago firm reflected their confidence in the growing Port Angeles economy. Development in the region grew apace during the years between 1910 and 1914. Logging boomed along the Strait of Juan de Fuca and in the foothills and river valleys of the Olympic Mountains as the easily accessible areas around Puget Sound were increasingly cut over. Mike Earles, a wealthy lumberman who worked his way up through the logging industry and eventually made Seattle his base of operations, built the first major mill in the Port Angeles area in 1914 to receive power from the Elwha Dam upon its completion. Earles also financed and managed the building of a railroad from Port Townsend, where boxcars were loaded on barges and shipped to Seattle. The railroad went into operation in 1915. These developments, along with construction of the dam, greatly increased Port Angeles' ability to harvest, process, and ship lumber.

While these events helped stimulate steady growth for the town after 1914, it is important to keep in mind that the extractive economy and the profits of the Olympic Peninsula were largely controlled by capitalists living outside the region. As historian William Robbins points out in his

study of the logging industry in Coos Bay, Oregon, "For more than 150 years the lumber and forest products industry has provided a prime example of migrating capital, rapid liquidation of resources, and boom-and-bust cycles for towns dependent on the forest bounty." Robbins demonstrates that the migratory capital backing the exploitation of Northwest resources largely originated from outside the region. Outside investment certainly controlled the logging economy of the Port Angeles area. A 1908 listing of timberland owners with title to more than 10,000 acres revealed that only one, Mike Earles, lived in the region; and he resided in Seattle. The Port Angeles mill built by Earles in 1914 was sold to a California owner in 1915.

The spirit of capitalism, so strong and untrammled in the American West during the late 19th and early 20th centuries, played a fundamental role in the building of the Elwha River Dam. As William Robbins writes, "It is essential to recognize that for the last thirty years of the nineteenth century and into the early years of the twentieth, the American West was the great natural-resource reservoir and the investment arena for eastern U.S. and western European capital." While boosters spoke of the social benefits of extracting resources for wealth and generating electricity, their fundamental interest was in generating capital and accumulating wealth.

In the case of Aldwell and his project, although he was able to create some local interest and investment, the construction of the Elwha Dam would never have been accomplished without substantial investment by the firm in Chicago. It was their capital, much less than their expertise, that resulted in the damming of the Elwha. And unlike Aldwell and the boosters of Port Angeles, the Chicago investors did not conceal their interests behind impressive speeches about improving "the commonweal" or creating a "glittering metropolis." In a letter to Aldwell the firm articulated its interests quite clearly after discovering that he had promised the city of Port Angeles it could defer payment for electricity generated by the dam. They unequivocally explained that they required immediate capital return from the dam and in the future Aldwell would make no more important decisions without first consulting them.

Local boosters aggressively pursued investment from outside the region. Port Angeles businessmen sought to entice emigrants and capital to their town while convincing themselves of the benefits to their community. Nature appeared abundantly benevolent in the bounty provided for extraction and sale, and local businessmen assured themselves and others that the wealth to be gained from harvesting resources such as lumber, salmon, and minerals, would contribute to Port Angeles' growth and success as well as to the pocketbooks of wise investors. Moreover, clever entrepreneurs were not limited to conventional means of extracting profit from nature. A Tacoma resident proposed a particularly bold idea to the Port Angeles Board of Trade, requesting their investment support. He suggested using heated electric wires to cut large pieces of ice from glaciers on the side of Mount Olympus, shooting them down a 30-mile wooden flume to Port Angeles, and then shipping the ice to San Francisco for use in cold storage houses. The board, maybe recognizing the limits of technology and capital or just stunned by such a grand vision, politely declined involvement in this particular scheme.

While businessmen in the Port Angeles area pursued the wealth to be amassed from logging, mining, and fishing, certain limits arose that increasingly restrained their economic activities. The emergence of the Progressive Era conservation movement resulted in resource management initiatives that impinged on the laissez-faire economic environment within which American capitalists had long operated. The overexploitation of resources that resulted in economic booms and busts and incredible environmental damage had engendered a movement

that sought to rationally and efficiently manage resources for the long-term public good. However, in the hinterlands of the nation, such as the Pacific Northwest, restrictions on the use of resources were haltingly codified or were ignored for lack of enforcement. The apparent superabundance of resources made it difficult for conservationists to convince people of the need to regulate commercial activities and development. For many years entrepreneurs continued to extract from forest, hill, river, and ocean whatever promised suitable profit at whatever price the market would bear and regardless of the environmental and social consequences.

When Aldwell began building his dam he appeared untroubled by the impacts the dam would undoubtedly wreak on salmon fisheries. This lack of concern did not reflect disdain for nature. In his autobiography Aldwell spoke frequently of his love for nature, and for fishing in particular. But like most of his contemporaries, Aldwell favored quick, profitable development over cautious progress and conservation of resources. Wilderness was a barrier to progress and therefore had to be tamed. He would have us believe he did not tremble at the risks inherent in the building of dams.

