Who Gives a Dam? An Examination of Stakeholder and Sovereign Perspectives on Dam Removal and Restoration of Lower Snake River Salmon Populations

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Abstract

The decimation of salmon populations on the Snake River, greatly worsened by the construction of the four Lower Snake River (LSR) dams in the 1970s, has launched a decades-long debate about whether the dams should be removed. A diverse coalition of stakeholders and sovereigns is pushing to restore the river to its natural flow. Scholarly literature on LSR dam removal has primarily focused on cost-benefit analyses of dam removal and the unlikely political alliances in the fight for breaching the dams. While these paradigms remain important in understanding the complexity of this issue, research has generally failed to document why those fighting for dam removal are doing so. Through semi-structured interviews with key stakeholders, I characterize how environmentalists, recreational guides, and citizens of sovereign Tribal Nations are motivated to advocate for dam removal and illustrate these individuals' connections to this issue. I argue that stakeholders are motivated by salmon's cultural, natural, and economic importance to their homes and, in the case of the Tribes to their cultural livelihoods. The varying motivations for involvement in the campaign for dam removal fall into two groups: issues with the ongoing operation of the dams and the perceived benefits of dam removal. There was a consensus among interviewees regarding which groups were aligned with or opposed to the dam removal effort. Sovereign Tribal Nations are unanimously recognized as the leaders of the coalition in favor of removal. Interviewees place an emphasis on the importance of a solution to this problem that is beneficial for all parties involved; doing better for the region as a whole while simultaneously restoring fish populations. Finally, I establish that due to the federal ownership of the dams, there is a shared understanding that a meaningful decision on the future of the dams can only come from Congress.

Introduction

When I was nine, my fourth-grade class took a field trip to the Bonneville Dam and Fish Hatchery, departing from Portland, Oregon, and taking the 30-minute drive through the Columbia River Gorge. There, we crowded around a fish-viewing window, watching salmon swim up fish ladders, determinedly migrating past us toward their spawning grounds. Our tour guides explained how these fish ladders, combined with hatcheries, were helping recover salmon populations that had once been so abundant it was said you could walk across rivers on their backs.

Hydroelectric dams are almost as prominently featured in my home as salmon themselves. In the same fourth-grade class, we would sing Woody Guthrie's ballad *Roll On Columbia,* heralding the great men who had constructed dams and tamed the mighty Columbia for the benefit of growing industry in the region. At the time, I accepted the narrative that dams and salmon could coexist.

Since their construction was authorized in 1944, the four Lower Snake River (LSR) dams have been a source of controversy. There have been nearly 30 years of debate about the rationale and feasibility of breaching the dams to restore the Snake River, a tributary of the Columbia River, to its natural flow, primarily for the benefit of anadromous fish populations, which are among the Pacific Northwest's most significant environmental and cultural symbols. Various stakeholders and sovereigns, including environmentalists, recreational fishermen, and Sovereign Tribal Nations of the Pacific Northwest, many of whom hold spiritual, economic, and livelihood ties to salmon, have advocated for the breaching of the LSR dams (Laursen 2023). As salmon populations continue to be strained by climate change and Snake River populations struggle to

recover, a viable solution to the challenges posed by these dams for anadromous fish remains unachieved.

Therefore, understanding why individuals are applying pressure for dam removal is essential to move beyond debate and realize the opportunity for actual change. This project will examine how local stakeholders and sovereigns in the fight for dam removal on the Snake River view the relationship between salmon and the dams, why they are advocating for undamming, and what removal could mean for the region. I develop a framework that captures how the social and cultural importance of salmon is a driving force behind campaigns for dam removal on the Lower Snake River while simultaneously aiming to understand the personal motivations driving advocacy for salmon populations.

Overview of Research and Conceptual Framework

The goal of this study is to better understand the personal motivations behind the opposition to the continued operation of the four Lower Snake River dams. Ultimately, I hope this research will identify potential shared motivations or strategic opportunities for cooperation that could strengthen the existing opposition to the dams and highlight the stakes for these various groups if the dams remain in place. The majority of published literature on this subject examines the economic or scientific viability of dam removal, characterizes the coalitions that are involved in the debate surrounding dam removal on the Snake, or examines the importance of salmon to the Tribal Nations in the region. My research adds to this literature by improving the understanding of why advocates for removal are motivated by this cause, particularly on a personal level.

I argue that stakeholders who have lived in or grown up in the Snake River Basin associate salmon populations with their homes and recognize them as an integral part of the

physical, cultural, and economic fabric of the region. Furthermore, individuals who spend significant time recreating in the region, specifically river guides, identify seeing first-hand the decline of habitat or salmon populations as a reason for being passionate about removal. Stakeholders' reasoning for supporting dam removal on the Lower Snake are diverse but can be divided into two main categories: frustrations with the status quo in the Snake River basin, including both the physical barriers for migrating fish and wasteful current economic operation, and perceived benefits associated with removal. Finally, I argue that the overwhelming consensus among pro-removal stakeholders and sovereigns is that meaningful change will only come from a Congressional ruling on the future of the dams. Foremost for these individuals is finding a path forward that includes removal but is beneficial to all parties involved, on either side of the removal debate.

The issue of dam removal on the Lower Snake to restore salmon populations was described to me as "the most complicated natural resource issue that's out there." There is no easy solution to this problem and the window of opportunity to save Snake River salmon populations from permanent extinction is rapidly closing.

This project examines a specific case intimately connected to a variety of critical issues including conservation, water availability, and Indigenous sovereignty. As these issues become increasingly complicated by global warming and shifting priorities surrounding natural resource management, I hope to provide an understanding of the rationale for stakeholders and sovereigns who are pushing for dam removal to save salmon populations. Finally, this project aims to draw attention to an issue that is important to me. Growing up in the Pacific Northwest and my passion for fly fishing have led me to develop an especially heightened interest in the future of Snake River salmon. I hope this work informs a wider audience about the debate that is occurring on the

Lower Snake River and allows for a greater understanding of why there is a campaign for these dams to be removed.

This section is followed by an evaluation of the existing literature related to this subject which primarily consists of other dam removal projects, cost-benefit analyses of removal on the Snake, and the importance of salmon to indigenous tribes of the region. Next, I describe my data collection and analysis including an explanation of my recruitment method and coding process. Finally, I describe the results of my data analysis in a results section that defines the importance of this issue to stakeholders, their perception of other groups involved in the removal debate, and the strategies they believe will be most effective in reaching the eventual breaching of the dams. These results highlight the motivations for involvement in the debate surrounding dam removal on the Lower Snake and the complexities of how these motivations are channeled into action among pro-removal stakeholders and sovereigns.

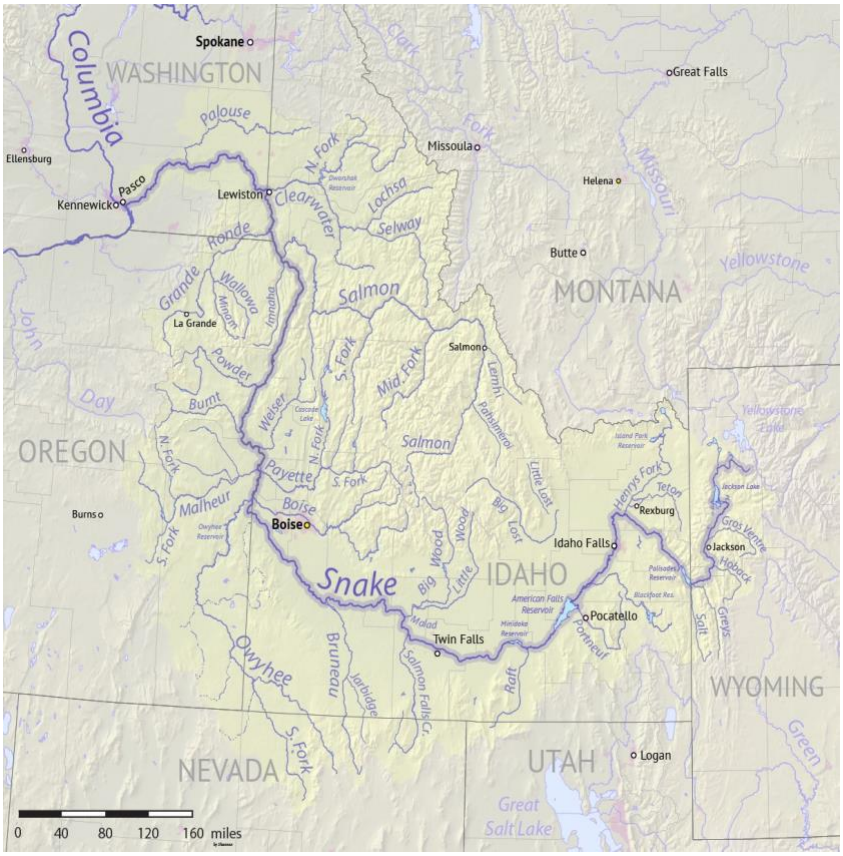
Background & Context

This work will primarily consider some of the world's most notable dams, a celebrated population of salmon, and the people who are working to restore and protect them. Salmon are a species of anadromous fish, meaning they migrate from cold, clean freshwater rivers to the ocean and then finally back to the same rivers to spawn before dying. They lay eggs in small rivers and streams where eggs hatch into fry and remain for up to a year before eventually growing into smolt and migrating downstream, often riding the river current. After reaching the ocean, they live there for anywhere from one to eight years, depending on the species, before returning to the same river in which they were born to lay eggs, thus completing their lifecycle (Angeles and Us, n.d.). After spawning, salmon die and deposit nutrients from the ocean into the inland

ecosystems, functioning as an essential part of the biosphere beyond the waters they inhabit (Blumm, Rohlf, and Eno 2024).

Sockeye Salmon Returning to Spawn (Fisheries 2024)

The Snake River is the largest tributary of the Columbia River, which flows along the Oregon-Washington border before emptying into the Pacific Ocean. The Snake originates in Western Montana and flows across Southern Idaho before pivoting north along the border between Idaho and Oregon. It eventually turns west in southeastern Washington and drains into Columbia at Kennewick, WA ("The River," n.d.). The basin drains roughly 110,000 square miles across six states; Utah, Idaho, Wyoming, Nevada, Oregon, and Washington (Blumm 2021).



