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Collaboration and conflict in the process of creating governance: Challenges and opportunities for anadromous fish restoration in the Columbia River Basin

by

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Committee Approval

To the Graduate Faculty:

The members of the committee appointed to examine the thesis of Benjamin Ortman find it satisfactory and recommend that it be accepted.

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Collaboration and conflict in the process of creating governance: Challenges and opportunities for anadromous fish restoration in the Columbia River Basin

Thesis Abstract--Idaho State University (2021)

Despite decades of restoration efforts in the Columbia River Basin in the United States, recovery of anadromous fish remains elusive. Regional stakeholder conflicts about objectives for fish restoration complicate efforts to collaboratively develop successful governance systems. While ecological research and solutions have been primary considerations for restoration initiatives, much of the literature recognizes social complexities as the root of the problem. This research employs qualitative methods that use narratives about anadromous fish restoration to lead to more comprehensive understandings the factors that drive decision-making in the process of developing collaborative governance. I show that the depth of divergence between stakeholder objectives has not yet been sufficiently addressed. I then explain which discourses are privileged over others by decisions, or indecision, throughout the governance process. Lastly, I highlight that current governance model lacks any pathway for making difficult decisions when stakeholders cannot reach consensus.

Key Words: Narratives, Conflicting Objectives, Salmon, Governance, Collaboration, Columbia River

Chapter 1 Introduction

Due to the complex nature of socio-ecological problems, collaborative governance systems that promote sustainable and equitable solutions are necessary. The likelihood of achieving successful governance increases when systems are able to equitably incorporate the voices of all stakeholders in decision-making processes (Dietz et al. 2003, Armitage et al. 2009, Adger 2000). Yet, the formation of governance is further complicated in regions that experience rapidly changing populations and changes to the biophysical environment, which necessitates systems that are flexible, responsive, and adaptable (Chaffin et al. 2014; Dietz et al. 2003, Armitage et al. 2009, Tompkins and Adger 2004). Theoretical perspectives on governance, such as environmentality (Agrawal 2005) can shed light on potential challenges and understandings of developing and implementing sustainable governance systems. In applying Michael Foucault's (1991) idea of governmentality to the environment, environmentality offers a way to understand the complexities and power dynamics that exist in the context of environmental governance and socioecological systems (Agrawal 2005). While governmentality describes governing as a process of complex power dynamics, the scaled web of interchanges between people, and the connections that define the relationship between those people and the systems that govern them (Foucault 1991), environmentality applies these concepts to the context of human-environment processes (Fletcher 2017). I use environmentality as a theoretical framework to better understand how power sharing dynamics and conflicting stakeholder objectives in the Columbia River Basin create challenges and opportunities for developing sustainable governance structures.

Despite decades of restoration efforts in the Columbia River Basin in the United States, recovery of anadromous fish remains elusive (Gayeski et al. 2018). Central to many issues around the species' lack of recovery are conflicts that have arisen between stakeholders about objectives for restoration and conservation of the species in the Columbia River Basin (CRB) (Mogren 2011). This is common in many socio-ecological systems where restoration and conservation efforts are influenced by environmental change and economic, political and social factors that present challenges to natural resource management (Ebel et al. 2020; Rademacher, 2011). Fisheries issues, such as the one in the CRB where anadromous fish

pass through various jurisdictional boundaries, pose some of the most difficult governance challenges due the variety of different goals and objectives across stakeholder groups (Campbell and Butler, 2010; Rademacher 2011). These difficulties in governance can in turn complicate the implementation of future conservation and restoration plans.

Scholars have shown what conditions contribute to successful governance of complex socio-ecological systems, including understanding and adapting to unforeseen events, establishing social connections between institutions and communities that transcend institutional boundaries, and adequately incorporating diverse stakeholder perspectives into decision-making (Ebel 2019; from Armitage et al. 2009, Olsson et al. 2004).

Rather than a stagnant or completed task, governance is more often an evolving process that necessitates the need to study the emergence and process of governance institutions (Ebel 2019). In the CRB, restoration efforts have been complicated by challenges to designing successful governance strategies (Gayeski et al. 2018, Mogren 2011, Taylor 1999), in particular accommodating divergent stakeholder perspectives. Therefore, due to the importance of studying governance as an emergent process, I elucidated and examined narratives held by stakeholders in Idaho and throughout the CRB who are involved in governance and decision-making to identify different stakeholder objectives, whether they are shared or differ, and why. Identifying narratives can foster an understanding of how individual and stakeholder views affect the discourses used in each narrative. Variations in discourse related to stakeholder objectives can present challenges to the process of building successful cooperative governance strategies. This research asks the following research questions: (1) What are the narratives associated with anadromous fish restoration and conservation in the CRB? and, (2) To what extent do stakeholders in the CRB reflect a shared vision and common set of objectives and how may this affect the emergence of governance?

To address these research questions, I conducted an in depth qualitative study using a narrative analysis approach to identify various narratives of anadromous fish restoration, who is propagating each narrative, how individual level narratives differ from the overarching institutional narrative, which may affect how certain objectives are prioritized. I elicited narratives at the institutional and individual level of

governance by interviewing leaders of different local and regional institutions that have been a part of two governance collaboratives in the CRB: the Columbia Basin Partnership (CBP) (also known as the Columia Basin Partnership Task Force) and the Idaho Governor's Salmon Workgroup.

After attending meetings, speaking with stakeholders, and analyzing stakeholder websites, I found that the CBP maintained an overarching narrative characterized by a shared vision for restoration in the CRB. However, when interviewing individuals from different stakeholder groups who were a part of the CBP, individuals' responses showed divergent goals and objectives for restoration in the CRB that were not necessarily reflected in the overarching CBP narrative. In eliciting how differences in stakeholder objectives influence each narrative, this study offers insights into the challenges that arise when designing and implementing governance involving diverse stakeholder groups. Furthermore, due to the ongoing nature of this issue in the CRB, this project illuminates the emergent process of governance, adding to literature that recognizes governance as a process influenced by interactions and negotiations with both individuals and institutions. Focusing on the process of how governance evolves allows for in depth consideration of the political, social, and cultural factors that influence power dynamics and the decision making process within governance structures (Ebel 2019).

Chapter 2 History of Governance in the CRB

Difficulties in establishing lasting cooperative governance in the Columbia River region stem from the various levels of complexity that define the CRB. Since the arrival of Euro American inhabitants in the Pacific Northwest in the 1800s, and more recently the construction of the hundreds of dams in the basin over the past century, man-made boundaries have been drawn that ignore the basin's connectivity, limiting the river's capacity to function and hindering necessary ecosystem processes. Over a thousand miles in length, the Columbia River Basin spans two countries, five states, and over a dozen tribal reservations (See Fig 1). Due to its scale and its complexity, governance efforts within the CRB must incorporate multiple levels of government and sovereign nations. Secondly, the basin provides the largest source of power in the Northwest through harnessing its energy through a vast system of hydroelectric dams. Finally, the basin is essential for barging, irrigation, and flood control, while providing for municipal water needs, recreation areas, and fish and wildlife habitat (Mogren 2011).

There are three main interest groups in the CRB: "salmon harvesters, those dependent on the commercial benefits, and economic development provided by the multi-purpose dams, and environmental interests" (Mogren 2011; p 12). Despite occasional common interests, both within and across these groups, there are vastly divergent goals and objectives. While salmon harvesters such as commercial and tribal fishers share a common interest in the commercial benefits of salmon, they hold different worldviews on why those resources are important (Mogren 2011). Sport and commercial fishers see salmon declines as a threat to economic well-being and an important cultural practice, while tribal fishers are concerned about how salmon declines could affect their sense of identity and social life connections (Mogren 2011). In contrast, the groups primarily concerned with commercial benefits of hydropower, navigation, and irrigation, envision the dams as a display of the region's economic prosperity as well as security through providing things such as drinking water and flood control (Mogren, 2011). The multitude of objectives and visions for water usage underlie a river basin that has never been governed by one single entity with the authority to solve basin-wide issues (Mogren 2011). The need for a cooperative effort to negotiate different

perceptions of the river's purpose and objectives regarding river use has led to multiple attempts at forming collaborative governance in the CRB.

Between 1934 to 2009, twenty-six different governance models had been proposed for the CRB, while only eleven were established (Mogren, 2011). Mogren (2011) suggests that four defining events or, "critical situations", between 1929 and 1999 allowed for major shifts in governance in the CRB, these included "the onset of the Depression, the end of World War II, the hydro-thermal crisis of the mid 1970s, and the first ESA listings of salmon in 1991" (pg. ii). Prior to the 1920s, there was virtually no regulation and unlimited access to public goods and resources. From the 1920s through the 1970s, the governance systems were dominated by federal oversight and development-driven agendas, and included only a limited number of participants, all of who shared a market-driven approach to management (Mogren 2011). The hydro-thermal crisis of the mid 1970s, however, provided an opportunity for Indigenous and environmental activist to take an active role in the region's new state governance systems through the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Power Act). The resulting governing body from this act was the Pacific Northwest Electric Power and Conservation Planning Council (NPPC), which still exists and is known today as the Pacific Northwest Power and Conservation Council (NWPCC). The NWPCC allows for a higher degree of input from the four states of Idaho, Montana, Oregon, and Washington. Finally, as fish stocks crashed in the late 1980's, the listing of multiple anadromous fish stocks as endangered species once again shifted the region to a federal governance model (Mogren 2011).

Court rulings that resulted from Endangered Species listings in the 1990s resulted in multiple legal actions that let to four biological opinions (1992, 1993, 1994, 1995) (Bi-Ops) required a NMFS led biological assessment (Bi-Op) of the Federal Columbia River Power System (FCRPS), which were legally contested each time by environmental groups and tribal entities. Resulting governance structures included The Regional Implementation Forum (RIF) (1995-2009), an "adaptive management structure involving states, tribes, and federal agencies" developed in 1995 in response to the endangered species listings and resulting NMFS Bi-Op (Mogren 2011; p 278); the short-lived Columbia River Basin Forum (CRBF) (1999-2000) that intended to resolve regional disputes through the inclusion of federal and state agencies, tribal

entities, commercial and private associations, and non-governmental organizations; and a continuation of the NWPCC (1980-present) created out of the Northwest Power Act of 1980 to mitigate any negative consequences of the FCRPS to fish populations.

Unlike previous governance structures, the RIF featured the tribes, states, and federal governments as co-managing equals (Mogren 2011). An Implementation Team was created under the Executive Committee of the RIF, also consisting of senior leadership from the same three groups. Three teams under the Implementation Team were created to manage day-to-day dam operations (Technical Management Team [TMT]), advise structural integrity of the dams (Systems Configuration Team), and manage water temperature and dissolved gas issues (Water Quality Team). Today the Implementation Team remains an active governance institution known as the Regional Implementation Oversight Group (RIOG), created in 2009, including only two teams: the TMT and Fish Passage Operations and Management (FPOM). These two teams as well as the RIOG in general include representation from tribal, state, and federal governments. The NWPCC also allows for a degree of input from the four states of Idaho, Montana, Oregon, and Washington through positions on the council appointed by state governors. Importantly, the RIOG process and the NWPCC are maintained as completely separate and independent entities. Finally, treaties such as the Columbia River Treaty remain an important aspect of international and tribal CRB water governance, while the Pacific Salmon Treaty is focused on ocean harvest. While a few structures remain in place from the last few decades of attempted regional cooperative governance, scholars have repeatedly documented the inability of these structures to halt or reverse the decline of anadromous fish populations in the CRB (Mogren 2011, Gayeski et al. 2018, Lichatowich et al. 2019).