"The transformation of a wilderness into civilization was the reward for his sacrifices, the definition of his achievement, and the source of his pride. He applauded his successes in terms suggestive of the high stakes he attached to the conflict." Roderick Nash wrote this of the American pioneer in general and Aldwell certainly fits this model. In his autobiography Aldwell expresses great pride in the Elwha Dam project. He was proud of his role in "conquering the wilderness." While many rivers ran thick with salmon, encouraging a belief in the "unlimited" abundance of fisheries resources, electricity remained in short supply and the demand for it increased with the steady growth of population and commercial enterprises; therefore the choice was clear to Aldwell. Instead of worrying about the salmon that would be eradicated by the dam, he saw the potential for profit and the development of a civilized metropolis that hydroelectricity would bring.

As historian Richard White writes in *The Organic Machine*: "Emerson's vision of the machine as a force of nature found its fullest expression as part of the old romance of energy in Western society, a dream of liberation from labor, an end to social conflict and environmental degradation through the harnessing of nature's power to human purposes." The perfecting of the Elwha as an engine of development, prosperity, and social progress was the ultimate goal of Aldwell and his fellow boosters.

The completion of the Elwha Dam closed off the river to spawning salmon and steelhead. Not only did it prevent spawning Chinook, coho, chum, and humpback from reaching the upper river and its tributaries, it also blocked the sockeye from passage to Lake Sutherland. Aldwell's failure to build fishways across the dam violated an 1893 state law forbidding the construction of dams without fishways. In September 1911 Clallam County Game Warden J. W. Pike wrote a letter to State Fisheries Commissioner J. L. Riseland sounding the alarm on the dam's impact on spawning salmon.

I have personally searched the Elwha River & Tributaries [sic], above the dam, & have been unable to find a single salmon. I have visited the Dam several times lately, was out there yesterday and there appears to be thousands of Salmon at the foot of the Dam, where they are jumping continually trying to get up the flume. I have watched them very close, and I'm satisfied now, that they cannot get above the dam.

The letter concluded by discussing the Elwha's virtues as a salmon-producing river and the destruction the dam would wreak on the coho salmon run and the fishing industry. Riseland sent Superintendent of State Fish Hatcheries John Crawford to examine the dam. Crawford acknowledged that there were no fishways at the dam and no means by which the salmon could bypass it. Further, he stated that although it was impossible to add effective fishways at that time to the design of the dam, he was assured by the engineer in charge of construction that a fishway would be built as soon as the dam was in the final stages of construction. This never happened.

Riseland, after meeting with investing members of the Olympic Power Company, representatives of the commercial fishing interests of the Olympic Peninsula, representatives of the United States Bureau of Fisheries, Thomas Aldwell, and the dam engineer, proposed a plan for getting salmon past the dam. Many experts believed then that a functional fishway could not be built in a dam as high as the Elwha, which upon completion exceeded 100 feet. Accordingly, Riseland proposed that the Olympic Power Company build and maintain a fish trap at the base of the dam and, with an elevator, lift the fish above the dam and release them to continue their spawning run. The letter explicitly stated that this action would have to be taken or the Olympic Power Company would be required to build a functional fishway.

Aldwell ignored demands for fish passage renovations until the arrival of a new fish commissioner. Leslie Darwin was appointed State Fisheries commissioner in 1913, after the election of progressive Democrat Ernest Lister as governor. Darwin had moved to Bellingham from Texas as a young man and panned for gold on the slopes of Mount Baker. He later entered the field of journalism, becoming a reporter for the *Seattle Times* and managing the Bellingham newspapers, the *Herald* and the *American-Reveille*. Under Darwin's leadership the latter evinced a strongly progressive tone, calling for a fairer distribution of wealth, greater taxes on rich corporations, and decrying the corruption of big business. Upon winning the governor's seat Ernest Lister sought out a fish commissioner who would strictly enforce fisheries laws. Darwin was the first fish commissioner to openly criticize the fishing industry's wasteful practices, representing a significant break from the past when fish commissioners maintained ties to the fishing industry.

