Collaboration on the Columbia River:

How the Narrative of Environmental Justice and Management Affects Renegotiation

By

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Table of Contents

Acknowledgements	3
Abstract	4
Introduction	5
Two Narratives, One River	7
Successes of the Columbia River Treaty	8
Shortcomings of the Columbia River Treaty	10
The Narrative Policy Framework	14
Methods	18
Data Analysis	20
The Setting	21
Changing The Flow: Macro-Level Conditions Influencing Narratives	23
Pro-Environmental Policies	24
Pro-Indigenous Decisions	29
A River of Opportunity	33
Meso-Level Narratives on Ecosystem-Based Function	35
Post Recommendation and Renegotiation	41
Discussion and Conclusion	44
Works Cited	48
Appendices	56
Appendix A: Columbia River Basin	56
Appendix B: Meso-level Narratives Codebook	57

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Abstract

The Columbia River Treaty (CRT), signed in 1964, is known widely as a successful transboundary river treaty between the United States and Canada. It was designed with a basic dual functional purpose, to increase flood prevention in the lower basin and to maximize hydroelectric power output between the two nations. Archival evidence tends to show that the CRT has been beneficial for both the US and Canada, the original signatories. However, 15 sovereign First Nation and Native American tribes within the Columbia River Basin were not included in the original negotiations. Now that parts of the transboundary treaty are expiring and the terms are being renegotiated, these indigenous peoples are insisting that their voices be heard and their values incorporated into the new treaty. As a result, collaborative negotiation processes have involved these indigenous peoples. The United States has incorporated some of the Columbia River Tribes' views and concerns into their CRT proposal, and The Canadian Indigenous Tribes have been given official Observer status thanks to the Canadian Entity. The expectation is the introduction of a more diverse set of values and interests is likely to reshape the terms of the Columbia River Treaty in profound ways. The question is, what has led to the inclusion of Indigenous Peoples' values and interests affecting the CRT's renegotiation? The Narrative Policy Framework (NPF) is used here at the macro-policy level to explore this question by analyzing the narrative form of the political institutions to understand policy change within the subsystem to lead to this collaboration. Archival findings to date have shown a change in narrative related to the CRT that has been influenced by the Indigenous Peoples, and this development has led to a potential change in functionality of the CRT.

Introduction:

The Columbia River Treaty (CRT) was originally signed in 1961 (ratified in 1964) as a response to the flooding and utter destruction of Vanport, Oregon, the state's largest city, in March, 1948 (U.S. Entity, 2013). The ratification of the CRT represented one of the greatest achievements in transboundary freshwater tributaries, due to the cooperation amongst two nations (113th Congress, 2013). The CRT was designed to manage the flows on the Columbia River with two primary functions; the first being flood risk management, and the second being the maximization of hydropower energy output from the dams built in accordance with the CRT. (USACE, 1961). Considering these two functions, the CRT has been a resounding success (Holm, 2018; McKinney, 2010; 113th Congress, 2013; etc), however these successes on the Columbia River came at the detriment of ecosystems and the Indigenous Tribes of the Basin's culture (Basin Tribes) (Cohen, 2018). The original signing of the CRT in 1961 was a bilateral agreement between the United States and Canada with no input from the Basin Tribes. The agreement had major negative environmental impacts on fish, waterfowl, and overall health of the Columbia River from the construction of the CRT's dams (Cohen, 2018). These two narratives (the successes and shortcomings of the CRT) have evolved side by side, with most academic literature being focused on the role of the state and the importance of bilateral negotiations and the exchange of monetary benefit for a service being provided; as opposed to the complete removal of a culture that was sustained by the river for thousands of years (Cohen, 2018). As these opposing narratives progress, multiple legislative statutes and court decisions have passed affecting the management of the river (i.e. the Boldt Decision and the Endangered Species Act (ESA)). Not only do these statutes and decisions affect the management of the

Columbia River, but they also show that the political landscape of the river has changed dramatically since the ratification of the CRT in 1964. This change has led to a greater voice for environmentalists and the Indigenous Community on both sides of the border compared to the original CRT.

The CRT is now undergoing the process of renegotiation between the United States Entity (consisting of the Chairman of the Bonneville Power Administration and the Northwestern Division Engineer of the U.S. Army Corps of Engineers) and the Canadian Entity (consisting of the British Columbia Hydro and Power Authority). This process began in 2013 with the U.S. Entity's Columbia River Treaty Regional Review (Regional Review). This Regional Review was done to determine whether or not the Treaty should be canceled in 2014, the earliest date in which it could be terminated. Some portions of the Treaty are set to expire in 2024, specifically the assured annual flood control operation at Treaty storage dams in Canada. The assured annual flood control operation ensures Canada provides 8.45 million acre feet of water draft behind the three CRT dams, Keenleyside, Duncan and Mica (Hamlin, 2020). During the original negotiations for the assured annual flood control operations and the Canadian Entitlement Program (Canada's half-share of all of the downstream power benefits), the United States and Canada considered other interests. These include ecosystem functionality, river resiliency, and creating a more flexible system of management to address climate change effects on the River (U.S. Entity, 2012). The two major points of contention in the renegotiation process are the Canadian Entitlement and the new Ecological-Based Function. This encompasses tribal rights and cultural resources, as well as environmental functions of the river (U.S. Entity, 2013). These new topics of the renegotiation, combined with the development of tribal activism, has provided a unique opportunity for the voices of Tribes on the Columbia River to be heard and acted upon

in a collaborative fashion with the United States Entity. Also, with the passage of Bill 41 by British Columbia (B.C.), three Canadian Indigenous Nations (The Ktunaxa, Syilx/Okanagan and Secwepemc Nations) now have much more influence on the CRT's renegotiation.

This study examines some of the changing outlooks in the political landscape since the ratification of the Columbia River Treaty in 1964, and evaluates the roles played by Indigenous Tribes in the Treaty's renegotiation. Specifically, how Columbia River Tribes and Canadian Indigenous Nations have pushed for the addition of ecological-based function to the CRT. This study means to link how these changing outlooks, identified as macro-level conditions within Narrative Policy Framework, led to the inclusion of and collaboration with Columbia River Tribes and Canadian Indigenous Nations in the CRT's renegotiation. Considering the institutions governing the Columbia River and the 50 plus years of changes to the river's management and treaty implementation, the Narrative Policy Framework (NPF) has the tools to analyze the narrative tools driving this proposed additional third function of the CRT and its implications on the River.

Two Narratives of One River

The CRT is seen as a major success on the part of the two nations involved in its negotiation and ratification, the United States and Canada. The CRT created a non-conflict, diplomatic solution to manage the water resources and uncertainty of flooding for two nations (Hyde, 2010). To this day, the U.S. and Canada have worked hard to maintain a working relationship between the Entities by operating the Dams in accordance with the CRT, but also trying to account for the multitude of other interests that have evolved since (Hyde, 2010). The flexibility within the CRT allows both states to focus on a win-win approach to the Columbia River to maximize the benefits on both sides of the border (Hyde, 2010). However, there are

those that believe more can be done on an international level between the United States and Canada. Further, despite the accomplishments of the CRT, there was no Tribal seat at the table in the original CRT's negotiation, so no concern was brought forward over the Columbia River's ecosystems and anadromous species of fish. Intertwined with these fish, Tribal culture suffered negative effects in the Basin (Cohen, 2018). These two narratives began with the ratification of the CRT and are discussed below.

Successes of the Columbia River Treaty

The implementation of the CRT in 1964 was an attempt at preventing uncertainty of flooding within the River Basin, with annual flows ranging between 1.6 and 12 acre feet/second (af/s), which is a largely varying range for a river (BPA, 2001). The average flow for the River is about six af/s annually, but to complicate the problem, the River only has enough storage capacity for approximately 30% of the River's annual runoff that runs through the Dalles (BPA, 2001). By comparison, the Colorado River has enough storage capacity for more than 200% of the Colorado River's average annual flow. The Treaty's (storage) Dams of the Columbia River include Mica, Hugh Keenleyside, Duncan and Libby dams (BPA, 2001). The Mica, Keenleyside and Duncan dams are built in and operated by Canada. The CRT defines the payment for the building of these dams and their operation in the Canadian Entitlement Purchase Agreement of the CRT. The payment is documented as a \$254,000,000 lump sum by the U.S. for the building of the dams and the first thirty years of flood control (USACE, 1961). The compensation for dams' construction and how benefits for flood risk management should be compensated represent a large portion of the CRT. On the Canadian side of the border 92% of water storage occurs, but only 30% of the runoff for the basin occurs on the Canadian side. Despite the lack of available water storage, the combined cooperation of the U.S. and Canada has allowed only two

major floods (1996, 2017) in the Columbia River Basin since the treaty dams were constructed (BPA, 2001). The cooperation between the U.S. and Canada in the management of flood risk on Columbia the River since the Vanport Flood in 1948 is a major success of the River's first primary function.

Furthermore, the River generates 54% of the power usage in the Northwest as of 2012 through the cooperative management of the Columbia River between the United States and Canada (Holm, 2017). The River originally powered nearly 100% of the power needs of the Northwest at the time of the CRT's ratification, however due to population growth and limited supply of the River's power, there has been a diversification in the energy portfolio of the Northwest since the CRT's ratification (Foundation for Water and Energy Education, 2017). The water in the Columbia River is a huge asset to power production in the Northwest; however it is also a power asset to many parts of the U.S. and Canada. The transmission lines the River powers extend to the California, Texas, British Columbia and Alberta grids, and when there is a surplus in power (usually in late spring and summer due to excess release to mimic natural river flows for salmonid populations) the excess is sold to these regions (Foundation for Water and Energy Education, 2017). This flexibility in the transmission of power has created greater efficiency across multiple electric grids, preventing the need for more electrical resources. During the fall and winter in the Northwest, when the demand for energy is at its peak, the stored water behind the Treaty Dams act as a reserve of energy to keep the Northwest's power costs low.

The storage behind the dams and the energy benefits it provides is also a part of the Canadian Entitlement, as in that half of all of the energy produced from the dams is returned to Canada (USACE, 1961). Furthermore, Canada is paid for any economic loss from operating the

dams for flood control and foregoing other usages of storage directly related to this use of operation. Since the time of the CRT, the dams have also been operated to release water storage in order to provide a more natural annual hydrograph for salmonid species as a part of the ESA. For this operation, the U.S. further compensates Canada for these losses (USACE, 1961). The major difference between these two operations is that the annual plan for dam operation (flood control and hydropower production) is discussed 6 years in advance, and Canada has a certain amount of water stored for flood control management, whereas the water stored for fish passage is negotiated on an ad hoc basis (USACE, 1961).

Shortcomings of the Columbia River Treaty

It is not difficult to understand the success of the CRT, however, in order to ratify the document, there were several hurdles involved and major violations of Tribal Rights that offset the tone of international cooperation. During a 2013 Senate Meeting on the draft of the CRT's Regional Review Joel Moffett, Chairman of the Columbia River Inter-Tribal Fish Commission, stated:

"In developing this coordinated system operation under the Treaty with Canada, the U.S. did not consult with the Columbia Basin Tribes nor consider the effect of the Treaty on our cultural and natural resources, yet the Treaty has had far reaching impacts on our cultural and natural resources that continue to this day. Not only were the Columbia Basin Tribes not consulted during the Treaty's negotiation, the Tribes have also been excluded from its governance and implementation. The Treaty does not include considerations of critical tribal cultural resources."