2.1 The Columbia Basin Partnership Task Force

After several failed governance attempts, the Marine Fisheries Advisory Committee (MAFAC) (an entity of the National Oceanic and Atmospheric Administration (NOAA)) started an independent assessment in 2010 to determine the condition of the CRB fisheries and decide on a long-term recovery plan. This effort spawned The Situation Assessment in 2012, which reflected the perspectives of over 200

stakeholders from across the CRB and emphasized that many overlapping efforts in the region shared common goals and would benefit from a uniting various recovery plans to create a shared vision of success. Out of this emerged the Columbia Basin Partnership (Task Force) in 2017 to develop common goals and a shared vision for the future of Columbia Basin anadromous fish restoration. The CBP brought together a diverse group of participants, including CRBTF tribes, conservation groups, hydropower interests, commercial and recreational fishers, agriculture, river economies; and the states of Idaho, Montana, Oregon, and Washington. These groups were gathered to participate in the CBP based on a shared interest in the restoration of healthy and harvestable salmon and steelhead populations.

Early on throughout 2017 and 2018 during Phase 1, members of the CBP met and discussed the causes of salmon declines, explored the diversity of goals and interests among participants, and built relationships based on mutual respect and understanding. Additionally, they drafted an overarching vision for the CRBTF that outlined a set of shared qualitative and prospective quantitative goals for the region. Their vision reads: "A healthy Columbia Basin ecosystem with thriving salmon and steelhead that are indicators of clean and abundant water, reliable and clean energy, a robust regional economy, and vibrant cultural and spiritual traditions, all interdependent and existing in harmony."

In Phase 2, the CBP finalized the Quantitative Goals outlined in Phase 1 for 27 Columbia Basin salmon and steelhead stocks. Additionally, members discussed possible ways to reach the quantitative goals. The CBP created and considered scenarios for reaching those goals by weighing different biological, social, cultural, ecological, and economic factors. The CBP acknowledged that the conflicting interests within these considerations presented significant challenges to finding sustainable solutions through cooperative governance and agreed that the next step was to develop an action plan to work towards achieving their goals. Upon the publication of the Phase 2 Report in 2020, the CBP had successfully drafted a common vision for the Columbia Basin and developed qualitative and quantitative goals with a range of scenarios and considerations for achieving those. Despite these accomplishments, upon its conclusion 2020, the CBP had not come up with a process of deciding what action steps were necessary to reach those goals. Later that year, the Columbia Basin Collaborative was created as a natural next step in this collaborative

undertaking, with the objective of developing a process by which to advance the goals outlined in the CBP's phase 2 report.

2.2 The Columbia Basin Collaborative

An agreement was signed in 2020 by the states of Idaho, Washington, Montana, and Oregon in cooperation across regional stakeholders, including federal partners, tribal entities, and other interested parties to create the CBC, which held its first collaborative workshop in early 2021. The CBC was similar to the CBP in many ways such as the inclusion of a wide group of stakeholders as well as using a collaborative approach while striving for consensus in decisions making. However, the CBC is distinct from the CBP in that its purpose is to develop a framework for rebuilding salmon and steelhead stocks in the Columbia Basin by advancing the goals and accomplishments of the CBP. Additionally, while the CBP was initiated and led by NOAA's MAFAC, the CBC is spearheaded by the four interested states through their governor appointed NWPCC representatives. Considerations for NOAA passing off the responsibilities of leading this collaborative effort include the overall cost (of staff time and resources), a desire to have more involvement from diverse leadership throughout the basin, and, because the CBC itself has no enforceable decision-making power, it would need the support of the states, tribal sovereigns, as well as federal agencies to successfully fulfil its purpose of advancing the goals of the CBP. Furthermore, the four states (by way of their NWPCC representatives) were the first to have the resources, show a dedicated interest, and gather the momentum needed to continue these basin-wide collaborative efforts. Lastly, the CBC presented a new refined organizational structure and strategic approach.

The CBC's public proceedings began with two Organizational Workshops in 2021 (February and June). The first workshop featured four governor appointed representatives of the NWPCC who introduced the CBC's purpose, proposed the intended approach, and entertained public comments and questions. The second public Organizational Workshop followed a similar structure as the first workshop with the addition of four representatives from the four states, including Idaho's Office of Species Conservation as well as Oregon and Washington's Departments of Fish and Wildlife, while presenting a refined organizational

structure. This structure is comprised of an Integration/Recommendations Group (I/RG), topic specific work groups, and a Project Team containing the NWPCC representatives from the four states. The I/RG, made up of 20-30 members including the four states, tribes, federal agencies, and stakeholders, assigns tasks to topic specific groups (comprised of scientific analysts and technical experts) who then make management recommendations to the I/RG. The I/RG will integrate issue specific recommendations to sovereigns and other regional entities after assessing them for feasibility and refining recommendations. The Project Team manages logistical tasks of the CBC and assures that efforts proceed smoothly. The CBC is currently in the process of establishing who will make up the membership of the I/RG through nominations. Although the CBC is currently in the process of refining its organizational membership process in order to advance the goals agreed upon by the CBP, concerns still exist about how this will be achieved.

2.3 Congressman Mike Simpson's Proposal (The Columbia Basin Initiative)

Due to an overwhelming recognition that the current system is not working for all people in the Northwest and out of a fear for the fate of salmon and steelhead in Idaho and beyond, United States Congressman Mike Simpson set about to find solutions to these issues. Over the past three years Congressman Simpson held over 300 meetings with all stakeholder groups in the CRB, including elected officials, Tribal members, and other stakeholders. These meetings were carried out in an attempt to better understand the issues that face the region regarding salmon recovery, dams, energy, and transportation. Due to the over 17 billion dollars spent on salmon recovery, the cyclical conflict over salmon and the four LSRDs through biological analyses, ongoing litigation, appeals, Congressman Simpson and his staff concluded that without a comprehensive plan for recovery either more fish populations will soon reach extinction or other drastic measures will be taken through court decisions or other unilateral actions.

Finding that at their core, all issues were in some way interrelated, Congressman Simpson created a proposal for a solution that frames this problem as larger than a "salmon vs. dams" conflict. Due to an inability to find a solution that could both restore fish populations and control for poor ocean conditions,

warming rivers, and the effects of the four LSRDs, the proposal includes breaching the four LSRDs. While the idea proposes these dams must be breached, it also recognizes that the stakeholders affected must be provided the necessary resources to develop the systems they need for a sustainable future. Importantly, it is also proposes CRB Tribal groups are made co-equal partners in working towards salmon recovery. In order to fund this idea, Congressman Simpson has proposed a plan that takes advantage of what is referred to as a unique regional opportunity to craft their own solution and uses over 33 billion dollars spread out over plans for improvements and projects that address dams, energy, agriculture and transportation, fish, and communities. The proposal does not include any legislation, suggesting that legislation should be drawn up through the joint efforts of CRB stakeholders, Tribal groups, and the states in a complete regional effort by Northwest. Congressman Simpson is not sure this proposal including removal of the four LSRDs will restore salmon to historic numbers, however he says, "I am certain that if we do not take this course of action, we are condemning salmon to extinction."

2.4 Opportunities and challenges in creating successful governance

In the CRB, restoration efforts have been complicated by challenges to designing successful governance strategies due to the volume of diverse stakeholder perspectives and a history of dynamic and inequitable power sharing between groups (Gayeski et al. 2018, Mogren 2011, Taylor 1999). Environmentality provides a theoretical lens through which power dynamics and unique stakeholder subjectivities can be discussed (Agrawal 2005, Fletcher 2017). Additionally, as diverse groups participate in collaborative governance processes, individual stakeholder opinions and biases that affect whose objectives and discourses are privileged over others can be better understood. Governance in this context includes the process of regulating or making decisions and the methods of implementing (or choosing not to implement) those decisions (Escap 2009). Not synonymous with government, governance includes sovereigns such as state, federal, and tribal entities as well as private business and other non-governmental organizations. While some regions of the world have created institutions that sustainably managed certain natural resources for centuries, the creation of governance systems face complications that can result in

failure to manage resources sustainably, particularly as the managed system becomes larger and more complex, when stakeholder groups are heterogenous, and when the system experiences rapid environmental or political shifts (Dietz et al. 2003, Ostrom 1990). Over the last century, the Columbia River Basin has experienced these complexities which has complicated efforts to develop sustainable and effective governance systems. In addition to problematic environmental and demographic changes in the region, including climate change and population growth, the lack of a lasting, cohesive system of governance has likely contributed to declines in natural resources such as salmon and other anadromous fish.

To understand what solutions may lie in the future for achieving collaborative, successful governance in the CRB, it can be useful to examine studies outlining what constitutes the characteristics of successful governance. Adaptability and anticipation of multi-factor complications is crucial to the success of governance efforts in highly complex systems such as the CRB that are prone to experience rapid human and biophysical shifts (Chaffin et al. 2014; Dietz et al. 2003, Armitage et al. 2009, Tompkins and Adger 2004). Tompkins and Adger (2004) describe this as a "learning-based process" that allows for prompt evaluation and adjustment upon the reception of new information. Additionally, studies have also shown that successful governance must be an inclusive process in which all stakeholders have a voice in the decision-making process (Dietz et al. 2003, Armitage et al. 2009, Adger 2000). This involves not only economic and political considerations, but also social ties that foster trust among different parties involved creating structures and policies (Adger 2000). Governance deliberations and the ensuing management decisions must also be developed in a manner that has given consideration and is grounded in an understanding of the region's cultural and social context (Adger 2000). Finally, in complex systems like the CRB, successful governance should include a multi-scale approach (Armitage et al. 2009) and incorporate cross-scale linkages (Ebel 2020) that will serve to reinforce social ties and cross-cultural understanding. Due to the volume of interested stakeholders from the individual to the institutional level, CRB governance systems will need to include multiple layers of stakeholder contributions and incorporate cross-scale connections. Cross-scale connections also improve the likelihood of successful governance by

including more diverse networks of individuals and groups who can influence everyday decisions at the local and community level (Tompkins and Adger 2004).

