A Sacred Responsibility:

Governing the Use of Water and Related Resources in the International Columbia Basin Through the Prism of Tribes and First Nations

Universities Consortium on Columbia River Governance

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Thanks to Supporters

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Executive Summary

In the fall of 2012, leaders from First Nations and tribes in the international Columbia Basin participated, along with about 150 other people, in the 4th transboundary symposium convened by the Universities Consortium on Columbia River Governance. Gathered on the shores of Flathead Lake in Polson, Montana, the participants explored the interests, rights, and roles of tribes and First Nations in the basin. Following the symposium, members of the Universities Consortium continued to work with the tribes and First Nations to explore the role of tribes and First Nations in governing the use of water and related resources in the transboundary Columbia Basin.

Over 18 months, from the summer of 2013 through the fall of 2014, representatives from the tribes and First Nations worked side-by-side in a Steering Committee to guide this research project. This process, in and of itself, represents the first of three significant outcomes. The Steering Committee and research team met via conference calls and face-to-face workshops to shape the purpose and scope of the project, explore and examine preliminary findings, and to clarify options and conclusions. This project is a good example of how universities can inform and invigorate natural resource policy by convening the right people with the best available information while maintaining their independent judgment and integrity. The project also provided a unique opportunity for First Nations and tribes on both sides of an international border to work together on issues of common concern.

The second significant outcome of this project is this publication, which includes a unique compilation of materials. As revealed by the table of Contents, the report includes basic information on the history and governance of the international Columbia Basin; a synthesis of the interests and aspirations of tribes and First Nations in the basin; an overview of the legal framework that defines the role of indigenous peoples in international water governance; and a review of case studies throughout the world that might inform efforts to improve governance in the basin. The intent is to provide a compelling narrative that highlights and explains the past, present, and future role of tribes and First Nations in governing the use of water and related resources in the international Columbia Basin. The narrative is grounded in the interests and aspirations of tribes and First Nations, and informed by trends and lessons from the international water community.

The third significant outcome of this project is the findings and conclusions of the report as highlighted below:

Historical Context

- Tribes and First Nations have been governing the use of land and water resources in the Columbia Basin for thousands of years. Individually and collectively, the stewardship of land, water, and other natural resources is not only an issue of self-determination for tribes and First Nations, but also a sacred responsibility. Ecosystem function and resilience has always been a core cultural value of this governance system.

- Federal, state, and provincial governments in both the United States and Canada now play a significant role in the conservation and management of transboundary water, in large part

through the Columbia River Treaty (CRT). The CRT and associated implementation structure are largely focused on the operation of various dams and reservoirs for the twin objectives of hydropower production and flood risk management. However, the governance and decision-making related to land and water throughout the basin occur at nested geographic scales and with varying degrees of formal authority. Tribes and First Nations, provincial and state governments, local watershed groups, municipal governments, and sub-national laws and agreements play differentiated roles in managing the use of natural resources.

- New governance arrangements are needed to better accommodate the interests and rights of Columbia Basin tribes and First Nations; to recognize and better integrate the full menu of objectives identified in the International Joint Commission's initial 1944 referral that catalyzed the creation of the Columbia River Treaty; and to reflect the changing laws and social values associated with ecosystem-based function.

The Interests and Aspirations of Tribes and First Nations

The interests and aspirations of tribes and First Nations in relation to the international Columbia Basin are to:

- Play an active, ongoing, and equitable role in the negotiation and implementation of agreements governing the use of land, water and related resources.
- Joint authority, decision-making power, and responsibility in the ongoing governance of the use of land, water, and related resources and move beyond consultation to shared governance.
- Ensure the recognition and protection of First Nations and tribal rights, responsibilities, and interests in transboundary agreements and governance arrangements.
- Integrate traditional ecological knowledge and interests in the ongoing conservation and management of land, water, and related resources.
- Ensure that land and water is conserved and managed from a holistic and integrated perspective (i.e., integrate decision-making for water quantity and quality, and integrate water and land-use decisions).
- Be treated with respect as sovereign partners in the ongoing conservation, management, and equitable sharing of benefits and costs; in other words, participate in the reasonable and equitable sharing of economic and other benefits including those associated with hydropower production.
- Provide opportunities for "sustainable development," also known as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Operationally, this means promoting and supporting livable communities, vibrant economies, and healthy landscapes.

- Protect and restore the cultural heritage resources of tribes and First Nations.[2]
- Add ecosystem-based function as a third primary purpose of the CRT. This would mean that ecosystem-based function would be integrated with flood risk management and hydropower into system operations.
- Integrate fish passage and reintroduction programs, where appropriate, as an essential element of modernizing the Columbia River Treaty.

The Role of Indigenous Peoples in Transboundary Water Management: Lessons for the Columbia River Treaty

Given these interests and aspirations, along with their historic roles in governing the use of water and related resources in the international Columbia Basin, what are the options and opportunities for tribes and First Nations to play a meaningful in the negotiation and implementation of the CRT? The role of tribes and First Nations in the negotiation and implementation of international agreements like the CRT is a function of both domestic and international law, as well as a body of indigenous law that helps define how tribes and First Nations participate.

- International law in general is largely silent as to the capacity of non-state actors, including tribes and First Nations, to participate in the process of negotiating international treaties. In practice, and in the context of the international Columbia Basin, international law provides sufficient flexibility to both Canada and the U.S. to involve tribes and First Nations in the process of negotiating and implementing agreements for the conservation and management of transboundary water and related resources.
- Both Canada and the United States have previously invited tribes and First Nations to participate as members of various international negotiation teams and to play roles in successfully implementing international agreements.
- In the United States, the President has exclusive authority to appoint a team to negotiate an international treaty, and nothing prohibits the President from including tribal representatives on an international negotiating team. The U.S. Senate also has the power to appoint “observers” to an international treaty negotiation.
- In Canada, the federal government has the discretion to include First Nations in an international negotiating team as well as an affirmative legal duty to consult with and accommodate First Nations interests in various circumstances. Under certain circumstances the federal government or federal Crown may also be compelled to consult with, accommodate, and in some cases seek “consent” from First Nations with respect to positions to be taken in international negotiations.
- The international Pacific Salmon Commission between Canada and the United States is a good example of how tribes and First Nations participated in the negotiation of the Pacific Salmon Treaty (PST), and now participate in the implementation of that agreement through the Pacific Salmon Commission. The Nordic Saami Convention, Inuit Circumpolar Council, and Great Lakes

Water Resources Compact and Agreement also demonstrate an international trend to include indigenous peoples in both negotiating and implementing governance arrangements for the use of transboundary land, water, and related resources.

- There are a number of very compelling policy and pragmatic reasons to include tribes and First Nations in negotiating and implementing future governance for the international Columbia Basin.
- To advance their interests and aspirations with respect to the CRT, the Columbia Basin tribes and First Nations may want to pursue one or more of the following options:
    - Encourage the existing Entities[3] to adjust the CRT by integrating ecosystem-based function as an objective of the CRT equal to the current purposes of flood risk management and hydropower development, either by amending the existing treaty or creating a separate new agreement;
    - Promote and support a model of "shared governance" of the international Columbia Basin led by sovereign entities, including tribes and First Nations; and
    - Encourage the Entities to establish and maintain an "advisory committee" on ecosystem function to provide ongoing input and advice to the Permanent Engineering Board, a bilateral group responsible for operational implementation of the CRT.

Improving Governance in the International Columbia Basin

In addition to playing a more meaningful role in negotiating and implementing the CRT, the tribes and First Nations in the Columbia Basin are committed to exploring and developing options to improve the overall governance of water and related resources in the international Columbia basin.

- Based on a critical review of 19 international case studies on transboundary water governance, it appears that certain examples in the Pacific Northwest – particularly the Pacific Salmon Treaty and Commission – are as progressive as any institution in the world in terms of joint power and authority with indigenous peoples.
- Very few of the cases studied embrace the multiple interests and objectives relevant to the Columbia Basin, including ecosystem-based function, flood risk management, hydropower production, and other values. Rather, most of the international examples appear to focus on a much narrower mix of objectives.
- The international case studies suggest that the role of indigenous peoples in transboundary governance arrangements is often limited to providing "input and advice" to official decision-makers. The mechanisms for indigenous peoples (and others) to participate are quite general in nature and focus largely on "informing and educating" people about what the river basin organization is doing. Put another way, the case studies do not actively "seek input and advice" nor do they provide opportunities to "build consensus" among indigenous peoples and/or other stakeholders.

- Given the interests and aspirations of tribes, First Nations, and others to promote and support a more holistic, integrated approach to governing water and related resources in the international Columbia Basin, the following options might be considered:
    - Conduct a more complete "gap analysis" to clarify what type of governance functions are most needed in the Columbia Basin;
    - Create an independent, state-of-the-art transboundary forum to inform, invigorate, and supplement the formal governing arrangements within the Columbia Basin;
    - Create an exclusive transboundary forum led by and for Columbia Basin tribes and First Nations; and
    - Encourage the International Joint Commission (IJC) to create an international watershed board for the transboundary Columbia Basin.

Taken together, these options provide a roadmap for future dialogue, deliberation, and decision-making. The Universities Consortium on Columbia River Governance deeply appreciates the opportunity to work with Columbia Basin tribes and First Nations throughout the basin on this important set of issues. We look forward to working with tribes, First Nations, and all of the citizens and officials in the basin to not only adjust the CRT, but also improve governance more generally.

Introduction

In the fall of 2012, leaders from Columbia Basin First Nations and tribes participated, along with about 150 other people, in the 4th transboundary symposium convened by the Universities Consortium on Columbia River Governance.[4] Gathered on the shores of Flathead Lake in Polson, Montana, the participants explored the interests, rights, roles, and responsibilities of indigenous peoples in the international Columbia River Basin. This symposium generated two notable outcomes: (1) The Columbia River Basin: A Sense of the Future – a synthesis of interests and concerns with regard to the future of the transboundary river basin as captured by the Universities Consortium during four symposia and related research initiatives (see Appendix 6.1); and (2) a commitment from indigenous peoples to continue exploring their role in the governance of the international Columbia Basin.[5]

Following the symposium, members of the Universities Consortium continued to work with the Columbia Basin tribes and First Nations to frame an appropriate set of objectives to guide this applied research and report. After an exchange of memoranda and the creation of a Steering Committee, the Steering Committee agreed to the following objectives:

1. Clarify the history and ongoing role of tribes and First Nations in governing the use of land and water resources in the Columbia Basin, including:
    - How traditional interests and practices were overlaid by the existing system of treaties, laws, and arrangements; and
    - The efforts of tribes and First Nations to reassert their legal rights to govern land and water resources in the Columbia Basin;
2. Explain the legal framework that defines the role of indigenous peoples in international law, treaties, and transboundary water governance;
3. Harvest lessons learned from case studies around the world on how indigenous peoples have participated in the successful negotiation and/or implementation of governance arrangements for international waters, highlighting what worked well and what did not work so well.
4. Identify possible options for tribes and First Nations to be involved in successfully (a) negotiating, and (b) implementing governance arrangements for the international Columbia Basin (including the possibility of an adjusted CRT).
5. Share the findings and conclusions with leaders and governments of First Nations and tribes in the international Columbia Basin, and then with key decision-makers and other stakeholders, including but not limited to the White House and U.S. Department of State; the Canada Department of Foreign Affairs, Trade and Development and the Province of British Columbia; Columbia Basin Trust and the Northwest Power and Conservation Council; Bonneville Power Administration, the U.S. Army Corps of Engineers, and BC Hydro; other key decision-makers in Canada and the United States; and other people who have authority and/or care about the future of the international Columbia Basin.

Throughout this project, the research team affiliated with the Universities Consortium worked side-by-side with the steering committee that included representatives from the Columbia Basin tribes and First Nations. The research team drew on its experience in transboundary water law and governance, collaborative governance, and policy research to prepare this report. Consistent with the purpose of the Universities Consortium, the research team sought to be impartial and nonpartisan, and purposefully stopped short of advocating any particular option or opportunity.

1.0 Historical Context

The first objective of this report is to place governance of land, water, and related resources in the international Columbia Basin into a historical context that spans from time immemorial to the developments over the past seven decades. The underlying idea is to understand the existing governance arrangements, and the factors that have shaped recent decisions, from the perspective of the tribes and First Nations who have occupied this landscape for at least the past 10,000 years.

From the outset, it is important to realize that any depiction of a legal and institutional situation reflects a snapshot, freezing a dynamic process in time and space. This snapshot is inadequate for understanding the flow of decisions over time. A treatment of the governance of any transboundary natural resource solely in terms of blackletter rules and doctrines, divorced from the social process that gives them life and meaning can be particularly misleading. The intent of the following narrative is to identify and explain the events that have resulted in the existing legal and institutional framework for governing water and related resources in the transboundary basin. If done properly, the analogy is to a moving picture which depicts the unfolding past and focuses on the events and relationships that have had influence in shaping the current circumstances so that these arrangements become clearer as to their meaning and significance for the future, as well as the past.

1.1 The International Columbia Basin

1.1.1 Physical Geography

The story of the international Columbia Basin begins eight hundred million years ago when the ocean met the North American continent roughly along the western edge of Idaho:[6] the mountains, basalts, granite boulders, and river channels either were under water or did not exist. Moving quickly and generally through geologic time, collision and uplift extended the continent and formed the mountains that now rim the international Columbia Basin. A succession of lava flows, from 17 to 8.5 million years ago, formed the basalt bedrock and vistas of present-day central Washington. The time period ranging from a million years ago to 12,000 years ago brings us to the near geologic present when a repeated sequence of glacial advance and glacial melt carved and scoured the landscape.

As illustrated in Figure 1, the present-day basin is framed on the west by the volcanic Cascade Mountains, the Rocky Mountains to the east, and the Great Basin to the south . Following the triangle metaphor, the peak is formed by the main stem of the Columbia as it flows north from its headwaters until reaching Big Bend, where the river turns south and into the United States. At Wallula Gap, the Columbia River bends west, partially forming the Oregon/Washington state boundary, and ultimately flows west into the Pacific Ocean. The Kootenay (or Kootenai, as spelled in the U.S.), the Clark Fork/ Pend Oreille, Spokane, and Okanagan (spelled “Okanogan” in the U.S.) rivers also feed into the upper portion of the international Columbia Basin. The Snake River drains the southeastern corner and joins the Columbia River near the center of the triangle. The Willamette, the last major tributary, joins the Columbia 100 miles above the Pacific Ocean.

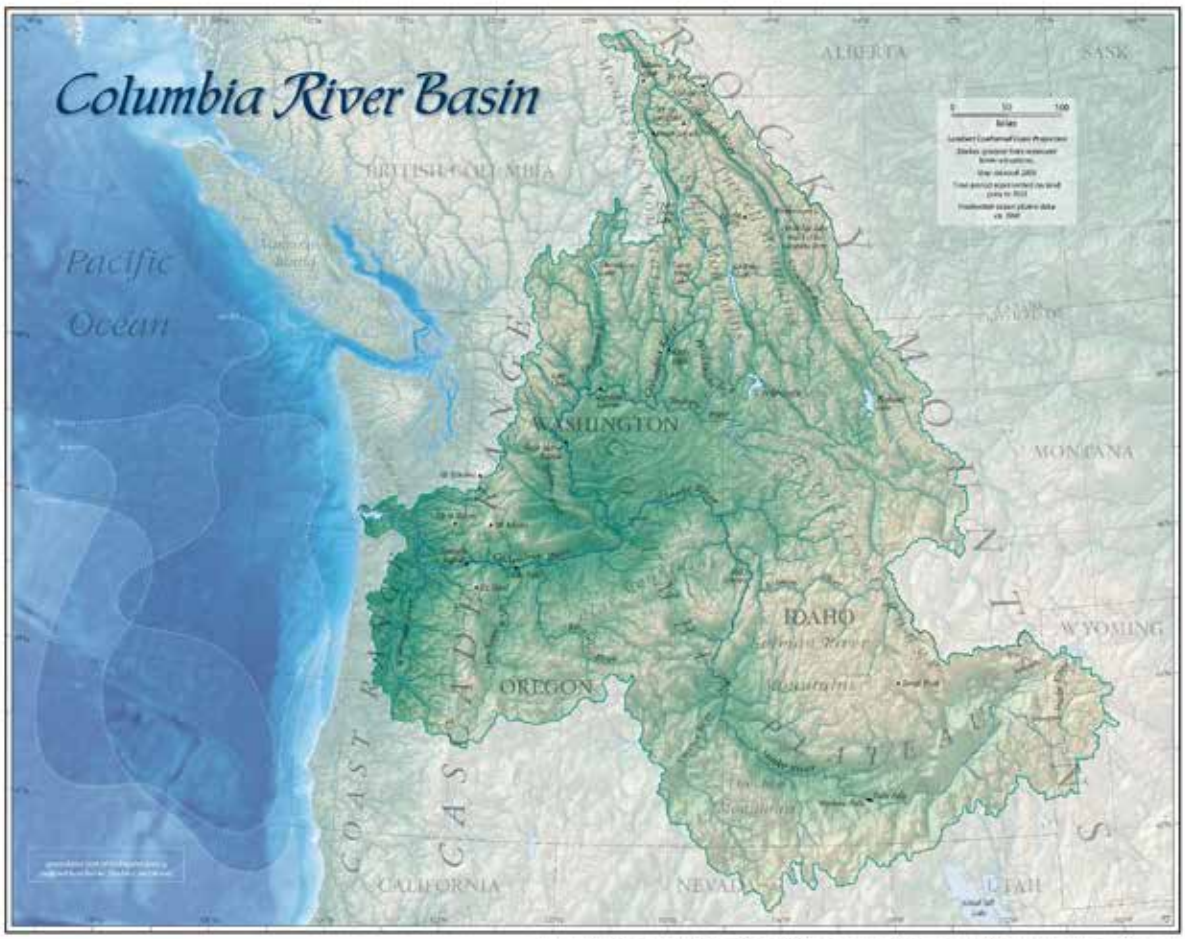

Figure 1: Columbia River Basin (Thanks to Wenatchee Valley Museum & Cultural Center).