One example of the lack of consultation in the Treaty is the construction of Keenleyside Dam in 1968. It was a decision made by Federal and Provincial agreements in Canada. This dam

not only displaced 2000 local people, but it also flooded a sacred burial site of the Arrow Indigenous Nation (Cosens, 2012). The building of this dam was highly controversial as it did not include local stakeholders or the Arrow Tribe in the decision making process. Further, there was an option to build the dam at a different site, further south on the River. This "Lower Arrow Dam" option had the potential not to disturb the Arrow Indigenous Nations burial ground, and would cause significantly less environmental disruption (Cosens, 2012). The Columbia River Engineering Board, put in charge of optimizing the hydroelectric power and water storage, was tasked to pick amongst one of three options for which placement of the dam would be best. The board could not make a recommendation as to which plan would be optimal for use of each site and water resources, and therefore left the job of choosing the best plan for the dams up to the treaty negotiators (Cosens, 2012). The treaty negotiators eventually selected the plan that included the High Arrow Dam, and several electrical engineers in the region spoke out against the plan. One engineer, Jack McDonald, explained that:

"In making the financial assessment of High Arrow, the value of the unspoiled Arrow Lakes valley to the people of this province has been completely ignored...in all calculations that its value before High Arrow are nil."

In this quote, there is a clear tone of distraught over the inherent value from the unspoiled Arrow Lakes valley being reduced to zero. McDonald also goes on, "...A resource such as Arrow Lakes cannot be assessed in mere dollars and it should not be sacrificed unless an indisputable benefit is gained," (Mouat, 2012). There was no undisputed benefit of building the High Arrow Dam over the Low Arrow Dam, as stated by the Columbia River Engineering Board (Cosens, 2012), and so if the decision to construct the dam in this particular plan had the opportunity to be influenced by stakeholders and the Arrow Tribes, merely through a collaborative governance

setting, the destruction and flooding of the burial ground could have been avoided. This dam was controversial for three distinct reasons. First, the two arrow lakes were separate bodies of water that were conjoined via a single waterway, which was a unique environmental habitat. Second, it displaced more that 2,000 people in the area that it flooded. Third, it flooded a sacred burial site of the Arrow Indigenous Nations (Mouat, 2012). This single instance of a major decision being made without the consultation of Tribes has led to the destruction of a cultural resource as well as the degradation of a unique ecosystem.

Further, the alteration of the Columbia River's flow via the addition of the Treaty dams added other, indirect effects to the ecosystem. These dams store the majority of the water that can be stored in the Columbia River Basin, and the natural temperature of water stored behind dams can change (Peery, 2012). The increased volume, larger surface area, lower velocity, and reduced mixing, all contribute to annual warming of water. This means that earlier warming in the year, higher peak temperatures, and later cooling, all occur due to dam storage. This change to the temperature regime can have significant impacts on hatchling and smolt populations (Peery, 2012). Additionally, returning salmonids may choose to follow different, cooler streams rather than ones their original birthing locations they, under normal conditions, return to annually, which displaces populations.

An additional effect of damming the Columbia River was halting the constant flux of nutrients from the river to the estuary and from the ocean back to the river system. First, dams lead to sediment build up behind walls, and between 1945 and 1999 there was 50% less annual sediment transport in the River's estuary (Modal, 2014). This can lead to an increase in the amount of erosion and salt water within the estuaries due to less fresh water availability for mixing (Modal, 2014). An example of a reduction in water mixing is Libby Dam at Kootenay

Lake, where phosphorus loading in the lake has declined, causing a trophic cascade from lack of phytoplankton and zooplankton availability to feed land-locked salmonids. Next, through the migration of salmon from the ocean into the stream, specific nutrients flow up the River; these are known as Marine Derived Nutrients (MDNs) (Peery, 2012). These MDNs have been removed completely from the River above Grand Coulee Dam and the lack of MDN returning to other parts of the Basin corresponds with the decline of salmon runs (Peery, 2012). This may be one reason for less successful salmon restoration projects in ecosystems that normally support salmon rearing.

Finally, with the implementation of dams along the Columbia River, the culture of the Columbia River Tribes and Canadian Indigenous Nations was severely damaged. Salmon is not only a staple to the diet of the tribes, but has significant cultural identity as it takes the place of honor in First Foods Ceremonies (Pearson, 2012). Salmon plays a significant part in the traditions of the Tribes on the River, and with the construction of dams along the Columbia River this important part of Tribal culture has been stunted (Pearson, 2012). To describe the bond between Native Peoples and Salmon, author Elizabeth Woody (2003) wrote, "Great spiritual comfort is derived from the first salmon, whose journey ends with a feast held in its honor. Together, Tribal members and Salmon weave a unique cultural fabric designed by the Divine Creator.". The CRT fails to acknowledge the significance of the role salmon plays in Tribal religion due to the lack of Indigenous Voices in the initial negotiation (Pearson, 2012). However, since the CRT's implementation, there have been movements to try and correct this wrong by adding hatcheries above the Grand Coulee Dam that are managed and fished by the Tribes and citizens that live in the area. One of the reasons the CRT does not include other uses, such as the ecosystem function and protection for fish, is because the construction of Grand

Coulee Dam almost entirely wiped out the native anadromous fish species in the river above the dam.

From the construction of Grand Coulee, to the implementation of the CRT, and forward into the mid 1970's there was no collaboration with or input from Tribes. This story begins to shift with the passage of pro-environmental statutes and litigation leading to court decisions that have been in favor of Tribes. These progressive changes that have occurred through time have created an opportunity for the voices of the tribes to be heard with the renegotiation of the CRT. These events are best described as a changing narrative that is leading to the implementation of ecosystem functionality as the third primary function of the CRT.

Narrative Policy Framework

The Narrative Policy Framework (NPF) is a framework that focuses on the importance of the narrative elements of a policy system that are not often tested in policy scholarship (Crow, 2017). The narrative elements in the NPF that are important for studying policy narratives include characters, setting or context, a temporal element of plot consisting of a beginning, middle and end, and a moral of the story (Jones, 2010). These narrative elements can illuminate political dynamics, actor beliefs and behavior, and institutional culture within a policy system (Jones, 2010). The NPF has been applied in multiple environmental policy arenas, from social justice issues to medicare to environmental issues (Shanahan, 2018). The NPF has a lengthy history of application in multiple policy arenas dealing with two or more sides of an argument being put forward, which is why it is well suited for the renegotiation of a treaty between two major international players. Although the treaty is being negotiated between the United States and Canada, also at stake is the role of Columbia River Basin Tribes that were neglected in the original negotiation of the CRT in 1961. These are the main characters of focus in the narrative,

How the Narrative of Environmental Justice and Management Affects Renegotiation and each of them employ a different meso-level hypothesis, which is stated within the NPF's framework

The NPF has three levels of analysis: micro, meso and macro (Pierce, 2014). The microlevel deals with public opinion and narrative persuasion. Both of these are important within the renegotiation of the CRT because each side employs town halls to explain how they are handling the renegotiation, however, public support may not be enough to drive either side away from their main priorities (Pierce, 2014). The meso-level deals with the strategic elements of policy narratives, and how narratives shape policy outcomes. The most notable variable in this level is the "variation in coalition composition," in which narratives are often used to either expand or contain the scope of conflict depending on the power dynamics that are in play for that group (Pierce, 2014). variation in coalition composition is especially pertinent in the United States, as many of those involved in the renegotiation want to contain the issues being put forth to just those that are stated in the 1964 version of the Columbia River Treaty (hydropower generation and flood risk management).

The macro-level of analysis is the least studied level of policy analysis in the NPF. Its major deficiency comes from a "lack of theory addressing macro-level driving forces in a political system that influence how (policy narratives) develop among policy actors and the general public," (Sabatier, 2014) The macro-level focuses on narratives at the institutional or societal level (referred to hereafter as themes) that can shape policy outcomes or processes (Crow, 2017). These "themes" can be noticed through the changing of long standing "rules of the game" governing the institutions they are set in. The themes developed since the CRT's implementation include a switch from command and control form of river management to an ecosystem-based approach, and with a greater sense of environmental justice given to the

Columbia River Basin Tribes. These changes are evident in statutes and decisions made after the CRT's implementation, changing the institutional governance of the Columbia River Basin.

The CRT formed an institution of governance with data points that are tied to historical events and how they have come to shape the management of the Columbia River Basin. The macro-level of analysis works best with the institutions created by the CRT, and these data points give greater context to how the policy actors behave in the context of the renegotiation process (Buthe, 2002). As posited by Buthe (2002), using, "history—as an object of study that may require a distinct approach to theorizing and to the presentation of empirical information-must consist of macro processes that cover an extensive temporal space." He goes on to say that isolating a single event within the larger historical context can deprive us of understanding its meaning within the larger historical context. When looking at the CRT, there are close to 60 years of the treaty's implementation, with another 15 years of history leading up to its passing, giving 75 years of temporal space and events to be analyzed. Furthermore, time can act as an explanatory variable in a causal model, working in the background on other explanatory variables in a non-linear way (Buthe, 2002). Using these historical events as data points as envisioned by Jones and McBeth (2010) for the NPF's macro-level of analysis, a clear method of using temporal data points can be achieved. Also, because these data points are major priority changes by the policy actors involved in managing the River, they are much more suited to be studied as qualitative data points rather than quantitative ones.

The elements of the policy narrative are the setting, the plot (temporality and events in sequential order), characters (the policy actors or policy groups), and the moral of the story or policy solution. The setting for a narrative is something that is normally taken for granted, usually the unchangeable factors surrounding the policy setting such as assumptions of policy

controversy (Pierce, 2014). In this case, the setting will consist of the dams that are already built within the basin, the amount of hydroelectric power being generated, and the flow of the River as a part of the setting. Further, the setting will include some pre-treaty events as context for the current narrative.

The minimum qualification for a narrative study requires at least one character with one policy preference. Characters in the NPF fall into three archetypes; heroes, villains and victims. The most common of these character archetypes is villains, as it is easy to identify- they cause a perceived harm, whether unintentional or not (Jones, 2014). The next most common archetype is the victim, because they are the ones receiving the harm, however these don't have to be policy actors, groups, or people. Victims can be a polluted river, ecological process being stunted, or other inanimate objects/processes (Jones, 2014). The major characters in the CRT's renegotiation who have been in play since the original CRT are Canada's Indigenous Nations, Columbia River Tribes, the U.S. Entity, and the Canadian Entity.

The plot is the temporal aspect of the narrative with a beginning, middle, and end, and is used to provide a relationship between the characters and the setting (Jones, 2014). The exposition for the CRT's renegotiation begins with the lead-up to the signing of the original CRT in 1964 because it provides a solid foundation for the events and consequences that take place after the signing of the treaty up until the 2013 U.S. Entity Regional Review. This period also shows what the major focuses of each government involved and explains why the CRT was so narrowly focused on the production of hydropower and flood risk management. There were many issues that were not considered in the original Columbia River Treaty, and this led to multiple statutes in different jurisdictions/regions in the River to create a "patchwork quilt" of laws to govern the River (Paisely, 2015). The middle of the plot occurs after the 1964 CRT is

ratified by both countries and multiple other statutes and regional decisions are made. Such regional decisions begin what would be considered "rising action" within the narrative; these include the Endangered Species Act (ESA), the Clean Water Act (CWA), and the Boldt Decision. This is where we find the patchwork quilt of governance of the River. The middle of the plot concludes with the 2013 U.S. Entity's Columbia River Regional Review , which is the catalyst for the renegotiation process. The reviews and recommendations put forward by each of the entities and other regional coalitions resemble something vastly different from the original CRT. The Regional Review represents the inciting of the plot with the time thereafter representing the rising action. However, whether or not these recommendations will be implemented in the renegotiation are yet to be seen, depending on how strong narratives are for or against the new recommendations.