While it is important to examine the outcomes of governance systems and structures, governance should not only be considered in terms of outcomes. Rather than a stagnant or completed task, governance is often an evolving process that necessitates an examination of the emergence, process, and development of governance institutions (Ebel 2019). Studying the process and evolution of governance can elucidate new dynamics which may not be observed in the outcomes alone. Social connections in multi-scale governance systems are important in showing how decision-making power and influence are dispersed throughout the duration of a collaborative efforts. For example, considering how different individuals are involved in the transitionary steps that result in certain governance structures can reveal important power dynamics between stakeholders during decision-making processes (Ebel 2020). This also reinforces the need for governance to be flexible and adaptive in the CRB, due to the developmental nature of this process in a quickly changing environment. The evolving process of governance can be observed through the proceedings currently manifesting in the CRB, through the collective efforts of the Columbia Basin Collaborative.

Chapter 3 Narratives

Narratives are the stories that are used to describe and analyze difficult policy issues and must be considered due to their ability to influence the potential for change decision making (Roe 1994). Known as policy narratives, they can be defined by a particular set of qualities. In order to qualify as a narrative, a narrative must have (1) a setting or context, (2) a temporal plot (beginning, middle, end), (3) problem fixers (heroes), problem causers (villains), or victims (those harmed), and (4) a moral of the story (solution offered) (Jones and McBeth 2010).

3.1 Narratives in Conservation

Narratives, defined as storylines that emphasize "assumptions about drivers of change and consequential solutions they enable" (Berdej et al. 2015), often reflect individuals' constructed realities and compel people in the same manner as if they represented real events (Roe 1991). Roe (1991) states that narratives begin with the definition of a problem, transition to a part where a solution is identified, and culminate at an endpoint in which a desired outcome is realized. These storylines often describe a complex situation in simpler terms and are frequently used by policy makers to steer decision-making (Roe 1991). Importantly, narratives provide a means to interpret the roles of different actors in a temporal arrangement, placing events and objects on a timeline in a way that makes them understandable (Chase 2006). However, any one particular narrative does not necessarily represent the full spectrum of stakeholder objectives, perceptions, and connections to a resource, nor will it be sufficient to explain the full complexity of a particular situation (Berdej et al. 2015). In conservation, narratives can describe a viewpoint on natural resource management issues that serve to guide decision-making.

Scholars have shown that narratives are useful in identifying which aspects of the environment are most important to individuals and groups and to what degree (von Heland and Clifton 2015, Farrell 2017, Albertson 2019). Von Heland and Clifton (2015) state that in order for an ecosystem to be the focus of policy and necessitate regulation, its value to different individuals and organizations needs to be established.

They argue that narratives are key to understanding the value humans assign to species because they establish the characteristics that make an environment, how conflicts are defined, the ways solutions are implemented, and boundaries assigned (Von Heland and Clifton 2015). Often it appears that an individual's values are related to their identity and the ways in which they are a product of their past experiences. Narrative analysis is important in this regard because conflicting values are inherent in wicked problems (Rayner 2006). Similarly, narratives can be important because of how they "separate the sacred from profane and tell us who we are, why we are, what we are doing, and why it matters" (Farrell, 2017. P 15). In this way narrative analysis provides a unique opportunity to elucidate the way in which values develop and meaning is ascribed to certain aspects of the environment in a variety of ways. Similarly, narratives can help explain how issues often originate from conflicting conceptualizations of stakeholders' beliefs about what's right or wrong and their deeply embedded ideas about the role nature plays for humans (Albertson 2019). Understanding what is most valued and why can show how those values influence individuals' and groups' objectives.

Narrative inquiry can help explain how objectives of different stakeholders are formed and shaped (Campbell 2002, Von Heland and Clifton 2015, Berdej et al. 2015, Farrell 2017, Roe 1991.) When seeking to attempt solutions to characteristically wicked problems, what shapes their objectives is important to consider in seeking cooperative efforts and creating mutually beneficial goals. Campbell (2002)'s research displays how narratives can be used to elucidate stakeholders' underlying objectives and bring to light what factors motivate stakeholders' policy preferences. Additionally, in marine conservation, several studies suggest that elucidating diverse stakeholder narratives are imperative to understanding how the motivations that underlie policy choices and reflect challenges in marine governance (Berdej et al 2015, Von Heland and Clifton 2015). Similarly, Farrell (2017) found that narratives help explain conflicts that surround management of the region containing the Greater Yellowstone Ecosystem unveiling underlying motivations for policy preferences though people's understandings of the environment. Furthermore, narratives are derived through day to day social experiences that serve as methods by which to understand the different cultural ways of thinking common to certain groups (Farrell, 2017). These storylines that emphasize

"assumptions about drivers of change and consequential solutions they enable" (Berdej et al. 2015), often reflect individuals' constructed realities and compel people in the same manner as if they represented real events (Roe 1991). In studying how narratives affect the positions that stakeholders' embrace, it is important to consider that narratives are often contested, having influence on or be influenced by other narratives.

Narratives have frequently been used to understand environmental and social outcomes in development often in the Global South, revealing the role of narratives in deciding which issues or actors are privileged in a particular conflict (Von Heland and Clifton 2015, Berdej et al. 2015; Campbell 2002; Fairhead and Leach 1995, Bixler 2013). Narratives have the ability to exercise control over how conservation problems are framed, who is included and excluded in conservation efforts, and the kinds of solutions that are deemed appropriate, are all understood as a negotiated and politicized part of the conservation process (Berdej et al. 2015; Von Heland and Clifton 2015.) For example, Von Heland and Clifton 2015, found that narratives can be legitimized and made official when adopted by regional governing bodies or powerful NGOs. Similarly, certain narratives may favor hegemonic and privileged ideologies, which may cause other narratives to be ignored. By separating and dividing different framings, narratives can favor certain frameworks such as scientific knowledge, perceptions and ideologies while possibly diminishing others (Cronon 1992). Similarly, narratives can have a wide variety of governance and policy implications, privileged storylines have the greatest implications regarding human well-being and equity because they undermine the voice and needs of disadvantaged or marginalized groups (Campbell 2002). Campbell (2007) found that multiple narratives are almost always present, and that the interplay between narratives has the ability to both strengthen the power and political influence of some groups while simultaneously marginalizing others. In addition, Fairhead and Leach (1995) showed how policy can be influenced by narratives and hegemonic discourses and these narratives often contradict the objectives of local and regional natural resource management. This may inhibit the development of more holistic understandings of the conservation issues and prevent finding alternative solutions to conservation and management issues (Berdej et al. 2015). Finally, Bixler uses the notion of power to discuss how

stakeholders create and explain those narratives revealing the contrasting perceptions of the problems and factures between different interest groups (Bixler 2013).

Therefore, this research employs the use of narratives about anadromous fish restoration (with a focus in Idaho's section of the Columbia River Basin) to lead to more comprehensive understanding of stakeholder perceptions while identifying the factors that drive decision making in the process of developing collaborative governance.

Chapter 4 Methods

To address my research questions, I used a qualitative research approach to gather data over a seven month period from January to June, 2021. Specifically, I used a combination of purposive, convenience, and referral sampling in order to further understand stakeholder narratives in the CRB (Bernard 2017). Initially I selected interviewees from a list of participants in the latest (2020) convening of the Columbia Basin Partnership Task Force. Within this list, I used mostly convenience sampling, conducting interviews with any members who were willing to sit down with me. Additionally I used referal sampling when on several occasions participants suggested that I speak to another person who would be able to contribute to my research through their relevant expertise and experience. The CBP was comprised of the following groups: federal and state agencies, tribal entities, and regional stakeholders. Stakeholder groups involved that were not state, federal or tribal include: utility companies, river economies, non-tribal fisheries, and conservation-focused groups. I included an additional group, research and academia, that was not included in the CBP because many university scholars and researcher have studied CRB fish restoration for many years and have experience working with stakeholders throughout the region. I conducted twenty-nine in-depth semi-structured interviews (Bernard 2011) among seven groups: state agencies (4), federal agencies (1), tribal entities (4), utility companies (8), conservation groups (7), non-tribal fisheries (3), and research/academia (2).

Participants either had experience working directly with the CBP or had worked in close conjunction with members of the CBP. Participants were intially contacted by email and asked if they would be willing to participate in a research project about CRB governance and anadromous fish restoration efforts. This list of participants was also chosen because it was assembled and its members were selected specifically for the purpose of gathering a representative list of regional leaders. As a result, sampling from this group provided me with data from a basin-wide group of key regional decision makers. I conducted approximately sixty minute semi-structured interviews (Bernard 2017) with twenty-nine participants resulting in approximately thirty hours of recorded interview material. For safety reasons and due to Covid-19 protocols, all interviews were conducted via video conference software with two exceptions, in which

interviews were conducted by phone. A general interview guide was used to ensure a measure of consistency across interveiws including questions such as the following: (1) What do you feel is the solution to restoring fish populations in the CRB? (2) What do you think are the biggest challenges to restoring anadromous fish populations in the CRB? (3) What do you think the future holds for anadromous fish in the CRB? (4) Who has the most to lose from the decline of anadromous fish populations in CRB? Other interview topics included ways that issues differ among geographical regions and fish species, individual experiences being a part of the CBP, and stakeholder responsibilities for fish restoration within the CRB.

In addition, information was gathered from peer-reviewed articles, books, websites, and through participant observation, which provided important social context (Bernard 2017; Tracy 2020; Yin 2015). The most important meetings I attended were the first two Columbia Basin Colaborative virtual workshops in February and July of 2021, during which I took extensive field notes (Bernard 2017). Each of these workshops lasted approximately three hours, after which a website provided detailed summary of meeting processes, minutes and attendance records, as well as a transcription of all questions an answers posed during the public input session. In addition to the CBC meetings, I attended various regional workshops related to water use and energy in the CRB as well as ten Technical Management Team meetings. As a participant observer in basin-wide workshops, I was able to experience first hand the priorities voiced by stakeholders as well as experience the format and flow of the administration and interactions meeting leaders and attendees. Moreover, attending these meetings allowed for observation of interactions between members of different stakeholder groups as well as provided a method of checking the reliability of the content and narrative information gathered from interviews. Using multiple sources when collecting data can serve as a method of triangulation and help increase the validity of the data (Yin 2003).

All interviews were recorded, transcribed and coded deductively using Atlas.ti software. Deductive coding was guided by narratives that emerged from interviews informed using the essential components of a narrative as outlined in Jones and McBeth (2010). Interviews were coded for following the parts of a narrative: (1) context (2) temporal plot (3) problem fixers and (4) problem causers. Codes were then used to inform the formation of stakeholder narrative and perspective descriptions.

Chapter 5 Results and Discussion

The Columbia River and its tributaries have been the lifeblood of a vast web of cultural, economic, and ecological systems for thousands of years. While the river maintained its connectivity for much of that time, the early developments in hydropower and water management—imperative to the growth and prosperity of the society we know today—were implemented with little or no regard for the basin's connectivity, limiting the river's ability to properly function ecologically. When considering ecological recovery of the basin, one must consider that the basin spans multiple countries, states, and tribal territories, each of who have multiple layers within the communities that make up their constituents complicating governance efforts and comprehensive planning. These social, cultural, political and economic contexts form the regional narratives of salmon and steelhead in the CRB.