Map of the Snake River Basin ("Snake River" 2025)

Snake River salmon were "once the mainstay of the Columbia Basin salmon runs" with basin-wide historical population estimates ranging from 10-16 million fish annually returning to the Columbia and its tributaries to spawn (Blumm et al. 1998; Hooper 2005). The Snake River supported four native species of salmonids; Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), sockeye salmon (*Oncorhynchus nerka*), and steelhead (*Oncorhynchus mykiss*) which are anadromous rainbow trout, a close relative of salmon, often counted among species of salmon but which do not die after spawning and can return to the ocean multiple times ("Timeline: A Long Fight to Restore Snake River Salmon," n.d.). Snake

River salmon are crucial to the region despite their populations having been decimated in the last 200 years.

The destruction of salmon runs on the Snake River was caused by a variety of anthropogenic factors ranging from climate change to overfishing, but "scientific studies have consistently identified the development and operation of hydroelectric dams as the main cause for the decline" of salmonids on the Snake (Blumm et al. 1998). Dams disrupt migration up rivers to spawning grounds, thus harming reproduction. Common methods of bypassing dams, including fish ladders and barging, have proved ineffective at mitigating these effects (Hooper 2005; Keefer et al. 2008).

There are four hydroelectric dams on the Lower Snake River (LSR) between Kennewick, Washington, and Lewiston, Idaho on the Idaho-Washington border. Congress authorized their construction in 1944, with the primary goal of providing cheap hydroelectric energy to developing areas while simultaneously turning Lewiston, a town nearly 500 miles inland from the Pacific, into a deep-water shipping port (Blumm 2021). Construction of the first dam, Ice Harbor, began in 1957 and the fourth and final dam, Lower Granite was finished in 1975 ("Timeline: A Long Fight to Restore Snake River Salmon," n.d.). These hydroelectric projects proved devastating for anadromous fish. Before the dams were constructed in the Snake River average annual returns were greater than 100,000 fish; by the 1990s, Snake River returns averaged 20,000 fish with a historic low of just over 2000 fish in 1995 (Blumm et al. 1998). By 1997, native Snake River populations of Chinook, sockeye, and steelhead had been listed as endangered under the Endangered Species Act and Snake River coho had been driven to extinction (Blumm et al. 1998).

Lower Four Snake River Dams in SE Washington ("Risch, Newhouse Introduce Bill to Protect Four Lower Snake River Dams | Idaho | Bigcountrynewsconnection.Com," n.d.)

The decline of salmon populations has given rise to a movement aimed at breaching the four LSR dams and replacing their benefits with alternative methods of shipping and electricity generation. Breaching the dams is recognized as having the "highest potential benefits for salmon and steelhead" by "the federal agencies who oversee the operation of the dams" (Army Corps of Engineers et al. 2020; Hilbert-Wolf and Gerlak 2022). This movement coincides with a growing paradigm of dam removal in the Pacific Northwest including successful removals on the Elwha and Klamath rivers.[1] There is a diverse coalition of stakeholders and sovereigns pushing for restoring the river to its natural flow for the benefit of salmon including recreational fishermen, Tribal Nations, and environmentalists.

[1] Dam removal on the Elwha River has resulted in "increased adult fish numbers, expanded habitat use, and a resurgence of naturally produced juvenile salmon". Summer-run steelhead have also returned to the river after having been "once thought to be lost to the dams" ("The Elwha River Restoration," 2024). Ten days after removal was completed on the Klamath "more than 6,000 Chinook salmon were observed migrating upstream into newly accessible habitat" ("Benefits flow quickly as dam removal restores Klamath River," 2025).

Sovereign Tribal Nations across the Pacific Northwest are especially affected by the diminished salmon populations; “Salmon play an integral part of tribal religion, culture, and physical sustenance” (“Tribal Salmon Culture,” n.d.). The significance of salmon to these groups goes beyond its importance as a food source or cultural symbol. Tribes across the Pacific Northwest, such as the Nez Perce, who live in the Snake River basin, are recognized as ‘salmon people,’ whose cultural beliefs assign them the responsibility to speak for and protect the fish that provides them with life sustenance (Penney 2021).

Dam construction and operation on the Lower Snake River have been hugely detrimental to the fish populations relied upon by the Tribes. As highlighted by Harrington and Cantor, “the control of water via national policies like the Federal Power Act and regional hydropower development can be considered acts of Indigenous dispossession and colonization” (Harrington and Cantor 2024). Thus, the opportunity for dam removal would be a step towards environmental justice and the upholding of rights to harvest fish for subsistence promised in treaties with the U.S. government. It is therefore unsurprising that the regional Tribal Nations are leaders in this movement.

In 2021, Congressman Mike Simpson (R-ID) proposed a plan to remove the four Lower Snake dams as part of President Biden’s 2021 infrastructure package. The proposal was titled the *Columbia Basin Initiative* and never materialized into a bill but was the product of meetings with hundreds of stakeholders in the region (Harrington and Cantor 2024). The proposal had a price tag of $34.5 billion and was aimed not only at removing the dams but also advancing “a host of other components to mitigate agricultural and transportation impacts, enhance recreational opportunities, and re-imagine the regional energy landscape” (Harrington and Cantor 2024). Beyond the cost of removal, the proposal also included a 35-year automatic extension of the

licenses of all other hydroelectric dams in the region and an immediate moratorium of all litigation related to anadromous fish (Wilson 2021). The plan was omitted from the infrastructure package and remains unrealized.

In December 2023, the Biden administration announced the Columbia Basin Restoration Initiative (CBRI), an initiative seemingly inspired by Congressman Simpson's, which would simply pause litigation surrounding the LSR dams while providing "a comprehensive new roadmap for salmon recovery" including plans to replace LSR dam benefits with the eventual goal of dam removal ("Timeline: A Long Fight to Restore Snake River Salmon," n.d.). The most recent presidential election result likely places this initiative, or any similar effort, in jeopardy. The dams on the Lower Snake River remain operational and salmon populations continue to suffer.

Evaluation of Established Literature on Salmon and Dam Removal

The long-term decline of Pacific salmon populations, coupled with growing momentum for large-scale dam removal—including completed removal on the Klamath and Elwha Rivers—has spurred significant literature on the key topics explored in this thesis. However, limited research exists on *why* the stakeholders are impassioned to participate in this movement to save declining salmon populations or *how* this motivation manifests.

This section captures a portion of the existing literature on the subject of Snake River dam removal and Pacific salmon restoration: a) the competing rationale for dam removal; b) existing evaluations of the LSR dams; c) the opportunity for restorative environmental justice through dam removal; and d) studies of declining Snake River salmon populations and ineffective restoration efforts. These subsections highlight the past seventy years of development

on the Snake River and the resulting push to breach the dams, yet often overlook the underlying reasons why stakeholders are motivated to advocate for the improvement of salmon populations.

A. The Competing Rationales of Dam Removal

In the 20th century, America went on a "dam-building binge," constructing over 75,000 public and private dams larger than 6 feet (Klein 1999). These structures served various purposes across the nation, including "generating electricity, supporting irrigation, water storage, flood control, and recreational functions," all at the cost of free-flowing rivers. By the 1990s, the dam construction movement had dissipated entirely as attention grew on the "negative environmental consequences" and "dismal cost-benefit ratios" (Klein 1999). In fact, the number of dams was falling due to the growing momentum for the destruction of dams across the country (Klein 1999).

The increased popularity of dam removal has led to expanding literature on the topic. The reasons for and obstacles to removing dams highlighted by Lejon, Renöfält, and Nilsson (2009) and Lane (2006) emphasize the main paradigms that guide the decision-making process; safety, economics, environmental concerns, and related legal issues (Lane 2006; Lejon, Renöfält, and Nilsson 2009). Lejon et al's (2009) focus on dam removal in Sweden does not diminish the relevance of their research for mine; contextualizing their work with American examples and the broadness of their perspective ensures that their work is relevant to this case (Lejon, Renöfält, and Nilsson 2009).

Large dams are structures with a finite lifespan that, if not abided, can pose a "threat to public safety" with catastrophic consequences as demonstrated by the collapse of the Banquio dam in China, which killed 230,000 in 1975 (Lane 2006; Lejon, Renöfält, and Nilsson 2009). Also, the potential financial liabilities from the risk of failures can lead operators of dams to opt

for early removal. Additional economic factors prompting removal include operating costs that outweigh returns, the potential for increased local revenue as a product of a free-flowing river, and expenses amassed by owners and operators as mitigation for environmental destruction (Lane 2006; Lejon, Renöfält, and Nilsson 2009). The latter was the cause of the removal of the Condit Dam on the White Salmon River in Washington. Rather than invest $30-50 million in fish passage technology, PacificCorp, the dam's owners, elected to remove it (Lane 2006).

Ecological motivations are also paramount. Dam removal not only allows migratory fish access to spawning grounds and improves habitat for riverine species, but also allows sediment to flow naturally through systems (Lejon, Renöfält, and Nilsson 2009). Dams blocking the natural flow of sediment can alter downstream habitat, particularly through beach erosion, harming habitat already in jeopardy by climate change (Lane 2006). Finally, legislation such as the Endangered Species Act and the European Union Water Framework Directive, which aim to protect endangered fauna and manage water sustainably, may provide incentives or even mandate dam removal in special cases. These reasons for dam removal are neither mutually exclusive nor exhaustive but exemplify common ones cited across the world.

However, these arguments for dam removal are often opposed with ones that can be classified as ecological, economic, or societal. Stanley and Doyle (2003) recognize the removal process as an "ecological tradeoff", where removal's benefits for habitat and wildlife are weighed against the negative impacts of large-scale ecological "disturbance" caused by removal (Stanley and Doyle 2003). Dam removal can result in the loss of "resident flora and fauna and the disruption of ecosystem processes, at least in the short term" as well as the potential for invasive species to colonize previously inaccessible habitat (Stanley and Doyle 2003). Furthermore, removing dams releases sediment stored above dams resulting in rapidly changing

habitat conditions meaning that "organisms with short generation times are able to recover quickly…but long-lived species, are more vulnerable" (Stanley and Doyle 2003).