During the periods of glaciation, ice dams formed reservoirs that submerged the Okanagan Valley, the Clark Fork watershed, and present-day Lake Roosevelt.[7] These glacial reservoirs were hundreds of feet high and thousands of feet long – enough water filled these reservoirs to cause the ice dams to float, collapse, and unleash epic floods. Landmarks such as Dry Falls and Celilo Falls were carved as water and chunks of ice raced to the Pacific Ocean at highway speeds.

Across this physical landscape, a crazy quilt of political and jurisdictional boundaries has been drawn. In addition to crossing the United States/Canada border twice, the basin also encompasses portions of the province of British Columbia, seven states (Oregon, Montana, Idaho, Nevada, Wyoming, Utah, and Washington), and traditional territories of tribes and First Nations. Federal, state, provincial, and tribal agencies have management responsibilities to various parcels of land and segments of river. This fabric of governance will be discussed in greater detail later in this section of the report.

The last 100 years brought a second round of flooding to the Columbia Basin. Today, over 230 major man-made dams hold back waters for irrigation, transportation, hydroelectricity, flood risk management, recreation, and other uses.[8]

Although only 15% of the international Columbia Basin lies within Canada, this headwaters region contributes about 38% of the average annual discharge and up to 50% of the peak flow at The Dalles Dam, located in central Oregon.[9] This geography played an important role in the arrangement of storage and hydropower dams in the Columbia River Treaty and the transformation of the basin into an extensive network of hydroelectric dams (see Figure 2). Climate change is expected to significantly alter precipitation and snowmelt patterns upon which the dam operations depend for power generation and other authorized uses. Models predict warmer temperatures, more precipitation as rainfall, and decreased snowfall in the next 50 years.[10] In many of the predictive models, the percentage of average flow originating in Canada is expected to increase.

Figure 2: Pacific Northwest Reservoir System

Among the transboundary rivers shared by the United States and Canada, the Columbia River possesses two unique characteristics: high seasonal variability and an extensive hydropower network. The unregulated Columbia River has a high to low flow ratio of 1:34, compared to the Great Lakes - St. Lawrence, which has a ratio of 1:2.[11] The hydroelectric dams along the Columbia River produce enough energy to power eight cities the size of Seattle[12] and, roughly, a third of the hydropower in the United States.[13]

1.1.2 History of Columbia Basin Tribes and First Nations

Creation stories vary in the specifics, but consistently place people in the international Columbia Basin from time immemorial with a sacred duty or responsibility to care for the land, water, and animals.

Archeological records date human presence to at least 10,000 years ago – but floods, from both glacial runoff and man-made reservoirs, and looting contribute to an incomplete archeological record.[14] Both records – archeological and oral – affirm that peoples on the Columbia Plateau have long fished, hunted, trapped, and gathered to sustain themselves. According to the Columbia River History Project:[15]

> "The traditional lifestyle was one of hunting and foraging, with winter villages and seasonal camps that would be established for fishing or gathering purposes. Indians who lived along the lower Columbia River maintained more permanent settlements than those who lived farther upriver, where food supplies were more seasonal, the winter climate was harsh and the lifestyle accordingly was more nomadic. Roots, berries, animals, fish, wildlife — all were important to the tribes both as food and as elements of their spiritual beliefs. Land and water, which supported life, were sacred.
>
> The earliest inhabitants were nomadic hunters who relied on big game animals as an important part of their diet. Fishing began to be important to the subsistence pattern at least 8,000 years ago. By about 3,000 years ago, fish, animals and root crops were important in the diet, and shared food resources, particularly fisheries, may have led to cooperative political, social and religious structures among bands in shared geographic areas.
>
> Lower Columbia River Indians lived in large villages of multifamily plank houses; in the interior Columbia Plateau, houses constructed of mats and poles were more common, as fit the more nomadic lifestyle. Celilo Falls and Kettle Falls were major fishing and trading areas for Indians from throughout the Northwest and also were the home localities of several tribes. The introduction of the horse to Columbia Basin tribes in the mid-1700s greatly expanded the range of hunting and trading, which for some included annual expeditions east of the Rocky Mountains to hunt for bison.
>
> By the mid-1800s Columbia Basin Indians had developed complex societies in discrete geographic areas, each with seasonal rounds of foraging, hunting and fishing. When necessary, tribal territories were defended aggressively against outsiders."

The traditional territories of Columbia Basin First Nations and tribes were extensive, crossing the boundaries of the basin and spanning what is now the Canada/USA border at the 49th parallel.[16] People traveled

from around the region to fish at Athalmere (near the present day town of Invermere, British Columbia), Kettle Falls, Priest Rapids, Celilo Falls, Five Mile Rapids, the Cascades, Salmon Falls, and various rapids on the upper Snake River. Archeological evidence shows that Surprise Rapids, now submerged by the reservoir behind Mica dam, was a major fishing site in continuous use for over the past 7,000 years.[17] With the introduction of horses, some tribes traveled to the Great Plains for bison.

Today, 15 Columbia Basin tribes and 18 bands affiliated with various First Nations retain lands, rights, and responsibilities in all corners of the international Columbia Basin (see Figure 3):

- The traditional territories of the Okanagan Nation Alliance member communities (Upper Similkameen Indian Band, Lower Similkameen Indian Band, Penticton Indian Band, Osoyoos Indian Band, Westbank First Nation, Okanagan Indian Band, and Upper Nicola Band) are primarily located in the watershed of that same name.

- Members of the Ktunaxa Nation represented by the Ktunaxa Nation Council (Lower Kootenay Indian Band, ?a'kisqnuk First Nation, ?aq'am, and Tobacco Plains Indian Band) have traditional territories spanning the Kootenay and upper Columbia watersheds. It is important to emphasize that at least two First Nations (Ktunaxa and Okanagan) have members on both sides of international boundary.

- The Secwépemc Nation, composed of Shuswap Band, Simpcw First Nation, Adams Lake Indian Band, Neskonlith Indian Band, Little Shuswap Lake Indian Band, and Splatsin Band, have territories in the northeastern headwaters of the basin, along the Okanagan and crossing into the Fraser Basin.

Tribes in the United States include the: Cowlitz Indian Tribe, Confederated Tribes of the Warm Springs Reservation of Oregon, Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Colville Reservation, Burns Paiute Tribe, Confederated Tribes of the Umatilla Reservation, Spokane Tribe of Indians, Fort McDermitt Paiute Shoshone Tribes, Kalsipel Tribe of Indians, Coeur d'Alene Tribe, Nez Perce Tribe, Kootenai Tribe of Idaho, Shoshone Paute Tribe of the Duck Valley Indian Reservation, the Confederated Salish & Kootenai Tribes of the Flathead Nation, and the Shoshone-Bannock Tribes of the Fort Hall Reservation. The Columbia River Inter-Tribal Fish Commission, the Upper Columbia United Tribes, and the Upper Snake River Tribes Foundation provide technical and policy support to these tribes in their coordinated efforts to modernize the Columbia River Treaty. See Appendix 6.3 for profiles on the 15 Columbia Basin tribes.

In the treaties and executive orders that created the boundaries of these reservations in the United States, many tribes also reserved rights "to hunt and fish in usual and accustomed places" outside the bounds of the reservation.

1.1.3 Demographic Trends and Settlement Patterns

Following the Lewis and Clark Expedition of 1804 to 1806 and the explorations of David Thompson, Euro-Americans began to populate the international Columbia Basin as fur trappers, traders, missionaries, homesteaders, farmers, miners, ranchers, and loggers. These entrepreneurs settled lands that had been occupied by tribes and First Nations for centuries, often at considerable odds toward

Figure 3: Tribes & First Nations

First Nations (many cases of special claims are still outstanding due to this situation).[18] Beginning in the 1850s, a growing thirst for land and resources prompted different approaches by the United States and Canadian governments in their relations with the original residents of the Pacific Northwest. According to the Columbia River History Project[19]:

> "The United States recognized the sovereignty of Indian peoples in 1832 when the United States Supreme Court ruled in *Worster v. Georgia* that the "several Indian nations" had legal status as "political communities within which their authority is exclusive." On their reservations, created by treaties with the United States, Indians had exclusive authority, and this authority and all rights to land within the reservations were "not only acknowledged but guaranteed by the United States," according to the court.
>
> Importantly, the United States did not grant rights to Indians through treaties, Indians reserved rights for themselves. In this, the fledgling United States recognized the sovereignty of the Indian people who were here first and with whom the United States shared the continent. This spirit of joint occupation of the territory imbued treaties the United States already had signed with Indians, beginning in 1787, but by the mid-1800s the implied balance of power among the separate nations began to shift toward dominance by the United States as the country steadily fulfilled its westward expansionist dreams.
>
> Meanwhile in Canada, the federal and provincial governments aggressively sought to extinguish or deny Indian claims to land and, in this way, encourage immigration to British Columbia by Europeans. The Colonial Land Ordinance of 1870, for example, gave away land in British Columbia, in 320-acre increments, to any British man over the age of 18 and pre-empted any other claim to the land. Specifically, the law stated that: "such right of pre-emption shall not be held to extend to any of the Aboriginies of this Continent."

Many tribes, but not all, entered into treaties or were recognized as sovereigns executive orders with the United States government. Under these agreements, the tribes ceded millions of acres to the U.S. while reserving lands and rights. Among the rights reserved by several tribes, was the right to take fish at all usual and accustomed fishing stations. These agreements served as the foundational texts upon which tribes subsequently relied upon in various legal actions to defend their rights to self-governance, to co-manage fisheries, and to exercise other reserved and recognized rights.

First Nations, as noted above, never ceded lands nor signed treaties. However, it was not until a significant court decision of the Supreme Court of Canada in 1973 that the Canadian government began to slowly recognize the titles and rights of First Nations. At that time,

> "… the Supreme Court of Canada ruled that Aboriginal title to land existed in British Columbia, but the province continued to reject the concept until 1990 when it reversed itself and established a task force to investigate treaties. This led to the creation of an impartial Treaty Commission in the province in 1991, an agreement between First Nations and the province in 1992, the BC Treaty Commission Act in 1993 and, ultimately, acceptance by the federal government and the beginning of treaty negotiations over title to land."[20]

1.2 Governing the Use of Water and Related Resources

Governing the use of water and related resources in the international Columbia Basin is complex, and includes local, regional, national, and international laws, regulations, policies, and institutions.[21] This sub-section provides an introduction to this nested system of governance, beginning with the historic role of tribes and First Nations, and then reviews the role of federal, provincial, regional, and local entities.[22] For a primer on the function and structure of government in the United States and Canada, including the roles and responsibilities of tribes and First Nations, please see Appendix 6.4.

1.2.1 From the Beginning: Tribal and First Nation Practices

Salmon are iconic to the Pacific Northwest and their importance to tribes and First Nations cannot be overstated. According to one tribal myth, the Creator called a council of all the animals when he was preparing to bring people onto the earth. The Creator then asked each of the animals to give a gift "to help the new humans survive, since they would be quite helpless and require much assistance." The very first to come forward was Salmon, who offered his body to feed the people. The second to come forward was Water, who promised to be the home to the Salmon. In turn, everyone else gathered at the council gave the coming humans a gift, but it is significant that the very first two were Salmon and Water.[23]

Tribes and First Nations also historically harvested steelhead, sturgeon, trout, and other species. Other, and equally important, resources to tribes and First Nations included roots, berries, animals, and medicinal plants. Collectively, these are the "First Foods," which formed the foundation of the diets, as well as economies, of the tribes and First Nations in the Columbia Basin.

Each tribe, with unique variations, developed a framework governing the use and harvest of the resources upon which they relied for their survival. For example, Columbia River Inter-Tribal Fish Commission describes traditional fishery regulations:

> "Elders and chiefs regulated the fishing [at Wy-am, also known as Celilo Falls], permitting none until after the First Salmon ceremony. Each day, fishing started and ended at the sound of a whistle. There was no night fishing. And when a fisher was pulled into the water – most who fell perished in the roiling water – all fishing ceased for the day. In later years, each fisher was required to tie a rope around his waist, with the other end fastened to the shore. Elders and others without family members able to fish could take what they needed from the catches. Visiting tribes were given what they could transport to their homes. The rest belonged to the fishers and their families."[24]

The First Salmon ceremony is an important part of traditional tribal spiritual practices and connects "followers to the land and to the culture practiced by their ancestors."[27] As noted earlier, systems of governance reflect not just laws and legal codes but a system of decision-making, guided by the values and beliefs of a culture. Caring for salmon, the river, and other Columbia Basin resources is not just a system of governance, but also a sacred obligation. The cultural and spiritual identities of tribes and First Nations, albeit with variations, have always been, and continue to be, sustained through the deliberate stewardship and use of land and water.

1.2.2 The Boundary Waters Treaty

At the beginning of the twentieth century, water quality had deteriorated along the 49th parallel, particularly on the east coast, to such an extent that both the United States and Canada were compelled to address the issue.[25] Prior efforts to resolve such issues through ad hoc commissions (such as the International Waterways Commission established in 1905) were not sufficient to handle the growing water related disputes between the two countries.

Recognizing the need for a more permanent body to address transboundary water related issues, the United States' primary interest was to maintain its sovereignty and political independence in the joint management of transboundary waters.[26] The U.S. did not want any new institution to have too much power or authority. By comparison, Canada's principal concern was the establishment of a more "egalitarian" relationship with the United States. Not only was Canada's relative size and level of development smaller at the time, but Canada also had the difficulty of having its foreign policy under the control of the United Kingdom. As a practical matter this meant that Canada could not legally negotiate its own international treaties, including one with the United States. In addition to a more equitable relationship, and contrary to the U.S. position, Canada also wanted the agreement to include tributaries and more authority for the Commission.

Negotiations finally concluded in 1909 when the United States and the United Kingdom signed the "Treaty Relating to Boundary Waters between the United States and Canada" (Boundary Waters Treaty). Tributaries were not included in the agreement. However the United States allowed the International Joint Commission (IJC) – the body created to implement the Boundary Waters Treaty - to have greater authority than it originally desired. The United States also accepted an arbitration function for the IJC. In addition, both countries agreed to open and free navigation for all boundary waters, and reserved the right to control the use of waters within its jurisdiction while maintaining that boundary waters were subject to equal and similar rights.

The IJC is composed of three members from each country. They are guided by general principles spelled-out in the Boundary Waters Treaty for preventing and resolving disputes over certain categories of waters shared between the two countries and for settling other transboundary issues. The specific application of these principles is decided on a case-by-case basis.

The IJC has three main responsibilities: (1) make binding decisions and appoint boards of control to oversee its decisions and recommendations with respect to "new uses, obstructions or diversions of boundary waters in either country that affect the natural level or flow of waters in the other country, [as well as] ... the construction of any works, dams or other obstructions in rivers that flow from boundary waters, or rivers that flow across the border, if these projects will raise the natural level on the other side of the boundary in the upstream country;"[27] (2) investigate and advise the governments on transboundary issues referred to it, commonly referred to as "a reference." However, by custom both countries need to make such a reference before the IJC will act. The conclusions and recommendations brought forth from these fact-finding cases are not legally binding; and (3) act as an arbiter for disagreements jointly submitted to it by Canada and the United States.