Methods:

Most of the original debate around the addition of ecosystem-based function becoming a third primary purpose of the CRT happened in 2013 when the Regional Review was being conducted. Since the Regional Review, the Treaty's renegotiation has been done in rounds with the 12th round of negotiations beginning January 10, 2022. The data collection is based on testimonials for House and Senate Hearings on the Columbia River Treaty's Review Process and from Town Halls presented over Zoom by the British Columbian government giving updates for the renegotiation. Finally, data supplemental to the testimonials and provided for historical context comes from an in-depth review of historical information. This data includes major policies and court decisions that have affected the management of the River since the CRT's ratification.

During the 2013 hearings, 23 individuals and organizations explained their positions on the addition of the ecosystem-based function to the CRT. These 23 individuals represented 17 organizations and four U.S. Senators. These people and organizations represent the many interests of the PNW, from navigation to irrigation, recreation, etc. Since the Regional Review has been published, many of the opposing policy actors and organizations involved mention their commitment to the Regional Review put forward by the U.S. Entity. Although the greater endorsement behind the Regional Review shows solidarity amongst the stakeholders, it does not implicate policy actors' interests in how the CRT should be renegotiated. The testimonials delivered during the two hearings provide these interests for each policy actor as the Regional Review has yet to be set in stone.

Due to COVID-19 and a lack of transparency provided by the U.S. State Department on the CRT's renegotiation, Virtual Town Halls conducted by the government of British Columbia and other press releases by the Canadian government are the best insight to how the negotiations are being conducted and who is involved in the negotiations. The United States signs off on these press releases and the Canadian Entity will not release any details that might give away explicit content within the renegotiation. They have also provided several Q and A forums that provide detail on Indigenous involvement in the negotiations, the work being done on ecosystem functions within the River, as well as the United States-Canadian relations and other aspects of the CRT's renegotiation.

Finally, the major historical policies and court decisions that have affected the CRT and the consolidation of tribal power to create an opportunity for tribes to participate and be heard in the renegotiation process include the Boldt Decision, CWA, actions under the Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program, the Electric

Consumers Protection Act of 1986 under FERC, the Federal Columbia River Power System Biological Opinion requirements under the Endangered Species Act, the Nez Perce Water Rights Agreements of 2004, and implementation of the Columbia Basin Fish Accords. These major policies show a change in how the River operates with regards to the Environment and Indigenous Tribes within the Basin. At the helm of many ecosystem-based projects are Columbia River Tribes and Canadian Indigenous Nations. These data points come from the Regional Review as actions that have contributed and will contribute to ecological functions on the River.

Data Analysis:

This study's analysis was conducted in two phases. The first being analysis of the broad historical context where there are changes in multiple agencies' policies since the CRT's original negotiation that are the building blocks for the potential addition of Ecosystem-based function for the CRT. Most of the historical data here is secondary, aside from the individual changes in policies of agencies that are primarily sourced, such as the Electric Consumers Protection Act of 1986 (ECPA) under section 10j, directing the Federal Energy Regulatory Commission (FERC) to place a greater consideration for environmental issues in hydropower licensing. The changes in policy governing the Columbia River show a change in theme from a command and control form of river management to an ecologically based form. Secondly, the court decisions detailed show a theme of steps being taken towards environmental justice for Columbia River Basin Tribes. The second phase of analysis narrows focus around the 2013 Regional Review and the later House/Senate hearings and rounds of negotiation that take place until 2022. This is where the renegotiation process begins and the potential addition of ecosystem-based function is introduced, signifying a major change for the management of the River. Much of the data in this phase is primary data in the form of written letters, testimonies and hearings, as well as town

halls conducted by policy makers and policy actors. The primary resources give a better glimpse into the policy actors' beliefs and policy positions in surrounding the CRT's renegotiation and connect the meso-level policy narratives employed by policy actors to the macro-level themes discussed above. Finally, with major changes to the B.C.'s negotiation team (the inclusion of Canadian Indigenous Nations as observers to the renegotiations in 2019), it is worth noting the potential impacts of these nations on the renegotiation process.

The Setting

The geographical and physical setting of the Columbia River starts with its flow, and also the dams and hydroelectric output. The River is the fourth largest river in North America (with regards to average annual flow in million acre-feet) with ten times the flow of the Colorado River, and the entirety of the Basin is roughly the size of France (U.S. Entity, 2013). Tributaries of the River reach as far as Montana and northern Nevada (Lang, 2015). Along the main stem of the River lies 14 major dams, with only three of them being used for water storage (Foundation for Water and Energy Education, henceforth FWEE 2014). These three dams along the River are only capable of holding 30% of the river's annual water flow, as opposed to the dams of the Colorado River (Glenn Canyon and Hoover) which are capable of holding more than 200% of the annual waterflow that the Colorado River produces (BPA, 2001). Most of the water storage capacity along the River is found on the Canadian side of the basin between the Duncan, Mica, and Keenleyside dams. However, on the Canadian side of the basin only 25% of the average annual runoff of the River is generated (FWEE, 2014). Along the main stem of the River, there are 11 run-of-river (RoR) dams designed to optimize the amount of hydropower produced by the River. These dams do not store water, but instead pass it through turbines to create hydroelectric power. The river can produce a maximum of 22,500 megawatts of power which is the foundation

of the Pacific Northwest's (PNW) power consumption, making up about 54% of the power used in the region. This massive amount of power comes from more than 400 RoR dams placed all over the basin (FWEE, 2014). These dams provide a successful integration of the two major functions outlined in the CRT stated above; there has not been a major flood on the River in 25 years, and according to the Northwest Power Conservation Council, 50% of the power consumption in the Pacific Northwest (PNW) is currently fueled by the hydropower being produced by the various dams along the Colorado. These are clear indications of the successes built out of the Treaty's two major functions.

One of the dams along the River is Grand Coulee Dam, which was built long before the building of the Treaty Dams. This dam was constructed in 1941, in a time with less consideration for environmental and Tribal cultural resources. The dam was built absent a fish ladder or other means to transport migrating fish. This led to a loss of 50% of salmon within the Columbia River and its tributaries and, as a result, destroyed a culture built around salmon and diminished sustenance of the affected tribes (Pearson, 2012). For a people whose salmon intake makes up 60% of their diet, this was a major loss to their physical and mental health (Pearson, 2012). Between 1976 and in 1993, wild salmon further decreased by 80% causing the Columbia River Tribes to be limited to only fishing for ceremonious purposes. Furthermore, the power produced by Grand Coulee Dam is not distributed evenly, due to the dam being built between Grant County Oregon and the Colville Indian Reservation, causing tribal members to pay double for electricity costs, (Sirois, 2011). The construction of this dam and its operation is an example of the treatment of Native Americans prior to the CRT's ratification. It is an important example of the political setting prior to the CRT's implementation. There have been concessions made to local Tribes stating they receive access to 50% of the fish that are hatched at 3 different

hatcheries (Leavenworth, Entiat, and Winthrop) which produce over 2 million fish a year (USBR, 2021). Finally, there are efforts underway by the Bureau of Reclamation in order to potentially restore fish passage at Grand Coulee Dam.

The contextual setting of the River Treaty starts with the 1909 Boundary Waters Treaty (BWT) between Canada and The United States. The BWT's most important focus was on the U.S. and Canada having "exclusive jurisdiction" of the waters that flow over on their side of the boundary. This precedent is important because it leads to domesticating what should be international, "big picture" ecosystem issues. Further under this determination, the diversion of water by the upstream country does not need to take into consideration the needs of the country downstream (Boundary Waters Treaty). This is a continuation of the Harmon Doctrine that was adopted in a dispute between the U.S. and Mexico over the waters of the Colorado River. Both the U.S. and Canada were able to use the water from the River for their own developmental purposes until 1941 when the International Joint Commission (IJC) evoked Article IV of the BWT. The article states, "that neither country may change the level of transboundary waters at the boundary without the approval of the IJC," over the construction of Grand Coulee Dam. The BWT is still in effect today, and is what the management of the River reverts back to if the CRT is withdrawn.

Changing The Flow: Macro-Level Conditions Influencing Narratives

In the past 50 years of the CRT's implementation, there were a multitude of changes within the United States' management of waterways. Specifically, moving away from a "command and control" structure to a more "ecosystem-based" approach represents a macrolevel condition that influences the narratives created by policy actors. One example of this is a change in language of the original CRT from flood "control" to what is now flood "risk

management." Further, the original CRT is focussed on using the Columbia River for industrial development and hydropower production, but has since considered more ecosystem resources. Due to the timing and rigidity of the CRT's contractual agreements, it has lasted 50 years without modernization towards a more cooperative treaty for the restoration of the Columbia River's ecosystem. All of the laws passed in Canada and the United States have only been enforceable domestically which has led to benefit imbalances due to the CRT's framework (i.e. Canadian Entitlement for spill). These laws have, however, moved each country towards a more ecosystem-based approach with multiple interboarder projects designed to restore the Columbia River. At the forefront of many of these projects are Columbia Basin Tribes and Canadian Indigenous Nations working towards a more holistic management style of the Columbia River Basin. For example, the funding from the Columbia River Fish Accords has led to nearly 15,000 instream and out-of-stream actions to support salmon, sturgeon and lamprey populations and restore ecosystem health on the Columbia River. With Indigenous Tribes in the Basin becoming a greater authority on the environmental restoration of the River, they have enhanced their position to influence the CRT's renegotiation to include ecosystem-based function. This empowerment as a form of environmental justice for Indigenous Tribes represents a second macro-level condition that influences the strength of these policy actors and the narrative(s) they create. The following sections describe major statutes and court decisions that changed the management of the Columbia River as evidence of these macro-level conditions.

Pro-Environmental Policies

Since 1964, the River Dams have been managed by the CRT and this management has undergone change for decades, from the implementation of the CWA to the ESA, and the Boldt Decision. There has been major adaptation and flexibility demonstrated by the United States to

prevent a breach in contract (Cosens, 2021). Due to the United States' Constitutional Law, prior international agreements supersede new national laws, and because of this modern laws must be contorted in order to fit the standards of previous international agreements (Cosens, 2021). These statutes are not simply instances of laws being passed, but also an indicator of the changes in culture that have taken place since the CRT's negotiation. Many of the statutes, decisions, and agreements also come with major caveats for the future of the River.

During the 1950's, when the United States and Canada were negotiating the original deal, the major concerns of the Pacific Northwest (PNW) were energy production and industrial development (Cohen, 2018). Since then, there has been a shift in what people want to see in the management of waterways, including the River. This is identified through changes in policy of agencies and the adoption of new pro-environmental statutes and pro-Indigenous decisions. For instance, with the passage of the 1972 Clean Water Act, Congress gave the Environmental Protection Agency the power to regulate water ways, such as the Columbia River. Further, it gives environmental organizations an avenue to enforce anti-pollution statutes through litigation. In following the precedents set by the BWT, the Clean Water Act is only enforced by the United States, and its counterpart, Canada, enforces the Canada Water Act of 1970. The Clean Water Act and the Canadian Water Act are both domestic statutes that work towards preventing the pollution of the River. The Clean Water Act has been an instrumental avenue for environmentalists, such as the Columbia River Keepers, in bringing forth lawsuits to challenge River polluters (Columbia River Keepers, 2021).

The next federal policy that modifies the management of the River is the Endangered Species Act of 1973 (ESA). The multiple salmonid species that have been placed under the endangered classification (sockeye, coho and chinook) require a certain amount of water flow

from the River to survive. This water flow has been determined on an ad hoc basis the year prior to the operation year of the Columbia River (Mainzer, 2013). It usually amounts to about one million acre-feet of water that is moved from winter to late spring and early summer. This water is regarded as a non-treaty flow augmentation operation that has been agreed upon by both nations to restore a more natural yearly hydrograph to benefit endangered salmonid species (Mainzer, 2013). This is a demonstration of the United States and Canada cooperatively operating the river's flow in order to achieve an ecosystem-based benefit that is not codified within the CRT. The flow augmentation for the benefit of the endangered salmonids is the only other reason for changes in the flow of the River aside from hydroelectric power generation and flood risk management, but it comes at a cost (Elliot Mainzer, 2013). Despite the mutual agreement between the United States and Canada, the water spilled must be compensated back to Canada per the Canadian Entitlement. Releasing these flows later in the summer leads to less optimal power production for the PNW in the winter months and PNW ratepayers have to pay back this hydropower production slack via the Canadian Entitlement.