Other arguments identified by Lejon et al. are grounded in economic concerns. The cost of removal itself can be large; "funding has to come from different sources" as expenses are typically too high to fall upon one entity (Lejon, Renöfält, and Nilsson 2009). To obtain federal funding, removal projects must go through a lengthy and thorough regulatory process involving legal permitting mandated by legislation like the Clean Water Act (Lane 2006). Additional economic consequences of removal can include loss of jobs associated with the dam, decreased revenue associated with flatwater recreation, and the cost of replacing cheap and non-greenhouse gas-emitting hydropower energy (if applicable) (Ek, Spegel, and Stage 2024).

Finally, both Lane (2006) and Lejon et al. (2009) identify a myriad of societal concerns with dam removal including conflicts related to ownership of exposed land, cultural-historical values, and aesthetic concerns. There is the possibility that dams "may have been in place for a long time and have become accepted and valued parts of the environment" or become synonymous with local identity such that residents oppose their removal (Lejon, Renöfält, and Nilsson 2009). Reservoir drawdown as a result of removal also exposes land which was previously underwater creating potential confusion and conflict over ownership and land rights.

Established literature suggests that dam removal is a subject fraught with contention. Removal revolves around weighing the economic, cultural, and social tradeoffs that freeing a river may unleash. Every dam has unique situational characteristics, meaning that each decision is distinctive and must be treated as such.

B. Dam Removals as Eco-Cultural Restoration

Extensive research assessing the relationship between salmon and sovereign Tribal Nations establishes the importance of salmon to the livelihood and traditional existence of Pacific Northwest Tribal Nations. Further work describes the advantages of tribal-led momentum for dam removal and how dam removal can facilitate the escapement of 'social-ecological traps' through the mutually beneficial practice of "eco-cultural restoration" (Long and Lake 2018; Diver et al. 2024).

The inclusion of sovereign Tribal Nations in the process of dam removal is a possible means toward restorative environmental justice and escaping "social-ecological traps" as described by Long and Lake (Long and Lake 2018). Through a review of scientific publications, they outline "many factors stemming from colonization by Euro-Americans" which "have engendered social-ecological traps that have inhibited tribes from continuing traditional land stewardship activities that supported their well-being and maintained ecological integrity" (Long and Lake 2018). These 'traps' include "legal and political constraints on tribal access and management; declining quality and abundance of forest resources due to inhibition of both natural disturbance and Indigenous tending regimes; competition with nontribal users; species extirpations and introductions of invasive species; and erosion of tribal traditional ecological knowledge and relationships that are important for revitalizing resource use" (Long and Lake 2018). Escaping these 'traps' requires "addressing… ecological and social constraints" through methods like "cooperative restoration efforts between land management agencies and tribes" (Long and Lake 2018). This process involves promoting "more complex notions of sustaining coevolved, reciprocal relationships between people and their environment" learned from Indigenous customs (Long and Lake 2018).

Long and Lake (2018) describe dam removal as a potentially meaningful step toward escaping social-ecological traps. An example of this eco-cultural revitalization process is the Karuk tribe in the Klamath River basin in Northern California and Southern Oregon. In 2024, the largest dam removal project in history was completed on the Klamath River after two decades of 'tribally led activism, including from the Undam the Klamath social movement" (Diver et al. 2024). The Karuk were leaders of the movement as a product of their "deeply interconnected ecological, cultural, and ceremonial relations that are co-constituted with the Klamath watershed" (Diver et al. 2024).

By conducting focus groups and interviews with tribal members, Diver et al. (2024) identify the significance of dam removal as a process of eco-cultural restoration which "supports 'fixing the world' for all human and non-human relations" while allowing Karuk culture and livelihood to thrive through relation to a free-flowing river and salmon. The researchers recognized that "deeper recognition of what is at stake for Indigenous communities like the Karuk Tribe with dam removal and river restoration is needed for such forms of restorative justice to occur" (Diver et al. 2024). The dam removal on the Klamath River has allowed the Karuk tribe better opportunities to fulfill "inherent stewardship responsibilities," which in turn "advance restorative justice and their traditions for restoring balance in the world" (Diver et al. 2024). This process, which begins to heal both the natural world and the Karuk relationship to it, promotes the restoration of cultural values that allow for the escapement of 'social-ecological traps' imposed by dammed rivers and destroyed salmon populations. This conclusion is echoed by other literature examining tribal involvement in dam removal including Fox et al (2022), who describes how the process of dam removal "creates opportunities for restorative environmental justice for Native Americans and their rivers" (Fox et al. 2022).

The Nimiipuu (Nez Perce) are the largest tribal nation living in the Snake River drainage. They say that their survival is "interdependent" with salmon and that "without salmon…their culture will die" (Colombi 2012). The intensity of this relationship between Nimiipuu livelihood and salmon prompts Benedict Colombi (2012) to establish the connection between the Nimiipuu's ability to adapt in the face of transforming adversities as their possession of the "power and resources to act to protect salmon" (Colombi 2012). To achieve this the Nimiipuu have established "trust and partnerships, recognizing that they cannot adapt without partnering and gaining power with others" (Colombi 2012). Colombi's depiction of the importance of salmon to the adaptive capacity of the Nimiipuu provides evidence of what dam removal could mean for this tribe. Removal would not only allow for eco-cultural restoration and the escapement of a socio-ecological trap but would simultaneously restore a sense of freedom and agency. By contextualizing how agency over salmon is essential to Nimiipuu's ideal livelihood, Colombi shows people are driven to fight for the survival of a fish as a means of improving their livelihoods.

These existing studies map the intimate connections between dam removals, salmon, Indigenous tribes, and restorative justice or eco-cultural healing. I seek to replicate aspects of this work in my project by continuing to map these connections to salmon for tribes living within the Snake River watershed, like the Nez Perce. Additionally, while tribal perspectives are central to this conversation and rightfully emphasized in existing literature, I also seek to document how other stakeholders, such as recreational fishermen and environmentalists, are motivated by their affinities for salmon.

C. Population Destruction and Ineffective Restoration: Dams and Salmon

Pacific salmon populations have been decimated since the arrival of white settlers in the Pacific Northwest. In the last century, extraordinary amounts of money have been invested to improve wild salmon populations across many rivers including the Snake. The results have been uninspiring at best. An understanding of the ineffectiveness of different methods for improving salmon populations is essential to explaining why stakeholders are adamant that dams be removed.

Joanna Hooper (2005) recognizes various anthropogenic causes as "the four H's of salmon mortality," namely "hatcheries, habitat management, harvest, and hydropower" (Hooper 2005). There are approximately 200 hatcheries throughout the Columbia River basin, many of which were constructed during the 20th century with the hope of mitigating the effects of dam construction on salmon populations (Blumm, Rohlf, and Eno 2024). Scientific reviews conducted in the late 1990s discovered that "hatchery operations were based on false assumptions" and that the operation of hatcheries "had failed to reduce their adverse effects on naturally spawning fish" (Blumm, Rohlf, and Eno 2024). Furthermore, a byproduct of the location of hatcheries chosen in the 1960s and 1970s has been that "only a fraction of those fish that were produced as mitigation" for dam construction "returned to an area where Indians are allowed to fish commercially" (Allen 2003). Hatchery operations persist today, using copious amounts of public funds to fill rivers with genetically inferior hatchery fish that compete with wild fish and have shockingly low adult return rates (Blumm, Rohlf, and Eno 2024). This analysis does not assess how disillusionment with hatcheries as a means of reviving fish populations contributed to the dam removal movement. I will demonstrate how the failures of the hatcheries and other methods for restoring populations have led salmon advocates to argue the Snake River dams need to be breached.

While the failed restoration of fish populations through hatchery production has been uninspiring, Hooper (2005) argues that a "majority of scientists believe that hydropower is the most significant factor limiting Snake River salmon populations" (Hooper 2005). The LSR dams harm salmon populations in a variety of ways; "'[b]lockage and inundation of habitat; turbine-related mortality of juvenile fish; increased delay of juvenile migration through the Snake and Columbia Rivers; increased predation on juvenile salmon in reservoirs; and increased delay of adults on their way to spawning grounds'"(Hooper 2005). Since 1968, the National Marine Fisheries Service and Army Corps of Engineers have spent billions of dollars on 'barging,' wherein migrating smolts are collected above dams on the Snake, placed on barges or trucks, and transported ~40 hours around the dams, and then released below the Bonneville dam on the Columbia River (Hooper 2005; Keefer et al. 2008).

The effectiveness of this program was evaluated by Matthew Keefer et al (2008). They concluded that despite increased survival for juvenile salmon, barging negatively impacts both wild and hatchery salmon, and the negative impacts persist into adult life (Keefer et al. 2008). Adults who had been barged as juveniles displayed lower homing rates and increased straying, confirming "the hypothesis that barging disrupted imprinting during out-migration" (Keefer et al. 2008). These study results caution against barging efforts to promote the restoration of specific populations such as the Snake River salmon. Their work demonstrates how even "well-intentioned interventions can affect migratory fish behaviors and population demographics in unintended ways", limiting the scope of anthropocentric solutions available for population restoration (Keefer et al. 2008).

Restoration efforts for Snake River salmon have largely failed, as all populations remain endangered. Furthermore, the growing threat of climate change is expected to intensify pressures

on these species. The inability of barging, hatcheries, and other mitigation strategies to recover populations has forced salmon advocates to fight for dam removal. The current literature does not explain how or why the ineffectiveness of existing policies and programs to restore fish populations has motivated stakeholders to join the movement toward dam removal; this work will argue that stakeholders view dam removal as the only option to recover salmon.

D. Existing Evaluations of the LSR Dams and Conflict Surrounding Them

Existing studies highlight the divisiveness of the Lower Snake River (LSR) dams and document the economics, science, and policy surrounding them and their impact on salmon. However, most analyses overlook the significance that restoring salmon populations holds for certain stakeholder groups and sovereign Tribal Nations.

Many evaluations of the LSR Dams show their construction or operation yields negative net economic benefits. A modified cost-benefit analysis of LSR dam removal conducted in 2001 by Nancy Kubasek and Chaz Giles relies on a framework involving four factors: environmental impacts, economic impacts, consideration of alternatives, and local impact (Kubasek and Giles 2001). They conclude breaching the LSR dams "to be the most beneficial outcome" with two stipulations (Kubasek and Giles 2001). First, the cost for removal is split between federal and local entities. Second, workers who lose their jobs as a result of dam removal be re-trained for new careers. They argue that for breaching to be economically viable, the cost of dam removal cannot be solely the burden of the local communities. This places further emphasis on the importance of Congressional approval of federal funds for dam removal. The complexity, enormity, and divisiveness of dam removal on the Lower Snake beg the question of why recovering salmon populations is enough to prompt the creation of a movement with such an ambitious and challenging objective.