Darwin was representative of an emerging body of scientific managers who assumed the role of regulating industry and managing resources during the Progressive Era. The conservation movement had emerged in response to overexploitation of natural resources and environmental degradation. According to historian Richard Hofstadter, "in the Progressive Era, the life of business, and to some degree, even of government, was beginning to pass from an individualistic form toward one demanding industrial discipline and engendering a managerial and bureaucratic outlook." Most progressive leaders were members of the professional classes, people of high education and status in American society. Doctors, editors, college professors, small businessmen, and lawyers were active in the Progressive movement, which gained momentum in a period of economic and political stability. Rather than seeking major change, the progressives sought to adjust the existing order to better adhere to the values of restraint, conservation, support of the community, and participatory democracy, which they had been raised in and still valued in the face of a changing society that, in their view, assigned undue power to those accruing massive capital. In their eyes the creation of a system of bureaucratic management through government would allow them not only to curb the excesses of industrial capitalism but also to ensure continuation of traditional preindustrial values in American society. The movement is most commonly understood as an effort to curb the worst excesses of

capitalism. As activists they saw themselves as the conservators of democracy, bringing restraint over a new capitalist era that while running amok threatened not only natural resources but the freedom and opportunities of American citizens as well.

Darwin felt that the role of the conservationists was to intervene and manage natural resources where industry had overexploited and threatened the health of those resources and harmed the public good.

It has always seemed to me that the responsibility for being the head of the Fisheries Department of this state is a very great one. Millions of dollars are invested in our fisheries; thousands are dependent upon it for employment; the demand has yearly increased, and the efforts to take our fish have multiplied to the extent that some of the salmon runs have shown a great decrease.

The people of this state have an interest in perpetuating and maintaining our food and shell fishery, compared with which the right of any individual, no matter how great his investment therein, sinks into insignificance.

Darwin's goal was not the interruption or prevention of impacts to the ecosystem from industrial development. He strove to efficiently manage resources in order to sustain their productivity and gain the most use from them. "Many of those interested in catching and canning fish lose sight of the fact that the state's interest in our fisheries is paramount to the interest of any individual who engages in their taking merely for profit." Darwin's views were similar to other conservationists of the period who, according to historian Samuel Hays, attempted to transform "a decentralized, nontechnical, loosely organized society, where waste and inefficiency ran rampant, into a highly organized, technical, and centrally planned and directed social organization which could meet a complex world with efficiency and purpose." Theirs was not a radical position but rather a moderate one; they merely sought to restrain the worst excesses of laissez-faire capitalism:

It seems to me to be a crime against mankind—against those who are here and the generations yet to follow—to let the great salmon runs of the State of Washington be destroyed at the selfish behest of a few individuals who, in order to enrich themselves, would impoverish the state and destroy a food supply of the people.

Unfortunately, every pressure is exerted in behalf of those selfishly interested. These selfish interests have gone to almost unbelievable extent in certain instances in order to silence any opposition in their course, and have slandered and vilified those who opposed their plans and methods. These persons do not want the people of the state to know the truth of the matter, believing that if they do they will act to protect and conserve.

It is my belief that had the people understood the situation, they would have acted long ere this, and would have prevented the practical destruction of some of our greatest salmon runs.

Upon taking office, Darwin quickly discovered that the Olympic Power Company had failed to perform the steps ordered by his predecessor. Darwin latched onto the issue of the Elwha Dam immediately and pursued it relentlessly. After exchanging a series of letters and telegrams with Aldwell, Darwin proposed construction of a fish hatchery below the dam, strongly asserting the state's preeminence over the federal government regarding state fisheries. In response to a conversation between Aldwell and representatives of the Bureau of Fisheries, Darwin wrote:

The Federal Government has not the least thing in the world to say concerning any thing in the State of Washington relative to its food fish. We are highly pleased to have the Federal Government establish as many hatcheries as they can be prevailed upon to construct and we shall

do everything in our power to help them secure sites, but you must appreciate that they have nothing whatever to say whether or not the State shall enforce its laws relative to the construction of fishways.

Having asserted the authority of the state over its own fisheries, Darwin then proceeded to offer a solution to the problem. Pointing out that "no officer of the State has any right to waive one of the state's statutory requirements," and that no one was "at liberty to say to you that you will not have to put a fishway over your dam," Darwin proposed a clever, pragmatic, and illegal plan. He suggested that by selecting a hatchery site at the base of the dam and making the dam the obstruction for the purpose of collecting eggs for the hatchery, it would be possible to obviate strict enforcement of the fish passageway law and, therefore, maintain both salmon runs below the dam as well as hydroelectricity generation. In short, Darwin requested that Aldwell provide a site and funds for the building of a hatchery.

Aldwell failed to appreciate the solution offered to him and continued to resist compliance. As Aldwell delayed committing to the plan, the fish commissioner grew increasingly impatient. After an extended exchange of letters, and at the end of his rope due to Aldwell's failure to implement the hatchery plan or respond to his missives, Darwin fired off a short, gruff letter on June 2, 1914. He made it clear that unless he received a response regarding Aldwell's plans within five days, he would issue an official order to build a fishway across the dam: "It is out of the question for us to allow another fish run to beat its brains out against the dam." Aldwell responded in a letter the following day, dated June 3, 1914, that he was doing everything possible to meet Darwin's requests to provide a hatchery site and \$2,500 for construction of the hatchery. Before the end of June, they had reached agreement on these terms and began steps to have the hatchery built.