The results of this project have implications that go beyond the CRB to increase scholarship's understandings of how environmentality impacts the process of the formation of governance in socio-ecological systems. Narrative analysis among stakeholders in the CRB demonstrates the differences of objectives that exist among stakeholder groups despite agreeing on the general vision for anadromous fish restoration. Considering the "subjectivities" of individuals in the CRB through the lens of environmentality can elucidate new understandings of how challenges such as power-sharing roles have prevented past efforts as creating lasting collaborative governance systems (Agrawal 2005). Environmental subjectivities are the ideas or worldviews about the environment that exist among individuals in different stakeholder groups. This approach also reveals how individual subjectivities or stakeholder worldviews, impact the ability of groups to form equitable governance structures. Differences in objectives of CRB stakeholders are affected by a variety of cultural, social, and economic worldviews about human-environment relationships. Similarly, these worldviews have further been influenced by the history of unilateral decision-making and marginalization of certain groups throughout governance and decision-making processes.

While this paper provides important insights for governance considerations in the CRB, it is important to recognize the limitations of data limitations of the small sample size within some stakeholder groups. In using an exploratory approach and gathering interviews from across many different groups

throughout the basin, it is possible that additional perspectives and ideas may exist that are not represented in this project. Additionally, some narratives, while useful for their individual perspective, may not be representative of the entire spectrum of ideas that are present within each stakeholder group.

In my research, although stakeholders often pointed out that fish declines are more of an issue in some regions than others, none disagreed that fish populations have declined over the past century. Participants in this study used several narratives when discussing salmon and steelhead declines and restoration in the CRB. The most commonly used topics included: habitat, harvest, hatcheries, and hydroelectric dams, known regionally as the four "H's". While the overall institutional narrative takes a four H approach and all stakeholders acknowledge the necessity of this approach, groups with different objectives maintain conflicting ideas about what parts of this approach to prioritize moving forward. Similarly, participants from all groups also believed that the problem of anadromous fish restoration in the CRB was not solely caused by one factor but instead was a combination of ecological, social, political, or cultural factors. Paradoxically, complicating each of the main issues involving anadromous fish restoration is the fact that seemingly every topic is both part of the problem and part of the solution. For example, problem causers such as dams, harvest, and habitat were part of what caused fish declines by preventing passage and changing the river corridor, overharvesting, and degrading of habitat. At the same time dams, harvest, and habitat remain at the forefront of restoration discussions in terms of restoring the natural river corridor through improving passage or dam removal, regulating harvest numbers, and restoring habitat. Although social factors were often discussed as problems, other than generalized ideas about collaboration, trust, and relationships, ideas and suggestions for solutions were mostly ecological in nature. Similarly, despite a shared overarching collaborative vision for the CBP and CBC and acknowledgement that multiple factors are responsible for fish declines, stakeholders often privileged the discourse of one single narrative or a number of connected narratives over others. Stakeholder ideas were often complicated by their use of multiple, if not all of the above four H narratives to create individual metanarratives that are combined and interwoven to explain their interpretation of the basin's issues and where solutions should be sought. Pieces of these narratives are often in conflict to one another, displaying the diversity of perspectives, objectives,

and fundamental worldviews that exist in the CRB, which has implications for achieving successful governance. In the following sections, I will discuss the overarching institutional narrative, each of the H's and the existing stakeholder perspectives surrounding them that may be in conflict with the overarching institutional narrative.

5.1 The Collaborative Institutional Narrative

The Columbia Basin Partnership Task Force convened in 2017 and published a Phase 1 report in May 2019 that outlined the group's shared purpose, developed qualitative and provisional quantitative goals for fish numbers, and vision of basin-wide healthy and abundant salmon and steelhead runs for the future. The first phase provided a basis for continuing the group's meetings and collaborative processes in the second phase. In Phase 2, the group refined the provisional quantitative goals and created a final set of goals for 27 CRB salmon and steelhead stocks. Additionally, the group explored methods by which to accomplish the quantitative goals, exploring multiple scenarios through biological or other methods that address different factors (e.g., social, cultural, economic, and ecological factors). Upon reaching the end of the planned meeting times in September 2020, the Columbia Basin Partnership Task Force produced a Phase 2 report, summarizing the group's efforts and accomplishments. In the Phase 2 report, the same vision and qualitative goals were emphasized along with newly refined quantitative goals measured in ranges of numbers for 27 CRB stock including five species of adult salmon and steelhead. In 2020, the efforts of the CBP were continued by the formation of the Columbia Basin Collaborative (CBC) which provided an opportunity for more in-depth analysis and advancement CBP goals.

The CBC continues working under the context of the shared vision for the Columbia basin identified in Phase 1 of the CBP and reads as follows: *"A healthy Columbia River Basin ecosystem with thriving salmon and steelhead that are indicators of clean and abundant water, reliable and clean energy, a robust regional economy, and vibrant cultural and spiritual traditions, all interdependent and existing in harmony."* This vision, combined with information I gathered from interviews, participant observation, and other public documents, provided the basis for defining the collaborative institutional narrative. I found that

the overarching narrative underlying the institutional vision may not necessarily be reflected by individual stakeholders. In-depth interviews and participant observation revealed that viewing the collaborative group's institutional narrative as representative of each stakeholder group is an oversimplification of the problem and solutions of anadromous fish recovery. Instead, many stakeholders that share basin-wide general discourses about restoration hold narratives guided by individual perspectives that more specifically reflect their own objectives. These narratives reflect the multitude of different perceptions, priorities, and lived experiences of individuals throughout the CRB. Though not always in direct contradiction to the institutional narrative and overall collaborative vision, individual narratives, if not appropriately understood, may create greater challenges to future consensus. Avenues through which narratives diverge can bring into question the foundational vision, without which the effectiveness of decision-making for the next step of collaborative processes of the CBC will be severely limited. This research and analysis took place as the CBC begun to meet and decide on how to move forward with CRB collaborative governance efforts and advance the goals outlined in the Phase 2 report.

5.2 The Four H's: Problems and Solutions to Anadromous Fish Recovery

The four topics of habitat, harvest, hatcheries, and hydropower made up the vast majority of the discussion of anadromous fish in the CRB. These four H's are commonly accepted among regional stakeholders as four essential components of addressing salmon and steelhead issues. This idea is well reflected the words from one interview with a conservation group leader:

> "So our wheelhouse is really focusing on habitat restoration. But you really can't get to recovery of someone is unless you also address things like hydro power, hatcheries and harvest."

Below, I will discuss each of these topics separately, but the following sentences help contextualize some of the ways each of these are so thoroughly interconnected: --- The *hydropower* system alters the basin's ability to function as a riverine *habitat*. *Hatchery* versus natural origin salmon and steelhead are able to

navigate *hydropower* fish passage systems and spawn in different types of *habitat* at varying success rates. Furthermore, *hatchery* and natural origin fish compete for the best *habitat* and are known to interbreed causing genetic complications in some populations. All three of these H's have direct effects on how many fish are available for commercial or recreational fishers to *harvest*. The revenue from *hydropower* facilities provides mitigation funding used to support *hatcheries* and most of the research conducted on *habitat, hatcheries,* and *harvest*.

5.2.1 Habitat

Habitat impacts are pervasive throughout the basin and therefore generally agreed upon in terms of having caused past degradation and as as solution necessary to present and future improvements. Habitat narratives are complicated by the fact that there is not one standard habitat problem throughout the basin. Additionally, habitat restoration projects have been carried out in the CRB for decades (Mogren 2011) amidst continual fish population declines, leading to the conclusion that addressing habitat alone is not a sufficient solution.

There were several important pieces to this narrative that were supported by a diverse set of stakeholders. First, the region has undergone major structural alterations that have foundationally transformed the river from a free-flowing river to a series of lakes through the installation of hydroelectric dams, limiting the river's ability to maintain core ecosystem processes. This concept, often referred to by participants as the river or migration corridor, is well conveyed through the following statement from one participant.

> "But that misses the bigger ecological picture, which is you've transformed 140 miles of free-flowing river into a series of slack water holes that operate in a fundamentally different way ecologically. So, you've turned riverine habitat into basically lake habitat that isn't conducive to the native species."

Similarly, [unfavorably high] water temperature was one habitat issue often discussed in relation to ocean and instream conditions. For some stakeholder groups, this was the cause of many other issues for fish, while for others, unfavorably warm temperatures were a result of other overarching factors. Climate change, low river flow levels, and the above river corridor concept were discussed as root causes of warmer temperatures affecting ocean conditions and in stream temperatures across the basin. Responses and discussion about climate change and ocean conditions were separated from other topics by a general consensus that these come with large unknowns about potential solutions. Similarly, people agree that ocean related issues are more difficult to influence than inland habitat factors such as dams riparian conditions. Other regions have experienced habitat degradation as a result of development and infrastructure implementation without consideration of watershed health and ecosystem functions such as the importance of intact floodplains. Certain areas of the basin deal with habitat issues mainly stemming from deforestation, logging, and ranching livestock related issues. While many stakeholders provided opinions or recommendations for inland habitat restoration projects, a general lack of ideas about solutions overshadowed larger scale habitat issues such as ocean conditions and the effects of climate change.

Participants from multiple stakeholder groups expressed a skepticism about the effectiveness of habitat restoration efforts. This was especially true for the most inland locations where there are few, if any, fish still returning to spawn each year. This is likely tied to a lack of consensus about the existing condition and health of habitat in certain areas of the basin. The Salmon River and its tributaries in Idaho historically provided a large portion of the salmon and steelhead spawning habitat but views on the condition and quantity of that habitat varies today. The following quotes, one from a participant who oversees a salmon conservation organization, and one from a State of Idaho Representative, respectively, display this contradiction.

> "The upper Columbia doesn't have this kind of habitat. And a lot of it's already been pretty well butchered with development, and whatever, but the Snake River Idaho and Oregon supports

considerable wilderness areas and roadless country. The spawning rearing habitat for these fish is superb. What we have left of it, I mean, a lot of it has been deteriorated over time. But so, the Snake River is loaded with habitat that can support these fish. If you give them the opportunity to get to the ocean and back from the ocean in with reasonable survival."

"Some of the problems that we're documenting, um, a lot of times folks don't understand habitat. And there's a lot of folks that point to Idaho and say, central Idaho (Snake River Tributaries) is five-star hotel for for fish, all you got to do is get rid of the dams and everything will be okay. Well, that's a pipe dream. That's not the case. And it's overly simplistic to say, so yeah, there's some good places, you know, there's a little bit here and there. But for the most part, you know, the resources have been exploited."