This remains unanswered in a more recent analysis of the dams, wherein Blumm (2021) deems Congress' decision to construct the dams a "colossal, generational mistake…that has nearly extirpated all of Idaho's salmon" (Blumm 2021). His evaluation asserts that LSR dams provide limited and replaceable power generation, and no flood control, and what transportation opportunities are created could easily be replaced by "readily available truck and rail transport through the same Columbia Basin corridors" (Blumm 2021). A recent proposal by Congressman Mike Simpson (R-ID) to breach the dams, presented to Congress in 2021 with a $33.5 billion price tag, is deemed "unrealistic" (Blumm 2021). This finding aligns with that of other authors who "agree that the economics need to shift in favor of dam removal for the status quo [of dam operation] to be altered" (Hilbert-Wolf and Gerlak 2022). These cost-benefit analyses are primarily focused on economic feasibility. While this is an extremely important aspect of this debate, they cannot tell the whole story that is at play in the LSR basin or how it affects the region's residents.

Multidimensional analyses of dam removal provide a basis for understanding the feasibility of meaningful change on the Snake River. The established literature too often disregards the relationships between salmon populations and inhabitants of the region that have catalyzed the creation of a movement to undam the river. While these assessments of the feasibility of dam removal highlight the controversy and complexity of this issue, they do not explain why declining salmon populations are a driving force for individual involvement in trying to change the status quo on the Lower Snake.

Summary

Existing literature on dam removal on the Lower Snake River broadly elucidates the factors precipitating the modern movement to breach the dams. The reasons for dam removal

include economic benefits, the importance of salmon to Tribal Nations, and the ineffectiveness of existing methods for restoring populations. While these issues are often discussed in the literature as affecting individuals abstractly, I aim to provide more detailed, personal accounts of how individuals representing a diverse coalition are motivated to advocate for dam removal and reflect the composition of the current movement.

DATA AND METHODS

The Lower Snake River dam removal project is my chosen case study due to its broader importance to the salmon populations in the Pacific Northwest, the controversy surrounding the dams, and the fascinating coalition of stakeholders and sovereign Tribal Nations uniting around dam removal. There is an opportunity to save one of the largest runs of salmon in the Pacific Basin by restoring access to some of the best-remaining freshwater habitats in the United States, which is critical to restoring salmon populations. Furthermore, within the world of anadromous fish conservation, this case has become the most well-known dam removal dispute in the United States. In the wake of the Klamath River dam removal, the four Snake River dams represent the best opportunity to restore salmon migrations. If the four LSR dams are removed, the removal would overtake the Klamath Dam removal as the largest in American history. The potential for removing the dams and restoring the salmon populations inspired me to explore the removals further. Finally, the Lower Snake River dams illustrate ways that a diverse group of stakeholders and sovereigns with different interests can collaborate and coalesce around the common goal of restoring a free-flowing river.

The goal of this work is to understand how individuals with different interests, demographics, and roles in the Pacific Northwest are motivated to campaign for dam removal on the Lower Snake River. A shared passion for saving salmon unites this diverse group. I will

provide insights into how this diverse coalition that includes sovereign Tribal Nations, environmental advocacy groups, outfitters, and recreationists has united around a single cause. I will also capture the areas of cooperation and conflict within the movement – this includes how participants believe decision-making responsibility ought to be distributed among different groups and the perceived importance of collective decision-making to ensure success. Finally, I will uncover views about potential paths for dam removal, the tactics that are favored to achieve this, and perceptions about the most effective activism strategies to achieve the long-term goal of restoring this river to a free-flowing habitat.

I conducted eight semi-structured interviews with employees of environmental advocacy organizations, river guides and outfitters, and a Nez Perce tribal citizen and philanthropist. I also analyzed a webinar discussing tribal perceptions of the Columbia Basin Initiative with citizens from the Nez Perce and Yakima Tribes. Fortunately, the questions asked in the webinar prompted answers that allow for direct comparison to the perspective of interviewees.

For the interviews, I recruited individuals primarily through internet research: first, I scoured the web for stakeholders whose perspectives would be relevant to my research goals and then I contacted them via email to schedule an interview. All interviews were conducted on Zoom or the phone and recorded using Zoom or Otter.ai. Alternate recruitment strategies included the ‘snowball’ method, which entailed asking interviewees if there was anyone they could recommend I speak to. This process proved fruitful. One of my first interview subjects recommended that I attend the webinar, which I joined via Zoom meeting and later returned to using a recording. The table below identifies the name, profession/organization/sovereign affiliation, stakeholder type, and the data gathering method for each stakeholder I interviewed or listened to through the webinar.

Name	**Profession/Organizational Affiliation**	**Stakeholder/Sovereign Affiliation**	**Data Analyzed**
Greg McReynolds	Executive Director, Idaho Rivers United	Environmental Advocacy Groups	Interview
Kira Finkler	Head of Idaho Chapter, Trout Unlimited	Environmental Advocacy Groups	Interview
Mitch Cutter	Salmon and Energy Strategist, Idaho Conservation League	Environmental Advocacy Group	Interview
Tess McEnroe	Former Communications Director, Idaho Rivers United and River Guide	Environmental Advocacy Group and River Guide/Outfitter	Interview
Roy Akins	Owner and Head Guide, Rapid River Outfitters	River Guide/Outfitter	Interview
Abbie Abramovich	Salmon Grassroots Lead, Idaho Conservation League	Environmental Advocacy Group	Interview
Jack Hurty	Salmon and Steelhead Coordinator, Idaho Outfitters and Guide Association, and River Guide	River Guide/Outfitter	Interview
Kayeloni Scott	Columbia/Snake River Campaign Executive Director, Yakima/Nez Perce	Yakima/Nez Perce Citizen, Environmental Advocacy Groups	Webinar
Chairman Shannon Wheeler	Nez Perce Tribal Chairman	Nez Perce Citizen	Webinar
Joel Moffett	Vice President of Tribal Nations Engagement at Native Americans in Philanthropy, Nez Perce Former Vice Chairman of the Nez Perce Tribe Executive Committee, Chairman of Columbia River Inter-Tribal Fish Commission (CRITFC)	Nez Perce Citizen, Environmental Advocacy Groups	Interview

Semi-structured interviews were my preferred method of collecting data due to the nature of the information I was seeking. To gain insight into the stakeholder process, I needed to garner a variety of "I" perspectives, catalog individuals' values, and document the relationships between the coalition . This information was most effectively collected through semi-structured interviews, which allowed the interview subject to share uniquely personal insights, even in a short conversation. Conducting semi-structured interviews also allowed me to catalog individual motivations and experiences, an essential aspect of successful data collection for my research goals.

I started the interviews by asking stakeholders to describe themselves and their connection to the campaign for dam removal on the Lower Snake River. Next, we discussed the importance of this case to each interviewee and what they view as the main arguments in support of dam removal. This was followed by a series of questions aimed at understanding how interviewees recognized other participants in the dam removal debate and whether one group on the pro-removal side emerged as a leader. Finally, I polled stakeholders on their optimism for the future of the movement, including whether the recent Presidential election had changed this outlook.

I modeled my work after Krista Harrington and Alida Cantor's (2024) article "Dam Removal Politics and Unlikely Alliances in the Lower Snake River Basin" which relied on 22 interviews with stakeholders in tandem with "qualitative analysis of over 50 media articles" to understand better the opinion of different groups on Mike Simpson's proposed *Columbia Basin Initiative* (Harrington and Cantor 2024). Their work effectively captures information on both "opinions and alliances" from their interview participants, capturing individual perspectives and insight. Their use of semi-structured interviews and subsequent analysis allows for the effective

construction of overarching narratives while also documenting a variety of perspectives surrounding dam removal.

Similar to Cantor and Harrington's methods, I used an inductive coding system to organize and analyze the data from the interviews and the webinar and to conduct thematic analysis. After transcribing these data sources using Otter.ai, I uploaded transcriptions to Atlas.Ti where they were coded by identifying patterns within the data, looking particularly at common themes that arose among different stakeholder groups, with the goal of identifying common threads. I reviewed the results of this coding to identify broader, recurring themes in different interviewees' responses. The themes concerned topics such as personal motivations for being involved in the fight against dam removal, perceptions of and interactions with other stakeholders, and views on the future of dam removal on the LSR. This format of data collection and analysis offered an opportunity to highlight distinct and important individual perspectives or experiences, within these overarching themes. Furthermore, as my research questions produced a diverse dataset with limited pre-defined identifiers (demographical information, employment type), it was helpful that this method allowed me to maintained a certain degree of flexibility with my analysis.

One clear difference between Harrington and Cantor's work and mine is that they conducted interviews with stakeholders on both sides of the debate while I focused solely on individuals who support dam removal. Opponents of dam removal in LSR dam removal studies, such as those by Nancy Kubasek and Chaz Giles (2001) or Micheal Blumm (1998), present examples of negative effects that removing dams could have on shipping, electricity generation, and recreation on the Lower Snake (Kubasek and Giles 2001; Blumm et al. 1998). By not interviewing individuals who are against dam removal, I am missing important perspectives.

However, by restricting the scope of my research in this way, my project is able to focus more deeply on pro-removal stakeholders. The narrow focus also ensured that my project was feasible within the given timeframe. Also, due to my own sympathies and interests, I have situated the group fighting for dam removal at the heart of my project.

An additional potential limitation of my research was my inability to get interviews with a diverse and representative group of participants as I had hoped for. Specifically, I was unable to get multiple interviews with tribal citizens. I had set myself a lower threshold of two interviews for each of the three primary relevant groups to ensure a base level of representation in my project but had to adjust this goal to include an analysis of the webinar due to being unable to secure multiple interviews with tribal citizens. While this is an unfortunate gap, I supplement the lack of interviews with tribal citizens with data from the webinar and believe that the information garnered is both relevant and applicable to my research questions.