Historically, the IJC has played a variety of roles in the international Columbia Basin. First and foremost, Canada and the United States agreed in 1944 to "refer" to the IJC a study on the joint development and management of the international Columbia Basin, including "(a) domestic water supply and sanitation, (b) navigation, (c) efficient development of water power, (d) the control of floods, (e) the needs of irrigation, (f) reclamation of wetlands, (g) conservation of fish and wildlife, and (h) other beneficial purposes."[28] The International Columbia River Engineering Board, on behalf of the IJC, accordingly conducted extensive technical analysis along these lines.

However, after the 1948 flood that completely wiped-out the town of Vanport, Oregon, a 1959 referral to IJC limited future technical analysis and negotiation on a Columbia River "water" treaty to (a) benefits on storage of water and electrical interconnection within the Columbia River system; and (b) benefits apportionment between the two countries with focus on electrical generation and flood control. According to Heffernan, the underlying assumption was that "ecosystem function" could be achieved through unilateral management and that hatcheries could mitigate for lost fish stocks due to the lack of adequate fish passage.[29] As explained below, flood risk management and hydropower generation subsequently became the two exclusive objectives of the CRT. Appendix 6.5 includes copies of the 1944 and 1959 letters of referral from Canada and the United States.

In addition to informing the original negotiations and ultimate structure of the CRT, the IJC has played other roles in the international Columbia basin. In 1988, some participants at a workshop in Castlegar expressed support for the establishment of a watershed council, and possibly an IJC international watershed board, in the Upper Columbia Basin to coordinate planning and decision-making functions. In 1999, the IJC was invited to meet with the Columbia Basin Tribes/First Nations in Kelowna, B.C., to discuss the role of the IJC and to explore the possible establishment of an international watershed board. At the meeting, some of the 13 First Nations and tribal representatives expressed that, on issues affecting the Columbia Basin, they did not have a voice and were not involved in decision-making.

The IJC currently oversees three boards associated with the international Columbia Basin:

- **The International Kootenay Lake Board of Control** is responsible for overseeing the implementation of the Orders with respect to the level of Kootenay Lake. It holds a public meeting every fall. At the October 2000 public meeting there was an oral request for the Board to be expanded to include a landowner representative from each side of the boundary.

- **The International Osoyoos Lake Board of Control** is responsible for overseeing the implementation of the Orders with respect to the level of Osoyoos Lake. It holds a public meeting every fall. Questions raised at Osoyoos Board public meetings have included issues of water quality, water temperature, impacts on fish, and potential relationships to Osoyoos dam releases.

- **The International Columbia River Board of Control** is responsible for overseeing the effect of regulation of water levels at Grand Coulee Dam on the levels of the Columbia River at the international boundary.

Over the years, the Province of British Columbia has increasingly taken the position that it does not support the establishment of additional IJC international watershed boards in the Columbia Basin.

1.2.3 Columbia River Treaty

The Columbia River Treaty (CRT) is an international agreement between Canada and the United States to coordinate flood control and to share the benefits of optimized hydroelectric energy production. As explained above, the original IJC referral on this transboundary issue appeared to include other objectives, including fish and wildlife conservation, that were later not included in the CRT. The CRT has famously helped transform the Columbia River into one of the most hydroelectrically developed river systems in the world, with a generating capacity of more than 21 million kilowatts.

The administration of the CRT is governed by the "Entities," established pursuant to Article XIV of the Treaty. The U.S. Entity was established by executive order in the U.S. and is made up of the Administrator of the Bonneville Power Administration and the Division Commander of the Pacific Northwest Division of the U.S. Army Corps of Engineers – both are agents of the federal government. The Canadian Entity is BC Hydro, which is a British Columbia "Crown Corporation" controlled by the Province of British Columbia. "Crown Corporations" are enterprises owned by the Crown, or Queen. They are established by an act of the relevant parliament or legislature and report to that body via a minister of the Crown in the relevant cabinet. They are thought to be relatively shielded from constant government intervention and legislative oversight and thus generally enjoy a greater degree of freedom from direct political control than government departments.

Together the Entities prepare an Annual Operating Plan (AOP) six years out, which determines Downstream Power Benefits and the Canadian Entitlement, from which a Detailed Operating Plan (DOP) is developed in the year prior to implementation. A bilateral Permanent Engineer Board is responsible for reviewing actions and plans of the Entities for consistency with and alerting the governments of departures from CRT obligations. See Figure 4 for an organizational chart for implementing the CRT.

While the infrastructure of dams on the international Columbia Basin has produced many benefits in the form of power generation, flood control, navigation, irrigation, and recreation, it has also significantly affected local cultures, displaced both tribal and non-tribal communities, compromised ecosystem functions, and reduced fish and wildlife populations.[30] Through climate change and population growth, conditions and demands on the river system will continue to fluctuate.

Today, after nearly 60 years, two provisions in the CRT may significantly alter the international Columbia Basin yet again. First, on September 16, 2024, if no prior action is taken, the existing coordinated flood control procedures will automatically expire and be replaced by "called upon" flood control (i.e., as needed and agreed to by both countries). A second potential change could have been set in motion as early as September 2014, which was the earliest date that either country could have provided written notification of intent to terminate the CRT. However, unilateral termination of the CRT cannot actually take effect until 10 years after notice is given. Unless either country issues a termination notice, the CRT, with called upon flood control provisions coming into force in 2024, will continue indefinitely.[31]

Although the change in the CRT's flood control provisions will not take effect until 2024, and the CRT cannot be unilaterally terminated until 2024 at the earliest, if at all, both Canada and the United States recently completed an intensive review of future scenarios for the CRT. Many concerns originally

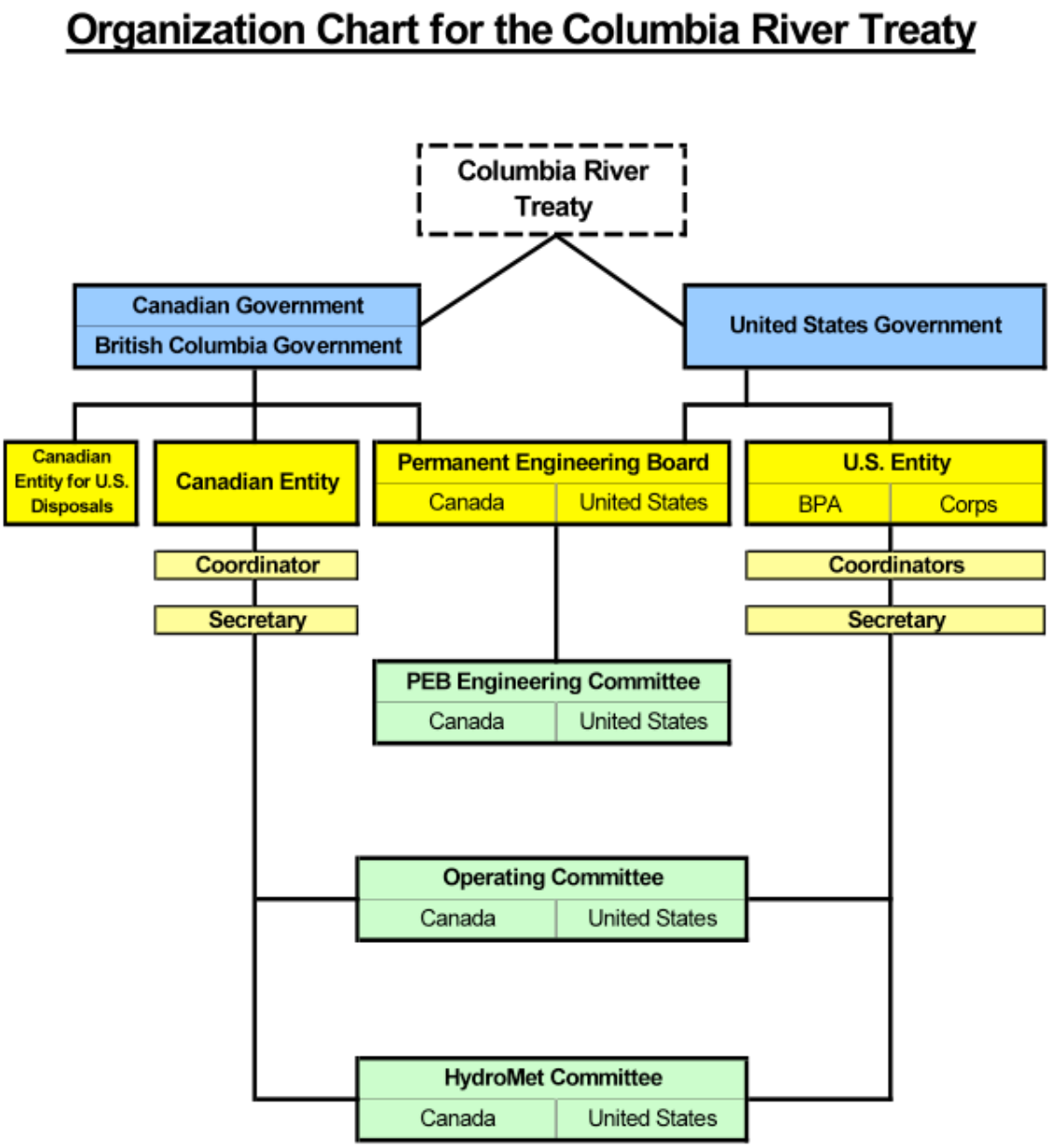

Figure 4: Organizational Chart for the Columbia River Treaty

addressed in the CRT, such as flood control and sharing power benefits, remained and new issues had emerged, brought on by changing needs, growing populations, and increasing environmental awareness. A summary of some of the major events that have occurred since 1964 is presented in Appendix 6.6. Many of these events have already influenced the administration and implementation of the CRT, and will no doubt shape the future function and structure of the CRT.

After completing an initial joint report, Canada and the United States conducted separate formal reviews on the future of the CRT.[32] Review of the CRT provided a unique opportunity to consider the effectiveness of the existing CRT under current and anticipated conditions and explore whether it might be necessary and/or desirable for the two countries to continue, modify, or terminate the CRT. As of March 2014, the

"Entities" in both Canada and the United States had issued recommendations regarding the future of the CRT to their respective jurisdictions (see Appendix 6.7 for a copy of the recommendations from both countries). The federal governments in both Canada and the United States are continuing to conduct their own internal policy reviews of the CRT. However there is no set timeline for the completion of these reviews.

In Canada, the province of British Columbia and the Columbia Basin Trust facilitated the regional review.[33] They convened a series of public consultation events, which helped inform their decision to, "continue the CRT and seek improvements within the existing CRT framework."[34] Released in March 2014, the Province's decision document listed 14 principles that British Columbia says should guide any changes or improvements to the CRT. These principles include adaptation to climate change, continued government-to-government consultation with First Nations, and coordination with the United States to maximize benefits to both countries.

In the United States, the U.S. Entity led a Sovereign Review Process that included representatives from various regional sovereigns, including states, federal agencies, and tribes. After hosting a series of public listening sessions, the Sovereign Review Team released its recommendations, which they characterized as a "regional recommendation."[35] In their recommendation to the U.S. State Department, the U.S. sovereign review team wrote that, "the region's goal is for the United States and Canada to develop a modernized framework for the CRT that ensures a more resilient and healthy ecosystem-based function throughout the Columbia Basin while maintaining an acceptable level of flood risk and assuring reliable and economic hydropower benefits."[36]

1.2.4 Additional Transboundary Governance Arrangements

In addition to the Boundary Waters Treaty and the CRT, the use of water and related resources in the international Columbia Basin is influenced by a number of additional transboundary arrangements. This following narrative highlights three representative transboundary cooperative arrangements, and Appendix 6.8 includes a more complete list of transboundary cooperative arrangements – particularly between British Columbia and Washington.

Libby Coordination Agreement[37] -- The Libby Coordination Agreement is a supplemental agreement to the CRT, negotiated by the Entities in 2000 and endorsed by both Canada and the United States. This agreement recognizes the value of fisheries and fish management as "an equally legitimate part of Libby operation with the power and flood control uses of Libby and [Columbia River] Treaty projects" and creates a substantive framework for balancing and protecting these values.[38] Some consider this agreement a testament to the flexibility within the CRT to adapt to changing values and to recognize ecosystem management as a co-equal driver in river operations along with hydropower production and flood risk management.[39]

The need for such an agreement arose, in part, because of the circumstances in which Libby Dam was authorized and the situation with regard to Kootenai River white sturgeon. Under the CRT, the United States was allowed to build Libby Dam on the Kootenai River as it dips into a corner of northwest Montana. The reservoir behind Libby – the Koocanusa Reservoir – extends roughly 41 miles (67 km)

into British Columbia. When the Kootenay River (the spelling varies by country) returns to Canada, British Columbia receives some downstream benefits due to operations at Libby Dam. Libby Dam must be operated pursuant to the CRT. However, unlike other CRT dams, the hydropower potential at Libby is not included in calculating the Canadian Entitlement. The effects of the Libby reservoir and dam operations on the ecosystem, recreation, and local economies have long been an ongoing concern for local residents.[40]

These concerns were further exacerbated in the mid-1990s when the United States listed sturgeon on the Endangered Species list. A subsequent biological opinion dictated that the U.S. Army Corps of Engineers increase spring and summer flows to enhance spawning and migration. In 1999, the conflict reached a point that threatened the ability of the Canadian and U.S. Entities to reach agreement on the Assured Operating Plan (AOP) and calculation of the Canadian Entitlement. Both federal governments granted the Entities permission to negotiate a settlement.

After a year of negotiations, the Entities reached an agreement that allowed Libby Dam to operate for endangered species and established provisions to minimize the adverse effects of such operations to Canadians. Specifically, the Agreement allows for drafting on Arrow Lakes Reservoir, an exchange of hydropower between Bonneville Power Administration and BC Hydro, and an optional storage exchange between Koocanusa and Canadian storage reservoirs. Either country can terminate the Libby Coordination Agreement with 30 days written notice. Although this settlement has led to a relatively long-term agreement between the two countries, many issues and concerns with respect to ongoing operations at Libby Dam and Koocanusa Reservoir were raised during the CRT review process. In any case, this agreement illustrates the degree to which the CRT is flexible and adaptive to social, economic, and environmental change.

Transboundary Flathead River MOU[42] -- The Flathead River begins in British Columbia and flows south into Montana, emptying into the Clark Fork River and eventually the Columbia River. Akamina-Kishinena Provincial Park encompasses a small portion of the Canadian Flathead, but otherwise the Canadian portion of the basin was relatively unprotected and had long been an area of interest for energy and mining companies. Montana sought to ameliorate the impact of development in British Columbia on or near the Flathead that might cause significant risk of harm in Montana. The U.S. portion of the basin is composed primarily of Glacier National Park – the North Fork of the Flathead marks the western park boundary – Flathead National Forest, and the Flathead Indian Reservation.

In 2010, after years of dialogue, debate, and protests, the governor of Montana and Premier of British Columbia signed a *Memorandum of Understanding and Cooperation on Environmental Protection, Climate Action and Energy*. Representatives from the Ktunaxa Nation Council and Confederated Salish and Kootenai Tribes, although they were never consulted during the negotiation over this transboundary agreement, were asked to "witness" the signing of the MOU.[43] The MOU created a framework for collaboration and sharing information and outlines actions for furthering environmental protections, climate actions, and development of renewable and low carbon energy in the Flathead River Basin. British Columbia and Montana are responsible for coordinating and implementing this agreement. Both parties can propose amendments at anytime and give a one-year termination notice.

Landscape Conservation Cooperative (LCC) – The U.S. Department of Interior established 22 large landscape cooperatives in 2009 to better facilitate funding, information sharing, and collaboration across jurisdictions.[44] Large Landscape Conservation Cooperatives are self-directed partnerships between federal agencies, states, tribes/First Nations, non-governmental organizations, universities, and other entities to collaboratively define science needs and jointly address broad-scale conservation issues, such as climate change.

The Columbia Basin spans two LCCs: the North Pacific Landscape Conservation Cooperative (NPLCC) and the Great Northern Landscape Conservation Cooperative (GNLCC). The NPLCC encompasses the coastal regions west of the Cascade Mountains and includes representatives from California, Oregon, Washington, British Columbia, Yukon Territories, and Alaska.[45] It combines the collective science capacity, infrastructure, creativity, perspectives, and sometimes, financial resources of existing partnerships and programs to address decision support needs on a comprehensive scale. It is a forum for developing a common understanding of change driven by climate and related stressors and its success depends on active engagement of partners throughout the region. NPLCC's over-arching goal is to promote development, coordination, and dissemination of science to inform landscape level conservation and sustainable resource management in the face of a changing climate and related stressors. The GNLCC is similar in scope and partnerships, but spans the Rocky Mountains and most of the Columbia Basin – approximately the area upstream of The Dalles.[46]

1.2.5 Domestic Governance Arrangements

Several domestic arrangements in both Canada and the United States also influence the governance of land and water use in the international Columbia Basin.