5.2.2 Hydropower

The hydropower system in the CRB is extensive and the main way it affects anadromous fish population is through limiting their ability to migrate from the ocean to the spawning grounds as adults and return from small streams to the ocean as juveniles. The largest effect of the hydropower system is the above phenomenon (in the habitat section) where the river has been transformed into a series of lakes and reservoirs with conditions fish are not appropriately adapted to. Dams create both obvious physical barriers to salmon migrating upstream and less obvious stagnant water in reservoirs, powerful turbines, and spillways that pose threats to downward movement of juvenile fish. Many of the dams in the basin include fish passage structures that allow fish to pass by the dam and continue upstream. Various models of fish passage systems and methods have been attempted throughout the basin from transporting fish around dams by plane and truck to building instream pipelines with little success. Even the successful passage systems today are often debated as to the effectiveness of passing fish in either direction. Importantly, multiple dams in the basin block fish passage entirely, isolating hundreds of miles of historical fish habitat upstream of them from natural fish access. Complicating the discussion of the hydropower system in the basin are the

plethora of secondary issues that can be attributed to the presence of dams. These include predation, increased water temperature, and delayed downstream migration times. Predation issues were spoken in terms of pinnipeds and avian predators that target vulnerable fish that congregate in unnatural areas due to the bottleneck caused by dams. Predation issues also include introduced species including predatory fish species that prey on fish eggs and juvenile salmon as they travel to the ocean. Of these secondary issues, predation was spoken of widely by stakeholders throughout the basin. Despite the attention given to discussion of predation there was with an overall agreement that predation is a significant issue and predators should be dealt with imminently.

There is a large number of scientific studies that stakeholders use to justify their position on the hydropower system or to discredit ideas that contradict their own. One paradox that exists in the basin, but is not often discussed, is that a large portion of the research conducted surrounding the hydropower system is funded by the hydropower system itself. Although this paradox is not often discussed by stakeholders, this fact complicates the types of research projects and overall body of work that is published each year concerning fish passage and the effects of the hydropower system on anadromous fish. As funds generated from hydropower sales were continually allocated to what became hundreds of millions dollars each year of research, fish passage, hatcheries, and habitat projects throughout the basin, the focus of regional governance inevitably shifted to a more fish-centered discussion (Mogren 2011).

5.2.3 Harvest

Harvesting salmon is the main livelihood that allowed many Indigenous tribes to grow in population and develop as societies throughout the CRB. Earlier salmon harvest based economies that existed for thousands of years were grounded in regional subsistence rather than market capitalism. Upon Euro-American arrivals in the region, increasingly high and largely unregulated harvest rates, habitat degradation, and poor natural conditions eventually resulted in severe crashes and predicted extinctions in regional salmon runs in the late 1890s (Mogren 2011). Harvest rates declined significantly as a result of depressed salmon returns and remain at only a small fraction of historical harvest records. In some ways

harvest issues are complicated by treaties that guarantee tribal access to fish under certain circumstances. Additionally, small and largescale commercial and recreational fishing businesses exist throughout the basin and along the coast, some of which have relied on salmon harvest for hundreds of years. With current numbers and low-end predictions of future fish numbers, it will become increasingly difficult for the basin to meet all stakeholders' harvest expectations regardless of allotment decisions.

The overall institutional vision for harvest in the CRB is to provide dependable fishing opportunities for tribes and other fishers in marine and fresh water, emphasizing sustainability, optimizing harvest and fishing opportunities, and providing shared benefits for all. All stakeholders believe that harvest allotments of specific populations should be closely controlled and limited. However, ideas about how harvest quotas should be set varied greatly among groups. Additionally, while many groups share interests in harvesting salmon, reasons for and worldviews about harvesting salmon are understood by from vastly different perspectives. The two most prominent of these are reflected in the starkly different ideas about natural resource use. Historically, Indigenous perspectives on the resources found in nature were used culturally and spiritually in a manner that considered themselves an integral part of the natural world and ecosystem. Although they remain altered to some degree from consequences of white settler's attempts to eradicate Indigenous traditions, this worldview still exists and stands in contrast to the American capitalist perspective. This second main perspective is the largely white Euro-Christian perspective of having dominion over the earth and natural world, which can be applied to the market capitalist approach to exploiting natural resources as a means to economic and commercial progress. Other perspectives that could influence opinions about harvest priorities, include environmentalist and recreational narratives. Environmentalists understand nature and natural resources as having intrinsic value and the importance of preserving it for that reason. Alternatively, recreational fishers value natural resources, in this case fish, for the recreational opportunities and experience they provide.

5.2.4 Hatcheries

Artificial propagation of fish through the use of fish hatcheries has been used in the CRB since the commercial salmon fishery experienced major declines due to over harvest in the late 1800s. After the decline of many of the large salmon populations, hatcheries were used as a tool to supplement the fishery for commercial fish harvest purposes. As artificial propagation of salmon rose to an industrial level, a misguided way of thinking was born that the region could continue unsustainable harvest levels and commercial development to the detriment of wild fish runs (Litchatowich 1999). As it became apparent through the mid 1900s that dams were having a significant negative affect on salmon runs, hatcheries were increasingly used to mitigate for these damages. A general belief that hatcheries and other man-made projects could serve as a sort of panacea to all the anadromous fish related problems was a common theme leading into the endangered species listings of the late 1900s. Hatchery supplementation can affect wild fish through competition, interbreeding that results in less adapted genetics, and disproportionate capture rates of wild vs. hatchery origin fish by commercial operations (Lichatowich 1999). One example of this can be seen through early attempts to repopulate depleted salmon runs, when eggs from different locations as far as Alaska were stocked throughout the CRB, effectively creating a mixture of different salmon genetics, many of which were not evolved for their new set of biophysical conditions. Finally, hatcheries were often used historically for political and social purposes throughout the basin without consideration of ecological consequences. All of these factors provide the context through which fish hatcheries are understood today in the CRB.

Overall the collaborative institutional vision includes three focuses for hatcheries which are supporting natural production, mitigation for lost natural production, and protecting the integrity of existing fish stocks through the application of the best available science. As previously stated, stakeholder groups unanimously agreed that hatcheries are one of the four key H's necessary in restoring basin wide anadromous fish runs. Nonetheless, hatcheries were emphasized as a component of the problem and solution to widely different degrees, ranging from being mentioned mainly in terms of the problems that

hatcheries cause, to the need to vastly increase hatchery production and funding in order to restore fish populations. Some groups held that current fish declines could be largely attributed to decreased federal funding, which supported many lower Columbia hatcheries. Other groups spoke extensively about the legacy that the history of hatcheries as an industry has left. Evidence of this idea can still be seen today reflected in the words of the director of a Columbia River fish recovery plan initiative:

> "It is hard to change. And there is kind of inherent resistance to that kind of change, because so many federal programs and institutions are built around that thinking, good example. Right. So the NWPCC, Northwest Power Conservation Council, recently developed this website. Right. And, and what it is, it's, it's an overview of all the great things that hatchery programs have done in the basin from their perspective, right. And I know the folks that put it together, and I know the thinking that went into that. And it was literally kind of a hatchery cheerleading effort to push back on the emerging science that is now bringing into question the role of hatcheries and impacts from hatcheries and how it's inhibiting recovery."

Hatcheries were largely discussed by stakeholders in terms of their usefulness for reintroduction and mitigation purposes. Other stakeholders mentioned that people attribute value differently to hatchery vs wild fish, noting that there is a portion of the population that doesn't care weather a fish is a wild fish or of hatchery origin. This is important because it has significant implications for how fish restoration decisions are approached and what types of projects are prioritized, including the amount of money appropriated to wild fish specific restoration.

5.3 Sovereigns and Stakeholders

The following section will generally outline how stakeholders groups and sovereigns portrayed problems and solutions for anadromous fish restoration. Then I will discuss how different social, political,

economic, and cultural factors contribute to the discourses that each group use to describe their respective positions on restoration.

5.3.1 Conservation Groups

Of the conservation groups I interviewed, the majority were focused on the state of Idaho. Therefore, while I believe the groups I interviewed to be representative of many conservation groups throughout the CRB, the perspectives portrayed by the conservation stakeholder group in this study focus on Idaho more closely than the other states in the basin. Additionally, this geographic focus on Idaho is due to the fact that Idaho is home to the regions of the CRB furthest from the ocean, making the anadromous fish that travel there as part of their life history more vulnerable to unfavorable conditions and an uncertain future.

The dominant discourse for this group surrounded the first "H", hydropower, the network of dams throughout the Columbia and Snake Rivers. Participants often discussed the CRB's history before the construction of the four Lower Snake River Dams (LSRDs) when salmon and steelhead were able to coexist with the four other dams on the Columbia River, which serves as the state boundary between Washington and Oregon. In the years before construction of the four LSRDs, millions of fish would return each year to spawn in Snake River tributaries. This provided for a $500 million annual fishing and guiding economy and supported the culture of recreation and fishing in the Pacific Northwest. Since the dams were built in the mid 20th century, salmon and steelhead have been in decline, showing that the construction of the four LSRDs, in addition to the four other dams, created too many barriers to sustain long term viable salmon populations. Conservation group participants spoke consistently about concerns for all four H's and the importance of a multifaceted approach to fish restoration. They highlighted that other factors such as, but not limited to, climate change, ocean conditions, habitat degradation, and overharvest have also contributed to these declines. However, participants from the conservation group suggested that scientists agree that without breaching the four LSRDs, wild Chinook, Sockeye and Steelhead will go extinct. This group argued that the four LSRDs provide no flood control, very little irrigation and only a small fraction of the power

for the region. Conservation stakeholders argued that the irrigation, transportation and power could be effectively be replaced through other sources. They mentioned as well that the decline in these fish numbers is also in violation of federal treaties with Indigenous people to whom salmon are an integral part of their culture and lifestyle. Conservation stakeholders strongly support congressman Mike Simpson's proposal including breaching the LSRDs. This group believes that alternative forms of energy are possible for the future, the four LSRDs are not necessary to the regions power, and other regional river economies could be modified to function without the four LSRDs. These sentiments are reflected in the words of one conservation organization director:

> "But let's just call it what it is. And they do business and they're only successful because their risk and their losses are socialized to the American public. And hydro can be replaced, energy can be replaced. It's this. This is an old technology. It's 50 years old. You can do that with other hydro that doesn't require damming the rivers you can do with modular nuclear pump storage. You can there's, you know, these people act like that it's the pinnacle of technology, this 1960s technology."

Participants were not only concerned with the hydropower system, and often discussed other issues. They suggested that harvest should be limited but there is some disagreement to how it should be restricted, ranging from proposals of small closures for recreational anglers to a moratorium on all anadromous fish for all users indefinitely, including the tribes, until fish numbers recover. With regard to hatcheries, participants held that they are a necessary part of the solution, but some disagreement exists within the conservation community about how much hatcheries should be used and to what degree.