The building of the Elwha hatchery is significant in that it represented Darwin's hopes of using hatcheries not only to ameliorate the impact of dams on salmon spawning runs but also to increase the numbers of fish overall.

Every major stream in the state...which salmon ascend and particularly those of Puget Sound should have hatcheries established thereon.... In order to care for the growing fishing industry, it would seem hardly possible for the state to have too many.

Darwin believed that the salmon fisheries could be managed in such a way that fish stocks could not only be maintained in the face of heavy commercial fishing and development but could actually be increased in number. Nature could be managed, manipulated, and improved upon through the application of science and technology. The impacts of overfishing, dams, and logging on salmon runs might be ameliorated by an aggressive campaign of hatchery construction and salmon propagation. The construction of hatcheries and raising of hatchery fry constituted the primary mission of the fisheries agencies in the late part of the 19th century and the early 20th century. Hatcheries were the only solution available to fisheries managers in this early period of little authority and political and public support for resource extraction. From 1896 to 1915 the total salmon and steelhead fry production for Washington state increased from 4.5 million to over 1 billion.

Importantly, the deal Darwin struck with Aldwell was a continuing violation of the 1893 fish passageway law. Whereas Darwin had elsewhere willingly used dynamite to remove small earthen dams in an effort to enforce the law and restore salmon runs, he was more flexible with such a heavily capitalized project as the Elwha Dam; he struck a deal with a company that had been in violation of the law for five years, years during which the salmon runs were dealt serious

harm. However, there were limitations inherent in the political and economic environment for Darwin.

Regardless of the letter of the law, it is reasonable to assume that Darwin did not command adequate authority as fish commissioner to remove a dam of such magnitude, commanding such popular and economic support. The power of the conservationists and state government was limited in this period and region. Darwin pushed hard to get what he could, believing that he had forged a feasible compromise.

Darwin later convinced the legislature to change the law so hatcheries could be built in lieu of fish passageways. In the first few years of his administration he accepted seven hatcheries in place of wild salmon runs annihilated by the construction of dams. Indeed, the construction of hatcheries marked the ambitiousness of his goals as fish commissioner and reflected the trust in scientific management of resources that was typical of the early breed of conservationists and resource managers and which introduced a long century of fisheries mismanagement.

In this vein, the first two years of his administration, from 1913 through 1915, marked a period of busy activity, with Darwin focused on increasing propagation throughout the state. Collection of eggs during the first year of Darwin's tenure exceeded the greatest annual collections by over 50 percent. Five new hatcheries were built, and by 1917 he had constructed ten new hatcheries despite limited financial support. Other hatcheries were either enlarged or reclaimed after being abandoned. Darwin waxed rhapsodic on the potential of the Elwha Hatchery. "The indications are that it will be developed into one of the best hatcheries in the state by reason of the fact that the Elwha River seems to be used by a number of the varieties of salmon." He attempted to increase the gathering of eggs to the greatest degree possible and advocated distributing eggs to hatcheries not gathering sufficient amounts for propagation—at that point a new development in hatchery practices; one that would prove problematic in later years.

By the time of his final report in 1921, the number of hatcheries in the state had been increased from 17 to 31 and the hatching capacity had tripled since 1913, when Darwin took office. But Darwin's departure was laden with frustration and failure. He wrote, "To him who tries to stand between the greed of those to whose private interest it is to destroy a great natural resource and the state which owns that resource, there is reserved a most unpleasant portion." Despite his efforts, fish runs continued to plummet, especially on the Elwha and Columbia Rivers. Darwin attributed this to overfishing that occurred in 1917 and 1918, harvesting of immature fish, resistance to regulation by fishermen and cannery owners, pollution from industrial and urban development, and, of course, dams.

On the Elwha River things went badly for Aldwell and Darwin *and* the salmon. The dam, originally built on unstable riverbed, blew out after heavy rains in the fall of 1912. Beset by the burdensome costs of reconstruction, it was sold in 1919 to a subsidiary of Crown Zellerbach to provide electricity for a mill in Port Angeles. By 1921 few fish were returning to the dam on the Elwha, and in 1922, only a year after Darwin left office, the Elwha Hatchery was abandoned. The hatchery failed and the electricity expected to power the growth of a metropolis in the end provided energy for one milling operation. Simultaneously, the returning salmon began their decline to a mere shadow of their historically prodigious runs. Above the Elwha Dam only memories remained of the flow of sleek red and silver bodies that had once surged through rapids to reach their spawning grounds and build their redds.

The passage of the Elwha Restoration Act in 1992, which calls for the restoration of the salmon and steelhead runs and removal of the dams, if necessary, indicates the extent to which early battles over economic development and preservation of salmon runs continue to haunt public policy and environmental management in the Pacific Northwest today.

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