The Northwest Power and Conservation Council (Council) was created by Congress in 1980 with the passage of the Pacific Northwest Power Planning and Conservation Act. The Council is tasked with ensuring public participation and developing an "affordable and reliable energy system while enhancing fish and wildlife in the Columbia River Basin. A primary responsibility is the development of a 20-year power plan that is updated every five years – the seventh updated plan will be released mid-2015. The Council also administers the Columbia Basin Fish and Wildlife Program, developed pursuant to recommendations from federal and state fish and wildlife agencies and appropriate tribes, that is designed to protect, mitigate, and enhance species affected by hydropower development and operations.

The Columbia Basin Trust (CBT) was formed in 1995 pursuant to British Columbia's Columbia Basin Trust Act to support "efforts by the people of the Basin to create a legacy of social, economic and environmental well being and to achieve greater self-sufficiency for present and future generations."[47] This mission is carried out through initiatives supporting economic development, environmental stewardship, and community and youth engagement. CBT also works to increase awareness and understanding of water issues, including deliberations on the CRT. Although CBT and the Council have slightly different mandates (e.g. CBT does not have a direct role in energy planning) there is a Memorandum of Understanding between the two organizations to coordinate and collaborate on projects of mutual interest.

Natural Resource and Environmental Laws and Agreements – A number of statutes, court decisions, and administrative rules further govern the use and management of water and other natural resources in the international Columbia Basin. Appendix 6.5 provides a chronology of major events influencing the governance of the international Columbia basin, including several key laws and court decisions in both Canada and the USA including:

- *The Canada / British Columbia Agreement 1963* (Canada) transferred most Columbia River Treaty benefits, rights and obligations to British Columbia, requiring Canada to obtain B.C.'s agreement before amending or terminating the Treaty.

- *SoHappy v. Smith/United States v. Oregon* (1969) (USA) Judge Belloni, U.S. District Court of Oregon, combined these two cases under *U.S. v. Oregon* to rule that the Yakama, Warm Springs, Umatilla, and Nez Perce are entitled to a "fair share" of the harvestable amount of fish runs, both on and off-reservation, and that the state is limited in its power to regulate off-reservation Indian fisheries. The state could only regulate when "reasonable and necessary for conservation." Further, state conservation regulations could not discriminate against the tribes, using the least restrictive means necessary.

- *The National Environmental Policy Act* (1970) (USA) requires the integration of environmental values in the decision-making process by federal agencies. Federal agencies submit environmental assessments (EAs) and environmental impacts statements (EISs) of major federal actions to the U.S. Environmental Protection Agency for review. This law also established the Council on Environmental Quality (CEQ) to coordinate federal environmental policies.[48]

- *The U.S. Endangered Species Act* (1973) (USA) seeks to protect and restore imperiled species, as well as the ecosystems upon which they depend. An imperiled species can be listed as endangered – in danger of extinction – or threatened – at risk of becoming endangered. The U.S. Fish and Wildlife Service, which focus primarily on terrestrial and freshwater species, and National Marine Fisheries Service, which focus on marine and anadromous species, administer the ESA.[49]

- In *U.S. v. Washington* (1974) (USA) Judge Boldt mandated that a "fair share" meant 50 percent of the harvestable fish destined to pass the tribes' usual and accustomed fishing places and reaffirmed tribal management powers. Judge Belloni then applied the 50/50 principle to Columbia River fisheries under *U.S. v Oregon*. In *Settler v. Lameer*, the Ninth Circuit Court of Appeals ruled that the treaty fishing right was a tribal right, not an individual right, and that tribes had reserved the authority to regulate tribal fishing on and off the reservations.

- *The U.S.-Canada Pacific Salmon Treaty* (1985) was signed by U.S. President Ronald Reagan and Canadian Prime Minister Brian Mulroney, which reduced Canadian and Alaskan harvest of Columbia River salmon and added tribal representation to the international decision-making body along with other government fish managers. This Treaty also has provisions related to transboundary stocks of salmon, including those in the Columbia River.

- *The Columbia Operations Fisheries Advisory Committee* (COFAC) was established in 1994 as a structured forum for the exchange of information pertaining to the coordination of activities re-

lated to the operation of hydro projects on the Columbia River system in Canada and associated fisheries issues. COFAC has representation from provincial and federal fisheries regulators, First Nations, and hydroelectric operators from the Columbia River system in Canada.

- *British Columbia Water Use Plans* (Canada) were developed for most of BC Hydro's hydroelectric facilities through an intensive collaborative planning process involving participants, such as government agencies, First Nations, local citizens, NGOs and other interest groups. The provincial Comptroller of Water Rights reviewed the water use plans under the provisions of British Columbia's Water Act, and once they are approved operational changes, monitoring studies, and physical works outlined in the plans are implemented by BC Hydro and other relevant agencies. These water use plans are supposed to be periodically reviewed.

  Water Use Plans were developed for the Mica, Revelstoke, and Keenleyside projects on the Columbia between 2001 and 2005. These plans identified the key interests that needed to be addressed in reservoir operations and developed fundamental objectives to address those interests. Tradeoffs between competing values were analyzed and reconciled through a process of structured decision-making. This process resulted in a plan that attempted to optimize the achievement of a full suite of objectives. However, these discussions were importantly constrained by pre-existing international agreements such as the CRT storage and flow arrangements. Some WUP critics in local communities also felt they were made to "play 4th fiddle behind power, Aboriginal and environment interests" in the WUP process.

- Canada's *Species At-Risk Act* (2002) (SARA) aims to prevent distinct populations and species from becoming extirpated. It also provides for the recovery of endangered species and prevention of other species from becoming at risk. SARA established the Committee on the Status of Endangered Wildlife in Canada, an independent scientific body to assess and identify species at risk.[50]

- *British Columbia Annual Operations* (Canada) -- Planning and operations on the Coordinated Columbia River System are guided by a complex and interrelated set of laws, treaties, agreements, and guidelines in both Canada and the United States. While some of these have been in effect for many decades, the governing policies are dynamic, and important additions have been made in recent years. Annual Operations Updates are one mechanism used to fine tune flows and advise communities and stakeholders on what the plans are for a given year.

- *The Canadian Columbia River Forum* (2006) provides an information-sharing forum in which the participants can collaborate on initiatives and processes that affect the Canadian portion of the Columbia River Basin. The Canadian Columbia River Forum represents seventeen Canadian federal, provincial, regional and First Nation agencies committed to collaborating on water-management initiatives in the transboundary-reach of the Canadian Columbia River Basin. This networking and information sharing forum brings together decision-makers to collaborate on existing and emerging water management issues that influence the Columbia Basin in Canada.

- *Columbia Basin Regional Advisory Committee* (Canada) (2014) -- Members include local government elected officials, First Nations in some cases, BC Hydro, MEM, and community citizens.

The purpose of the Committee is to (1) act as "sounding board" on Columbia River Treaty reports and other information, providing feedback, opinions and suggestions for improvement; (2) provide feedback to key CRT Review questions, in particular regarding Basin interests (e.g. environment, socio-economic, domestic; and (3) help inform recommendations to government on the future of the CRT.

- *Community-based Watershed Stewardship Groups* – In addition to the formal legal and institutional arrangements governing water and other natural resources in the international Columbia River Basin, over 50 multi-stakeholder, community-based watershed groups provide a local forum to solve water and related natural resource issues within particular watersheds in the basin. A graduate student at The University of Montana is in the process of creating a map showing the geographic distribution of these watershed groups throughout the international basin, along with a simple profile of each group. Preliminary findings of this applied research project will be available in 2015.

1.3 Challenges and Opportunities for Tribes and First Nations

In light of this historical and institutional context, Columbia Basin tribes and First Nations face various challenges and opportunities, including:

1.3.1 Fragmented, Unceded Traditional Territories: In 1846, Great Britain and the United States signed the Oregon Treaty, establishing the 49th parallel as the boundary between the United States and British Canada. However, the Oregon Treaty, while resolving an ongoing boundary dispute between the United States and Great Britain, created immense political differences and legal frameworks among, and between, sovereign tribes and First Nations on both sides of the Canada / USA border with previously close allegiances. According to one account, "When the surveyors came from the International Boundary Commission, we took them and their equipment across the river. We shared our food with them and showed them safe trails to follow. We helped them, and then they drew a line through the middle of our house and said we couldn't cross it. You call that line the U.S.-Canada Border. Because of that Border, and the epidemics that killed so many of us, the Kootenai Nation is now reduced to seven communities - five in Canada and two in the U.S.. Although we are fewer in numbers now, we are still strong in spirit and will. And we are still the Kootenai Nation - one people, one heart, one mind" (*Century of Survival, A Brief History of the Kootenai Tribe of Idaho*, 2010, page 20).

1.3.2 Asserting Tribal and First Nations Legal Rights: In Canada, the recognition of Aboriginal and Treaty Rights are grounded in Section 35 of the Canadian Constitution adopted in 1982. Section 35 provides constitutional protection to "existing aboriginal and treaty rights" of Aboriginal peoples in Canada. The Canadian federal government has said that it does not see section 35 as a "pathway" for "aboriginal governments or institutions to exercise law-making authority,"[51] but rather more as a pathway to self-government where the scope of self-government is limited to internal matters that are essential to the operation as a government or vital to a culture. According to the Canadian federal government this includes land management, acquisition of land by Aboriginal governments for public purposes, regulation of hunting, fishing, and trapping on Aboriginal lands and the potential for First Nations to assert some co-management authorities of fisheries and migratory birds.

Various tribes in the United States have significant rights of self-government that stem from their recognized sovereignty and the treaties or other agreements that they entered into with the U.S. federal government. In addition to other powers, tribal governments can levy taxes, pass laws, and have their own courts. In general, tribal governments are recognized to retain similar rights and responsibilities as those granted to states. In some instances, there is an extensive body of case law establishing tribes as co-managers of natural resources such as salmon.

1.3.3 Lack of Involvement in International Treaties: In general, tribes and First Nations have not been substantively involved in negotiating international agreements, including agreements governing international water, energy, and other natural resources. Rather, the prerogative to conduct international negotiations has generally been closely guarded in both Canada and the United States by the executive branch of the respective federal governments. For example, tribes and First Nations were not substantively involved in the negotiation of the Boundary Waters Treaty or the Columbia River Treaty. However, there appear to be no obvious legal barriers to their inclusion and there have even been a few notable exceptions that will be discussed below.

1.3.4 Decline of Salmon and Fishery Economies: Regrettably salmon runs associated with the international Columbia basin, particularly ocean fisheries, declined significantly in the late 1800s coincident with the proliferation of commercial fisheries, salmon canning in the lower Columbia, and fisheries habitat destruction.[52] Salmon runs associated with the international Columbia basin were further decimated with the constructions of dams on the Columbia River and its tributaries. Before the completion of Grand Coulee dam in the United States in 1939, over a quarter of all Chinook, Coho, sockeye, and steelhead migrated into the upper Columbia River in Canada.[53] The salmon and steelhead runs, associated tribal harvest, and fishery related economies above Grand Coulee were completely lost as a result of dam construction. Subsequently, dams such as Chief Joseph in the United States and those authorized by the Columbia River Treaty, further blocked fish migration and altered the natural flow regime upon which salmon depended for their migration.

The flooding of various landscapes and the decimation of salmon in the upper Columbia basin and depletion through the lower Columbia basin caused irreparable and continuing harm to Columbia Basin First Nations and tribes. With the loss of salmon, First Nations and tribal members lost their fishing related economy, social exchanges and sense of community, and, over generations, the loss of the traditional knowledge related to the harvest, preparation, and use of salmon. Additionally, the decline of salmon removed a key species from both the aquatic and terrestrial ecosystems, the complete ramifications of which are still not known with certainty.

1.3.5 Opportunities to Share Knowledge and Cultural Values – Reservoirs behind the dams also led to a loss of landscape and language. According to the Syilx or Okanagan Nation, language:

> "… arose from our learning about the land…[L]anguage carries the teachings of a very old civilization with thousands of years of knowledge of healthy living on this land. The laws are always taught by telling the stories [to] each child and to any adults who need reminding.
>
> The land forms in the stories are teaching and are reminders to each generation that the land is at the center of how we are to behave. The destruction of the story landmarks and natural land forms are like tearing pages out of a history book to the Syilx. Without land knowledge we are endangered as a life form on that land and we in turn endanger other life forms out there."[54]

Landscape is a way of passing on language, identifying traditional territory, and grounding cultures and systems of governance to the place in which it exists. If landmarks disappear, then people lose the ability to pass that information and language down to future generations.

1.3.6 Economic Opportunities - According to a 2005 American Indian Population and Labor Force Report by the Bureau of Indian Affairs, tribal communities face an unemployment rate of 49% and a 29% rate of individuals who are employed, yet still remain below the poverty line.[55] In comparison, the U.S. national rate of unemployment is around 6% with a "working poor" rate of 4.2%.[56] A 2010 study released by Statistics Canada comparing labor force characteristics of Aboriginal and non-Aboriginal populations, found that the unemployment rate for Aboriginal workers, ages 25-54 living off the reserve, was at 12.3%, nearly twice the unemployment rate for non-Aboriginal workers (6.8%).[57] The employment rate, in 2010, for Aboriginal people was at 62%, whereas 80.9% of non-Aboriginal people are employed. To reduce these economic disparities, especially in the face of climate change, the viability of tribal and First Nations' communities and businesses (including agriculture, recreation, fishing, hydropower, etc) is contingent on greater inclusion in decision making and balancing ecosystem-based function with other demands on the river.

1.4 Conclusions

The international Columbia Basin drains approximately 259,500 square miles (697,00 square kilometre) of the Pacific Northwest. The basin bisects an international border (United States/Canada), and encompasses portions of the province of British Columbia, at least seven states (Oregon, Montana, Idaho, Nevada, Wyoming, Utah, and Washington), and various traditional territories of tribes and First Nations.

Tribes and First Nations have been governing the use of land and water resources in the international Columbia Basin for thousands of years. *Individually and collectively, the stewardship of land, water, and other natural resources is not just an issue of self-determination for tribes and First Nations, it is considered a sacred responsibility*. Ecosystem function and resilience have always been core cultural values of this governance system.

The federal governments in both the U.S. and Canada currently play a significant role in transboundary water management in the Columbia Basin, in large part through the Columbia River Treaty. The CRT and associated implementation structure is focused on the operation of various dams and reservoirs for power production and for local and system-wide flood risk management. However, the governance and decision-making related to land and water throughout the basin occurs at nested geographic scales with varying degrees of formal authority. Tribes and First Nations, local watershed groups, local governments, and sub-national laws and agreements play various roles in managing the use of natural resources in the international Columbia basin.

> This preliminary inventory of transboundary governance arrangements suggests that any future attempt to improve the governance of water and related resources in the basin needs to provide a mechanism to better share information across these various initiatives and explore opportunities to better coordinate activities and work cooperatively.

The Columbia River Treaty, and associated organizational structures, is a relatively effective bilateral agreement between the U.S. and Canada to share benefits and costs by cooperatively managing dams and reservoirs for the twin objectives of flood risk management and hydropower production. However, the CRT is not an all-inclusive forum to govern the use of land, water and related resources in the international Columbia Basin consistent with changing social values, environmental imperatives, and legal obligations. A new governance arrangement appears to be needed that better:

- Accommodates the interests and rights of tribes and First Nations;
- Promotes and integrates the full menu of objectives identified in the International Joint Commission's 1944 referral that catalyzed the creation of the Columbia River Treaty; and
- Reflects the changing laws and social values associated with ecosystem-based function.

2.0 The Interests and Aspirations of Tribes and First Nations

The objectives of this section of the report are to (1) clarify the interests and aspirations of tribes in the United States and First Nations in Canada with respect to the international Columbia Basin; and (2) identify common interests among First Nations and tribes in the international Columbia Basin.

2.1 Columbia Basin Tribes[58]

In 1996, a tribal working group in the US Columbia Basin produced a "Report of the Inter-tribal Workgroup to the Columbia River Basin Tribes for Fish and Wildlife Program Implementation and Regional Governance (AKA "Red Paper)." The opening section of this report clarifies the core values, interests, and vision of tribes in the Columbia River Basin:

> "The Columbia Basin Tribes … share a responsibility, vital to the life and spirit of the entire Basin, to pursue and promote the restoration and naturalization of the Columbia Basin ecosystem. The Basin must be viewed as a whole, integrated, living web of life and our decision-making must be cognizant of all resources...water, land, air and human.
>
> We are on a common ground with—not superior to—other forms of life and must respect all life, not just our own. We are also stewards with a responsibility to our future generations. In the fulfillment of that responsibility, we must seek not only knowledge, but also wisdom.
>
> People are part of the fabric of life in the Basin. Natural resources are not just commodities to be exploited. One value of tribes taking a lead role in restoring watersheds and improving habitat for fish and wildlife is that they can teach first-hand how to repair watersheds that have been torn apart."