In summary, conservation stakeholders suggested that before the four LSRDs were built, fish populations were low but they were still sustainable. After the LSRDs were built, Snake River salmon numbers are now at unsustainable numbers and will face extinction without dam removal. They state that these dams could be removed in accordance with the CRBTF vision including, "reliable and clean energy, a robust economy, and vibrant cultural and spiritual traditions." They did recognize that harvest, habitat,

and hatcheries would also contribute to the restoration solution and that these three H's should be continually addressed and improved throughout the fish restoration process. However, their dominant discourse focused on the Snake River salmon and steelhead stocks with the priority issue being the removal of the four LSRDs in order to improve Snake River fish numbers. While the conservation groups said that this is only a priority aspect of the larger overall four H solution, they believe that other stakeholders misinterpret their perspective. This misinterpretation stems from discourses about dam removal and how the concept is often referred to as dam removal in general—no one is proposing dam removal in general)—to dam removal of the four LSRDs, an idea that is being seriously considered, proposed by an Idaho congressman and endorsed by conservation groups, tribes, universities and many other regional stakeholders. This confusion and misrepresentation were described as a barrier in the ways that it is used by politicians to support their objectives as well as how the public understands fish restoration issues. These forms of misinterpretation of conservation groups' intentions could potentially drive conflict in the larger collaborative group.

Lastly, this group discussed how other groups (mainly River Economies) search for scientific studies and use misrepresentations or partial pictures of data in order to support their own narrative. It is claimed that the hydroelectric companies and other river economies use misinformation or incomplete scientific analysis to support their position that the FCRPS has fewer negative effects on salmon and steelhead than it actually does. The following comments from a conservation organization leader displays this idea:

> "Yeah, or, you know, the other the other, probably a better example is BPA. And, you know, others will often say, well, 95% salmon survive, survive these, these for each project, or survive the dams and they don't really specify or go out of their way to not specify that that's each project and don't don't reflect and don't express. So it's the presentation of that in this case, they don't say well, that's actually five to 8% at each of those projects and just the concrete structures, you add that up along the way, closely mortality, if you buy it, which I do. And then we have a totally different number

looking more like 50 plus percent, rather than 5% mortality associated with the dams themselves. So so all the say another way, another problem and how those narratives work is the way that people present evidence or scientific evidence versus the scientific evidence itself."

5.3.2 River Economies

This stakeholder group is primarily concerned with the economic benefits that the Columbia River provides. The most pressing objectives of the entities that make up this stakeholder group are to secure water for use in irrigation, river transportation, and hydroelectric energy production. In accordance with the four Hs, participants agreed that anadromous fish restoration necessitates a multi-faceted approach including improvements to habitat, hydropower facilities, hatchery production, and harvest regulation. However, the most important overall topic to this stakeholder group in restoring anadromous fish was maintaining the Federal Columbia River Power System (FCRPS) to meet the needs its constituencies throughout this process, especially for industries that depend to some degree on hydroelectric dams such as barging, ports, and irrigation. The main areas of concern include insufficient power to meet public needs, water shortages for farmers and ranchers, and the inability to transport agricultural products cost efficiently. Other secondary concerns expressed by this stakeholder group often fell under one of the above categories. In terms of solutions, stakeholders primarily focused on habitat out of the four H's, but harvest and hatchery issues were also important components of a solution. Habitat and hatcheries are safe focuses for these two groups to support as these types of projects have existed in the basin for centuries and can be carried out without disrupting the current system that supports these river economies. When they did mention including (the fourth H) hydropower to their ideas about restoration, they spoke of it in terms current projects that could be modified or improved rather than a more radical approach that calls for basin-wide infrastructure changes. In general they spoke of Congressman Mike Simpson's proposal as a negative idea and something that could hurt the region economically without providing any certainties for fish restoration.

While this group shares aspects of the overall institutional narrative about the general approach to restoration using the four H's, it can be split into different groups when it comes to specific priorities on

certain issues: a group that believes dam breaching should not be considered and another group that sees dam breaching as a potential, but one that is not ready to move forward with yet. With regards to dam removal, both groups believe that dams in general are bad for fish, they have contributed to salmon population declines, and that dam breaching is not a "silver bullet" or panacea for fish populations. The first group believes that dam breaching should not be considered in any case because it will not necessarily provide solutions for fish recovery, it will damage essential components of regional economies, and there are too many unknowns. The second group believes dam breaching is not something to move forward with immediately, but rather they think that it is possible that dam breaching, only in the Lower Snake River, may be necessary if and when all other options have been exhausted. They would argue that some future and current projects for solutions warrant further consideration and evaluation. Examples of these projects include experimenting with new Flex Spill methods and other research projects that adjust existing projects like juvenile fish release timing, location, and barging techniques.

5.3.3 Tribal Perspective

This section is written based on interviews with non-Tribal members who are fish and wildlife biologist and managers who work for Tribal entities, one interview with a Tribal member, and secondary data from participant observation and document analysis. Additional perspectives were gained from Tribal members' comments as a part of CRB collaborative processes and published by the CBP.

CRB Tribal narrative is set apart from all other perspectives because of Tribal members' distinct connection to the land. The CRB Tribal perspective includes an identity that is culturally, socially, and spiritually linked with the environment and the anadromous fish species that inhabit the region. Anadromous fish were historically, and in many ways remain, key aspects of Tribal culture, ceremonies, and economy. Tribal participation in collaborative processes is complicated by the historical mistreatment and injustice imparted on their people by the United States government. Tribal leaders emphasize the problem with the implied principle of fair play and equal compromise considering the well-known history of unequally experienced resource loss and marginalization. Importantly, this group maintains different

relationships with the United States government than other stakeholder groups through treaties. Nevertheless, Tribal leaders share the overall vision for restoring salmon and steelhead populations in the CRB with other stakeholders. The Tribal perspective understands that while there are many things out of the control of regional decision-makers, many things can be influenced by regional collaborative efforts. Tribal groups agreed in their perspective from scenarios in the CBP that the CBC and future collaborative efforts should focus on the parts of regional decision-making that the CBC and its members have significant influence over.

Intratribal objectives vary widely with regards to hatchery production, harvest regulation, and habitat projects which are dependent on location specific issues. Perspectives vary depending on the degree to which anadromous fish are able to access the historical locations where they once flourished, and the terms of the treaties that were signed by the federal government. For example, Tribal groups who no longer have access to salmon due to blocked rivers, might be prioritize reintroduction and installing passage systems above all else. Similarly, coastal Tribes might focus more heavily on hatcheries as a means to supplement their commercial fishery. Other Tribal groups whose historical territory lies on lands and rivers that have viable returning wild fish runs may avoid using hatchery supplementation. They may choose this in contrast to the previously listed approach in order to maintain the genetic integrity of their salmon and steelhead stocks that are unique to those and minimize competition between hatchery and wild fish in their regions.

5.3.4 Non-tribal fisheries

This stakeholder group can be separated into coastal and inland fishers. For the purposes of this study, I consider coastal fishers those who commercially fish in the mainstem of the Columbia River and in the ocean. Coastal fishers include primarily commercial fishers who make a living from harvesting salmon as well as recreational fishers and guide who fish in coastal waters or mainstem Columbia River. Inland fishers include fishers anywhere from purely recreationally motivated to a combination of recreation and harvest oriented anglers who fish in the tributaries of the Columbia River such as the Snake and Salmon

Rivers or Columbia River upstream of the confluence with the snake River. The perspective of this project, comes primarily from inland fishers from Idaho locations. I found that while the stated overall objectives were the same, coastal vs inland groups have different perspectives on the issue of salmon and steelhead restoration. Furthermore, perspectives also vary within these two groups. Of the coastal commercial salmon fishers I interviewed, one participant primarily expressed concerns about the reduction of hatchery production of salmon, which they perceived to have reduced the numbers of salmon available for harvest. This group's priorities for restoration included reestablishing previous levels of funding for hatcheries and increasing artificial propagation of salmon. It was believed that problems originally stemmed from budget cuts and incorrectly portrayed science from conservationist against hatcheries and their monetary funding agencies. Likewise this perspective held that the basin's habitat is not sufficient to support the numbers of fish that it did historically. This perspective is in some ways consistent with ideas that hatcheries can take the place of natural reproduction, as stated in Lichatowich (1991).

Conversely, a different commercial fisher held an alternative perspective that aligned much more closely with Tribal and Conservation group narratives. This perspective acknowledged the four H approach, emphasizing the urgency of restoring the natural river corridor including removal of the four LSRDs while continuing and improving projects involved with the four H's. This stakeholder also highly endorsed Mike Simpson's proposal because of its wholistic approach to restoration. Interestingly, these two stakeholders, while both commercial salmon fishers, gained experience from working with groups that maintain different ideas about how to approach restoration throughout their careers. I believe the latter stakeholder's position can largely be attributed to their experience working with wild trout conservation efforts, while the first stakeholder's experience comes primarily from work with commercial fishing advocacy associations. Wild fish initiatives rarely prioritize hatcheries as an ideal approach to fish recovery, defaulting to natural processes wherever necessary, preferring conservative uses of hatcheries.

Inland (Idaho) fishers and guides are less focused on hatchery production as the solution to the CRB anadromous fish issues. While it remains a part of a four H's approach, hatchery production does not necessarily help Idaho's fish numbers as directly as it does coastal regions. It is also possible that hatchery

fish are thought to be less successful at returning to the highest elevation and furthest locations from the ocean. Idaho's nontribal fishers follow a similar narrative to that of the conservation group in supporting the ideas of Congressman Mike Simpson's proposal. This includes looking into new ways to regionally transport agricultural products, funding dam breaching and replacing energy provided by the four LSRDs, while simultaneously continuing a focus on all four H's throughout restoration efforts.

In summary, coastal fishers' opinions vary, ranging from prioritizing hatcheries as solutions to discourses that align more neatly with conservation and tribal communities. Despite overall consensus that hatcheries are part of the solution, ideas about what role hatcheries should play depend on various geographical, economic, and cultural factors. Furthermore, perspectives on hatcheries as solutions are closely tied to stakeholder's experience working with organized groups and organizations and the priorities to which they align.

5.3.5 State Representatives

The state representatives included in this project are Idaho's appointed chair members of the Northwest Power and Conservation Council, which is described in previous sections. As one representative phrased it, the primary purpose of the NWPCC and its representatives is to ensure the region an "adequate, affordable, and reliable supply of energy." The other two pieces of the NWPCC's mission include a responsibility to mitigate for impacts caused by power generation and to inform the public about everything they do. Importantly, the NWPCC (with the Idaho Office of Species Conservation (IOSC)) functions as the leaders in the efforts of the recent Columbia Basin Collaborative group.

The primary focus for salmon and steelhead restoration for this group was to continue with projects that increase efficiency of dams for passing fish. The main project mentioned is the flex spill program that increases spill over dams throughout the basin during peak migration times in order to provide better passage conditions for fish. Another solution that was emphasized was monitoring and evaluation of current habitat and other restoration projects to check and see if they were achieving the goals that they originally outlined for those projects.