One major example of the ESA contributing to how the River Dams are managed comes from the 2005 court decision in National Wildlife Foundation (NWF) vs. National Marine Fisheries Service (NMFS) 2005. In this decision, litigation was brought from the NWF against the NMFS for the implementation of a new spill regime for the dams through Biological Opinions (BiOps), which effectively paved the way for courts to control the River Dams and spillage through injunctive relief (Morse, 2012). The NMFS was trying to determine the most beneficial way to keep the smolt population of fish at an acceptable level with the best data available. In this determination, they assumed the need to "spread the risk" between two different methods of fish transport: barging fish around the dams, and increasing spill flow in order to

ensure the survival of the most smolt (Morse, 2012). The NMFS proceeded to lean heavily on barging fish around the dams, as they believed it was the closest approximation to natural conditions (Morse, 2012). From 1995-2004 the NMFS' operation of the River's dams to maximize the survival of smolt faced multiple lawsuits, however, the courts continuously ruled in favor of the agency and deferred to their judgment. In 2005, the court granted an injunction against NMFS for the removal of some summertime spills. NMFS argued that there was a small number of smolts that would benefit from these spills because most of them would be transported later in August. NMFS was very pro-transportation of smolts, meanwhile NWF, states and tribes believed that spill was the safest mode of smolt migration out of the River (Morse, 2012).

In the end, the courts provided injunctive relief due to the agency's inconsistent effects analysis and that the change in management of the River's dams came from a policy change rather than a scientifically authorized change. Functionally, these injunctions by the courts created a situation where the court dictated the timing, amount, and location of spill and ran the River (Morse, 2012). This continued well into the 2010's.

Another policy that impacted the management of the River and had a significant effect on its development, is the Electric Consumers Protection Act of 1986 implemented by FERC. This legislation gives equal consideration of developmental and non-developmental values in the process to construct new hydropower facilities (Black, 1998). FERC must, under the ECPA, "consider resource agency recommendations pursuant to the Fish and Wildlife Coordination Act to protect, mitigate damages to, and enhance fish and wildlife resources." (ECPA, 1986). However, a major caveat to this statute is that equal consideration does not have to mean equal treatment, as the focus is on the consideration and reflection portion of power development under

the Federal Power Act (Black, 1998 and Buckendorf, 1992). Furthermore, under article 10j of the ECPA, FERC should receive recommendations from NMFS, USFWS, and State Fish and Wildlife agencies, but FERC does have the option to reject these recommendations (Black, 1998). Even when FERC does accept other agency recommendations, they seldom enforce them on the licensees, and instead delay recommended projects from other agencies (Grimm, 1990). As federal licenses expire for hydroelectric facilities, they have to undergo an environmental assessment of the facilities' effects on the environment around them. FERC's ECPA centers this process in the relicensing process, along with recommendations made by other agencies (Buckendorf, 1992). For its flaws, this statute's clear "elevation" of the ecosystem, as well as fish and wildlife for the agency, represents a major shift in the continuation of development along the River.

The final pro-environmental based policy is the 2008 Columbia River Fish Accords (Accords) between Idaho, Montana, multiple tribal confederations in the Northwest, and the federal government. The Accords have fostered a relationship between these groups and have also provided more than \$13.5 million for projects to benefit salmon and other fish species within the basin (Kappus, 2012). The Accords came in relation to and following the lawsuits by the NWF against the NMFS. Prior to the Accords, many Indigenous tribes and coalitions signed amicus curiae briefs against the federal agencies (Kappus, 2012). The Accords had a positive impact on on the Dams and the ecosystem of the River, but it also acted in a way to silence the Indigenous Tribes and coalitions that signed onto them as they "agreed not to initiate, join in, or support any ESA, Northwest Power Act, Clean Water Act, or Administrative Procedures Act lawsuits against the action agencies or NMFS regarding the Dam's proposed action. Additionally they agreed not to initiate, join in, or support in any manner ESA, Northwest Power Act, Clean

Water Act or Administrative Procedure Act suits against the Action Agencies or NOAA regarding the effects on fish resources and water resulting from the operations of the Dams," (Kappus, 2012). The Nez Perce Tribe was the only major tribe that disagreed with these terms and ended up not signing into the Accords. For all of the Tribes that agreed and signed onto the Accords, they received compensation to restore fish populations and their ecosystem via projects that have also employed Indigenous populations (Kappus, 2012). It has also allowed the River Tribes to spearhead major projects for ecosystem enhancement in the Columbia River Basin.

These major policy enactments represent a clear change in the priorities of managing the River since the CRT was originally enacted. The CRT was mostly focused on hydropower production and flood management, and so both countries had to operate the River on their side of the border in accordance with domestic law so as to not breach the Treaty. For example, when the U.S. created any extra spill for salmon, they paid Canada for the power that could have been generated by the water instead of being spilt over. Despite the flexibility within the CRT, there is consensus that a modernized Treaty would provide greater opportunities for cooperation. In creating a more flexible CRT and adding ecosystem-based function as the third major priority of the CRT, the United States and Canada are focused on reflecting this change away from development and production through command and control of the river, to a more environmentally based approach. Furthermore, there can be more international coordination between the nations if they share this new priority in the CRT. Aside from these changes in the management of the River to reflect the public's change in attitude toward the environment, several major court decisions since the CRT was implemented have bolstered Indigenous voices within the Columbia River Basin.

Pro-Indigenous Decisions

"Idigenous Tribes are arguably the most influential parties with respect to the salmon. The tribes have treaty rights to fish, and also enjoy a trust relationship with the federal government," (Kappus, 2012). This quote demonstrates the influence Indigenous Tribes have on the restoration and protection of salmon, but this wasn't always the case, as much of their authority was derived through major court decisions. One such example is United States v. Washington, 384 (1974) decided by Judge Bodlt (henceforth the Boldt Decision). The Boldt Decision is a reaffirmation of United States vs. Winans 198 (1905) (Winans), which is a legal case that stems from what is known as the Steven's Treaty. The Steven's Treaty Tribes, as well as the court cases that follow, demonstrate the reservation of a right and a legal contract to the Tribes being granted to fishing in their usual and accustomed places. These cases lay the groundwork for Tribes and Tribal Coalitions, such as the Columbia River Inter-Tribal Fish Commission (CRITFC), to lead ecosystem-based projects, in parallel with the ESA, to rear as many smolt as possible for their cultural ceremonies and identity. Leading a multitude of environmental projects made the Tribes experts on salmon reintroduction and gave them greater authority to influence the 2013 Regional Review. However, this would not have occurred without the Boldt Decision and prior rulings from the court.

The first part of these decisions starts with the Stevens Treaties, which were legal and binding documents made between the Governor of Washington Territory and nine Indigenous Tribes (Treaty Tribes) in the area. The Treaty Tribes, in exchange for their lands to build on, were given, "the right of taking fish, at all usual and accustomed grounds and stations, is further secured to said Indians, in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing." This "right to fish clause" is broken into two parts, the right to take fish and to do so at all accustomed grounds and stations (Bell, 2015). The construction of

the Bonneville Dam was a clear violation of the second part to the clause as it flooded an important fishing site for the Basin Tribes, Celilo Falls (Bell, 2015). Further, the construction of the aforementioned Grand Coulee Dam flooded another usual fishing site, Kettle Falls (Pearson, 2012). These two instances represent blatant breaches in the Stevens Treaties, but since the Boldt Decision, these breaches haven't occurred.

In Winans, the court found that the Treaty should be interpreted as the Tribes had interpreted it upon signing, and that the rights in the Steven's Treaty weren't rights granted, but instead reservation of rights the Tribes already possessed. Further, "Winans declares the Stevens Treaties secured a right-to-fish that included a right of crossing land to the river, a right to occupy that land, and to use it to the extent and purposes of fishing," (Bell, 2015). The Winans Decision established tribal fishermen to fish in traditional ways in traditional places and even though some of those traditional places were flooded by dam water, Treaty Tribes still had their right preserved to fish for salmon in traditional ways. However, the fishing industry in Washington started to bloom with more advanced fishing technologies, creating a situation where traditional Tribal practices did not accrue as much fish, leading to pressure on salmon runs and Indigenous peoples being edged out of those runs (Bell, 2015).

As a result of this pressure, illegal fishing, and a decline in fish populations, Columbia Basin Tribes started the Fish Warsof the 1960's, pressuring the federal government to recognize their rights to fish. The federal government then brought litigation to Washington State on behalf of multiple Treaty Tribes. In the Boldt Decision, the major issues declared were not only the right to fish that was affirmed in Winans, but also the quantity of salmon that was to be fished by Treaty Tribes and citizens of the State (Bell, 2015). The Boldt Decision ended up being upheld by the 9th Circuit Court of Appeals and the findings and conclusions were as follows:

1. the Winans decision that the right to fish in the Stevens Treaties was a reservation of a right already possessed and not a right given,

2. that the definition of the right to fish had been granted to settlers to fish beside Native Americans which meant "extraterritoriality" when fishing in locations,

3. Stevens Treaties override all state regulation of Tribal fish Regulations,

4. that Treaty fishermen were entitled to half of the salmon run at their usual and accustomed fishing sites (Bell, 2015).

The final pro-Indigenous court decision comes from Washington vs. Washington State Commercial Passenger Fishing Vessel Association 443 (1979) (Fishing Vessel). Despite the Boldt Decision, there was still major defiance within the state of Washington and Fishing Vessel was the final provision in interpreting the Stevens Treaties. In Fishing Vessel, the court decided that the Treaty Tribes were not to be denied meaningful use of their usual fishing places, and that the diminishment of this right would not have been a sufficient payment to the Treaty Tribes for the lands ceded to the Territory of Washington at the time (Bell, 2015). Finally, the most important part to this case's findings was that, "the removal of development that threatens the viability of Tribes fisheries and exclusion of Indians from the fisheries," (Bell, 2015) was upheld by the court. This stems back from the decision in Winans for the removal of enough water wheels to allow enough fish to pass into the Treaty Tribes usual and accustomed fishing sites. This court finding could be used to reinforce the authority given to Treaty Tribes in future court decisions against the federal government.

Aside from these major court decisions, there is one other advancement in Tribal authority on the fish and ecosystem management within the Columbia River Basin. The Tribes have been married to the ecological function of the River since the time of the original CRT as

advocates, but gained more authority on the subject through the aforementioned Columbia River Fish Accords. The Accords gave large payments to the Tribes for projects to ensure fish passage and ecosystem health. These payments amounted to about \$674 million over the course of ten years, funding 96 habitat based projects and 65 hatchery projects (BPA, 2008). However, these payments were not made in charity, as the Tribes had to agree to terms as to not litigate against future NMFS BiOps relating to the management of the River's spill/transportation for salmonids (Kappus, 2012). Despite these terms, the Accords allowed Indigenous Tribes the ability to spearhead ecological programs, once again giving them greater authority around the time the Regional Review was being written and adopted.