While this "red paper" focused on the coordination of fish and wildlife programs in the US portion of the international Columbia basin, it also presents a provocative and timely framework for shared governance of natural resources in the international Columbia Basin.

Before addressing that framework, it is helpful to review several additional documents that further clarify and amplify the interests and perspectives of tribes in the international Columbia Basin. In January 2008, the Affiliated Tribes of Northwest Indians adopted a resolution recognizing the mutual benefit of the tribes working together on the CRT and calling upon the U.S. Department of State and the Department of the Interior to consult with the tribes in the Columbia Basin regarding the CRT. Over the course of the next two years, tribal leaders and representatives met with each other and with representatives of the U.S. Entity to discuss their issues and concerns with the Treaty and its implementation. In July 2009, leaders from the Columbia Basin tribes met in Spokane to receive a briefing from the U.S. Entity on the status of Phase I of the CRT Review, proceeding jointly with the Canadian Entity at that time. This was the first major workshop where tribal leaders gathered to discuss the CRT. Tribal leaders met again in December of that year in Mission, Oregon, to share the broad scope of their interests and concerns with

the CRT and began drafting a document that outlined their common views. In February 2010, during the third major workshop, the Columbia Basin tribes agreed to the following "Common Views on the Future of the Columbia River Treaty:

> "The present Columbia River power and flood control system operations are negatively affecting tribal rights and cultural interests throughout the Columbia Basin. The Columbia River Treaty is foundational to these operations.
>
> The Columbia River Treaty –
>
> - Was negotiated and continues to be implemented without regard to the tribes' unique legal and political relationship with the federal government.
> - Is narrowly designed for the benefit of power and flood control.
> - Does not include ecological considerations for critical tribal natural resources.
> - Does not include considerations of critical tribal cultural resources.
> - Created a power and flood control system that degraded rivers, First Foods, natural resources, and tribal customs and identities.
> - Significantly affects tribal economies.
> - Excludes tribal participation in its governance and implementation.
> - Limits what can be accomplished with non-Treaty agreements to meet tribal resource priorities.
>
> The Columbia River Treaty is under review by the U.S. and Canadian governments for reconsideration in 2014. Reconsideration of the Treaty provides an opportunity for the tribes to seek benefits not realized in 50 years of Treaty implementation.
>
> The Columbia Basin tribes' interests must be represented in the implementation and reconsideration of the Columbia River Treaty. The Columbia River must be managed for multiple purposes, including -
>
> - Respect for the sovereignty of each tribal government - each tribe has a voice in governance and implementation of the Columbia River Treaty.
> - Tribal cultural and natural resources must be included in river management to protect and promote ecological processes – healthy and useable fish, wildlife, and plant communities.
> - Integrate the tribes' expertise of cultural and natural resources in river management.
> - Equitable benefits to each Tribe in priority to other sovereign parties in Columbia River management.

- Respecting and preserving the benefits of settlement agreements with tribes.
- Recognize tribal flood control benefits.
- Protecting tribal reserved rights to current and future beneficial uses, in a manner consistent with ecosystem-based management.

In order to realize these principles, the tribes' collective voices must be included in the implementation and reconsideration of the Columbia River Treaty."[59]

To help advance these common interests, the tribes created the Columbia Basin Tribes coalition or network in 2010. During the past four years, they have prepared issue papers to clarify their interests with respect to cultural resources,[60] ecosystem-based function,[61] restoring fish passage,[62] and flood risk management.[63] The following paragraphs summarize each of these issue papers; all citations are from the respective issue paper.

Cultural Resources—A draft statement pending approval by the Confederated Salish and Kootenai Tribes of the Flathead Reservation explains "cultural resources are those resources necessary for the CSKT culture to continue. These resources are a basic and sacred foundation to the CSKT way of life--the fundamental nature of the tribes' existence--without which the cultural continuity of the tribes is severely impaired." The draft statement goes on to explain that a significant amount of cultural resources has been lost in the traditional territories of the CSKT and continues to be lost, substantially altered, or destroyed, with increasing frequency. The document concludes that: "The Columbia River Treaty Review provides an opportunity and obligation to address cultural resources losses that have occurred, and will continue to occur, by federal development of water resources on CSKT aboriginal lands." To operationalize this recommendation, the statement identifies elements of a programmatic approach essential to implementation.

Ecosystem-based Function – Since time immemorial, the rivers of the Columbia Basin have been, and continue to be, the life-blood of the Columbia Basin tribes. The tribes define the "ecosystem function" of the Columbia Basin as its "ability to provide, protect and nurture cultural resources, traditions, values and landscapes throughout its' length and breadth." Based on this core value and understanding, the tribes explain that (1) ecosystem-based function was not addressed, and therefore not included, when the Columbia River Treaty (CRT) was implemented in 1964; (2) it needs to be added to a modernized CRT as a primary purpose along with flood risk management and hydropower; and (3) ecosystem-based function will result in a restored, resilient and healthy Columbia Basin watershed. The tribes conclude that -- while much has been done to address the adverse effects of hydropower development and operations on Columbia Basin ecosystem-based function, it is not the same as managing the Columbia Basin to address fish and wildlife listed under the Endangered Species Act. "Modernizing the CRT by incorporating [ecosystem-based function] and rebalancing the three primary purposes will take more regional analysis and deliberation to determine appropriate options and actions."

Restoring Fish Passage – According to the tribes issue paper on this topic, the upper Columbia Basin in the U.S. and Canada once produced annual runs of 1 to 3 million salmon and steelhead and provided habitat for lamprey, sturgeon and other fish species. These aquatic resources were critical to the

cultures, spirituality, subsistence, and economies of Native Americans and First Nations in Canada. The tribes go on to explain that fish access to the upper basin was irretrievably lost with the construction of Grand Coulee Dam and further diminished with the construction of other dams in the U.S. and Canada. The potential to restore fish passage in the upper basin was foregone with the ratification of the CRT, which led to construction of additional dams, and management of river flows counter to the health and viability of upper basin salmon.

The cumulative decisions in the U.S. and Canada to block fish access and inundate habitats were made over the objections or without consultation and consideration of tribes and First Nations' rights. The tribes propose "restoring fish passage and reintroducing salmon and other species into areas where they are currently blocked is a critical component of future ecosystem management within the CRT. The tribes have formulated a pragmatic, bilateral, multi-phased approach to salmon passage and reintroduction in the upper Columbia …"

Flood Risk Management -- Unless the current CRT is adjusted, the United States will lose flood risk management benefits in 2024, but will retain the right to call upon Canada (per the "called upon" provisions in the CRT) to provide flood storage once the U.S. has exercised "effective use" of its reservoir capacity for flood risk management. This potential change, coupled with future climate change projections, raises questions regarding the capacity and capability of flood prevention infrastructure and planning in the Columbia Basin, both for local flood risk management in the upper Basin and for system flood risk management throughout the Basin, especially for areas of high economic value in the lower Basin.

The Columbia Basin tribes are concerned that the default change to "called upon" and "effective use" after 2024 will adversely affect their efforts to enhance ecosystem-based function through a modernized CRT because it will more probably than not (1) require larger and more frequent drawdowns at Grand Coulee Dam (Lake Roosevelt) and other U.S. reservoirs in order to provide minimal flood risk prevention; (2) adversely impact resident fish, cultural resources, navigation, recreation, riverbank stability and public safety through dramatic changes in reservoir elevation; and (3)limit system capability to provide necessary spring and summer flows for salmon. To address these concerns, the tribes support the pursuit of congressional authorization and appropriations for a region-wide public process to assess potential changes to the current level of flood risk protection in the Columbia Basin, including the potential for adaptive management actions.

As mentioned above, the 1996 tribal working group report presented a governance framework to coordinate the planning and operations of activities within the Columbia Basin that affect or impact fish and wildlife, hydropower, water, and land resources. While this framework may not be perfect, it provides a comprehensive set of principles that may inform and invigorate efforts to design a more inclusive, informed, and responsive system for governing the Columbia Basin. Echoing the core values, interests, and vision presented above, the preamble to the report emphasizes that "Parties must … be brought into decision-making at the beginning, and there must be a willingness to seek consensus. Decision-making must be inclusive." It goes on and presents eight principles to improve regional governance in the basin:

- Tribes and state and federal agencies in the basin are *co-managers of the region's fish and wildlife*. The rights and authorities of all co-managers must be recognized and a commitment made to not act unilaterally.

- We *do not need to establish new legal processes or change existing authorities* for more effective governance but the region does need to move forward and develop effective methods for implementing already-existing plans.
- The *authorities and plans* for fish and wildlife *should be reviewed and reconciled.* In the future, there must be a *fully integrated process* for planning which *promotes coordination and respect for the respective roles and authorities of the co-managers.*
- *Unilateral federal control of the Basin is inappropriate.*
- Responsibility for *fiscal management should be transferred from BPA to the regional fish and wildlife agencies and Tribes responsible for implementing programs.*
- There must be *fair, effective processes established for resolving disputes among sovereigns.* Fish and wildlife programs based on consensus have the greatest likelihood of success but methods other than litigation should be available if consensus cannot be achieved.
- *Integrated resource management* must be incorporated and *efforts to restore watersheds and improve all habitats* for anadromous and resident fish and wildlife throughout their life cycles must be aggressively pursued.
- Planning and implementation of fish and wildlife programs should be based on *sound science, reliable information, and careful evaluation and monitoring.*

These principles provide a possible basis to begin negotiating a new governance arrangement among the United States and Canadian Entities, other federal and state agencies, as well as various stakeholders in the basin.

2.2 First Nations

The aboriginal peoples of Canada consist of First Nations, Inuit, and Métis representing eleven different major language groups and a population of over 1.4 million out of a total current population in Canada of 35.16 million.[64] The federal government of Canada has, pursuant to the Canadian Constitution,[65] legislative jurisdiction to make laws in relation to "Indians and lands reserved for Indians."

In 1982, Aboriginal peoples of Canada received explicit constitutional recognition for the first time. Pursuant to Section 35 of the Canadian Constitution:

(1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.

(2) In this Act, "Aboriginal Peoples of Canada" includes the Indian, Inuit and Métis peoples of Canada.

(3) For greater certainty, in subsection (1) "treaty rights" includes rights that now exist by way of land claims agreements or may be so acquired.

(4) Notwithstanding any other provision of this Act, the aboriginal and treaty rights referred to in subsection (1) are guaranteed equally to male and female persons.

The scope and content of "Aboriginal rights," "Aboriginal treaty rights," and "Aboriginal title" continues to be the subject of numerous decisions and declarations at all levels of the Canadian courts, and the interpretation, content, and meaning of these terms continues to evolve.[66] However, in general, "Aboriginal rights" refers to the exercise of certain practices, customs and traditions that were in existence at the time of contact between North America's original inhabitants and Europeans.

"Aboriginal title" is a unique concept and the product of the historic relationship between First Nations and the Crown. Aboriginal title provides the titleholder with the beneficial interest in the land, which includes the economic benefits of the land. Aboriginal title also enables the titleholder to proactively use and manage the land. Beyond exclusive occupation, the test for proving Aboriginal Title also requires sufficient occupation and in some cases continuous occupation. One difficulty is that a First Nation that has asserted, but unproven, rights or title claims does not appear to have same rights over the land as a First Nation that has proven their rights and title claim in court. The uncertainty is whether their rights in a specific area may change in future based on a successful rights or title claim or an agreement with the Crown to settle their claims. Overlapping First Nations land claims are also a significant challenge. Disputes from overlapping claims may hinder cooperative governance.

"Treaty rights" typically refers to obligations owed by the government to Aboriginal peoples, typically in return for the surrender of land rights.[67] Various Aboriginal groups signed treaties with the British colonial government before the formation of Canada in 1867, and with the Canadian government after that date. Although the federal government has generally tried not to reopen these historic treaties, specific claims arising from the alleged non-fulfilment of treaties and other lawful obligations, or from the alleged improper administration of lands and other assets under the Indian Act or other formal agreements, continue to be brought forward for negotiation and litigation.

In areas where treaties were not signed, for example, most of the Province of British Columbia and portions of the northern Territories, various comprehensive land claim negotiations have been initiated to clarify the rights of various Aboriginal peoples to certain lands and resources, and to facilitate their economic growth and self-sufficiency. Such claims are usually based on the concept of continuing Aboriginal rights and title, which have not been dealt with by historic treaties or other specific agreements, and involve negotiations between the Aboriginal group, the federal government, and applicable provincial or territorial governments. Some comprehensive land claim agreements have been concluded but many other claims are outstanding. Not all First Nations have participated, or are continuing to participate, in negotiations leading to land claims agreements.

Comprehensive land claim negotiations usually include such issues as the transfer of certain lands to some Aboriginal groups, the establishment of various institutions ensuring the involvement of Aboriginal peoples in a variety of decisions, the establishment of protected areas, and provisions in contemplation of Aboriginal groups' sharing in royalties generated from the development of non-renewable resources. Recently the Province of British Columbia has been developing mechanisms for Aboriginal groups' sharing in royalties generated from the development of non-renewable resources outside of the comprehensive land claim process. The approach of developing incremental agreements with First Nations has created a patchwork of British Columbia/First Nations agreements that partially define an evolving relationship between British Columbia and various First Nations.

There are many names for these strategic engagement agreements – some are called Shared Decision Making Agreements. They are all available on the British Columbia Ministry of Aboriginal Relations and Reconciliation website under "agreements."

The confirmation in 2003 of the legal duty of various governments to consult with Aboriginal groups whose rights may be impacted by a government decision was another foundational development in Aboriginal law in Canada.[68]

In 2014, the Supreme Court of Canada issued its decision in the Tsilhqot'in case.[69] According to the SCC in Tsilhqot'in, "Aboriginal title" is "collective title held not only for the present generation but for all succeeding generations. It cannot be … encumbered in ways that would prevent future generations of the group from using and enjoying it. Nor can the land be developed or misused in a way that would substantially deprive future generations of the benefit of the land." The SCC acknowledged that governments could infringe Aboriginal title in the name of "a compelling and substantial public purpose," such as infrastructure projects of national significance. However, the SCC stated "[T]he government must act in a way that respects the fact that aboriginal title is a group interest that inheres in present and future generations … Incursions on aboriginal title cannot be justified if they would substantially deprive future generations of the benefit of the land."

The SCC left the specifics to be decided on a case-by-case basis. "Whether a particular use is irreconcilable with the ability of succeeding generations to benefit from the land will be a matter to be determined when the issue arises." The key point to be drawn from the Tsilhqot'in Decision is that the rights and duties of FN and the relationship between FN and the provincial government are in a state of flux, subject to widely varying interpretations and evolving both in law and politically.

Various Canadian First Nations having longstanding historical interests in the international Columbia Basin include the Ktunaxa, Okanagan, Scwépemc and Sinixt. None of these First Nations have ceded their land and water rights or their sovereignty, nor have they yet completed a comprehensive land claims negotiation resulting in a modern treaty. The key interests of First Nations in the international Columbia Basin, both individually and collectively, include:

- Protect aboriginal rights and titles;
- Protect and restore salmon and salmon fisheries[70];
- Protect and restore cultural heritage resources;
- Promote and support ecosystem-based values and management;
- Provide more stable lake levels in Lake Koocanusa by modifying the operation of Libby Dam; and
- Share in the economic benefits associated with the dams and reservoirs on the Columbia River.

2.3 Toward Common Interests

While the interests of tribes and First Nations vary to some degree, they appear to share at least the following interests with respect to governing the use of land, water and related resources in the international Columbia Basin.

Procedural Interests

- Play an active, ongoing, and equitable role in the negotiation and implementation of agreements governing the use of land, water and related resources in the basin;
- Joint authority, decision-making power, and responsibility in the ongoing governance of land, water and related resources in the basin and move beyond consultation to shared governance;
- Ensure the recognition and protection of indigenous rights, responsibilities, and interests in transboundary agreements and governance arrangements;
- Integrate traditional ecological knowledge and interests in the ongoing conservation and management of land and water in the basin; and
- Ensure that land and water is conserved and managed from a holistic and integrated perspective (i.e., integrate water decision-making for water quantity and quality, and integrate water and land-use decisions).

Psychological Interests

- Be treated with respect as sovereign partners in the ongoing conservation, management, and equitable sharing of benefits and costs of the international Columbia Basin.