Data and Analysis

The primary reasons that motivate individuals to care about dam removal on the Lower Snake can be divided into two categories: experiences living in the Pacific Northwest and first-hand observation of the decline in salmon populations and habitat. The vast protected and pristine habitat in interior Idaho, the resiliency of Snake River salmon, and the overwhelming consensus that we are nearing our final chance to save these populations are consistently cited as reasons for being invested in this particular case. Interviewees typically describe economic, physical, and cultural problems with the status quo and the perceived opportunities for widespread benefits from dam removal in the future as explanations for supporting removal. Allies and opposition on this issue, as recognized by these individuals, are essentially uniform, with all participants in agreement that Indigenous Tribal Nations as the leaders of the pro-removal coalition. Finally,

collaboration and the importance of spreading validated information are described as being the primary strategies for effective change moving forward, with an overwhelming emphasis on the necessity of a solution being identified as collectively beneficial beyond just saving fish. Interviewees also consistently emphasized that the only action that will create significant change is a Congressional decision approving removal.

I. *"Salmon and Steelhead, They're a Cultural Fixture": Motivations for Involvement in the LSR Dam Removal Campaign*

The spiritual bond between salmon and the region's Tribal Sovereigns goes beyond the relationship between these fish and non-tribal groups, not just prompting Tribes to care but "obligating" them to advocate for dam removal. Employees from environmental advocacy organizations and river guides routinely cite two primary reasons they are passionate about working to remove dams and save salmon in the Snake River basin: living in the Pacific Northwest and seeing firsthand the decline of salmon populations or habitats.

The relationship with salmon goes far beyond sustenance for Tribal Nations, forming an integral part of their cultural identity and health. This is especially true of the aforementioned Nez Perce Tribe. Joel Moffett, Vice President of Tribal Nations Engagement at Native Americans in Philanthropy and Nez Perce citizen, feels "directly connected with the salmon… that come into the Snake", describing the fish as "brothers and sisters" to the Nez Perce peoples. This relationship between the salmon people and salmon is described by Nez Perce Tribal Chairman Shannon Wheeler as an obligation to the "land itself, and to the to the species that were here before us". The reciprocal relationship that comes from this obligation is mutually beneficial wherein if the Tribes "take care of the land, the land will take care of [them]".

The lack of salmon has led to the loss of customs and traditions “that we're unable to do because of the lack of salmon in the waters,” resulting in a cultural detriment. Joel experiences a “tangible, personal impact” from the dams, beyond their physical imposition. To him, fishing for salmon is a “medicine that you have to experience yourself”, something he feels fishing on the Middle Columbia. This restorative ‘medicine’ is upset by dams that have decimated fish runs and disrupted traditional fishing techniques and sites.

Chairman Wheeler describes the physical impacts of the lack of salmon available to harvest for the Tribes as part of a “health disparity” that is “affecting us [Tribal Nations] in a negative manner.” He describes the loss of salmon, a traditional ‘First-food’ as being a key contributor to “heart disease, high blood pressure, obesity… and the autoimmune diseases” which affect Tribal citizens. The destruction of salmon populations due to dams has had disproportionate negative cultural and physical effects on Tribal Nations, particularly the Nez Perce. Their unique connection to these species combined with these detriments has driven them to the forefront of this issue.

Other stakeholders typically recognize salmon as a meaningful feature of Idaho. This occurs dually as an acknowledgment of the ecological function of salmon populations and the importance of salmon to the cultural makeup of their home state. Greg McReynolds, the Executive Director of the conservation organization Idaho Rivers United (IRU), describes the link between his home and these fish: “Idaho is so special to me. I love Idaho. I feel so lucky to be here, to live here. And, you know, part of what makes Idaho such an incredible place is salmon. It's a very big part of what makes Idaho an incredible place.” The perceived importance of healthy salmon populations for a thriving Idaho drives Greg, as a passionate Idahoan, to care about these fish.

Jack Hurty, a member of the Idaho Outfitter & Guide Association (IOGA), is also clear about the cultural connection between salmon and the state. He explained to me, "[salmon] are a cultural symbol in Idaho, their symbolism is everywhere." Kira Finkler, the former head of the Idaho chapter of Trout Unlimited, confirmed this sentiment by describing her time as a member of the governor's salmon task force, traveling the state and speaking to Idahoans. She was particularly struck by the fact that even in "these towns and cities that weren't necessarily near a river", "people still had a very strong connection" with salmon.

A former employee of IRU and river guide, Tess McEnroe, describes a different cause for being pulled into the paradigm of salmon conservation. Unsurprisingly, her motivations are uniquely connected to time spent on the river guiding: during her time paddling on the forks of the Salmon River, the largest tributary of the Snake, she "started seeing fish decline and habitat loss on the Middle Fork of the Salmon and the main Salmon while guiding." The noticeable decline in salmon runs and "seeing the water get hotter in somewhere that… we consider to be some of the best remaining habitat in the lower 48 [states] for salmon and steelhead, prompted" her to become involved in conservation efforts. Jack mentions how his experience as a guide dictated his focus on this issue as well. His time working on the rivers of the Snake River basin fostered a passion for protecting this ecosystem: "As a guide, you're working in that river, you're kind of seeing that ecosystem firsthand, and you develop, like, a really personal connection with it." Stakeholders, particularly river guides, who have extensive experience spending time on these rivers or have observed first-hand the decline of salmon habitat and populations mention this connection as motivation to help protect salmon.

First-hand experiences motivating river guides and conservation workers to become involved in salmon conservation implies that exposing more people to these fish through

activities like field trips, community events, or restoration projects could help promote interest in their protection. Their perspectives suggest that if more people could interact with these fish in the wild or experience their importance to the cultural and physical makeup of the regions they inhabit, they could better understand the reason stakeholders are so adamant about dam breaching.

A potential critique of this work is that these motivations cannot be generalized by interviews with only individuals who are already involved in conservation and dam removal efforts on the Snake. While it is important to acknowledge that these are stakeholders who are already engaged in this fight, these individuals were not always born with these motivations. They had experiences with or fostered connections to Lower Snake River salmon populations that revealed to them the importance of this issue. This actuality highlights the potential for dam removal activists to mobilize a greater constituency by exposure to similar immersive experiences to instill the same values.

II. "The Most Complicated Natural Resource Issue That Is Out There": Unique Characteristics of Dam Removal on the LSR

Interviewees consistently recognized three reasons for the importance and uniqueness of this case. These characteristics are: the extent of intact, pristine habitat in the interior of the Snake River basin; the resilience of LSR salmon; and the belief that this is the last chance to save these fish.

The foremost recurring motivator for involvement in activism to remove the dams was the extensive and pristine condition of the habitat in the interior of Idaho that the Lower Snake River dams restrict salmon access to. A consistently offered explanation for what makes this case particularly important is the opportunity to restore complete access to what Tess describes as the

"best-remaining habitat in the lower 48 [states]." This echoes the literature discussing "central Idaho's exceptional salmon habitat" as a significant benefit of removal (Blumm 2021).

Along with the quality of this habitat, the enormity of this area is stressed as well. Greg emphasizes that "the upper portion of the basin, is so vast that it's sometimes hard to explain to people… because a lot of Idaho is roadless or wilderness or some kind of protected landscape, the rivers in it are in great shape. So the lower four Snake River dams basically act as a bottleneck for salmon returning to the system. And even though we have massive amounts of cold, clean, amazing salmon spawning habitat, not enough fish can make the round trip journey to take advantage of that." The emphasis on the potential value of intact, quality habitat highlights the relevance of habitat management for salmon recovery (Hooper 2005). By restricting access to one of the best remaining habitats in the region, the removal of "bottlenecking" LSR dams has been identified as crucial to the recovery of salmon populations across the Pacific Rim

The specialness and resiliency of salmon populations native to the Snake make them particularly important in the region as well. Interviewees mention the special traits and the journey of these fish as a rationale for being passionate about dam removal. Tess, in particular, is adamant that the salmon population on the Lower Snake are "so special. They make the longest migration journey in the lower 48, over 900 miles from source to sea… it's a really important fish population."

Equally admired among advocates is the resiliency of these fish. Greg describes this resilience most adamantly: "They've been coming back so long and so relentlessly that we know they have survived ice ages, right? We know they've survived volcanoes. They have persisted even when the ocean had so much ice that the ocean level was 100 meters lower than it currently

is, and they just kept coming back." Mitch Cutter, Salmon and Energy Strategist for the Idaho Conservation League, reiterates the toughness of these fish. He asserts that if eventually "all salmon go away because of climate change or due to some other factor that limits them… Snake River fish are going to be the ones that stick it out." These environmental advocacy workers are especially compelled by the resilience of these fish as a reason to continue their fight. Inspired by salmon battling dams and warm waters during their upstream migrations, they view this resilience as a strategic reason to not give up on restoring Snake River populations despite the many obstacles they have faced.

Despite the attributed resilience, the Snake River salmon population is at risk and the urgency of this mission is paramount. In a 2024 study, Blumm, Rohlf, and Eno (2024) describe "the precarious condition of Columbia Basin salmon", with Snake River sockeye at the highest risk of extinction and Snake River Chinook and steelhead also at risk due to "consistent, sharp declines" in populations (Blumm, Rohlf, and Eno 2024). Interviewees denoted this in their responses, all recognizing their efforts to remove dams as a race against what Mitch describes as a "ticking clock". "It's really important for us not just to take the dams down, but to take them down quickly enough to save salmon in Idaho," declares Greg, a phrase that was repeated almost verbatim by multiple other interviewees. We are nearing the last chance to save these populations and without action, we will soon reach "pretty critical extinction thresholds where they're just not coming back from those kinds of low numbers" according to Mitch.

III. The 'Why?' of Removal: Explanations for Lower Snake Dam Removal

The reasons that interviewees believe the dams on the Lower Snake ought to be removed can be classified into two categories: problems with the status quo and perceived benefits

promised by removal. Some, like the importance of upholding treaties with Tribal Nations, are intimately tied to restoring salmon populations while others, like increased recreation, apply to the situation on the Snake more broadly. As a product of the interconnectedness of the social, economic, and biological ecosystem on the Lower Snake, even these non-salmon-related reasons for supporting removal are essential to understanding the connection between dam removal and saving salmon.