The change in flow from using the power of the River for the industrial development of the PNW through command and control towards a more ecosystem-based management style is evident in the pro-environmental statutes. Further, the inclusion and bolstering of Tribal voices in the court decisions and the Columbia River Fish Accords represent a step towards the environmental justice long sought by Indigenous Tribes. These changes represent two macrolevel themes that have developed since the CRT's ratification and implementation. Despite these pro-environmental changes in the management of the River, many believe there is more that can be done through a more cooperative international approach with the U.S. and Canada, and that approach can be achieved within the renegotiation of the CRT. Others believe that there is enough already being done and that environmental issues should remain as domestic issues. The following section continues on from these themes into the United State's Columbia River Treaty's Regional Review, where policy actors craft narratives in support and opposition of the addition of ecosystem-based function to the CRT.

A River of Opportunity

The focus of the original CRT was on the building of and compensation for the Treaty Dams built by Canada and how they should operate for the benefits of hydropower production and flood risk management. The renegotiations will be less focused on the construction and compensation of the Treaty Dams and more on their management. With this comes navigation around the multiple domestic statutes and decisions aforementioned, and the opportunity for the groups neglected in the negotiation of the CRT to voice their concerns and ideas about River management. Due to the pro-environmental statutes signed post-ratification of the original CRT, and the changes in authority and influence for Indigenous Tribes throughout the Columbia River Basin, an opportunity for Columbia River Tribes in the United States to influence the CRT's renegotiation presented itself. This opportunity represents the rising action in the NPF, where the plot begins to form with an inciting moment towards CRT's renegotiation.

During the CRT's 2012 Regional Review Process, the United States put together a Sovereign Review Team (SRT), consisting of "Representatives of the four Northwest states, 15 tribal governments and 11 Northwest federal agencies," (U.S. Entity, 2014). The SRT developed the 2013 (Regional Review). The 15 tribes within the SRT developed the "Common Views on the Future of the Columbia River Treaty" document, or the "Tribe's Common Views Document" in 2010. This document represents an unprecedented amount of collaboration between the Columbia River Tribes (Cosens, 2021). They defined their objections to the original CRT, as well as what they wanted to see in the CRT's renegotiation. Much of the Common Review Document portrays the Columbia River Tribes as victims and they emphasize the need to correct past harms by adding a Tribal Coalition member to the U.S. Entity or be given official Observer status. They also emphasize the need for ecosystem-based function to be added as a primary purpose in conjunction with flood risk management and power production (Columbia Basin

Tribes, 2010). The Regional Review derives several of its recommendations from purposes in this document, including:

"Tribal cultural and natural resources inclusion in river management to protect and promote ecological processes, respecting and preserving the benefits of settlement agreements with tribes, and recognizing tribal flood control benefits," (Columbia Basin Tribes, 2010).

On the SRT, there were five representatives from the 15 Tribal governments, and they stuck to the addition of ecological function as the third primary purpose of the Columbia River throughout the development of the Regional Review, creating a major tipping point for the U.S. Entity to argue for it in the renegotiations (Cosens, 2021). The Regional Review went on to be the foundation for the United States entering into the renegotiation of the Treaty; but as the Regional Review was formed, there was much contention over the addition of ecological-based function becoming a primary purpose of the CRT. In the development of the Regional Review, the U.S. House of Representatives and the Senate were tasked to review and approve the draft of the Review. Each chamber held one hearing; the first was conducted in the Senate on November seventh, 2013 and the second in the House on December ninth, 2013. In the hearings, the most contentious issues discussed were how the Canadian Entitlement should be revised and the addition of ecological function should become a primary purpose of the CRT.

Meso-Level Narratives on Ecosystem-Based Function

The addition of ecosystem-based function presents two challenges: whether or not it should be added as a primary purpose and what the definition of the function would encompass (either as an all-inclusive ecological function or if it would be tailored to spill for salmon). Given these three different policy preferences for the addition of the ecological-based function, the focus is on those who want a limited scope of the function, those who want to use it to correct

the wrongs of the previous iteration of the CRT and making the purpose all-encompassing, and those who don't want to see the implementation of ecological-based function in the renegotiation at all. Within the scope of the Narrative Policy Framework, this is the introduction of some major characters and the narratives they employ to influence the Regional Review.

On the side of limited scope are Senators, the Public Power Council, Public Utility Districts, The Bonneville Power Administration (BPA), The United States Army Corps of Engineers (USACE), and the Washington Public Utilities Districts Association. This group of individuals/organizations are mostly for the implementation of ecosystem-based function but have caveats to its addition. The two major players within this group are The BPA and USACE, as their caveats and definition of ecosystem-based function are most likely to be used by the U.S. Entity in the renegotiation. The BPA and USACE are the two major institutions that make up the U.S. Entity. Both of these institutions defined the addition of ecological based function as, "appropriate and helpful to formalize and gain more certainty for these operations (storing and releasing water for ecosystem purposes), as opposed to having to negotiate them on a one-off, ad hoc basis," (Mainzer, 2013). The major focus of these two organizations was on the formalization of a process that has already been occurring under a mutual agreement under the CRT. Further; they see the inclusion of ecosystem-based function as a way to ensure flexibility of dam operations under current climate uncertainty (Kem, 2013).

Another major reason for the addition of ecosystem function for these organizations is for the curtailing of payments under Canadian Entitlement. Under the current rate of Canadian Entitlement, the United States must pay Canada for the water released by the dams that could have been used in a more beneficial way in Canada. This portion of the Entitlement becomes a greater burden for the United States, when spill is passed over the dam for fish passage because

there is no designation for it under the current CRT (Reimer, 2021). As in, the water released by the dams in Canada is water released by the dams, and the U.S. has to pay back Canadian Entitlement for it, regardless of how it is used. Also, without the designation of spill and power production, it disincentives the BPA and other dams in the U.S. to spill water, as it raises rates for their consumers, and it adds to the Canadian Entitlement (Reimer, 2021). This is why ecosystem-based function might very well be married to the Canadian Entitlement, especially for the U.S. Entity. By acknowledging ecosystem-based function as the third primary purpose of the CRT, the U.S. Entity may be looking at it as a means to the end of paying less for the Canadian Entitlement, because both parties would then be responsible for spillage for endangered fish, lowering the U.S. payment. In doing so, they appeal to a wider base of PNW ratepayers and utilities in that they would have to pay less. Further, by viewing ecosystem-based function as a formalization of a process that is already in place, it may only offer minor concessions to the environment and Indigenous Tribes. Limiting the scope of ecosystem-based function only to a formalization of a process already undertaken also limits the scope of their narrative of having to not include environmental and tribal interests. This is a meso-level narrative tool employed to keep a policy arena within the status quo (Jones, 2014).

It is the Indigenous Tribes and environmentalists' position that the addition of ecosystem functionality should be considered as a method to correct the benefit sharing amongst nations and those left out of the original CRT negotiations, and as an opportunity to elevate the value the Pacific Northwest places on the river and ecosystem.

"The elevation of the ecosystem function accurately reflects the high value that citizens of the region place on the health of the river," (Haller, 2013)

"The inclusion of ecosystem function as a primary driver, co-equal to hydro power and flood control, is a key feature that will make the Columbia River Treaty truly a model of international water management. An improved ecosystem should be a shared benefit and obligation with Canada," (Moffet, 2013).

Their policy preference is the addition of ecosystem functionality as an avenue to increase the protections of endangered fish, restore the River to a more natural flow cycle, and provide more security for cultural resources. Indigenous Tribes and environmentalists organizations are the two major policy actors hoping for ecosystem-based function to have a more balanced and equitable sharing of benefits rather than a formalization of the process that already occurs. Indigenous Tribes, spearheading major environmental based projects in the Basin after the Accords, have a natural ally in the environmentalist groups because many of their goals are aligned. For instance, both groups want to see more strategies of salmon recovery integrated into management of the river and additional flexibility in the wake of climate change and its effects on the river. The major players for this group include Pacific Rivers Council, The Columbia Basin Tribes (consisting of 15 tribes listed in the Common Views Document of the CRT), The National Congress of American Indians, and the Columbia Riverkeepers, and Tribal coalitions such as UCUT and CRITFC.

In consideration of these policy actors in the NPF, these characters could be viewed as the Victims and the Heroes. Specifically, the Indigenous Tribes and the environment can be viewed as the Victims as they have both been most negatively impacted by the CRT, not to mention those who were displaced by the dams built by the CRT in the 1960's and 1970's as demonstrated by the shortcomings of the CRT section above. The victim in the NPF is "harmed by a specific condition." (Shanahan, 2013). This doesn't always have to be person orientated,

and is often implemented to mean the environment, so in this scenario it is both the Indigenous Tribes as well as the Ecosystem aspect of the Columbia River. The NPF also defines heroes as the "entity designated as fixing or being able to fix the specified problem," (Shanahan, 2013), and the entities trying to fix the problems outlined in the shortcomings of the CRT are the Indigenous Tribal Coalitions and the Environmental Groups. Both groups recognize the inherent value of the River's ecosystem and used the CRT's Regional Review as a mechanism to justify this value side-by-side with the value of hydropower production and flood risk management.

Despite the support in favor of adding ecosystem-based function to the CRT as a third primary focus of River management, there were those who were opposed to the addition of the purpose, even in the capacity of formalizing an already occurring process. Most of these groups represented various other interests along the Columbia River, including Lane Power Co-op, the Columbia and Snake River Irrigation Association, Columbia River Pilots, The Executive Team Leader of Columbia River Negotiations for Canada, and the Idaho Water Users Association. These stakeholders all represent other uses and different functions of the CRT and they voiced concerns that ranged from lack of definition of ecosystem-based function, to protection of water being used for irrigation, and rate hikes for the inclusion of the function. These functions are all listed in the CRT, however, none of them are considered to be "primary functions" as ecosystembased function may be elevated to. USACE Brigadier General Jon Kem mentioned in his testimony to the Senate that the most sensitive area deals with ecosystem function being a primary function, but offers the following as a rebuttal:

"I want to make it clear this was not done to promote one set of interests over another, or we seek to disadvantage or negatively impact one interest group, rather we added it to the draft to incorporate the context of how we actually conduct coordinated operations with Canada

today... The fact is we coordinate with Canada for the storage and release of water for 3 reasons at this moment, period. We do it for flood control. We do it for hydro power. We do it for ecosystem functionality," (Kem, 2013)

Within this group, the major player is the Executive Team Leader of the River Negotiations in Canada, as they are the representative of Canada during these hearings, and are opposed to the inclusion of ecosystem-based function in its entirety. They "believe that the flexibility within the treaty has allowed change in operations for ecosystem values, including U.S. salmon recovery, by remitting flows in the spring to try and mimic the natural hydrograph, but also during late summer and during dry years, when it's so critical for fish survival," (Eichenberger, 2013). This view in 2013 created a tension of how to include ecosystem-based functionality. With this view, Canada positions itself in a way that it would not have to give spillage compensation for ecosystem-based function. They claimed that the flexibility of the CRT, as it was, created a format to help the U.S. with ecosystem function, but at this time had not incorporated the Canadian Indigenous Nations as Observers to the CRT's renegotiation. This becomes important later.

Finally, during the hearings, Indigenous Tribal Coalitions also placed emphasis on the collaborative process and the consensus by all parties on the SRT in developing the Draft of the Regional Review (Mofett, 2013). On December 9th, 2013 during the House Hearing on the Future of the Columbia River Treaty, The spokesperson for the CRITFC explained, "We think it's really important to develop that regional consensus, a consensus that we can all support, a consensus that makes the Columbia River a powerful entity, an entity that we can all move forward on," (Moffet, 2013). After these hearings conducted by the House and the Senate, the U.S. Congress decided to adopt the U.S. Entity Regional Recommendation with Ecosystem-

Based Function as the third primary purpose of the CRT. There are five purposes of ecologicalbased function in the U.S. Entity's Recommendation; they are to promote populations of anadromous fish and other wildlife, investigate/implement restored fish passage of anadromous fish on the main stem of the Columbia River, minimize adverse effects of Columbia River Tribes and Canadian Indigenous Nations, preserve cultural resources of the Columbia River, and pursue shared costs for the addition of ecosystem-based function.