Substantive Interests

- Provide opportunities for "sustainable development," otherwise known as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Operationally, this means promoting and supporting livable communities, vibrant economies, and healthy landscapes;
- Tribes and First Nations should participate in the equitable sharing of economic and other benefits, including those associated with hydropower production, irrigation, and flood control in the international Columbia Basin;
- Protect and restore the cultural heritage resources of tribes and First Nations in the international Columbia Basin[71];
- Integrate fish passage and reintroduction programs as an essential element to consider when contemplating the future of the Columbia River Treaty.[72] The tribes and First Nations released *Fish Passage and Reintroduction into the U.S. and Canadian Upper Columbia River* in February 2014. The report "is meant to inform the U.S. Entity, the Canadian Entity, our respective federal governments and other sovereigns of the elements of the tribes' and First Nations' proposal for integrating fish

passage as an essential element of modernizing the Columbia River Treaty. This is a bilateral effort that will require international actions under the Treaty."

The Columbia Basin tribes believe this comprehensive approach would "right many historical wrongs that Columbia River development imposed on indigenous peoples by separating us from our salmon and other fishery resources integral to our culture, subsistence, health and economic well being," according to the paper's cover letter to the U.S. Entity (made up of top officials from the Bonneville Power Administration and the U.S. Army Corps of Engineers).

"Reintroduction of salmon and other species is proposed through a pragmatic and phased approach to fish passage planning, research, testing, and design/ construction and would be followed by monitoring, evaluation, and adaptive management," according to the tribal paper. "Each phase of this ecosystem recovery program would be pursued based on the knowledge gained and successful outcomes from previous phases. With recent and significant advancements in transboundary collaboration and legal and technical knowledge, Columbia River Treaty reconsideration is the appropriate opportunity to reconcile the consequences of past, narrowly focused decisions on river development and operations."

- Add ecosystem-based function as a third primary purpose of the Columbia River Treaty. This would mean that ecosystem-based function is fully integrated with flood risk management and hydropower into the operations and recognized benefits of the CRT.

3.0 The Role of Indigenous Peoples in Transboundary Water Management: Lessons for the Columbia River Treaty

Given the common interests and aspirations of tribes and First Nations in the international Columbia Basin, along with their historic role in governing the use of water and related resources in this basin, what are the options and opportunities for tribes and First Nations to play a meaningful role in the negotiation and implementation of the Columbia River Treaty?

The rules, procedures, and norms governing the role of indigenous peoples in the negotiation and implementation of international agreements derive from a combination of international law and domestic law. The laws and traditions of tribes and First Nations in the international Columbia Basin, along with several other imperatives that emerge from policy and practice, also shape the degree to which tribes and First Nations could and/or should be involved in the negotiation and implementation of water and related agreements for the international Columbia Basin.

3.1 International Law

International law is a set of rules and policies that sovereign states use to manage their relations. International law is different from national law. In a national legal system, a well-defined central law-making body or legislature makes the laws, the executive implements the laws and secures their observance, and the judiciary interprets and applies the law. There are no exact equivalents to these bodies in the international legal system.

Historically, the main concept of international law is "sovereignty," defined as "the supreme, absolute and uncontrollable power by which any state is governed." However, a state's sovereign power to control activities inside its boundaries is limited by the international legal rules that the state has agreed to follow. Sovereign states make the rules that govern their citizens and that apply within the limits of their territorial jurisdiction, including the land within their borders, internal waters, territorial seas and the air above these areas extending to the point at which the legal regime of outer space begins.

International law is derived from express written agreements between sovereign states, usually called international treaties, as well as from other sources such as the customary practice of states that believe they are legally required to conform to certain practices.[73] International treaties affect only those states that consent or agree to be legally bound by such agreements. International law encompasses global, multilateral or bilateral agreements, as well as customary law, state practice, institutions that develop and administer the law, and the extra-territorial application of domestic law.

States that negotiate and ratify international treaties intend to be legally bound and are expected to make all efforts to comply with these laws.[74] Conventions, treaties, agreements, and protocols are all different names for legally binding written agreements between states. International treaties are

created to codify existing and emerging practices and to create new binding rules. The rules concerning international treaties that have developed over years of practice have been collected and codified in a treaty called the *Vienna Convention on the Law of Treaties*. The Vienna Convention on the Law of Treaties defines an international treaty, outlines the procedures for states to demonstrate their consent to be bound by the treaty, sets the rules for treaty procedure, and addresses other matters such as determining priority between treaties.

3.2 International Water Law

In seeking to better conserve and manage a prominent international drainage basin the tribes and First Nations in the international Columbia basin are not alone. There are over 260 freshwater international watersheds that cross the political boundaries of two or more countries. International river basins cover 45.3% of the land surface of the earth, affect about 40% of the world's population, and account for approximately 80% of global river flow. International river basins have certain characteristics that make their management especially challenging, the most notable of which is the tendency for regional politics to regularly exacerbate the already difficult task of understanding and managing complex natural systems.

According to Wolf et al.,[75] the most critical lessons learned from the global experience in international waters issues include:

1. Water crossing international boundaries can cause tensions between nations that share the basin. While the tension is not likely to lead to warfare, early coordination between riparian states can help ameliorate the issue.

2. Once international institutions are in place, they can be tremendously resilient over time, even between otherwise hostile riparian nations, and even as conflicts are waged over other issues.

3. More likely than violent conflict among states is a gradual decreasing of water quantity or quality, or both, which over time can affect the internal stability of a nation or region, and act as an irritant between ethnic groups, water sectors, or states/provinces. The resulting instability may have ripple effects in the international arena.

4. The greatest threat of the global water crisis to human security comes from the fact that millions of people lack access to sufficient quantities of clean water for their well being.

In response to this set of challenges, most experts agree that "Meaningful progress in improving water resources management across jurisdictional boundaries requires effective mechanisms to be developed for an informed and structured dialogue about contentious issues as a means of resolving disagreements as they arise, and an agreed means for implementing the decisions that are taken. This requires an open and transparent process to be put into effect, one that facilitates the development of mutual trust and understanding over time. Creating (international) river basin organizations (RBOs) has been actively promoted as one way of peacefully managing shared water resources and there are many good examples of RBOs from across the globe."[76]

The foundation of international water law is the *United Nations Convention on the Law of the Non-navigational Uses of International Watercourses*.[77] This UN Convention, completed in 1997 and entered into force on 16 August 2014, reflects the fundamental rules of customary international law applicable in the field.

This convention has been reinforced by the judgment of the International Court of Justice in the *Case Concerning the Gabčíkovo - Nagymaros Project* (Hungary/Slovakia), which confirmed that the 1997 UN Watercourses Convention enshrining the principle of equitable and reasonable utilization reflected customary international law.[78] Also of key historical importance are the 1966 Helsinki Rules that codified the concept of each basin state in an international drainage basin being entitled to a reasonable and equitable share of the beneficial uses of shared international waters.[79]

The practical influence of these legal norms are defined by four basic rules that have universal application, including to the international Columbia Basin:[80]

- States agree to use an international watercourse in a way that is "equitable and reasonable" vis-à-vis other states sharing the watercourse;
- States agree to take "all appropriate measures" to prevent "significant harm" to co-riparian states;
- States agree to provide "prior and timely notification" to other international watercourse states concerning any "new use or change in existing uses" of an international watercourse, together with relevant technical information, and that it "consult" with the other international watercourse states; and
- States agree to protect ecosystems of international watercourses (this principle is thought to be still emerging and does not yet rise to the same level of recognition as the three other basic rules).

3.2.1 Equitable and Reasonable Utilization

The most fundamental rule of international water law is equitable and reasonable utilization. In the *Gabčíkovo Case*, the International Court of Justice referred to the "basic right" of a state to "an equitable and reasonable sharing of the resources of an international watercourse."

This obligation requires each riparian state to ensure, in an ongoing manner, that its use is equitable and reasonable vis-à-vis other riparian states. What is equitable and reasonable in any given case may be determined only by taking into account all relevant factors and circumstances – both natural (e.g., climate and hydrography) and human-related (e.g., social and economic needs of the riparian states, effects of uses in one state on co-riparians, existing and potential uses). A logical corollary of the principle equitable and reasonable utilization is the proposition that sovereign states sharing an international drainage basin are obliged to equitably and reasonably share (downstream) benefits.[81]

Many countries sharing international watercourses have found that systematic communication may be effectively and efficiently accomplished through a joint management mechanism, such as a

commission. Absent such an organization or some other system to facilitate regular communication, it can be challenging at best to maintain a regime of utilization that is equitable vis-à-vis a state's co-riparians.

3.2.2 Prevention of Significant Harm

Another fundamental rule of international water law is that one state should not cause "significant harm" to another. This principle has been recognized in several important decisions in international cases. However, the application of the principle to international watercourses is highly controversial. While it is clear that one state may not intentionally cause harm to another through, for example, flooding or deliberate releases of toxic pollution, there is dispute about whether one state's use that reduces the available supply in another state is prohibited by this norm.

An alternative perspective is that the latter situation is governed first and foremost by the principle of equitable utilization: if harm is caused through a pattern of utilization that is otherwise equitable, it should not be prohibited. Otherwise, for example, a later-developing upstream state would be prevented from developing the portion of an international watercourse in its territory to the extent that such development impaired existing uses in downstream states. This view – that in respect of apportionment, the principle of equitable utilization prevails over that of harm prevention if the two come into conflict – would appear to be borne out by the UN Convention. Moreover, the International Court of Justice in the *Danube Case* referred only to the principle of equitable utilization when addressing the parties' respective rights to the uses and benefits of the river; the principle of prevention of harm figured only, although importantly, as a constraint on actions that would affect the environment of other states.

Regardless of its relationship to equitable utilization, the duty to prevent significant harm to other states is not absolute; it requires that a country exercise its best efforts to prevent harm. Whether a state has complied with this obligation will thus be, in part, a function of its capability to do so. Presumably, therefore, developing countries would generally have more leeway in this regard than developed countries by virtue of the greater capacity of the latter to prevent harm to co-riparians.

3.2.3 Prior and Timely Notification

Although it has been controversial in the past, today there is little doubt that customary international water law requires a state planning a new use to provide prior and timely notice to other states that the use might adversely affect them. This rule applies to all projects that have the potential to change the regime of the watercourse in a way that would be prejudicial to other riparian states.

In its classical conception, this principle applies to projects (including both new uses and changes in existing uses) that may have adverse impacts upon other states. More recently it has been recognized that adverse legal effects should also be covered by the rule. Thus, for example, a planned project in a downstream state might, when implemented, make it impossible for an upstream state to implement a project of its own without running the risk that its project would result in its overall utilization being considered inequitable. Because of this possibility, notification should be provided to co-riparian states

of all planned projects of significance, even if they do not have the potential for causing adverse factual effects in those states.

Once notification has been provided, the state in which the project is planned has a duty to consult with the potentially affected state or states. The states are expected to arrive at an equitable resolution of any differences between them with regard to the project.

This principle implies another key rule of international water law – *equitable participation.* Often an international watercourse will be used so intensively by co-riparian states that it will be necessary for them to take affirmative steps, such as construction or maintenance of works or some type of regulation, to make it possible for all riparian states to utilize the shared watercourse equitably. In the *Danube Case,* the International Court of Justice stressed the importance of equitable participation in the "common utilization of shared water resources for the achievement of the several objectives mentioned in the Treaty [in question]."

3.2.4 Ecosystem Protection

The UN Convention provides that states sharing an international watercourse have an obligation to protect and preserve the watercourse's ecosystems. While this obligation is not tied to harm to other states, it seems unlikely that a co-riparian would assert a violation unless it had suffered some harm. More specifically, states are required to prevent, reduce and control pollution that may cause significant harm to co-riparians. Like the obligation to prevent significant harm, this duty is one of due diligence.

3.3 Other Relevant International Law

3.3.1 Declaration on the Rights of Indigenous Peoples

The United Nations General Assembly adopted the *Declaration on the Rights of Indigenous Peoples* during its 61st session at UN Headquarters in New York City on 13 September 2007.[82] While it is not a legally binding instrument under international law, it does "represent the dynamic development of international legal norms and it reflects the commitment of the UN's member states to move in certain directions". The UN also describes the Declaration as setting "an important standard for the treatment of indigenous peoples that will undoubtedly be a significant tool towards eliminating human rights violations against the planet's 370 million indigenous peoples and assisting them in combating discrimination and marginalization."

Although Canada, the United States, Australia, and New Zealand initially voted against the Declaration, all have subsequently signed. However, in 2007 since the time of the vote during the United Nations General Assembly, and again upon signing, Canada placed on record its concerns with various provisions of the Declaration, including provisions dealing with lands, territories and resources; free, prior and informed consent when used as a veto; self-government without recognition of the importance of negotiations; intellectual property; military issues; and the need to achieve an appropriate balance between the rights and obligations of Indigenous peoples, States and third parties.

When it finally signed the Declaration in 2007, Canada described it as an "aspirational document that speaks to the individual and collective rights of Indigenous peoples, taking into account their specific cultural, social and economic circumstances" and a "non-legally binding document that does not reflect customary international law nor change Canadian laws".[83] However, the fact that the Declaration has managed to successfully showcase indigenous rights on the world stage is a very major accomplishment.

3.3.2 International Convention on Biological Diversity

Consistent with the interest and commitment of tribes and First Nations to integrate ecosystem function as a formal and equal objective of the CRT, the United Nations *Convention on Biological Diversity* (CBD), known informally as the Biodiversity Convention, is a multilateral international treaty. The Convention has three main objectives:

1. Conservation of biological diversity (or biodiversity);
2. Sustainable use of its components; and
3. Fair and equitable sharing of benefits arising from genetic resources.

The purpose of the CBD is to develop national strategies for the conservation and sustainable use of biological diversity. The Convention is also often seen as a key document regarding sustainable development.

The Convention was opened for signature at the United Nations Conference on Environment and Development, the "Earth Summit," in Rio de Janeiro (Brazil) on 5 June 1992. The Convention entered into force on 29 December 1993, 90 days after the 30th ratification, as stated in its article 36. It has now been ratified by 190 parties (189 countries and the European Community).

The Convention confirmed for the first time in international law that the conservation of biological diversity is "a common concern of humankind" and is an integral part of the development process. The agreement covers all ecosystems, species, and genetic resources and links traditional conservation efforts to the economic goal of using biological resources sustainably. The Convention sets principles for the fair and equitable sharing of the benefits arising from the use of genetic resources, notably those destined for commercial use. It also covers the rapidly expanding field of biotechnology through its Cartagena Protocol on Biosafety, addressing technology development and transfer, benefit-sharing and biosafety issues. Importantly, the Convention is legally binding; countries that join it ('Parties') are obliged to implement its provisions.

The Convention reminds decision-makers that natural resources are not infinite and sets out a philosophy of sustainable use. While past conservation efforts were aimed at protecting particular species and habitats, the Convention recognizes that ecosystems, species, and genes must be used for the benefit of humans. However, this should be done in a way and at a rate that does not lead to the long-term decline of biological diversity.

The convention also offers decision-makers guidance based on the precautionary approach that where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat. The Convention

acknowledges that substantial investments are required to conserve biological diversity. It argues, however, that conservation will bring us significant environmental, economic and social benefits in return.

3.4 The Role of Indigenous Peoples in the Governance of International Waters[84]

Within this broad framework of international law and international water law, the role of indigenous peoples in the governance of international waters is further defined by specific international and domestic legal norms. This section begins by explaining the international legal norms for participation in the international law arena, followed by a review of evolving practice within the United States and Canada.

3.4.1 International Law

The *Vienna Convention on the Law of Treaties* (VCLT), adopted in 1980, contains much of the international legal norms regarding international treaties. The VCLT defines an international "treaty" as a written agreement between "States." However, the VCLT is silent as to the capacity of other entities, such as tribes and First Nations, to participate in the process of negotiating and implementing international treaties.

The capacity to be a party to an agreement that is subject to international law is also closely tied to the question of the status of that party as a subject of international law. A sovereign "State" is clearly a subject of international law, and can endow others such as international organizations with the same capacity.

According to Bankes and Cosens, indigenous peoples at one time appear to have been regarded as having the capacity to conclude treaties governed by international law – e.g., peace and friendship treaties during the 18th Century.[85] However, the interests and legal standing of indigenous peoples in both international and domestic law appears to have been increasingly marginalized over the years, such that their treaty making capacity is now more an open question.[86]

The draft Nordic Saami Convention, however, provides an interesting precedent for how indigenous peoples were meaningfully involved in an international negotiation involving the governance of transboundary natural resources. The Saami peoples are indigenous to northern Finland, Norway, and Sweden as well as of the Kola Peninsula in the Russian Federation. Like other indigenous peoples around the globe, the Saami peoples have struggled for recognition of their interests and legal rights. Among other things, national borders drawn by these countries divided Saami traditional territories. Consequently, the Saami peoples have repeatedly called on the countries to mitigate or preferably remove the problems these borders create for the fellowship of the Saami peoples.