Four interviewees criticize the dams' current operations as an argument for their removal. Interviewees with direct knowledge of the dams' operations note that they are creating inessential power and their high costs for taxpayers. Mitch, who often communicates about salmon with energy-related groups, was explicit in stating "I can talk all I want about how the Lower Snake River dams aren't a major producer of power. They don't produce much valuable power, and they really don't produce much of the region's power." Despite these critiques of the damns, an argument against dam removal is the concern that any replacement power will be more environmentally harmful or expensive than hydroelectric dams. These fears must be reckoned with in any sort of agreement for removal but Mitch's testimony highlights the inefficiency and expendability of currently produced power as a reason to be in favor of removal.

Similarly, Jack describes having to educate members of IOGA on the economic inefficiency of current dam operations, pointing out that "the dams are not money makers, they're not profitable" and that "the number of people that are actually shipping grain on the lower Snake is a lot less than it used to be." Likewise, "by the BPA's (Bonneville Power Administration) own numbers, the Lower Snake dams are some of the most expensive assets in the Columbia hydro system… they're losing money on the dams." These evaluations of the current flaws in operation reflect the same conclusions raised by cost-benefit analyses of the

dams on the Snake, which conclude breaching to be economically reasonable (Blumm 2024; Kubasek and Giles 2001).

Additionally, advocates argue that the anticipated benefits of the dams' removal outweigh concerns and that changing the physical state of the river caused by the dams is essential. The lack of viable alternative solutions and the particularly harmful nature of the four dams on the Lower Snake salmon were mentioned repeatedly. Kira describes their construction as a tipping point that decimated salmon populations; "when you look at the map of the region and how many dams are already in place, and how many dams these fish already had to go through, it was just like that was four dams too much."

Advocates also emphasize that modification through improvements to fish passage like fish ladders or barging will not suffice- removal is the only solution. Greg has listened to people throughout the region "talking my entire life about some kind of magical solution that will bypass the dams, you know, like, let's create a salmon shooting tube, or a water slide, or let's barge them…whatever thing you think will work, it won't, it doesn't work. A question I get all the time is, why don't they just build fish ladders? There are fish ladders. There have been fish ladders since day one. It's not a problem that we can solve with technology." Due to their particularly harmful presence and inability to be modified, the LSR dams are the ones targeted for removal to save salmon populations.

This is not to say that small victories in improving fish passage have been unimportant. The litigation, particularly by the Tribal Nations, has been integral to sustaining populations overall. Joel explains that the minuscule uptick in Columbia basin-wide salmon populations over the last 30 years is a result of the tribes having "really stuck their necks out" and "put their treaties on the line in court" to try and pull small "levers" like seasonally increasing spillage

through dams to increase migratory success for salmon. However, he also argues that pulling these levers through litigation is not going to be enough. Instead, "some bold, big change is going to be needed to bring back the fish levels." Like Allen (2003), Keefer et al. (2008), and Hooper 2005), who critique the ineffectiveness of alternate methods of restoring populations- particularly barging- the overwhelming consensus among interviewees was that dam removal is the only option (Allen 2003; Keefer et al. 2008; Hooper 2005). As Mitch laments, "regardless of what improvements you make… the reservoir is still a reservoir, a concrete wall is still a concrete wall."

Interviewees identified additional anticipated benefits that would come from an undammed Lower Snake River. Unsurprisingly, increased recreational opportunities were mentioned by all three interviewees who are river rafting or fishing guides: Jack, Tess, and Roy Akins, owner and head guide of Rapid River Outfitters and city council member for Riggins, ID. Tess describes the existence of a free-flowing snake river as benefitting "anybody who wants to be outside." She is especially interested in the possibility of creating "the first multi-day overnight rafting trip in the state of Washington." New recreational possibilities would not stop there- Jack lists an abundance of outdoor activities that would become possible on the Lower Snake including "whitewater rafting, opportunities for salmon and steelhead guiding, hunting, camping, etc." Beyond the recreational opportunities, they both stressed the increased economic opportunity that these new industries would create.

The economic benefits of removal due to increased recreational prospects and subsequent tourism are emphasized predominantly by the guides already involved in the industry. Tess succinctly predicts the potential chain of events; "a free-flowing Snake River would bring tremendous opportunity in the sense of recreation, which then directly correlates to tourism,

which then directly correlates to the economy". Similarly, Jack explains that increased salmon populations would have a profound effect on towns in the interior of the Snake River basin where salmon and steelhead guides are a massive part of the local economies. Increased fish populations mean "there's more money going into local restaurants, there's more people coming to town, staying in hotels, buying gas." He offers the "example of Riggins, ID… [where] I think 25% of the town's yearly sales, so about 25% of their town's yearly income comes from salmon and steelhead guiding up on the Clearwater [River]. And in 2019, the state had to shut down [fishing on] the Clearwater [due to low fish returns]...that area lost $34 million in four months. And so that's a huge impact. So, you know, restoring these fish would drive a ton of ton of wealth into these communities.".

The economic benefits of the outdoor recreation tourism industry are well-established in the State of Idaho. In 2017, tourism accounted for $3.7 billion in direct spending, and in 2020, the outdoor recreation sector made up over 2.7% of the state's total value-added economy (Maas and Himes 2021). State government websites describe the current influx of tourism dollars as a "huge boon to our state economy", employing over 45,000 Idahoans ("Tourism Resources" 2025). Outdoor recreation and tourism are already established as essential parts of the economy of the state and the overwhelming consensus is that increased fish returns as a product of dam removal would create an economic boost across Idaho. This should be a repeatedly emphasized point when appealing to rural communities about the benefits of removal.

Joel provided insight into what upholding treaty rights and restoring plentiful fish populations could mean for the Nez Perce. He describes increased opportunities for traditional fishing practices occurring at historical fishing sites exclusive to the Nez Perce and how "we'd have so many more tribal members fishing [for] and eating salmon." This would mean the Nez

Perce getting “to exercise that fishing right that our people, our ancestors have carried out for thousands of years, maintaining that connection with our ancestors, and [by] continuing that tradition, we get to actually improve our diet, improve our health.” Improvements to physical health would go hand-in-hand with cultural health. Joel believes increasing salmon runs would enhance “the celebrations, the connection, the gratitude during those ceremonies where we thank the salmon for returning back” prompting the Nez Perce to continue to take care “of the river, of their habitat.” With returning fish and celebrations will come a strengthening of “that bond [between salmon and the Nez Perce] and that pride that the Nez Perce people have will only increase dramatically.” Honoring treaty obligations and restoring fish populations would be a form of eco-cultural restoration and restorative justice for the Nez Perce by allowing for the strengthening and celebration of their culture (Diver et al. 2024). This process would be mutually beneficial by strengthening cultural and physical health and simultaneously reaffirming the Nez Perce’s cultural responsibility to be stewards of salmon and the river.

Conservationists and guides alike recognize the opportunity for dam removal to begin repairing broken treaty obligations with the Tribal Nations of the area. Mitch recognizes supporting dam removal as a duty to defend the “right to these fish that was promised to them a long time ago.” He views the current situation as “a broken promise that’s been broken for a long, long, long time.” The goal of upholding the original promise is echoed by Abbie Abramovich, Salmon Grassroots Lead at the Idaho Conservation League, who points out, “we’ve essentially cut off access by driving these fish to extinction or the brink of extinction. They have a lot of rights built into those treaties. And one thing that I’ve been trying to shift lately is seeing that as my treaty as well. It’s not just on the tribes to make sure that they are fighting for their own treaty, but it’s something that we agreed to with them.” Removing dams would be a step in

the right direction, something supported by Colombi and Diver et al's work on the life connection between salmon and the Nez Perce and Karuk tribes (Colombi 2012; Diver et al. 2024).

Finally, interviewees repeatedly identified the opportunity to save salmon to keep them around for future generations as an opportunity dependent on dam removal. Tess poses her evaluation of this topic as a challenge: "Do we want to look back on this moment and be able to say we saved salmon for our grandchildren and generations to come so they can fly fish and share all these places and memories that we get to?" The fear of a future without salmon is something that the Tribal Nations reckoned with in the 1960s. Joel explains that "we weren't fishing… voluntarily because the fish were so low that the tribes knew…we have to conserve in order for there to be fish for our kids, our grandkids, our future generations." Dam removal would ensure that future generations have salmon, a common goal of interviewees regardless of background. Mitch identifies this sentiment as common throughout ICL's membership. He describes members who "like the idea of being able to see [a wild salmon or steelhead] somewhere someday or certainly like the idea of their kids or grandkids also being able to see abundant populations." This forward-focused perspective exemplifies how establishing the connection between dam removal and the opportunity for future generations to experience wild salmon runs can be an effective tactic for signaling urgently needed action.

IV. "We'll Talk to Anyone": Perceived Allies and Opposition

Pro-removal stakeholders and sovereigns all mentioned similar organizations as being allies and opponents of dam removal. Pro-removal groups include the tribal nations, conservation groups, salmon or river guides and outfitters, and the state governments of Oregon and Washington. Groups consistently mentioned as opposed to dam removal include Idaho

politicians, the Bonneville Power Administration and electric utilities, and individuals who use the dams for irrigation or transportation such as barging. The following table catalogs the stakeholders mentioned by interviewees and webinar participants, their affiliation as allies or opposition to dam removal, and how many interviewees or webinar participants referenced them. Participants in the webinar were not specifically asked to describe allies and opponents but they mentioned groups on both sides of the issue, and these mentions have been included with the tally from interviews.

	Number of Participants Who Mentioned as Ally (Out of 10)	Number of Participants Who Mentioned as Opposition (Out of 10)
Users of Dam Services (Farmers/Irrigators/Bargers)		**9**
BPA/Electric Utilities		**6**
NW Politicians	**5**	**5**
Tribal Nations	**10**	
State Government (OR, WA, ID)	**5**	
Conservation Orgs/NGOs	**4**	
Guides, Recreationalists, Outfitters	**7**	

The consensus of interviewees regardless of background was that the Tribal Nations are at the front of the movement. Jack emphasizes the Tribal Nations' role as "more than a

stakeholder. They're a sovereign. The importance of tribes and what they own really goes beyond what any stakeholder could possibly care about with salmon".

Tribal citizens echoed this sentiment when describing their own role in the movement and collaboration with other groups. Kayeloni Scott, a Nez Perce tribal descendent, Umatilla citizen, and Columbia/Snake River Campaign Executive Director distinguishes between the Northwest Tribal Nations' role and that of other stakeholders; "In this region, we have stakeholders and rights holders," referencing the rights to salmon promised to Tribal Nations by treaties. She reinforces a point made by other stakeholders: the Tribal Nations not only are spiritually connected to the Snake River fish but also were promised a right to salmon. As a result, their connection to dam removal goes far beyond any other stakeholder groups.