Post-Recommendation and Renegotiation

After the U.S. Congress confirmed the Regional Recommendation, the work was not over for the Columbia River Tribes. The goals of the Regional Recommendation represented a major win for them. For example, in the Common Views Statement the coalition of Tribes emphasized cultural and natural resources to be protected and to promote ecological health for these resources, and the Regional Recommendation included these goals (Columbia Basin Tribes, 2010). However, There were some goals that were not met. One of these was to secure their inclusion as a full member in the renegotiation process with Canada, or to be given official Observer status (Columbia Basin Tribes, 2010). The Tribes were denied both of these requests. Meanwhile, since the passing of the United States Regional Recommendation, the Indigenous Nations of Canada made huge strides in working with the Canadian Entity. One major accomplishment was to convince the Executive Team Leader of the River Negotiations in Canada, Kathy Eichenberger, to include ecosystem-based function into the Canadian Recommendation in 2014. Another accomplishment by the Canadian Indigenous Tribes was their addition as official Observers of the renegotiation process, representing an unprecedented amount of influence given to Indigenous Tribes in the Columbia River Basin. The following

section discusses both the United States and Canadian Entities interaction with Tribal Nations post-Regional Recommendation and during the renegotiation process.

The successes of the Columbia River Tribes in the Regional Recommendation seem to be the greatest success of the Columbia River Tribes from 2013 until 2019. Content analysis from the multitude of correspondence between the Columbia Basin Tribes and various U.S. government outlets demonstrates the Tribes have largely felt left out of government-togovernment consultation after the Regional Recommendation (Letters from the Columbia Basin Tribes Coalition, 2014). Tribal nations believe that the U.S. has not made significant progress, despite the goals of the Common Views Statement, and the National Congress of American Indians Resolution #ANC-14-042, toward the addition of a tribal representative to be added to the U.S. Entity or to be given observer status. These views extend from a 2014 letter to then Secretary of State, John Kerry, to an Op-Ed in the Seattle Times in 2019. The CRT's renegotiation officially started under the Trump Administration, in which no party received Observer status; not states, nor indigenous Tribal coalitions (Cosens, 2021). However, Tribal coalition representatives were invited as experts to further define ecosystem function, and as a result were able to listen in on the past three sessions. Further, under the Biden Administration, the new Secretary of the Interior, Deb Haaland (Laguna Pueblo Tribe), is a part of the negotiation team and may work as a conduit for River Tribal voices through collaboration (Cosens, 2021).

This comes in sharp contrast to the treatment of Canadian Indigenous Nations since the Canadian election of Trudeau and the change in provincial leadership of British Columbia. The original position of the Executive Team Leader of the River Negotiations in Canada in 2013 was that the CRT already had enough flexibility to address the endangered species within the River,

and that ecosystem functionality should not be made a third primary function (Eichenberger, 2013). This position was held by B.C. and Canada, despite collaboration with Canadian Indigenous Nations at the outset of their Columbia River Treaty Review (Treaty Review) in 2011. However, after the Treaty Review was completed and the Treaty Review's public consultation report was released in 2014, the Canadian Entity started to shift positions. Further, Trudeau's administration and the newly elected B.C. government in 2016 decided to be one of the first countries to move towards incorporating the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) into domestic law. Through the passage of Bill 41, the Declaration on the Rights of Indigenous Peoples Act, the B.C. Government looked to support the affirmation of and develop relationships with Indigenous governing bodies (British Columbia Legislative Assembly, 2019). After passing this law, the three Indigenous Nations on the Columbia River were given official Observer status in early 2019. This new statute will also indirectly influence the Treaty's Renegotiation now that there is a new party involved with the Canadian Entity's renegotiation team, creating a definitive tipping point for the addition of ecosystem-based function as a primary purpose. Since starting the renegotiation, the Canadian renegotiation team (including B.C., Canada and the Three Indigenous Nations in Canada) has also worked on the "Bringing the Salmon Home: The Columbia River Salmon Reintroduction Initiative," in which they explore the possibility of reintroducing anadromous fish species into the Upper Basin of the River.

This level of involvement by the three Indigenous Tribes in Canada in the renegotiation process is unprecedented, and is also what the Columbia Basin Tribes in the U.S. were hoping to achieve before the renegotiations began. In a 2014 letter to then Secretary of State, John Kerry,

the Columbia Basin Tribes spelled out their plea for greater government-to-government consultation:

"The tribes have enjoyed a measure of productive dialogue with your staff, staff level dialogue is not a substitute for government-to-government consultation at the policy level," (Columbia Basin Tribal Coalition, 2014).

They further add that the outcome of the CRT's renegotiation process should be agreed upon by both governments and lay claim to the injustices that preceded in the past 50 years of the CRT's implementation (Columbia Basin Tribal Coalition, 2014). The Columbia Basin Tribes once again show that they are victims of harm caused by the lack of consultation with Tribes in the past, and looked to Secretary Kerry to solve the issue, despite the Department of State not having a tribal consultation policy. The Columbia Basin Tribes did not get these amenities by the time the Obama administration changed to the Trump administration. During the Trump administration, there was no promotion to Observer status for any party, in contrast to the Canadian negotiation team. After the change from the Trump to Biden administration, President Biden published the Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships pursuant to Executive Order #13175. This Memorandum calls for the consultation of Tribes, acknowledging their sovereignty in honoring treaties, and including Tribal voice in policies that affect Tribal communities. This is a more promising outlook for the Columbia River Tribes during the CRT's renegotiation. When the renegotiations restarted after COVID-19 and after the change in administrations, the Columbia River Tribes have been working to be more involved in the negotiations by providing expertise regarding the extensive ecosystem work that the U.S. has undertaken in the Basin, including transboundary efforts (Cosens, 2021).

Discussion and Conclusion

The themes of environmental justice and a switch from command and control river management to an environmental approach are both on display in the statutes and decisions made after the ratification of the CRT in 1964. With no mention of environmental based functions in the CRT, both the United States and Canada have been able to address issues pertaining to the Columbia River's ecosystem. This was demonstrated by augmented flows for smolt populations, however it was done in a less collaborative way. With multiple projects and studies conducted across international lines for the Columbia River's ecosystem and the reintroduction of salmon populations into the Upper Columbia River Basin, there is a clear incentive for the CRT's renegotiation to include ecosystem-based function to allow a more holistic management of the Treaty Dams with respect to statutes like the ESA. Coinciding with this change comes the decisions made by federal courts to recognize Columbia Basin Tribes' reservation of the right to fish in their usual and accustomed places. This reservation of rights has led to Columbia Basin Tribes becoming one of the most influential parties with respect to salmon rearing. Through the Columbia Basin Tribes' influence on salmon rearing and river restoration, they have become a leading authority on the Columbia River's ecosystem, and this experience and authority put them in the position to influence the Regional Review in the United States. Meanwhile, the addition of and collaboration between the Canadian Indigenous Tribes with B.C. and Canada has led to a change in position on the Canadian Entity to be pro-addition of ecosystem-based function as a primary purpose of the CRT. Both of these interactions are demonstrations of greater environmental justice for the Columbia River Nations who were not consulted in the CRT's ratification.

Using the NPF's macro-level of analysis, the past events that have affected the management of the Treaty Dams are used here as data points to describe overall themes that have

been occurring since the CRT's initial ratification. These themes have thus become major points for meso-level narratives created by the policy actors involved with the CRT's renegotiation, and will undoubtedly influence the CRT during its renegotiation. In this case, looking at historical data points wholly through qualitative analysis may leave some room for error, but with enough time passing in a policy subsystem, and with enough changes that occur, a trend can potentially be shown quantitatively, or through mixed methods. By identifying these major historical trends as themes and their influence on meso-level narratives, as well as current conditions, there can be greater prediction accuracy in the NPF. By adding this component to the framework, developing context and a more complete understanding of the meso-level narratives of policy actors can be achieved.

With both the United States Entity as well as the Canadian Entity in favor of the addition of ecosystem-based function being added to the CRT as the third primary purpose, there isn't much standing in the way of its commencement into the CRT. The link between the meso level narratives employed by the "winning" policy actors to the historical macro-level themes stands. Without the changes to Indigenous influence and authority on the Columbia River through greater environmental justice for these groups, and the changes in river management from command and control to a more environmental approach, the opportunity for this addition would seemingly not exist. The Indigenous Nations of Canada and the Columbia River Tribes in the U.S. each created tipping points for the addition of ecological based function as a primary purpose to the CRT, but left without the historical context of these themes, a large piece of the puzzle is missed. The NPF's macro-level conditions, or themes, demonstrate how the larger historical context of the CRT's institution has led to an opportunity of significant change in the Columbia River's management and the inclusion of Indigenous Nations.

Finally, the Indogenous Tribes and Columbia River Tribes have been taking the lead and working with the U.S. Government as well as the governments of B.C. and Canada with regards to improving ecosystem functionality within the Columbia River since the U.S. Regional Review. The Columbia River Tribes have been working with the U.S. in developing feasibility studies of anadromous fish reintroduction into the Columbia River at dams that currently block fish passage. These studies as well as studies undergone by the Indigenous Nations of Canada that parallel the timeline of the CRT renegotiations have put the Tribal communities at the forefront of defining and incorporating the ecosystem functionality into the CRT. Looking ahead, the increased level of engagement by Tribes, especially in the PNW, will lead to a more holistic view of River Management. This case is just one of many that have occurred in the past decade, such as Klamath River dam removal and removal of the Blue Heron Paper Mill at Willamette Falls. As the U.S. continues to incorporate environmentalism into river management, the inclusion of Tribal knowledge is paramount for holistic river management, and with a modernized CRT there is a path forward for the U.S. and Canada to jointly include ecosystembased function within the Columbia River and attempt this more holistic approach to the Columbia River's management.

Works Cited

- Bankes N., and Cosens, Barbara. *The Future of the Columbia River Treaty*. Munk Centre Program on Water Issues, 2012.
- Bell, David. "Columbia River Treaty Renewal and Sovereign Tribal Authority under the Stevens Treaty "Right-To-Fish" Clause. Public Land and Resources Law Review, Vol. 36, 2015.

British Columbia. "Columbia River Treaty Review: Draft BC Recommendation." https://critfc.org/wp-content/uploads/2014/03/Columbia-River-Treaty-Draft-BC-Recomm endation.pdf). 2014.

- British Columbia. "Columbia River Treaty Review: Public Consultation Report." Columbia River Treaty Review Public Consultation Report - March 2014 (gov.bc.ca), 2014.
- British Columbia. "Columbia River Treaty Virtual Town Hall: Questions and Answers." Province of British Columbia, 2021.
- BC Gov News, (2019). "Historic agreement reached between Columbia River Basin Indigenous Nations, Canada and British Columbia to collaborate on Salmon Reintroduction." https://news.gov.bc.ca/20432

BC Gov News, (2019). "Canada, U.S. Exchange Proposals as Treaty Talks Continue." https://news.gov.bc.ca/newsletters/columbia-river-treaty/december-2020/treaty-update.

- British Columbia Legislative Assembly. "Declaration on the Rights of Indigenous Peoples Act." Queen's Printer, Victoria, British Columbia, Canada, 2019.
- Black, R., McKenney B., & Unsworth, Robert. *Economic Analysis for Hydropower Project Relicensing: Guidance and Alternative Methods*. U.S. Fish and Wildlife Service, 1998.

Bonneville Power Administration (BPA). "Administrator's Record of Decision 2008 Columbia Basin Fish Accords." BPA,

https://www.energy.gov/sites/default/files/2021/02/f83/eis-0312-rod-05-2008.pdf 2008.

