

A historically sustaining waterway, the Columbia River is well-known in the Pacific Northwest as a symbol of culture, energy, and economic power. Before the arrival of Lewis and Clark in 1802, the river had been an integral part of Native American culture, whose people thrived off of the estimated 16 million salmon that spawned along the river and its tributaries (Burne 2). Since the late 19<sup>th</sup> century, the river's salmon population has been in severe decline due to cannery operations, mining, logging, and most significantly, damming (Mann and Plummer 1). Due to the extent to which these developments have affected the salmon habitat and Native Americans along the Columbia River, measures must be taken in order to restore the once-bountiful Pacific Northwest.

Damming America's rivers became an icon of prosperity and community development after it was apparent that the United States needed to devise ways to produce aluminum cost-effectively, with the most efficient option being hydroelectric power. In post-World War I America, the demand for hydroelectric aluminum production grew when Germany became the chief aluminum-producing country shortly after Hitler gained control (Reisner 168). By 1942, the United States had a large surplus of hydroelectric power, and, "by the middle of the war, almost half of the aluminum production in the country was located in the [Pacific] Northwest – nearly all of it going toward the war effort" (Reisner 169). Soon, the power harnessed by dams for aluminum production transformed into an inexpensive source of electricity for the average American household (Reisner 174). Communities along the Columbia River became entirely economically dependent on these dams, and engineering and construction firms relied heavily on the government for work (Reisner 174). As Marc Reisner asserted in his

book, *Cadillac Desert*, “What had begun as an emergency program to put the country back to work, to restore its sense of self-worth, to settle the refugees of the Dust Bowl, grew into a nature-wrecking, money-eating monster that our leaders lacked the courage or ability to stop” (Reisner 175). Contrary to the indigenous peoples’ desires for environmental betterment, the government was not willing to deal with the consequences of their industrial ambitions.

The wild salmon populations, once so large that they were a symbol of the Pacific Northwest, face near extinction along the river due to increased numbers of dams and turbines. Being anadromous animals, several species of Pacific Salmon make their way in “salmon runs” down the Columbia River and eventually into the ocean every year, where they thrive until the next spawning season. Because of these dams, up to 95 percent of some runs never make it to the ocean, the impact of which has given cause for salmon to be considered for the Endangered Species List. Most of these deaths are blamed on the giant turbines that are part of the energy-harnessing dams along the river. When turbines are low in number, young salmon are able to travel over the spillways, a significantly safer route than having the salmon swim through the turbines (Mann and Plummer 1)..

In Washington State’s Grant County, officials at the Wanapum Dam considered installing more efficient turbines in an “effort to meet the growing energy demands throughout the region” (“Roll On, Columbia”). The problem with increasing the number of turbines on the river’s dams, however, is that while they are more economically efficient, the mortality rates of salmon are significantly increased as less fish are able to travel over the spillways. Most of the blame for the soaring population deficiencies along

the Columbia River Basin has been placed on the lower four dams along the Snake River, where the Army Corps of Engineers added more turbines in the 1970s (Mann and Plummer 1). While spilled water affects the livelihood of salmon, it also amounts to lost electricity, something that alarmed the Corps into finding ways to reduce losses of salmon along the river that housed their dams (Mann and Plummer 1). The corps created improved fish ladders, modified their turbines to reduce their damages, and moved juvenile fish downriver in barges and trucks (Mann and Plummer 2). The damage, however, had already been done to the wild salmon populations, and without proper legislation the species still faces extinction in the Pacific Northwest.

To make up for lost salmon populations and habitat destruction, Congress passed the Mitchell Act in the late 1930s, which provided funding for salmon hatcheries that would raise fish to be released in the wild runs (Burne 3). Critics of this system argue that not only does interbreeding lead to interference with the genetics of the wild fish, but that the hatchery fish mask the declines of the wild fish and actively compete for food and space while transmitting diseases amongst the wild populations (Burne 5).

Though accustomed to the government putting their needs behind those of their white neighbors, many tribal groups have partnered with environmental agencies to encourage the breaching, or terminating, of the river's dams. In 1994, the Plan for Analyzing and Testing Hypotheses, (PATH) was formed by concerned tribes, environmental groups, and scientists to determine a proper model of the salmon life cycle and the effects of downstream migration through the dams (Mann and Plummer 2). The group of twenty five scientists eventually determined that in almost every scenario of

salmon depletion, breaching the dams was the most effective solution to the recovery of the populations (Mann and Plummer 2).

In opposition to the idea of breaching the dams, the Cumulative Risk Initiative (CRI) was formed to re-analyze the efforts of PATH (Mann, Plummer). The group concluded that breaching the dams would only help the fall Chinook species, and they favored stopping the dewatering of streams and rivers as opposed to breaching the four lower Snake River dams, as PATH had suggested (Mann and Plummer 2). As George T. Frampton Jr., chair of the White House Council on Environmental Quality admitted, “There is not a single elected representative in Congress from the region that in any way supports breaching” (Mann and Plummer 2). Because of this strong and widespread political opposition to dam breaching, the Salish natives and other salmon advocates face a bleak future in their legislative endeavors to improve the livelihood of wild salmon populations.

In addition to breaching the dams, salmon advocates have proposed adding the Pacific Northwest’s population to the Endangered Species list. This plan would encourage more protective action on the government’s behalf, because the Endangered Species Act requires that the federal government implement a “recovery plan” when a species is in danger of extinction (Begley and King 3). This could include restrictions on land and water use, but it could also potentially turn lucrative commercial- and sport-fishing industries into “victims” (Begley and King 3). However, one must reflect on warnings decades ago surrounding the addition of the Spotted Owl to the Endangered Species List. By adding the owls to the list, Congress was forced to restrict deforestation and habitat declination. The logging industry was concerned with the predicted 120,000

job losses because of this protection, and lobbied against it much the same way that people who require the dams for their own economic benefit are arguing against salmon protection. Though this protective action was predicted to harm the area's economy, the region has since added 279,000 jobs. (Begley and King 3). Because the controversy over the spotted owls did not affect the economy as was predicted, it is possible that protecting the Columbia's salmon will not amount to great economical consequence.

To determine the financial effects of dam breaching, policy analyst Steven Weiss of the Northwest Energy Coalition used figures drawn from the government's own economic studies to determine that the dollar costs and benefits of breaching would roughly balance out (Clausen 2). He asserted that rail and trucking firms, tribes, nontribal commercial fishermen, private ownership companies and the recreation industry are just some of the groups that would benefit economically from the breaching (Clausen 2).

As a solution to depletion of salmon populations, destroyed river basin habitat, and a loss of culture for the Salish Native Americans of the Pacific Northwest, it would be most beneficial to breach harmful dams along the river and to add the Columbia River's salmon to the Endangered Species list. If the latter initiative was taken, there would be more reason for the federal government to continue taking action on the species' welfare in the future, and if the dams were breached, the salmon runs would be more likely to reach the ocean and continue spawning for years to come. While breaching the dams is considered a controversial topic because of economic consequences, the region needs to assess the extent of these consequences, and re-determine where their priorities lie in regards to the welfare of their region or the welfare of their bank accounts. The Pacific Northwest is a rainforest, and if people decide to live amongst the forests,

species, and waterways that the region has to offer, they should be ready and willing to protect their environment.

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