Yet, despite their deep spiritual and legal connections to Snake River salmon, Tribal Nations across the region have not always shared uniform opinions on dam removal. Joel experienced the process of uniting tribes around the region as a "long slog" because "even though we're all salmon tribes, every tribe is different." For example, the Columbia Basin Fish Accords, signed by the Umatilla, Warm Springs, Yakama, and Colville tribes in 2008, paused litigation surrounding improved dam operations for anadromous fish for ten years ("Columbia Basin Fish Accords," n.d.). The Nez Perce refused to sign. Joel explained that the Nez Perce were "…not going to compromise on this… for our credibility, we're not going to sign that agreement." He describes how the expiration of the pause in 2018 allowed leaders "to bring the tribes together" as they were no longer "constrained by this agreement". This means that a unified bloc of tribal nations can "push for the ultimate solution, long-term solution, which is taking down those dams".

Although Tribal Nations see themselves as leaders of the dam removal fight, they emphasize the importance of collaboration with other groups, particularly those opposed to dam removal. Chairman Wheeler describes the attitude of the Nez Perce towards collaboration with the metaphor of a handshake- “the Nez Perce don't come with our hand this way [palm up as if asking for something], we come with our hand this way [offering a handshake], in partnership, in working together to find solutions for what needs to be done.” A willingness to work with other groups whose interests may differ to find a solution and the necessity of collaboration are recurring themes in the data.

The importance of collaboration with groups who are opposed to dam removal is mentioned as both a necessity and an opportunity. Primarily, there is overwhelming stress placed on the fact that the only way to get dam removal done is by working with groups who are against it currently. Mitch describes “collaborating in a bi-partisan fashion” as “the only way that we are going to get there [removal].” All three river guides reflected similar outlooks about the significance of not being “afraid of talking to people who aren’t” on the side of dam removal. Ms. Scott and Chairman Wheeler of the Tribal Nations affirm this perspective, recognizing that “we've really come to a place of understanding, and we're working toward building on those relationships and building trust” with opponents of removal and that this process has meant “that's really where the growth happens and the opportunities [for progress] show themselves.”

Collaboration was described as an opportunity to foster trust between relevant groups on both sides of this issue and also to communicate a greater message about the priorities of the region and the potential for greater bipartisanship nationwide. Roy describes this project as a “chance for us to prove to ourselves as a nation, that we can cross aisles, we can shake hands, solve one of the most complex environmental problems we've ever encountered and that we can

still work together." He notes that this collaborative process "could have a much bigger impact or a much bigger value to it than just the fish being saved themselves." The national ramifications of this situation are further amplified by Chairman Wheeler: "This is a national issue. This isn't just the Pacific Northwest or the State of Washington's responsibility. This is a national issue, and so it's a responsibility of a country. And so I think as we continue to move forward then and be able to gain that trust, that's how we move forward". The conflict on the Lower Snake River could be a model for the power of collaboration across political lines to solve national natural resource issues.

This commitment to working with members of the opposition is another example of "unlikely alliances" as described by Harrington and Cantor in their study about support for the Columbia Basin Initiative (Harrington and Cantor 2024). They identify crisis and the presence of strong leadership as being important factors for fostering unlikely alliances; demonstrating collaboration on a complex natural resource issue to the nation represents a potential third category that has prompted stakeholders in the region to take up unlikely alliances. While this thesis only documents the pro-removal perspective, interviewees repeatedly mentioned the significance of this strategy in solving difficult regional environmental problems.

Finally, stakeholders I interviewed described Northwest politicians as potential allies with mixed feelings. Idaho's elected officials, outside of Mike Simpson, were described as "not having stepped into the conversation in a meaningful way." Roy criticizes the rest of the Idaho Congressional delegation as being "very ignorant about fish to begin with." He believes that they are "working against their own best interest. They're working against their own state, their own little rural communities, which they love to visit and recreate in. And they're working against themselves." An interesting facet of my conversation with Roy was the politicization of this

issue. He describes anti-dam removal politicians as having turned the Snake River dams into a wedge issue where dam removal advocates are characterized as a “tree hugger” or “greenie” while those opposed to dam removal are “one of our people.”

Interviewees bemoaned the politicization of this issue. Mitch, in particular, was disappointed that the dam removal debate turned into a political issue. He emphasized that “this issue is not a partisan issue at all.” The belief that dam removal should not be political was common. However, interviewees view politicization as an obstacle to reaching a consensus about a solution. Mitch expanded on the need for nonpartisanship by explaining that “the values that we're talking about, cross party lines in many ways.” He describes “making more people in the Northwest understand that” as pro-removal groups’ “fight for the next couple of years.”

The aspirations for nonpartisanship notwithstanding, dam removal is politicized. This is apparent not only in the criticisms of Idaho politicians but also in the belief that Northwest Democrats may be the group that can champion dam removal. Chairman Wheeler describes the current and former governors of Washington and Oregon as being highly receptive to collaboration with the Nez Perce on this issue. He depicts Governor Ferguson in Washington as being someone who “cares about salmon, he cares about the Pacific Northwest, and he cares about Orca.” He is also complimentary of Tina Kotek, Governor of Oregon, who has made it clear “that she wants to weigh in more on this, and will continue to work in restoring salmon runs” meaning “we have a governor in Oregon that's all in [on dam removal] now.” Abbie reaffirms this message in her belief that “it seems like Northwest Democrats are the ones who are really going to carry this forward at some point.”

V. “Dams are replaceable. Salmon are not”: Looking to the Future

The outlook among interviewees for future dam removal on the Lower Snake River was somewhat optimistic, albeit highly cautious. The process by which removal would occur is understood and prescribed. As LSR dams are federally owned and operated, their removal would require a Congressional decision mandating the dams be decommissioned and breached. All interviewees are steadfast in their hope for an outcome that is collectively beneficial for the region. Strategies for moving dam removal forward include targeting rural populations with place-based solutions that address these communities' concerns and spreading awareness about this issue. Most interviewees, particularly the Tribal Nations, were clear that litigation is not their preferred method of achieving dam removal.

All stakeholders were extremely realistic in their expectations, acknowledging that Congress would need to authorize the dam removals. Since the dams are federally owned and operated, a decision from the federal government is necessary to decommission and remove them. Environmental advocates were consistent in emphasizing that Congress needs to act. This reflects the "most far-reaching lesson" described by Blumm et al (2024) in their study on Pacific Northwest dam removal: "important decisions such as the fate of the four lower Snake dams rest not with agencies, Tribes, or judges, but ultimately with the political branches of government: members of Congress and the occupant of the White House" (Blumm, Rohlf, and Eno 2024). As Kira explains, "really you need a bill to pass Congress to remove the dams." Greg describes the consequence of this ultimate authority, reaffirming that "this was always going to be a long, hard campaign where we're going to have to… force Congress's hand. They're not going to do it for fun, because it's going to be hard, so we were going to have to make them do it." Two takeaways from the interviews are evident: there are no false illusions among stakeholders about Congress' role in dam removal and all groups are united towards this goal.

The partisan divide on the issue of dam removal and the need for Congressional approval points to an unfortunate disconnect. While some pro-removal advocates recognize the need for nonpartisanship, they are reliant on politicians to act. This disconnect arises because some stakeholders want to describe dam removal to the general public as an apolitical issue to sway more people on both sides of the debate. However, they are trying to build support for removal by convincing elected officials to take up a position against the dams. The goals of the dam removal movement can thus be described paradoxically as both exceedingly political in its means and also ideally non-partisan in its aspirations.

The most commonly mentioned theme throughout all of the interviews and analysis conducted for this study was the importance of an eventual outcome of dam removal that is collectively beneficial. There is a consensus among all groups that any plan surrounding the LSR must incorporate the wants and concerns of entities on both sides and be beneficial to the inhabitants of the region as a whole. In this way, the focus on a solution is shifted away from simply saving fish. Greg describes how being a resident of the region leads to a broader mindset: "We want to find outcomes that lift all boats in Idaho and at the end of the day, you know, our members and staff, we live here too, right? We've got to buy electricity. We want to see our farmers who are our neighbors thrive, we want to see our local communities thrive … And I think sometimes people are accused by [opponents] saying 'you just want salmon, and you don't care about anything else'. That's not true. You know, we want salmon, but we also want to have a thriving Idaho." When speaking about the collaboration involved in the CBRI, Ms. Scott spoke of the process of collaboration leading to a collectively beneficial outcome. She described how "we've [the Tribes] always pushed on this initiative that it's not one or the other, it's both. We can have salmon thriving in these rivers, and we can have farmers continue to provide food for our

country.” The willingness of the tribes to support a solution that is widely beneficial to the region is described by Abbie as selfless, a generosity perhaps undeserved by non-indigenous residents of the region. She speaks of this quality admirably; “they are willing to come to the table with folks who might disagree with them, and who rely on the services provided by the dams and say, ‘okay, how can I make this work for you?’ And I think that that is pretty incredible, given that tribes were not offered a place at the table when these dams were built.”

The tribes’ diplomacy is frustrating but required for moving toward the removal of the dams in Joel’s opinion. When describing the process of collaboration, he reinforces that the “tribes have had to sacrifice… we didn't ask for the dams. They didn't help us. They didn’t care…we had to go to court to get litigation right, and it still isn't enough. Because ultimately, we don't want dollars. We want salmon. We want a way of life.” So when other groups voice frustration over sacrifices related to removing the dam, he has to hold back: “It's taken a lot to bite my tongue, and to understand the reality of the times we live in”. He acknowledges that simply highlighting “moral grounds… environmental justice grounds… they're not going to move Congress. The general public isn't going to move on that argument.” Instead, removal will require collaboration that results in “a big change for all these other [dam-reliant] constituencies.” Ironically, the tribes can empathize with disruption to a way of life. Joel explains that they can understand- “we hear you, we've gone through it. So let's, let's understand that from their viewpoint. Let's listen to you. Hear your stories of how it's going to impact you, but also work together” to find a collectively beneficial solution that removes the dams and saves the salmon.