- BPA. "Cost and rate impacts of Columbia Basin. Fish Accords and the 2008 FCRPS BiOp." DOE/BP-3892, June, 2008.
- Büthe, Tim. "Taking temporality seriously: Modeling history and the use of narratives as evidence." American Political Science Review, 96(3), 481-493, 2002.
- Buckendorf, Randall. "FERC Interaction with Fish and Wildlife Agencies in Hydropower Licensing under the Federal Power Act Section 10(j) Consultation Process." Tulsa Law Review, Vol. 27, 1992.
- Columbia Basin Tribes. "Common Views on the Future of the Columbia River Treaty." https://critfc.org/wp-content/uploads/2015/05/Common-Views-statement.pdf, 2010.
- Columbia Basin Tribes Coalition. "Columbia River Treaty 2014/2024 Review." Letter to Elliot Mainzer and Gen. John Kem. NAIADS, 2014.
- Columbia Basin Tribes Coalition. "Columbia River Treaty 2014/2024 Review." Letter to Secretary of State, John Kerry. NAIADS, 2014.
- Columbia River Inter-Tribal Fish Commission (CRITFC). "Member Tribes Overview." https://www.critfc.org/member_tribes_overview, 2021.
- CRITFC. "Columbia Basin Fish Accords Ten-Year Report." Confederated Tribes of the Warm Springs Indian Reservation of Oregon. 2017.
- Columbia River Treaty Negotiations Framework. Secwépemc, Syilx Okanagan and Ktunaxa Nation and Canada and British Columbia,

https://secwepemcstrong.com/wp-content/uploads/2021/02/IB_LBP-12703728-v1-FRA MEWORK-Columbia-River-Treaty-CA-BC-IN.pdf, 2019.

Columbia Riverkeeper. "Tribal Nations: Tribes and Native Americans shape the Columbia River basin's past, present, and future."

https://www.columbiariverkeeper.org/columbia/tribal-nations, 2021.

- Corwin, Scott. "Hearing on The Future of the US-Canada Columbia River Treaty– Building on
 60 years of Coordinated Power Generation and Flood Control." Testimony. 113th
 Congress. U.S. House, 2013.
- Cosens, Barbara. "Resilience and law as a theoretical backdrop for natural resource management: flood management in the Columbia River basin." Environmental Law, 42, 241, 2012.
- Cosens, Babara. *The Columbia River Treaty Revisited: Transboundary River Governance in the Face of Uncertainty.* Oregon State University Press. 2012.
- Cosens, B., Chaffin, Brian. "Adaptive Governance of Water Resources. Shared with Indigenous Peoples: The Role of Law." Water, 2016.
- Cosens, Barbara. "Reconciliation of Development and Ecosystems: The Ecology of Governance in the International Columbia River Basin." Regional Environmental Change, 2018.
- Cosens, Barbara. Phone Interview. November 5, 2021.
- Crawley, Trevor. "Indigenous input key to Columbia River Treaty negotiations." *Today in B.C.*, 2021.
- Crow, D. A., Lawhon, L. A., Berggren, J., Huda, J., Koebele, E., & Kroepsch, Adrianne. "A narrative policy framework analysis of wildfire policy discussions in two Colorado communities." *Politics & Policy*, 45(4), 626-656, 2017.

- Early, M. and Krogh, Egil. "Balancing Power Costs and Fisheries Values Under the Northwest Power Act." Seattle University of Law, 1990.
- Eichenberger, Kathy. "Hearing on The Future of the US-Canada Columbia River Treaty– Building on 60 years of Coordinated Power Generation and Flood Control." Testimony. 113th Congress. U.S. House, 2013.
- Environmental Protection Agency (EPA). "Summary of the Clean Water Act." 2021. https://www.epa.gov/laws-regulations/summary-clean-water-act.
- Foundation for Water and Energy Education, (FWEE). "Following Nature's Current Hydroelectric Power in the Northwest." Foundation for Water and Energy Education, 2014.
- Grimm, Lydia. "Fishery Protection and FERC Hydropower Relicensing under ECPA: Maintaining a Deadly Status Quo." *Environmental Law (Portland, Ore.)*, 20(4), 929–973, 1990.
- Kem, John. "Hearing on The Future of the US-Canada Columbia River Treaty– Building on 60 years of Coordinated Power Generation and Flood Control." Testimony. 113th Congress. U.S. House, 2013.
- Hamlin, Miranda. "The Future of the Columbia River Treaty." Pacific Northwest Economic Region. https://www.pnwer.org/uploads/2/3/2/9/23295822/crt fact sheet.pdf, 2020.
- Holm, Catherine. "The Columbia River Treaty: Negotiating between Hydropower and Ecosystem-Based Functions." *Willamette L. Rev.*, *54*, 89, 2017.

Hyde, John. "Columbia River Treaty Past and Future." Hydrovision 2010 Conference, 2010. International Joint Commission. "Boundary Waters Treaty of 1909."

https://www.ijc.org/sites/default/files/2018-07/Boundary%20Water-ENGFR.pdf. Treaty between the United States and Canada, 1909.

- Jones, M. D., McBeth Mark. "A Narrative Policy Framework: Clear Enough to Be Wrong?" *Policy Studies Journal* Volume 38, Issue 2. 329-353, 2010.
- Jones, M., Shanahan, E., & McBeth, Mark. *The science of stories : Applications of the narrative policy framework in public policy analysis.* Palgrave Macmillan, NY, 2014.
- Kappus, Jill. "The Columbia River Basin Fish Accords: Dammed if You Do, Dammed if You Don't?" University of Arizona, 2012.
- Knox, Claire. "Distorted communication in the Florida Everglades: A critical theory analysis of Everglades restoration." Journal of Environmental Policy & Planning, 15(2), 269-284, 2015.
- Lang, Bill. "Columbia River." *Center for Columbia River History*, 2015. https://web.archive.org/web/20150910111556/http://www.ccrh.org/river/history.htm.
- Local Government's Committee. "Columbia River Treaty: Local Governments' Committee Recommendations Update."

https://akblg.ca/src/documents/Columbia%20River%20Treaty/CRT%20LGC%20Recom mendations%20January%202021%20FINAL.pdf, 2021.

- Lopardo, Elizabeth & Ryan, Clare. Dammed If You Don't, But What If You Do? Breaching the Lower Snake River Dams in Washington State. Case Studies in the Environment, 2020.
- Mainzer, Elliot. "Hearing on The Future of the US-Canada Columbia River Treaty– Building on
 60 years of Coordinated Power Generation and Flood Control." Testimony. 113th
 Congress. U.S. House, 2013.

- McKinney, Baker, Buvel, & Fischer, Andy. Managing transboundary natural resources: an assessment of the need to revise and update the Columbia River Treaty. *Hastings W.-Nw. J. Envt'l L. & Pol'y*, *16*, 307, 2010.
- McKinney, Paisley, Kyle; and Smith-Stenovec, Molly. "A Sacred Responsibility: Governing the Use of Water and Related Resources in the International Columbia Basin Through the Prism of Tribes and First Nations." Public Land & Resources Law Review: Vol. 37, Article 1, 2016.
- Michel, D. R."Columbia River treaty negotiations must include tribes, First Nations." *Seattle Times*, 2018.
- Modal, C., Solomon, M., Tew, B., Gerhman, B., & Lehner, C. "Analysis of Reservoir-

BasedHydroelectric versus Run-of-River Hydroelectric Energy Production." LandResourcesand Environmental Sciences Montana State University: Bozeman, MT,2014.

- Moffett, Joel. "Columbia Basin Tribes Coalition on the Columbia River Treaty 2014/2024 Review." Testimony. *Committee of Natural Resources and Energy. U.S. Senate*, 2013.
- Morse, Carmen. "When the Courts Run the Rivers." *The Columbia River Treaty Revisited*. Edited by Barbara Cosens. Oregon State University Press, 2012. Pp. 148-171
- Mouat, Jeremy. "The Columbia Exchange: A canadian Perspective on Negotiations." *The Columbia River Treaty Revisited*. Edited by Barbara Cosens. Oregon State University Press, 2012. Pp. 14-32.
- National Congress of American Indians. Modernizing the U.S. Canada Columbia River Treaty. National Congress of American Indians. Resolution #ANC-14-042. June 11,

2014.

- Pearson, Mary. "The River People and the Importance of Salmon." *The Columbia River Treaty Revisited*. Edited by Barbara Cosens. Oregon State University Press, 2012. Pp. 70-81.
- Peery, Chris. "The Effects on the Dams and Flow Management on Ecosystem Processes." The Columbia River Treaty Revisited. Edited by Barbara Cosens. Oregon State University Press, 2012. Pp. 138-145.
- Penfold, George. "A Review of the Range of Impacts and Benefits of the Columbia River Treaty on Basin Communities, the Region and the Province." Ministry of Energy, Mines and Natural Gas, 2012.
- Pierce, J. J., Smith-Walter, A., & Peterson, Holly. "Research Design and the Narrative Policy Framework," *The Science of Stories*. *Palgrave Macmillan, New York*, 2014.
- Reimer, Jake. "Termination: A Solution to Canadian Entitlement Valuation Disputes." Oregon Review of International Law : Volume 22, 2021.
- Rowland, Graeme. "U.S. must follow Canada and invite tribes into Columbia River Treaty negotiation" *Seattle Times*, 2019.
- Shanahan, E. A., Jones, M. D., & McBeth, Mark. "Narrative Policy Framework." Theories of the Policy Process, edited by Sabatier, P. & Weible Chris, Westview Press, 2014.
- Shanahan, E. A., Jones, M. D., McBeth, M. K., & Lane, Ross. "An angel on the wind: How heroic policy narratives shape policy realities." *Policy Studies Journal*, 41(3), 453-483, 2013.
- Shanahan, E. A., Jones, M. D., & McBeth, Mark. "How to conduct a Narrative Policy Framework study." *The Social Science Journal*, *55(3)*, *332-345*, 2018.
- Sowards, Adam. "Renegotiating the Columbia River Treaty, six decades later." *High Country News*, 2019.

Stern, Charles. "Columbia River Treaty Review." Congressional Research Service, 2020.

- United States. Bonneville Power Administration. "The Columbia River System: the Inside Story." United States: N. P., 1991.
- United States Congress, House Committee on Natural Resources. "Future of the US-Canada Columbia River Treaty." 113th Congress, (2014).
- United States 9th Circuit Court of Appeals. United States Vs. Washington, 384 F. Supp. 31, Feb. 12, 1974, pp. 330-334. Case Law Access Project, Harvard Law School. https://cite.case.law/f-supp/384/312/ Accessed 1-20-2022.
- United States, Executive Office of the President. Memorandum #13175: Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships. Presidential Actions, January 26, 2021.
- United States, United States Army Corps of Engineers (USACE). Columbia River Treaty. USACE: Columbia River Treaty,

https://www.nwd.usace.army.mil/CRWM/Columbia-River-Treaty/ 1961.

Upper Columbia United Tribes. "Member Tribes: Our Tribal Network." https://ucut.org/members-tribes/, 2021.