While representatives shared the overall institutional collaborative vision for recovery goals through a four H approach, how they understand how dams influence fish (in the Snake River), what scientific studies say about fish restoration, and what make up the most significant barriers to fish restoration varies significantly from some of the other stakeholder groups. Unlike conservation, tribal, and the academics (see below), state representatives maintain that dam breaching in the basin is not a realistic option. They hold that unfavorable ocean conditions present much more of a barrier to restoration than the FCRPS. Similarly, they believe that the four LSRDs are essential to the reliability and effectiveness of the FCRPS to provide the region with sufficient power needs. Furthermore, they maintain that extreme actions are not being taken because there is no public support for actions such as dam breaching. In contrast to regional scientist, scholar and environmental advocacy groups, state representatives believe there to be competing science that exists in the basin concerning what actions would be best for fish recovery.

5.3.6 Research and Academia

This perspective of this group is drawn from both in-depth interviews and secondary sources. In early 2021, a letter authored by 68 national and regional experts on anadromous fish issues from agencies and universities clarifies this group's position. They claim that the negative impacts to anadromous fish created by the FCRPS are clear and basin-wide fish restoration goals cannot be achieved without removal of the four LSRDs. Unlike how state representatives believe there to be competing science, individuals in research and academic believe there is more scientific evidence to support the removal of the four LSRDs now than ever before. Regional fisheries biologists and university scholars reject the idea of competing or contrary scientific findings regarding dam breaching in the lower Snake River. They attribute the confusion about different scientific opinions to erroneous representations of regional data by "for hire" consultants whose findings are funded by companies with conflicting economic interests in the FCRPS. This groups suggests that because of the historical productivity and available habitat, the Salmon River basin provides the key to not only salmon and steelhead not just in Idaho and the Salmon River drainages, but the the entire CRB. While this group emphasizes removal of the four LSRDs as the single most important step towards

fish restoration, it does this only in the context of adequate spill over dams throughout the region and maintaining a continually adaptable four H approach.

The same scientific data used to formulate these conclusions was also used by congressman Mike Simpson's proposal for basin-wide restoration. It follows that this group, along with conservation groups, Tribal entities, and many other regional collaborators support Mike Simpson's proposal for basin-wide infrastructure adjustments, including LSRDs removal.

5.4 Narrative Discourse Discussion (Implications for Collaborative Governance)

As seen in other complex socio-ecological systems (Ostrom 2009), developing effective and sustainable governance in the CRB is particularly complex due to the presence of diverse stakeholders with competing interests amid an uncertain political and environmental future. Above, I discussed some of the narratives held by different regional stakeholders in the CRB, which illuminated diverse, and often conflicting, objectives on anadromous fish issues. Below I will discuss how narrative analysis provides a framework through which a few key governance challenges are highlighted in anticipation of future regional collaboration with regards to anadromous fish restoration. First, I will address how, while diverse perspectives have been documented, the depth of divergence between stakeholder objectives was not sufficiently addressed in the collaborative setting of the CBP and remains an obstacle to decision-making processes and progressing towards regional goals. For collaborative governance to succeed, regional leaders need to collaboratively evaluate the degree to which stakeholder perspectives are understood and incorporated (Armitage 2009), especially in leadership roles. In addition, it is important to consider which discourses are privileged over others by decisions, or indecision, throughout the governance process. Similarly, honest dialogue about power dynamics within the developmental process of new governance structure should be considered in order to avoid repeating efforts that have failed to solve anadromous fish issues over the past century. Finally, my research revealed that the current governance model lacks any pathway for addressing conflict and making difficult decisions when consensus cannot be reached. Addressing these challenges will elucidate novel avenues for positive change and hope for future solutions

in CRB anadromous fish restoration that have not yet been realized despite decades of efforts and billions of dollars spent.

5.5 Divergent Objectives

The diversity of CRB stakeholder perspectives on anadromous fish issues is well captured and acknowledged by recent collaborators, as displayed in the following excerpt from the CBP Phase 2 report:

> "The lack of consensus or a substantial majority to commit to a singular strategy to salmon recovery burdens the ability to mount a basin wide balanced approach with glacial, divisive-dominated decision-making."

The report nevertheless contains detailed considerations from key basin-wide stakeholders including sections for each perspective from river economies to Tribal members and desired scenarios that match their objectives. While the report documents these perspectives, my participant observation and conversations with stakeholders revealed that the overarching collective institutional narrative of the collaborative body is not completely representative of stakeholder perspectives and fundamental approaches to fish restoration. This overarching institutional narrative in the collaborative vision that reads, "A healthy Columbia Basin ecosystem with thriving salmon and steelhead that are indicators of clean and abundant water, reliable and clean energy, a robust regional economy, and vibrant cultural and spiritual traditions, all interdependent and existing in harmony", yet this vision was often both confirmed and contradicted by stakeholders as shown in the following statements:

> "And then you step back and then you start getting regulatory complexities. Stakeholder complexities, environmental complexities and it gets, it is a balancing act that the region has to go through and really try to determine your tradeoffs. You know, what is more important over another item? And it really it does get down to picking losers and winners in most cases."

This quote from a utility district manager clearly describes a different situation than what is depicted in the collaborative vision. While the vision states healthy ecosystem and fish are indicators of regional constituents all existing in harmony, the quote highlights a balancing act with tradeoffs that have serious consequences for different groups. Another individual said,

> "The Columbia Basin Partnership has provided an opportunity to view the river system through a different lens as diverse stakeholders work toward a common vision for the future of the basin. All of us want the same things: thriving salmon, thriving communities, thriving economies."

In their public statement about the partnership, a regional water manager emphasizes one of the positive aspects of the collaborative setting, that stakeholders are discovering things they have in common. What the statement undermines, however, is the significance of the order in which different groups prioritize the three things that "all of us want," and the degree to which these three realities are interdependent. My interviews confirmed unanimous basin-wide agreement accepting that anadromous fish numbers have experienced significant declines, indicating that for very few, if any stakeholders, are all three "thriving" clauses a reality today. It is likely that some stakeholder groups do generally experience at least the latter two: thriving communities and economies; however, interpretation of what it is to have a thriving community or economy may differ. For example, these interpretations could range depending on if an individual is from an environmental advocacy organization, a farming community, or a privately owned power company. A fundamental difference between many CRB stakeholder groups is that the three above thriving clauses can exist independently of one another. Contrastingly, for some, namely Indigenous groups, these three are inseparable (Lichatowich 1999; Taylor 1999). While salmon no longer account for the foundation of Pacific Northwest economies, they are commonly still a part of many Tribal livelihood strategies and integral to their identities and community functions (Mogren 2011). While diverse views,

such as the above, have been documented, oversimplifying or ignoring the connected nature of basin-wide goals display that varying perspectives are yet to be fully understood by all CRB stakeholders.

Differences of stakeholder perspectives to approaching fish restoration are also highlighted through different framings of current stakeholder conditions, discussed by some stakeholders in terms of "false equivalencies". A Tribal member describes this concept in a scenario perspective from the CBP Phase 2 report that reads:

> "It (the scenario) focuses on achieving the fastest possible response to declining populations of salmon and steelhead and avoids normalizing the status quo or perpetuating the "false equivalencies" among sovereigns and stakeholders on "remaining whole.""

False equivalencies were discussed by other stakeholders in my interviews in terms of the commonly held viewpoint among participants that all stakeholders should be willing to sacrifice, often equally. This is especially poignant in the example of CRB Tribes who no longer have access to salmon, whether due to impassible dams, or the absence of sufficient federal treaty rights. Ironically, many of the Tribes who no longer have access or rights to salmon are not active participants in CRB governance for exactly that reason. These Tribes are in particular aren't as active likely due to an exhausting history of experiencing their traditional livelihoods diminished and voices undermined. However, for these Tribes the false equivalencies are ever more acute as connections to a resource that has played a central role in their understandings of culture, identity, and way of life were cut off by man-made structures, often without their consent or compensation. One Tribal representative expresses those statements in the following statement:

> "And when people are asking that, and we're sitting around the table, and, you know, again, this is a way people often kind of push, you know, some of that context away. But you see, are you really going to ask the tribes to give up more of what they've already given up, especially for those tribes

> that are in areas where the fish have completely been completely removed? So I think that still remains a really big, contentious point. And we just table that that's a false equivalency that exists."

Frustration is displayed in the above comment about the lack of acknowledgement or undermining of the historical and social context that forms the backdrop of these problems. Adaptive forms of governance must include careful consideration of the social context, especially where power imbalances exist (Armitage 2009). Failure to understand this historical significance can inhibit cooperative governance progress. Certain frameworks that set up these false equivalencies fail to recognize importance of the historical context in which these problems exist, such as in this Phase 2 report titled "Shared Sacrifices Scenario," reads:

> The "Shared Sacrifice" scenario is based on all parties acknowledging that a paradigm shift away from divisive, expensive past conflicts is needed. The scenario calls for the region to come together to craft lasting, durable solutions that form a "Community Response" to meet the Quantitative Goals for salmon and steelhead recovery envisioned in this process. All parties must modify their past approaches, set aside past thinking, and come together to identify contributions they are willing to make — every citizen must contribute something meaningful to this effort."

In this example, false equivalencies are displayed from the opposite perspective of an employee of a utility cooperative. While there are some great ideas about participation and cooperative action in the above statement, it clearly emphasizes a push to set aside the past and move away from past conflicts instead of acknowledging the implications that past conflicts still have today for some groups. Interestingly, this was spoken of by a Tribal member as a concept that all Tribal members agree on. While many intratribal disagreements exist about specific details of fish restoration, according to one member, Tribal community leaders and elders unanimously agree that this type of false equivalencies exist and so the resulting misunderstandings remain a significant barrier to recovery.

Questions that arose in the public workshops also provide insight into fundamental differences in how stakeholders approach anadromous fish restoration. One question from a participant in an early stage public collaborative workshop of the CBC asked for clarification of the difference between the CBC and the NWPCC. The answer followed that the NWPCC's focus is on mitigation for negative effects on fish and wildlife as a result of the FCRPS. That statement, while similar, is not synonymous with prioritizing the advancements of goals to rebuild healthy and harvestable salmon and steelhead stocks as multiple stakeholder perspectives outlined in my interviews and offered in the CBP Phase 2 report. One of these perspectives prioritizes decisions that benefit fish recovery, the other focuses on making up for damages that are incurred on behalf of the FCRPS. Problematically, as fish numbers decline, new generations of fisheries professionals (including those in charge of mitigation) use fish population numbers from the beginning of their careers. As a result, thoughts about healthy fish abundances are inevitably diminished adding to a pattern of salmon and steelhead population declines, in what is referred to as "Shifting Baseline Syndrome" (Pauly 1995). This is juxtaposed by Indigenous group members who believe that while habitat, climate, and other conditions have been significantly altered since the 19th century, their baseline and standard for good fish conditions reach further back in time than any other stakeholder group in the CRB. This comes with knowledge and experience that is undervalued and underused in frameworks for restoration that seek only to mitigate for damages of the FCRPS instead of proactively addressing fish recovery.