One benefit of reaching a collective solution now rather than later would be avoiding a situation where some constituencies are left behind by forced dam breaching due to factors like

the dilapidation of the dams or even more alarmingly low salmon populations. Both Roy and Greg described this fear, with Greg referencing the dam removals on the Klamath. There, federal approval, which was the product of a litigation process, approved the breaching of formerly privately owned dams ("Klamath River Dam Removal and Restoration," n.d.). He describes the outcome of this process as changing expectations in the region, with the mood going "from 'all these dams are going to be here forever' to 'they're coming out'. This change meant that "a lot of people got left behind" in the process of accommodating as many groups dependent on the river as possible. Roy cautions against leaving some groups out on The Snake: "if we fight till the very end, till there's one fish left, it's very possible that those four Lower Snake River dams will come out anyways, and nobody's going to get anything other than the fish coming back and the dams being torn out, and far later than we need to wait and put these fish at risk". The finite lifetime of dams and the potential for forced removal in the future allows advocates to pressure some opposition groups who would otherwise be uninterested in discussing the possibility of dam removal. Framing removal as a collectively beneficial outcome and raising the possibility that any benefits could be missed out on incentivizes stakeholders to join the conversation. Therefore, identifying solutions favorable to all parties not only broadens the appeal of dam removal but also pressures opponents to come to the bargaining table, particularly when advocates can offer specific plans involving replacement technologies or retraining workers.

When describing specific strategies to facilitate a solution, interviewees agreed that the most essential strategy moving forward will be getting more people interested in and educated about the benefits of dam removal, regardless of their opinion about salmon. Interviewee groups disagreed about the type of information that should be disseminated. The webinar participants from Tribal Nations described broad outreach centered on information about the situation to

whomever will listen. Chairman Wheeler describes the importance of "rais[ing] awareness" generally by "understanding and sharing" the growing body of information and scientific studies surrounding the prospect for dam removal on the Lower Snake with a focus on "moving forward." Ms. Scott expresses a similar sentiment about the need for "public engagement piece… to continue… and expand". Casting a wide net for dissemination of information about the benefits of dam removal was described as a key component of engaging more stakeholders. Both Ms. Scott and Chairman Wheeler also described broad outreach as ideally incentivizing people to "reach out" to lawmakers who will have the final say in this decision.

Environmental advocacy organization employees and guides were more specific about the information they wanted to share and with whom. Both were clear in their desire to educate people about the ineffectiveness of the status quo. Jack describes explaining to members of the IOGA "how things have changed" over the years. Abbie similarly describes the necessity of "sharing the cost of these dams, and how much money we poured into salmon recovery, how much money their repairs are going to need over the next decade to show that, whether or not you really care about fish or your interaction with fish, these dams are where your taxpayer dollars are going". They also wish to target specific groups with information campaigns. Typically, these are groups who incorrectly believe they have no stake in removal: "people who aren't just our outdoorsy advocate folks, who aren't just our fly fishers or aren't just our river rafters, or whoever it is, people who are already aligned with but I think we need to communicate with folks who don't necessarily feel connected to the river, and figure out, how can we make them feel connected to it."

Roy also mentioned targeting outreach at an unlikely audience: stakeholders in favor of extractive economies across the state limited by legislation currently in place to protect fish. He

describes his argument while appealing to these groups: “Look, if you get salmon and steelhead off the endangered species list. Guess what? You can go back to a lot more of your logging. You can go back to a lot more of your mining. You can go back to these extraction industries, your ranching because right now, a lot of the restrictions you're struggling [against] and running into over and over is the fact that you killed all the salmon and steelhead”. Through this strategy, dam removal could be marketed to people who would presumably be unlikely to support an ‘environmental’ agenda as an opportunity to restore industries destroyed by ‘environmental’ regulations.

These differences in preferred messaging reflect strategic choices. The tribal sovereigns can leverage their standing in the region to prompt more people to come to the discussion table, while NGOs and other experts can target individual groups with specifically tailored information.

Opinions about the role of or need for litigation moving forward varied among interviewees. No stakeholder group describes litigation as a preferred strategy for resolving conflict over dam removal, but guides and environmental advocacy employees spoke of it significantly more positively than citizens of the Tribal Nations. Chairman Wheeler describes it simply: “it’s beneficial for the sovereigns to stay out of court.” Reaffirming the importance of collaboration and discussion, he reiterated that the treaty rights promised to the sovereigns are reinforced and recognized by government, particularly through the signing of the CBI. The undertone of his message seemed to be that litigation would only serve as a divisive strategy, further dividing groups on both sides of the removal debate and preventing them from finding common ground.

Mitch also recognizes the undesirability of litigation. He criticizes litigation as “not exactly how you get to collaboration.” However, Mitch and a multitude of other environmental advocacy workers also acknowledge litigation as essential in the fight to save salmon because current dam operations are a product of advancing in the “litigation sphere on this to where we can get the dams to operate in a way that contributes to maximum survival for fish going through them. And we're prepared to keep going along that pathway, to use hydro-operations at the dams to maximize survival and to minimize how many fish die. So if that's the right that we have to go through litigation, then that's it, keep these fish around.” The usefulness of litigation and enforcement agencies is emphasized by Tess who explains that it’s “important to for us to keep going after the Bonneville Power Administration and the Army Corps of Engineers, who run the dams and own that land along the river. “Targeting them and lighting the fire under them and holding them accountable” would ensure that federal entities cannot continue to “kick the can down the road at this point”, as Abby separately lamented.

The sobering reality of these differing stances on litigation is that a court battle seems unlikely to be an effective way to advance the cause of removing the dams. Litigation and the courts may be a tool for keeping populations stable until consensus on removal can come but they are unlikely to result in a decision in favor of removal, as signaled by the Tribes’ desire to keep this debate out of court. This reinforces the described need for productive collaboration and reaching a solution that is collectively beneficial. Effective outreach strategies and having constructive conversations with adversaries of removal are more likely to lead to an outcome in which Congress, which has ultimate authority, authorizes the removal of the dams.

Conclusion

The removal of the four dams on the Lower Snake River is an idea that has been floated around for decades; yet, there is little evidence of significant progress towards a decision promising their removal. Stakeholders and sovereign Tribal Nations who are in favor of breaching the dams continue to fight for a removal plan that aims to restore salmon populations in the Snake River basin but also to improve the economic, natural, and social conditions of the region overall. Through my interviews with these stakeholders, I identify the importance of salmon to these individuals – as a cultural symbol, economic resource, and essential component of the natural environment. This connection is often dictated by either the employment, hobbies, or location of stakeholders and sovereigns, for whom salmon are an integral part of ecosystems they are passionate about. During this process, I have collected information that allows interested parties outside the region or new to this topic to understand the personal rationales behind dam removal. I have argued that stakeholders are primarily motivated by two main reasons for dam removal: problems with the status quo created by the operation of the dams and/or the anticipated benefits from their removal.

Through this lens, I examine the situation on the LSR from a different angle than the majority of published work. By focusing on what interviewees, who are uniquely informed and invested in this situation, view as the current issues and potential benefits of removal, I construct a personal perspective that supplements cost-benefits analyses by authors such as Blumm or Kubasek and Giles who focus mainly on economic feasibility of removal (Kubasek and Giles 2001; Blumm 2021). Stakeholders typically identify similar allies and opposition in this campaign, consistently emphasizing the role of the tribal nations of the region as leaders of the movement. Understanding the network of pro-removal allies aims to build on work

characterizing “unlikely alliances” by Kantor and Harrington but with the updated perspective that has arisen in the nearly five years since the creation of Mike Simpson’s Columbia Basin Initiative (Harrington and Cantor 2024). Finally, I assert that the identified necessity of a Congressional ruling to truly make progress toward dam removal is recognized by dam removal advocates uniformly. This provides an up-to-date snapshot of the reality facing pro-removal stakeholders in the Snake River basin in the aftermath of the election of Donald Trump.

One potential limitation of my work is its focus on only one side of the debate surrounding dam removal on the LSR and as a single case study. The trends and claims described in my work, while relevant to the debate at hand, cannot tell the whole story of what is at stake on the Lower Snake due to its focus on pro-removal advocates. Nor can they be generalized to other dam removal cases– the unique characteristics of each dam’s operations and the diversity of river ecosystems make generalizations about this topic difficult. Another potential limitation is gaps in representation; this occurs both as a product of a relatively low number of data from represented stakeholder groups (8 interviews and 2 webinar participants) and the representation of only one individual through interviews for arguably the most important stakeholders, the Tribal Nations. Millions of people would be affected by the decision to remove the four LSR dams and there are important implications caused by removal that remain missing from my examination of the conflict.

The immediate implications of this work are relatively narrow. Foremost, it allows anyone interested, invested, or who ought to be in this issue to better understand what motivates the pro-removal faction. It expands a paradigm in existing literature on the subject that is relatively narrow – how an undertaking like dam removal on the Lower Snake River is connected to individuals and how this shapes the movement that has arisen as a product of these links.

Furthermore, the centering of a non-human population like salmon at the center of this natural resource debate can be effective but often insufficient for creating meaningful change. Environmental organizing with nonhuman populations at the center is challenging because as Greg described to me, “a lot of times wildlife get the short end of the stick, from both parties, from all administrations and from Congress. You know they're popular, but you know, are they more popular than whatever economic driver is on the other side? Usually not.” My work demonstrates how it takes a committed and diverse group of advocates to potentially overcome this reality. Finally, I hope that instead of the focus on cost-benefit analyses or scientific evaluations of the detriment inflicted on salmon populations by dams that have traditionally dominated the field, this project captures the remarkable perspectives of individuals who are closely involved in this debate.

Further research should start by building on the foundational structure that I have outlined to expand the literature that focuses on characterizing the stakeholders involved in the LSR dam debate. This includes an expansion of my established array of stakeholders to include more perspectives on the pro-removal side but also a broader report on individuals who are against removal or on the fence about this issue. Ideally, expanding on my work will help create a broader catalog of the individual perspectives that have stakes in the LSR dam removal conflict. Another further development of my work could begin to more concretely connect stakeholders’ motivations to current developments in the Snake River campaign. By mapping how development within the dam removal is occurring on the Snake as a product of individuals or groups, the campaigns could be refined or modeled to create more effective and practical methods for creating meaningful improvements to the status quo on the Lower Snake River.

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