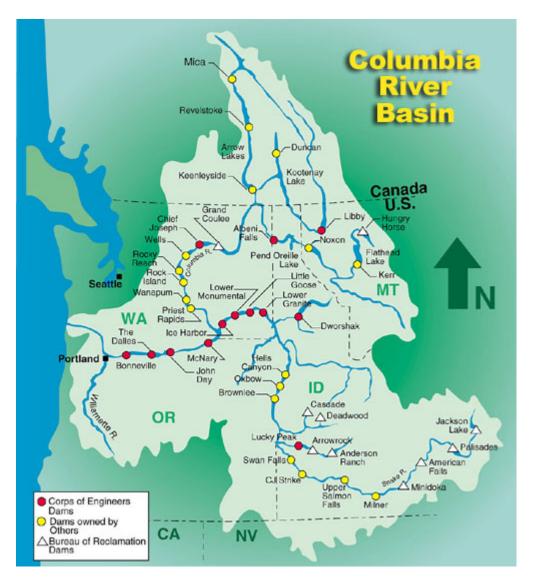
- U.S. Bureau of Reclamation. Grand Coulee Dam FAQ. https://www.usbr.gov/pn/grandcoulee/about/faq.html#salmon. Visited March 12, 2022.
- U.S. Entity. "Regional Recommendation for the Future of the Columbia River Treaty after 2024." Washington D.C., Government Printing Office, 2013.

U.S. Entity. "Columbia River Treaty 2014/2024 Review" Washington D.C., Government Printing Office, 2012.

Wolf, Woody, & Zuckerman, S. Salmon Nation: People and Fish at the Edge. United States Ecotrust, 1999.

Appendices

Appendix A



Picture from USACE: Columbia River Basin Dams. Found at

https://www.nwd.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-

View/Article/475820/columbia-river-basin-dams/

Appendix B

Doc Hasti ngs	Agency	Addition of Ecosystem Based Function	Reasoning	Quote	Keys
	Senator	Against	Doesn't want to supercede laws already in place, feels as though there is enough being done for the environment under current treaty, has flexibility, ecosystem items are being addressed domestically, will interrupt treaty negotiations	Ultimately, a collaborative biological opinion process, rather than ongoing litigation, is the appropriate way to address many of the ecosystem issues	Domestic, Enough done
Peter Defa zio	Senator	Against	Ecosystem issues relate to domestic laws, and there is no reason to "elevate" ecosystem issues in the CRT. We have already dramatically modified River Management for the ecosystem.	We are operating the system at this point for ecosystem function. We have dramatically modified the regime of the operation of our hydroelectric system. We are having excellent returns of salmon, and the trend line has been good for some time.	Domestic, Enough done

Kath y Eiche nber ger	Exec Director of Columbia River Treaty Review Team	Against	The flexibility within the Treaty now is enough to allow for changes for ecosystem function, and there is no reason to change the treaty for ecosystem health on both sides of the border.	We also believe that the flexibility within the treaty has allowed change in operations for ecosystem valuesWe also believe that the flexibility within the treaty has allowed change in operations for ecosystem values	Enough Done
Rick			Focussed on the efforts already put into place for ecosystem support, and how much members of this electrical coop have to pay in order to fund the Canadian Entitlement and the BPA's fish and wildlife	of \$285 annually to fund the Canadian	
Crink Iaw	Lane Electric Co-op	Against	support, further focus on uncertainty	support Bonneville's existing fish and	Enough Done, Uncertainty, Payment

				wildlife programs.	
Ron Reim ann	Columbia and Snake River Irrigation Association	Against	Against entirety of the Review Process	Maybe you need some old farmers from Canada and the United States to write the next treaty. Better yet, people who just care enough to protect and use our river in the best interest of all.What happened to a coalition of legislators from the Northwest stepping forward to protect our rights?	Full Rejection
Paul Amo s	Columbia River Pilots	Against	Against the augmentation of greater spring and summer flows as it creates hazardous conditions for navigation, especially in fall and winter months.	stakeholders are most concerned with existing spring and summer flows should be augmented through an expansion of present Treaty agreements. These augmented flows will increase shoaling which will, in turn, increase dredging	Navigation Hazards

				costs and likely impact navigation safety. The document further suggests that these increased flows would be accompanied by lower flows in the fall and winter. This will provide even less water over which to navigate these increased shoals.	
Wes McC art	Stevens County Commissioner	Against	Ecosystem function is a domestic issue more than anything, it should not be promoted to a primary purpose of the treaty, participation by local governments would point in a different direction.	provisions already	Domestic, Not the will

				above our constituents	
Norm Sem anko	Idaho Water Users Association	Against	Ecosystem Function is already recognized as a purpose of the Treaty and is pursuant to the ESA and other litigation, and should not be elevated to a third, primary purpose above irrigation, recreation and navigation, also doesn't want to expand the environmental obligations.	Flow augmentation and other forms of ecosystem-based function are currently provided for pursuant to very specific and rigorous adherence to environmental and conservation laws, including extensive federal court litigation. The Treaty should not frustrate or contradict those efforts, but it also should not be used to expand current requirements	Enough Done, Environmental Law Expansion
Kristi n Meira	Pacific Northwest Waterways Association	Against	Concerned over navigational issues dealing with ecosystem flows, much like Mr. Amos	The "ecosystem flows" referred to throughout the Draft Recommendation are accompanied by no scientific explanation or reference. These suggested "ecosystem flows" may have significant	Navigation Hazards

				impacts on navigation and navigation structures on the Columbia Snake River System.	
Goor	Washington Public Utilities		Recognizing the other ecosystem projects and their costs to date, ecosystem based function should come without detriment to hydropower or flood risk management, and should be approved by Congress (essentially a non-starter tactic),	These trans-boundary ecosystem measures should also ensure that there's not any detriment to the Federal hydropower system in terms of its reliability, resiliency and flexibility.Further, these trans-boundary ecosystem measures should not add any risk to the flood control regime designed to protect our communities.Finally, any new additions to ecosystem issues should receive congressional authorization and	
Geor	Districts		very insistent on the domestic work	Congressional appropriation through	Enough Done, Kill in
ge Caan	Association	Against1	already being done	your committee.	Congress
Gaan	ASSOCIATION	Луашын	aneady being dolle	your commutee.	Congress

John Kem	CMDR USACE	For1	Currently, the management of the Columbia River includes changes year over year for ecosystem functions, and this should be formalized in the Treaty by making it a third part of the Treaty to incorporate context behind River management operations. Water is coordinated in Canada currently on the basis of power, flooding and ecosystem	We include a recommendation to pursue the ecosystem function as a primary purpose. From my perspective, I want to make it clear this was done not to promote one set of interests over another, or by adding it we seek to advantage or negatively impact any other interests. Rather we added it in the draft to incorporate the context of how we actually conduct coordinated operations today.	Formalize Process
Kathr yn Brigh am	CRITFC	For	Framing argument around the consensus in the Review, providing clarification of the ecosystem functionalities and definitional purposes highlighted in review, a way to strengthen Columbia River cooperation on a national level, can	Current treaty, even though it is recognized that the ecosystem can be done, we have learned that if you don't have something in writing, sometimes when leaders change, things change. And so this treaty is going to be in place for a number of years, so	Review Team Consensus, Greater Flexibility, Formalize

			build greater flexibility, important to have new management in writing. Current Treaty only allows for modification of operation in limited ways	it's important to have something written down Columbia Basin Tribes worked with the U.S. Entity, other regional sovereigns, and Columbia River stakeholders, including the public utility districts, to try and craft a consensus-based high level policy recommendation on the future of the Columbia River Treaty.	
Colu mbia Basin Tribe s	Columbia Basin Tribes (Common Views of the CRT)	For	Tribal interests had a value of 0 in the original Treaty negotiation, the renegotiation and inclusion of ecosystem based function allows for a place that tribal interests can be heard and incorporated into the treaty.	Reconsideration of the Treaty provides an opportunity for the tribes to seek benefits not realized in 50 years of Treaty implementation. including: Respect for the sovereignty of each tribal government, Tribal cultural and natural resources must be included, -Equitable benefits to each Tribe, Respecting and	Tribal Considerations, Tribal Interests, Equity

				preserving the benefits of settlement agreements with tribes, Protecting tribal reserved rights to current and future beneficial uses	
Greg Halle r	Pacific Rivers Council	For	The addition of the Ecosystem based function reflects the value the people of the PNW place on the river, can allow flexibility in fight against climate change, can integrate more strategies in line with salmon recovery	The elevation of the ecosystem function accurately reflects the high value that citizens of the region place on the health of the river and on salmon runs generally.	Value of Columbia, Value of Fish
The Natio nal Cong ress of Amer ican India ns	The National Congress of American Indians	For	see The National Congress of American Indians Resolution #ANC-14- 042	The National Congress of American Indians Resolution #ANC-14- 042	Equity, Tribal Considerations, Value of Fish
Ron Wyd en	Senate	For1	Wanting to benefit natural resources within the Basin, in particular, salmon.	I read the concept to mean actions to benefit the natural resources of the	Value of Fish, Limited scope

			Very focussed on this single issue and sees a need for definitive and limited scope	Columbia Basin, particularly our salmon. I believe it's appropriate to address fish and other resources in any agreement to redo the Treaty However, the scope and cost of measures to address fish and other resources must be clearly defined and limited. There are potential	
Stev en Olive r	VP Generation Asset Management of BPA	For	Due to the past 30 ish years of augmenting the flow of the Columbia River for power generation, flood risk management, and ecosystem purposes, this should be added as a third primary purpose of the Treaty. Wants to gain assurance of the greater spring flow strategies and strategies for drier conditions.	ecosystem benefits of	Formalize Process, Greater Flexibility

Joel Moffe t	CRIFTC	For	Spokesman for 15 Tribes within the Columbia River Basin, wants to see return of anadromous fish to the Upper Columbia River, having ecosystem function added to the Treaty is agreed upon by all 15 tribes, and will make the CRT truly a model of international water management	It's my honor and privilege to provide this testimony on behalf of the 15 tribes of the Columbia River Basin which in itself is a worthy story of consensus and collaborationThe inclusion of ecosystem function as a primary driver, co-equal to hydro power and flood control, is a key feature that will make the Columbia River Treaty truly a model of international water management. An improved ecosystem should be a shared benefit and obligation with Canada.	Tribal Considerations, Value of Fish, Equity
Tho mas Karie r	Washington State Council Member for NPCC	For	For an agreement to operate dams already built, not to build dams, like the original CRT from the 60's, including for the survival of fish and ecosystem benefits	an agreement to build dams, as we did in the 1960s; we need an agreement to	Value of Columbia, Value of Fish

				cultural resources, and water supply when we modify the timing of flows across the border.	
Elliot Main			To Formalize the current way in which the management of the CR operates. The Treaty and river operations change every year at an ad hoc basis for ecosystem purposes, wanting to codify this type of management	The U.S. Entity's view is that it is appropriate and helpful to formalize and gain more certainty for these operations, as opposed to having to negotiate them on a one-off, ad hoc basis. I do want to be clear, however, that while we support the inclusion of ecosystem-based operations in the treaty, the implementation of ecosystem-based functions should be compatible with rebalancing the entitlement and reducing U.S. power costs and maintaining an acceptable level of	
zer	BPA Admin	For 1	in a formal manner	flood risk in the basin.	Formalize Process

Rick Larso n	Senator	For, if detailed/sp ecific1	Hesitant that there will be programs in place now that are overlooked, recognizes the benefits provided to fish species and native americans, and doesn't want rate payers to have to subsidize the benefits provided.	scientific backing for	Value of Fish, Limited scope, Recognition of Programs, Payment
Scott Corw in	Public Power Council	For, with caveats1	Public Power Council and Treaty Power Groups are committed to environmental stewardship, but they want acknowledgement of current efforts to help the ecosystem, a more defined ecosystem based function, and assurance it will not interfere in the power and flood control purposes of the Treaty. In a follow-up email, they are committed to the 2014 regional review by the SRT	PC and other members of the Treaty Power Group have stated that, to the extent a modernized Treaty is to address ecosystem matters, adequate recognition of and accounting for efforts already underway is critical. We have also noted the risk of lack of clarity and specificity in Treaty recommendations. And provisions must not compromise the integrity of electric system reliability, etc	Limited Scope, Committed to Stewardship, Recognition of Programs