While habitat projects are universally accepted as part of the solution to anadromous restoration problems, they have been carried out in the CRB for decades (Mogren 2011) and can therefore be considered a form of upholding the "status quo". The status quo can be generally understood as the existing state of affairs in a political or social context. Humans have been shown to favor the status quo in circumstances where they face difficult decisions, even when the results are unfavorable (Flemming 2010). In the CRB, this may be extended to the ecological context as well in terms of habitat because of the inextricable connectedness of social, political factors to the ecological problems in the basin. The overall

shared vision clearly states that it rejects the status quo as a viable option, as they consider nothing that has happened in the CRB has led to successful salmon recovery to date. Stakeholder discourses concerning the status quo reflect the collaborative vision, stating it as an unacceptable option as seen in the following statement by a non-Tribal member fish and wildlife manager:

> "So the bottom line is, is this can't continue something different, something more something new, everybody's in agreement. Status quo is not working."

Similarly, the two final reports from the CRBTF, now carried on by the CBC, promise that all its members are committed to higher standards than simply upholding the status quo. Nevertheless, users appear to assign different meanings to the term "status quo", complicating the validity of the promise stated in the CBC's vision. I question the overarching visions' promise because this rejection may oversimplify a problem that could inhibit necessary conflict. For example, the following quote, echoed by multiple stakeholders, focuses on dams in the lower Snake River as integral to the meaning of status quo:

> "And that's where the whole Bonneville program came in spending millions and millions of dollars, billions of dollars, doing a whole bunch of research, primarily from the Bonneville Power Administration, it was that they wanted to preserve the status quo. Well, we'll do all the research. It says that the fish and the dams are compatible. Even though the research they funded, said no, that's not right. And all EIS and all that stuff and federal court over all this stuff said 'No, they're not compatible'."

Future conflict in the CRB is one of the few certainties of CRB governance. This conflict should be embraced, rather than downplayed, in order to ensure a collaborative governance system that is appropriately equipped to deal with difficult decisions and the inevitable reoccurring basin wide conflict in

the future. Interestingly, if the term "status quo," refers to keeping all the dams in place in the CRB, it suggests that some stakeholders are actually holding fast to the status quo rather than rejecting it.

5.6 Who holds power and whose voices are privileged?

Through gathering a diverse group of stakeholders, using a collaborative approach, and striving for consensus in decision-making, the past CBP and current CBC present many opportunities for positive discussion and relationship building between stakeholders with different objectives. Despite its collaborative nature, significant power imbalances still can be identified in the early collaborative processes of the CBC. I was not able to discern exactly which stakeholder groups were included in the "ad-hoc convening committee" which organized and planned the first CBC meeting. However, an employee of the National Oceanic and Atmospheric Administration (NOAA) who worked closely with the CBP efforts informed me that the CBC was an initiative initiated by the four states and their governor appointed representatives. These state representatives are also the NWPCC members and made up all of the presenters and panelists at the initial CBC workshop and most of the leadership (including a few state agency employees) at the second public CBC workshop. In the second workshop, the representatives presented the CBC's purpose, the proposed structure, and the approach along with fielding public comments and questions such as the one in the preceding paragraph. The states should be applauded for leading the CBC initiative and striving for cooperative solutions in the CRB, however, the extent to which all stakeholders, especially the three sovereigns, are represented in the foundational stages of the CBC's proceedings should be reevaluated. Successful governance structures need to incorporate different knowledge systems including using different forms of knowledge to identify, frame, and analyze the problem (Armitage 2009). A Tribal chairman further emphasized this point in an exchange beginning with a directed at CBC panelists, that stated:

> "How are you going to ensure that the biological decisions are looking at the resources and a political position?"

The questions was not answered directly; however, multiple panelists offered that this would happen through the help of Tribal representatives such as the question asker. This type of question displays a type of conflict that implies many common themes that surfaced throughout this research project, including how the lines of social, ecological, and political problems are continually blurred. Similarly, the question implies that as these factors have converged in the past, some factors have weighed more heavily in decision-making processes. Because of how information can be used to support groups to exert their power (Armitage 2009), it is important to constantly assess how power is linked to decision-making and the use of science. This person's later comments reflect that the path taken in the past with regards to power imbalances favored neither fish, nor Tribal interests. After this exchange, another panelist assured the group of the importance of the Tribes' contribution to this effort in the following statements:

> "What the tribes stand for and their views on salmon recovery are key to this process."

And,

> "This is not the four states effort, we are inviting the tribes not only to be seated at the table, but to have a meaningful voice there, not only there but also in the workgroups"

Similar to the text in the overall CBC vision and overarching institutional narrative of the collaborative group, it is one thing to say that something is a joint effort and everyone agrees, but a different thing for that process to actually reflect those statements. Inviting someone to a seat at the table is not synonymous with cooking the meal together, deciding on who to invite together, and developing a partnership that cooperatively chooses a neutral location or "table" at which to host this hypothetical collaborative meal. In my experience, when I invite someone to have a seat at the table, I also own the table, the house, and I chose the meal. The individual or group who chooses which people to invite who they

believe is important reflects power dynamics that have a long history in the CRB, invoking questions of trust and true collaboration that can be seen in ending comments of the above exchange by the Tribal member:

> "You should have at least some Tribal representatives at the oversight level… …because we trusted you before and we're not there, so we need to have some assurances that this is a Tribal and state initiative."

Following this it was suggested that federal representatives also be involved in the oversight level of the CBC because of their duty to ensure that Tribal treaties are upheld. These comments and the important questions that they imply were not addressed by any of the state representatives and eventually the moderator moved to the next question.

Power dynamics as seen in the above exchange were corroborated by participants in interviews and conversations throughout my research. These often underlined the complex political and economic historical context of the CRB. In explaining how political and economic motives were biased since the creation and purpose of the NWPCC, a director of a regional salmon recovery group stated,

> "Um, it is hard to change. And there is kind of inherent resistance to that kind of change, because so many federal programs and institutions are built around that thinking *(that hatcheries are a panacea for salmon)*, good example. Right. So the NWPCC, Northwest Power Conservation Council recently developed this website. Right and what it is, it's an overview of all the great things that hatchery programs have done in the basin from their perspective, right. And I know the folks that put it together, and I know the thinking that went into that. And it was literally kind of a hatchery cheerleading effort to push back on the emerging science that is now bringing into question the role of hatcheries and impacts from hatcheries and how it's inhibiting recovery. So there you have an institution that, you know, represents the power industry in the northwest,

basically, touting the status quo and not looking, you know, as a deliberate push back on emerging science."

In these comments the participant discusses what they consider to be a significant bias on the part of the NWPCC with regards to hatcheries. They emphasize how the discourse used by the NWPCC in this case is used to ignore emerging science that contradicts against their own narrative. The NWPCC has a great deal of influence in the basin as well in collaborative processes as the leading body of the CBC. Such power balances (or imbalances) are pivotal to the success or failure of developing sustainable governance (Armitage 2009). Similar, this concept parallels findings from Fairhead and Leach (1995), that show how hegemonic discourses that contradict local and regional management objectives can greatly impact policy and management decisions. Fully understanding power dynamics, trust issues, and underlying stakeholder objectives will be crucial to arriving at solutions in an environment where difficult decisions and conflict constantly impede basin-wide consensus.

Subjectivities, as described in Agrawal's (2005) theoretical framework of environmentality can elucidate further understanding of how power-sharing, trust, and stakeholder objectives are interwoven in forming environmental governance structures. In the above paragraphs, individuals from certain stakeholder groups are portrayed as holding more power than others in the current collaborative governance proceedings in the CRB. Furthermore, individuals in positions of power often held to similar western market-driven worldviews that consider the environment and natural resources something to be taken advantage of for economic gain. Conversely, individuals with other worldviews such as those belonging to tribal members and conservationists were not observed to have positions in stakeholder groups and institutions that held higher levels of power in collaborative processes. In this context, subjectivities and power dynamics, as demonstrated through individual worldviews, factored highly in positioning of different individuals and the amount of influence different stakeholders and sovereigns held over collaborative decision-making processes.

5.7 Pathways (or not) to resolving conflict and decision-making

Although there are numerous positive takeaways from the CBP, and now the CBC, including relationship and trust building, constructive dialogue, and better (even if not full) understanding of other stakeholders' perspectives, key components of successful governance are still absent from this process. One such concern expressed by participants of the workshop was that the CBC has no concrete pathway for addressing difficult decisions in the collaborative setting. When the panel was asked how the CBC will make decision on issues where no group-wide census is able to be reached, a panelist answered by simply stating that they will do their best to reach consensus as seen in the following response:

> "The work of the CBC will be accomplished collaboratively. Members will endeavor to engage in dialogue using a collaborative, interest-based approach to seek common ground, support shared interests, address differences, and strive to seek alignment on recommendations and other decisions of the CBC."

This reveals another crucial concern, that there is no plan for what to do when the CBC is unable to reach consensus on particularly difficult issues.

This dilemma will inevitably slow future collaborative processes and cripple any momentum garnered from the many positive aspects of the CBP and CBC, including potential for finding inclusive basin-wide solutions (Bennet et al. 2019, Ostrom, Tiebout, and Warren 1961). Importantly, as shown in previous sections, preventing novel solutions in the basin not only further marginalizes certain stakeholder groups, it also privileges those "thriving" under the terms of the status quo. Another response from the panel was that a key aspect of the CBC process is utilizing the knowledge and work of existing forums, however, no previous version or forum has been successful in making the transition to creating actionable steps toward salmon and steelhead recovery. Finally, past forums and restoration efforts have possibly lacked successful outcomes for precisely this reason; CRB ecological issues are inseparable from social issues that are grounded in over a century of inequitable decisions. These decisions often prioritized

economic, political, and in some ways cultural and ecological interests, but consistently lacked adequate social considerations that are the crux of healthy socio-ecological system governance.

Chapter 6 Conclusion

In order to achieve CRB goals and make progress towards restoring healthy and harvestable anadromous fish populations, collaborative structures need to be developed with in anticipation of difficult decisions. For the CRB, this means fully understanding, embracing, and making decisions that stand apart from those of past efforts in order to bring about real change. As has been found in other socio-ecological systems, distrust between stakeholder groups and inequitable sharing of power leads to challenges in creating collaborative governance (Gelcich, Reyes-Mendy, and Rios 2019). Addressing this issue in the CRB could involve clarifying what "status quo" mean to different groups, creating equal tier leadership positions for all three sovereigns (state, tribal, and federal), continuing creative efforts towards organizing opportunities to build trust among stakeholders with different objectives, or likely all of the above. Regardless of what changes ensue in the future of the CRB, collaboratively addressing and working through conflict rather than minimizing or downplaying it, will be an important determinant in reaching comprehensive solutions. This warrants additional research that can better inform equitable shifts in sustainability and environmental governance development (Bennet et al. 2019). Furthermore, future projects should continue to study potential for conflict resolution, creating equal power sharing opportunities, and maximizing diverse participation throughout all tiers and stages of governance structures. The complexities and dynamism created by different social, economic, and cultural factors of the CRB, along with its current collaborative initiatives, provide a unique opportunity for understanding governance as a process through these developments.

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Appendix: The Columbia River Basin

Source: US Army Corps of Engineers