To advance their interests, the Saami peoples created the Saami Council in 1953 (it is considered one the oldest international indigenous organizations in the world, an umbrella organization with 15 members appointed by the major Saami organizations in Finland, Norway, Russia, and Sweden. In 1986, the Saami Council proposed that the four countries where their peoples lived should work jointly with the Saami people to develop a convention to clarify and affirm the Saami people's rights as an indigenous people and to address the problems associated with national borders.

In 1996, Finland, Norway, and Sweden appointed a committee to investigate the need for a Saami Convention. In 1998, the committee answered this question in the affirmative and recommended

that an Expert Group be appointed to prepare a draft Convention. A draft was prepared by an "Expert Group" comprised of state representatives from Norway, Sweden, Finland, and representatives of each of the three Saami parliaments. The draft Convention addresses a number of issues of concern to an indigenous peoples divided by international boundaries, including land and resource rights.

The states are currently engaged in negotiations to reach a final agreement on the text of the Convention. At this point the states have resolved that the Saami will not be a party to the ultimate agreement – apparently because of concerns that this may preclude the instrument's standing as a treaty under international law. However, the parties have also agreed that the Convention will not enter into force unless and until the three Saami Parliaments have also ratified.

Another approach to integrating the interests and rights of indigenous peoples into international agreements – albeit less than ideal -- is the recent Memorandum of Understanding (MOU) between British Columbia and Montana concerning the transboundary Flathead River (a sub-basin of the Columbia River).[87] The MOU provides a framework to resolve long-standing disagreements over land and water use in this shared watershed. For years, British Columbia has tried to develop coal and coal bed methane resources while the United States (the downstream state) has worked hard to protect the environmental quality of the Flathead River. Although the MOU is not a treaty, it acknowledges the interests of the Ktunaxa peoples in British Columbia and the Salish, Kootenai, and Pend d'Oreille peoples of the Flathead Nation in Montana. However, indigenous peoples were apparently not consulted during the negotiation of the MOU and were only invited to the signing ceremony as an afterthought.

As the conversation on participation unfolds within the international community and in the international Columbia Basin, it is critically important to distinguish between the involvement and participation of indigenous peoples as sovereign entities, as is the case of the tribes and First Nations in the Columbia Basin, and other "stakeholders" or "public" participants.[89] While no single set of rules about "participation" applies universally to multilateral environmental agreements (MEAs), the *UNECE Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters* (adopted in 1998)[88] may point the way towards standardization of participation rules in the domestic context, eventually paving the way for internationally agreed upon rules for participation.

Many modern MEAs apply rules of procedure based on those developed for the Rio Earth Summit that allow accredited nongovernmental organizations (NGOs) to play an active role at MEA meetings.[90] Participation is often limited to lobbying delegates of Parties in the corridors of MEA meetings and observing the meetings. Sometimes NGOs are given opportunities to address meetings. NGOs may also be excluded from some treaty meetings if a state party objects, and have restricted participation rights in plenary sessions of MEA meetings.

At least one additional international protocol encourages broad participation by stakeholders and sovereigns in the context of transboundary water management. *The Guide to Public Participation under Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes* stipulates that the public has both a right and an obligation to participate in the formulation and implementation of transboundary water management plans.[91] According to the *Guide,*

the public "should be involved in setting targets and target dates, in drawing up water-management plans and in the reporting exercise."[87] The *Guide* goes on to explain that "Public participation … can be hard to achieve due to the lack of awareness of the public's rights and of the public authorities' obligations, as well as the lack of national legal frameworks and cross-sectoral cooperation. There may also be political reluctance to engage the public, lack of access to information, and budgetary constraints to running public participation processes."[87]

While this guide – like the *Aarhus* Convention and *Rio Declaration* – focuses broadly on "public" participation, it captures and communicates several best practices to mobilize and engage citizens, stakeholders, and sovereigns. For example, the guide suggests that analyzing the river basin situation and collecting key information to identify the priority issues must be open to the public (and to stakeholders and sovereigns). It advises that authorities have the obligation not only to notify the public about the process, but also to inform them about how to participate. Questions of how and when to make information available are decisive for a successful outcome of the process. Time frames should be set in a flexible way, as the nature and complexity of the issue at stake might influence the time required for the process. The input and advice of the public must be evaluated carefully and reflected in a transparent and traceable way in the final decision. The guide concludes with a caution that without taking these and other best practices into account in the design and implementation of a public process to shape and implement a transboundary water management plan the process could be futile.[92]

Non-governmental organizations, sometimes referred to as civil society, are often increasingly ubiquitous at all stages throughout the formation, negotiation, implementation and enforcement of international agreements. In this respect, NGOs may help facilitate public participation by:

- Providing technical knowledge;
- Raising awareness;
- Assisting in communicating with non-parties;
- Promoting implementation;
- Gathering and transmitting information about possible non-compliance;
- Implementing relevant national policies;
- Pressuring governments to implement; and
- Participating in the decision-making process.

In summary there are no international legal barriers to including tribes and First Nations in the negotiation and implementation of international agreements. As "sovereigns" the tribes and First Nations in the international Columbia Basin would also seem to have an even more compelling case, to be included in the negotiation and implementation of international agreements.

3.4.2 United States Law

The United States Constitution divides foreign policy powers between the President and the Congress so that both share in the making of foreign policy. The executive and legislative branches each play important roles that are different but that often overlap.[93] The power of negotiation gives the executive branch a dominant role in making foreign policy through international agreements, but the President must take into account congressional opinion because agreements must often be approved by the Senate or Congress.[94] Congress also influences agreements by placing in legislation instructions and views concerning international agreements, indicating through various means what kind of agreement would be acceptable, and attaching reservations or other conditions when approving an agreement.

A few international agreements might be called "sole executive agreements" because the President considers that he has the authority to conclude them under his own powers and does not submit them to the Senate as treaties nor to Congress for approval. Examples are the Yalta Agreement of 1945, the Vietnam Peace Agreement of 1973, the Iranian Hostage Agreement of 1981, and the Afghanistan Settlement Agreement of April 14, 1988. Most international agreements, however, have some form of congressional participation. The Senate must approve treaties by a two-thirds majority. The bulk of executive agreements are either authorized by Congress prior to their conclusion or approved after their conclusion, and might be called congressional-executive agreements.

Testimony during hearings in 1961 before the U.S. Senate Committee on Foreign Relations indicates that the lead negotiating team on the Columbia River Treaty was composed of Secretary of State Ivan White, General Itschner of the U.S. Army Corps of Engineers, and Under Secretary Bennett of the U.S. Department of the Interior. In addition, members of the Senate Committee on Foreign Relations from the basin – including Senator Mansfield of Montana, Senator Church of Idaho and Senator Morse of Oregon -- participated in an advisory capacity.

In summary, consultation between the Executive branch and Congress is an important step in determining the appropriate process for ratification and implementation of an international treaty. By including Congressional representatives on the negotiation team or in an advisory role, the Executive branch can smooth the process of ratification. State participation in ratifying international treaties generally occurs through their Congressional delegation. For a treaty requiring the advice and consent of the Senate, the two-thirds majority requirement means that no more than 33 Senators may oppose any proposed treaty. However, informal customary practices of the U.S. Senate also allow one senator to place a hold on any bill, thus blocking it from reaching the Senate floor for a vote. A filibuster on the Senate floor can also block voting. Although recently subjected to greater transparency, these practices remain a strong tool for any state opposing a new or modified treaty that comes before Congress. To avoid opposition, the Congressional Research Service recommends "legislative-executive consultation prior to or during negotiations."[95]

As recognized sovereign entities, U.S. tribes represent a special group for consideration when discussing the participants in an international treaty negotiation. As a matter of law, the United States holds tribal resources (including land and water) in trust for tribes as a beneficiary. This does not obligate the United

States to bring tribes to the table in negotiations but obligates them as trustee to protect the interests of tribes.[96] In practice, tribal interests were not taken into account in the negotiation of Article VI of the Boundary Waters Treaty of 1909, which addressed the Milk River that runs through or borders three Indian Reservations, or in the negotiations of the 1964 Columbia River Treaty.[97]

3.4.3 Canadian Law

In Canada, the Supreme Court of Canada has acknowledged that the Crown (i.e., the federal and provincial governments) has a legal obligation to both "consult" and "accommodate" First Nations interests if a proposed government decision or conduct might adversely affect an aboriginal or treaty right or title.[98] According to Bankes and Cosens, this duty to consult and accommodate usually relates to future events and proposed decisions.[99] Therefore, there may be no present duty to consult and accommodate in relation to past harms created by the CRT or any pre- or post-treaty dams that are already operating.[100] The Supreme Court of Canada in the Rio Tinto decision has also said that in certain circumstances First Nations may attempt to seek compensation as a remedy.[101]

The federal Crown may also be compelled to consult First Nations with respect to positions to be taken in international negotiations according to the terms of certain land claim agreements.[102] For example, some modern land claim agreements require Canada to consult with appropriate First Nations relative to certain classes of international agreements and negotiations. For example:

- The Nisga'a Final Agreement to settle comprehensive land claims in traditional Nisga'a territory contains the following provisions in relation to fisheries and migratory birds: "Canada will consult with the Nisga'a Nation with respect to the formulation of Canada's positions in relation to international discussions or negotiations that may significantly affect fisheries resources referred to in this Agreement…Canada will consult with the Nisga'a Nation in respect of the formulation of Canada's positions relating to international agreements that may significantly affect migratory birds or their habitat within the Nass Area."

- The Tsawwassen Final Agreement to settle comprehensive land claims in traditional Tsawwassen territory contains a broad provision to the effect that "After the Effective Date, before consenting to be bound by a new International Treaty that would give rise to a new International Legal Obligation that may adversely affect a right of Tsawwassen First Nation under this Agreement, Canada will Consult with Tsawwassen First Nation in respect of the International Treaty, either separately or through a forum that Canada determines is appropriate."

The previously mentioned Tsilhqot'in decision may also lend support to the argument that it is necessary and/or desirable to meaningfully engage First Nations in certain international treaty negotiations "in a way that respects the fact that aboriginal title is a group interest that inheres in present and future generations … Incursions on aboriginal title cannot be justified if they would substantially deprive future generations of the benefit of the land."[103]

In summary, if First Nations interests are potentially impacted by an international treaty they should probably be consulted, otherwise the international treaty may be vulnerable to legal challenge. However,

what is the most effective process for consulting First Nations in an ongoing negotiation, which is itself, a dynamic process? Agreeing on a process with First Nations could provide more certainty over the process of treaty negotiation and assist the government in ensuring that there has been adequate consultation on treaty commitments.

3.5 Policy Reasons to Involve Tribes and First Nations

There are at least three compelling policy reasons strongly supporting the inclusion of tribes and First Nations in the negotiation and implementation of international agreements involving the international Columbia Basin.

First, as previously explained, there are various emerging international and domestic legal norms that encourage sovereign states to involve indigenous peoples in the negotiation and implementation of international agreements on transboundary waters and related resources. Many of these legal norms are currently mostly aspirational and hortatory. However, they encourage indigenous peoples to provide input and advice during the negotiation process, even though they may not yet explicitly mandate the involvement of indigenous peoples directly in decision-making processes.

Second, there is an increasing trend at the international level towards involvement by "non-state" actors in the negotiation (and implementation) of international agreements. In this context, non-state actors include, but are not limited to, (NGOs)[104], transnational corporations,[105] and indigenous peoples (e.g. tribes and First Nations).[106] This trend is reflected in the United Nations Economic Commission for Europe's *Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters,* often referred to as the Aarhus Convention.[107] As of March 2014, 47 parties have ratified the Convention, including the European Union. So far the ratifying states are in Europe and Central Asia. The EU has also begun applying Aarhus-type principles in its legislation, most notably the *Water Framework Directive* (Directive 2000/60/EC). The Aarhus Convention grants the public rights regarding access to information, public participation and access to justice, in governmental decision-making processes on matters concerning the local, national and transboundary environment and focuses on interactions between the public and authorities.

The trend to meaningfully involve indigenous peoples in international negotiations is also reflected in Principle 22 of the Rio Declaration, which states: "Indigenous peoples and their communities and other local communities have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development." Chapter 26.3 of Agenda 21 further encourages governments and Aboriginal peoples to work together to establish processes for empowering Aboriginal communities.

Third, there are several practical case study precedents where indigenous peoples have played a significant and meaningful role:

- The draft Nordic Saami Convention, discussed earlier in this report, reflects Article 37 of the *UN Declaration on the Rights of Indigenous Peoples*, which stipulates that indigenous peoples have

"the right to the recognition, observance and enforcement of treaties, agreements and other constructive arrangements concluded with States …"

- Another example of indigenous participation in negotiation at the international level has been through the Inuit Circumpolar Council (ICC) that has flourished and grown into a major international NGO representing approximately 150,000 Inuit of Alaska, Canada, Greenland, and Chukotka (Russia).[108] The organization holds Special Consultative Status at the United Nations.[109]

- The Pacific Salmon Treaty[110] and the Great Lakes Water Resources Compact and Agreement[111] are additional examples of where indigenous peoples have also been directly involved in negotiating transboundary water related agreements between the United States and Canada. For more information on these case studies, please see Appendix 6.9.

3.6 Pragmatic Reasons to Involve Tribes and First Nations

There are at least six compelling pragmatic reasons to involve tribes and First Nations in the negotiation and implementation of international agreements in the transboundary Columbia Basin.[112]

- First, such agreements are likely to be more effective when they reflect the interests and concerns that indigenous peopless have raised through the negotiating process. Formal participation in that process will place indigenous positions "on the table" and "on the record" at an early stage, increasing the likelihood that indigenous concerns will be incorporated into resulting norms. Indigenous peoples are also more likely to comply with and help implement any transboundary agreement to the degree that they are formally involved in shaping the agreement.

- Second, the direct participation of indigenous peoples in the negotiation process is likely to improve the substance of resulting agreements because the process will have dealt openly with indigenous peoples interests and concerns. An open and honest exchange of views among participants will enable negotiators to focus on central issues and increase the number of issues negotiated. In the case of the CRT, tribes and First Nations can, among other things, contribute scientific and technical knowledge to inform the CRT and on-the-ground management.

- Third, formal participation by indigenous peoples in negotiating transboundary agreements may help to ensure that the goals established by the resulting agreements are technologically, economically, and politically realistic. For example, since indigenous peoples regularly deal with water and related problems on-the-ground, they can contribute much of the scientific and practical information necessary to develop solutions for environmental problems. Indigenous peoples often possess a unique history and knowledge of ecosystem trends based on their long presence in the region.[113]

- Fourth, through formal participation, indigenous peoples are more likely to support any resulting norm(s). Also, because indigenous peoples are on-the-ground they are often in a very good

position to assist in implementation. The immediacy and the uncertain severity of global-scale environmental problems such as climate change underscore the importance of exploiting environmental awareness and formally involving indigenous peoples from the beginning of the negotiation of international agreements.

- Fifth, the formal participation of indigenous peoples in the negotiation of international agreements is likely to reduce, if not eliminate, the incentive of indigenous peoples to challenge the negotiation process and its outcomes. To the extent that indigenous peoples' inability to participate formally in the negotiation of international agreements that are or could be adverse to indigenous peoples' rights and culture, indigenous peoples might seek political and legal options to adress these problems.

- Sixth, to the extent that formal participation in the negotiation of international agreements gives indigenous peoples a stake in their success, such participation is also likely to increase the legitimacy of the international legal regime. Put another way, the direct participation of indigenous peoples in the international negotiation process is likely to enhance the willingness of indigenous peoples to comply with international agreements where their compliance is crucial to the success of such agreements. Indigenous peoples cooperation in areas such as information gathering also contributes to effective monitoring.

3.7 Conclusions and Options

The findings and analysis presented in this section suggest a number of conclusions and options to enhance the role of tribes and First Nations in any process to adjust and administer the CRT, as well as better contribute to governance of the international Columbia basin.

The role of tribes and First Nations in the negotiation and implementation of international agreements like the CRT is a function of both domestic and international law. International law is generally silent as to the capacity of non-state actors, including tribes and First Nations, to participate in the process of negotiating international treaties. However, in practice, international law provides sufficient flexibility to both Canada and the U.S. to involve tribes and First Nations in the process of negotiating and implementing international agreements for the conservation and management of international waters, such as the CRT.

In addition to the lack of any legal impediments, there is precedent to involve tribes and First Nations in successfully negotiating and implementing international agreements. Both Canada and the United States have in the past invited indigenous peoples to participate as members of international negotiation teams and to play a role in successfully implementing proposed international agreements.[114] There are also several compelling policy and pragmatic reasons to include tribes and First Nations in negotiating and implementing future governance arrangements for the international Columbia basin.

To advance their interests and aspirations with respect to the Columbia River Treaty, the Columbia Basin tribes and First Nations may want to pursue one or more of the following options, which are not mutually exclusive:

Option # 1 – Encourage the existing Entities on both sides of the border to adjust the CRT by integrating ecosystem-based function as an objective of the CRT equal to the current purposes of flood risk management and hydropower development.

This option echoes the recommendation by the U.S. sovereign review team, and one that is apparently not supported by the British Columbia CRT review team. To operationalize such an adjustment would require formulating a precise decision rule on how to resolve potential conflicts among and between flood risk management, hydropower, and ecosystem-based function. For example, the Entities could seek consensus [meaning unanimity], and if consensus does not emerge the Entities could use a special master with either binding or non-binding authority. Articulating some method for dispute resolution in the event that the participants cannot reach agreement is essential.

As an alternative, perhaps there is value in creating a separate new treaty to operationalize this objective in a way that requires the existing hydropower/flood treaty to conform to ecosystem function. One of the problems of simply integrating ecosystem function into the existing treaty is that the existing treaty has developed as basically a technical treaty and does not really lend itself to broader, less well defined purposes that require ongoing political input to resolve and implement. Even if the existing treaty is "adjusted," implementation will likely be dictated by the existing culture of narrow, technical implementation.

In either case, the *Pacific Salmon Commission* provides one example on how to design such a process. The Commission is a sixteen-person body with four Commissioners and four alternates each from the United States and Canada, representing the interests of commercial and recreational fisheries as well as federal, state, and tribal governments. Each country has one vote on the Commission, meaning that tribes and First Nations must work with other participants in their respective countries to present a common plan of action. The decisions of the Commissioners are aided by the efforts of the panels and committees.

One possible concern with this option on the Canadian side is a perception that that the United States might try to use this strategy to escape its international legal obligation to adequately and properly share (downstream) benefits by compensating Canada for operating dams in Canada to the benefit of the USA and the detriment of Canada.

Option # 2 -- Promote and support a model of "shared" governance of the international Columbia Basin led by sovereign entities, including tribes and First Nations.

In the United States, the President has exclusive authority to appoint a team to negotiate an international treaty. Nothing prohibits the President from including state, community, or tribal representatives on an international negotiating team. In the United States, the Senate also has the power to appoint "observers" to an international treaty negotiation.

In Canada, the federal government also has the discretion to include First Nations in an international negotiating team as well as the duty to consult with, and accommodate, First Nations interests in various circumstances. The federal Crown may also be compelled to consult with and accommodate First Nations with respect to positions to be taken in certain international negotiations.

One way to begin to identify, promote, and support a model of "shared" governance among sovereigns on the U.S. side might be to adjust Executive Order 11177, which defines who is a the U.S. Entity for purposes of the CRT, to include tribal representation, The argument that Columbia Basin tribes should be part of the U.S. Entity team is based on the sovereign status of tribes and also recognizes the wealth of knowledge and expertise they bring on ecosystem-based function and cultural values.

A parallel action on the Canadian side would be to include First Nations representation as part of the Canadian (British Columbia) Entity.[115]

Some issues that would have to be addressed with this option include (1) how the tribes and First Nations would choose their representatives; (2) how the expanded entities in both Canada and the USA would deal with tradeoffs and make decisions both within and between the two countries; and (3) how the expanded Entities in both Canada and the USA would be financed and administered.

Option # 3 – Encourage the Entities to create an advisory committee on ecosystem function to provide ongoing input and advice to the Permanent Engineering Board, a bilateral group responsible for operational management of the CRT.

The intent of this option is to ensure that tribes and First Nations are sufficiently represented on this advisory committee given their unique knowledge and interest on this topic. Several examples from other transboundary watersheds could inform the implementation of this option.

For example, in the *International Commission for the Protection of the Danube River* (ICPDR), mechanisms for including non-state actors are considered to be relatively advanced.[116] Various stakeholders from all groups of society (ranging from sport fishermen to environmental groups and research institutions to businesses) can register as observers to the ICPDR and then participate in the ICPDR's governance meetings. In these meetings, they can raise their issues and concerns directly in front of the Heads of Mission of the ICPDR member countries who might then take them into consideration all of which is a rather rare form of public participation in transboundary water resources governance. Also, the ICPDR have a number of highly regarded communications and awareness building products and engage actively with the private sector as well as with municipalities along the river.

A similar, albeit less advanced, mechanism exists in the *Lake Victoria Fisheries Organization* (LVFO) where NGOs are allowed to join two of the LVFO's governance body meetings (Policy Steering Committee and Executive Committee) upon invitation by these bodies. Since this RBO works on fisheries management mainly, it addresses the issues of fisheries communities in great detail. It does not apparently address indigenous communities issues in any specific, distinct way.

Another example is the *Missouri River Recovery Implementation Committee* (MRRIC), which serves as a basin-wide collaborative forum to develop a shared vision and comprehensive plan for Missouri River

recovery. The Committee makes recommendations to the U.S. Army Corps of Engineers on (1) a study of the Missouri River and its tributaries known as the Missouri River Ecosystem Recovery Plan; and (2) activities in the existing Missouri River recovery and mitigation program. The Secretary of the Army created MRRIC in 2008, pursuant to congressional authorization as set forth in the Water Resources Development Act of 2007. The Assistant Secretary of the Army for Civil Works appointed MRRIC members during fall 2008 and the first Committee meeting was held in 2008. The Missouri River Basin is home to 28 American Indian Tribes. Over 20 of the tribes participate actively on MRRIC. The Missouri River drains one-sixth of the United States, encompassing over 529,350 square miles. The river flows 2,341 miles through ten states and two Canadian provinces.

These options are designed to enhance the role of tribes and First Nations in adjusting and implementing the CRT. However, as explained more fully in the next section, the implementation and administration of the CRT should be placed in the larger context of transboundary governance within the international Columbia Basin.

4.0 Improving Governance in the International Columbia Basin[117]

To inform the process of exploring options to improve the governance of water and related resources in the international Columbia Basin, the Steering Committee and researchers agreed to critically review lessons learned from throughout the world. In March 2014, the participants agreed that case studies should ideally be selected according to the following criteria:

- Is the case study "transboundary"? That is, does the case study include water and/or natural resource governance arrangements that cross international, national, and sub-national boundaries?
- Does the case study involve indigenous peoples[118] in a meaningful way, either through:
    - Providing input and advice during the negotiation and development of the international governance arrangement? or
    - Participating in making decisions and playing an active role in implementation, management, and ongoing governance?
- Do indigenous and/or local peoples play a leadership role?
- Does the case study promote a comprehensive, holistic, ecosystem-based approach to land and water management?
- Can the models and lessons be adapted and/or integrated within the legal and institutional framework of the international Columbia Basin?

Given that Section 3.0 reviewed the key trends and arguments that emerge from international policy and practice to involve indigenous peoples in *negotiating* transboundary agreements, this section highlights lessons on *implementing agreements* and *governing* transboundary waters. In the search for case studies, the Steering Committee asked the researchers to include good models as well as examples that may be less than ideal but offer important lessons. The participants also agreed that it is instructive to examine the full range of topics relevant to the transboundary water governance, given the interest in exploring options to improve the governance of water and related resources in the basin. To this end, Appendix 6.10 presents (1) key elements of transboundary water governance; (2) a table that summarizes the findings on each variable by case study; and (3) a short vignette on each case study.

4.1 Lessons Learned from International Case Studies

After consulting with experts around the world, and keeping in mind that the primary focus of this report is the role of indigenous peoples in transboundary water governance, a total of nineteen case studies were critically reviewed with regard to 10 key elements.[119] Five case studies are located in the Pacific Northwest, another five case studies are located throughout North America, and the other nine case studies are located in Europe, Africa, Southeast Asia, and South America.

The key findings and lessons from the case studies are as follows:

- *Legal Basis* – The legal basis of the case studies ranges from formal treaties among two or more nations -- to less formal agreements, accords, conventions, and protocols -- to advisory committees and non-governmental organizations. The variety of legal frameworks suggests that "form follows function," as well as political will. In other words, a less formal agreement or protocol may often be used because the political and other costs associated with more formal treaties and institutional arrangements is higher than the perceived benefits.

- *Purpose and Function* – The purpose and function of the cases studies ranges from very narrow interests (e.g., the Pacific Salmon Commission's focus on conserving and allocating salmon) to extremely broad mandates (e.g., the Lake Tanganyika Authority's focus on protecting biodiversity and promoting sustainable development). Many of the case studies are focused exclusively on water quantity and/or quality, while only a few seem to have a broader portfolio that includes water, other natural resources, and sustainable development. Very few of the case studies embrace the unique mix of interests and objectives relevant to the Columbia Basin (i.e., ecological function, flood protection, and hydropower production – among other values).

  In addition to the variation in substantive focus, the case studies also vary tremendously in terms of what they are designed to do. The objectives of most of the case studies seem to focus primarily on:

  - Exchanging information and sharing data[120] *(e.g., International Commission for the Protection of Lake Constance);*

  - Coordinating actions *(e.g., the Mackenzie River Basin Board; Lake Victoria Basin Commission; Mekong River Basin Commission; and/or International Commission for the Protection of the Danube River);*

  - Fostering joint initiatives *(e.g., Nile Basin Initiative; Organization of the Amazon Cooperation Treaty);*

  - Advising formal decision-making bodies *(e.g., Missouri River Recovery Implementation Committee).*

  Very few case studies seem to be defined by shared governance among sovereign entities (i.e., sharing power and decision-making authority among nations, states, and indigenous peoples); the most instructive examples seem to be the *Pacific Salmon Commission* and the *Great Lakes Water Quality Agreement.*

- *Implementation Arrangement* – The primary institutional and organizational arrangement to implement the transboundary agreements reflected in these case studies seems to be a formal board or commission that is appointed by federal or national governments. While the implementing arrangements of the more formal transboundary treaties involve only federal or national government officials, other case studies provide opportunities for indigenous peoples (e.g., MacKenzie River Basin Board, Great Lakes Water Quality Agreement, and Missouri River Recovery Implementation Committee), stakeholders (e.g., Great Lakes Water Quality Agreement), and other interested parties (e.g., Skagit Watershed Council) to actively participate in ongoing governance.

Most of the implementation arrangements include some type of working groups, technical committees, and/or expert panels.

- *Role of Indigenous Peoples* – Most of the cases studied appear to limit the role of indigenous peoples to, at best, providing input and advice -- i.e., they are not involved in decision-making and implementation except in a few limited cases (*Pacific Salmon Commission, Great Lakes Water Quality Agreement*). According to one recent study,[121] there is little direct inclusion of indigenous communities in river basin organizations (RBO's) because individual member countries, considering themselves as sovereign states, reserve the right to represent their respective populations (including indigenous peoples) in their intergovernmental negotiations.

  Even RBOs that implement projects with relatively significant impacts on indigenous peoples, such as the Zambezi River Authority, do not have a great record of involving indigenous communities. Likewise, in large hydropower projects in Latin America (e.g., the Itaipu), the relevant RBO only marginally involved indigenous communities, apparently because the respective countries considered this a national issue. Also, RBOs are designed to address transboundary issues of water resources management and not with local level water resources management. RBO member states' governments often do not want their RBO to interfere with local management issues.

- *Stakeholder Participation, Dispute Resolution, and Joint Fact Finding* – Most of the case studies have explicit provisions to involve stakeholders, resolve disputes, and engage in joint fact finding. According to a recent study,[122] public participation (including citizens and stakeholders) appears to be historically relatively weak in transboundary RBOs. For the most part, RBOs function as intergovernmental organizations that bring together riparian states to a river basin at the governmental level. Public participation is, therefore, most often understood as information sharing only. Moreover, out of 119 RBOs, only 44 have any public participation mechanisms defined at all – most of them being rather general in nature and not addressing specific interest groups.

  As the conversation on alternative models of governance moves forward in the Columbia Basin, it would be instructive to dig a little deeper and learn more about some of these mechanisms. In addition, the *Guide to Public Participation under the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes* (United Nations Economic Commission for Europe, 2013) provides some useful guidance on designing and carrying out effective stakeholder participation.

- *Adaptive Management*[123] – Although our preliminary research yielded very little information on the role and practical application of (active) adaptive management in the case studies under consideration, the recently released report *Protocols for Adaptive Water Governance: The Future of the Columbia River Treaty*[124] provides detailed information on several selected case studies.

4.2 Preliminary Options for Future Governance of the Columbia Basin

The lessons from the international case studies suggest the following options on the issue of governing the use of transboundary land and water in the Columbia Basin. These options are not mutually exclusive. Rather, they could be pursued simultaneously and/or sequentially. From a practical perspective, it also makes sense to think of these alternative institutional arrangements as evolutionary and adaptive. Please note that the options presented below are numbered for ease of reference and do not suggest prioritization.

Option # 1 – Conduct a more complete "gap analysis" to clarify what type of governance functions are most needed in the Columbia Basin. Build on the preliminary inventory and analysis of governance arrangements presented in section 1.2 of this report. While some people seem to be most interested in opportunities to improve transboundary governance, it is important to clarify the full range of governance arrangements operating at different spatial scales within the basin, from local to statewide to regional to transboundary. To improve the governance of water and related resources it is essential to understand (a) who is doing what? (b) where are there opportunities to share, leverage, and work together? and (c) where are there gaps that might need to be filled?

One of the outcomes of this option is to clarify what problems and issues can be most effectively addressed at what spatial level. Consistent with the principle of subsidiarity[125], some problems and issues will be best addressed at the local level, while others will need to be addressed at state and regional levels. Finally, there are likely to be some problems and issues that can only be addressed at the transboundary scale. The gap analysis should provide some insight on the existing "nested" system of governance, and help identify gaps that need to be filled at different spatial scales.

Option # 2 – Create an independent, ongoing transboundary "forum" to inform, invigorate, and supplement the more formal governing arrangements within the Columbia Basin, and to promote a "whole basin" approach to governance[126]. While tribes and First Nations in the Columbia Basin may pursue one or more options to engage in the formal process of "adjusting" and implementing the CRT, they seem to be increasingly interested in helping catalyze, convene, coordinate, and/or lead an inclusive, robust, meaningful, and effective transboundary forum.[127] The idea here is not to duplicate other forums or mechanisms for learning, building agreement, and solving problems, but to recognize and address a largely obvious "gap in governance" – the lack of an ongoing, inclusive forum for transboundary dialogue, learning, coordination, and problem-solving.

Rather than compete with other governance arrangements, this forum could take the form of "Track II diplomacy," which refers to non-governmental, informal, and unofficial contacts and activities between private citizens or groups of individuals, sometimes called 'non-state actors.' Track II diplomacy contrasts with Track I diplomacy, which can be defined as official, governmental diplomacy that occurs inside official government channels. Track II diplomacy is not a substitute for Track I diplomacy. Rather, Track II diplomacy assists official actors to manage and resolve conflicts by developing options and exploring possible solutions derived from inclusive, informed, and deliberative dialogue – which is not constrained by the expectations and requirements of formal negotiation via Track I diplomacy.

Following the axiom that "form follows function," the objective of such a forum could be to provide a "whole basin" approach to the international Columbia Basin, including a focus on land, water, and related

issues throughout the entire transboundary watershed. The forum would not be focused exclusively on the CRT, but could be designed in such a way as to inform, invigorate, and otherwise monitor the operations of the CRT relative to other interests and values within the basin. The forum could also create mechanisms to:

- Facilitate an ongoing transboundary dialogue among citizens, stakeholders, scientists, decision-makers, and others within the international basin to exchange information, foster mutual learning, and promote a "whole basin" approach to governance;
- Provide, over time, a homegrown platform to resolve conflict related to competing interests;
- Explore needs and opportunities to coordinate existing transboundary cooperative arrangements, based in part on the "gap analysis" explained above;
- Promote and support a "youth caucus," a key initiative that emerged from the 2014 Columbia River Basin Conference;
- Encourage local governments and watershed stewardship groups to network and explore common interests and concerns. During the 2014 Columbia River Basin Conference, most participants recognized the core role that these types of organizations and associations play in governing land, water, and other natural resources at a very local level.

Based on these and/or similar functions, the proposed transboundary forum would be (1) collaborative -- i.e., inclusive of all interests and viewpoints; (2) nested -- i.e., include representatives working at different spatial scales beginning with (a) the nearly 100 or more local watershed stewardship groups (b) states and provinces; (c) regional organizations, such as the Columbia Basin Trust and the Northwest Power and Conservation Council; (d) tribes and First Nations; (e) Treaty Entities; and (f) existing transboundary governance arrangements; and (3) adaptive – i.e., the objectives, strategies, and governance arrangement for the transboundary forum itself would change over time to accommodate new ideas, information, interests, and so on.

One of the key ingredients to create and sustain this type of forum is to harness "backbone support" – i.e., one or more people that have the appropriate vision, passion, and capacity to mobilize and engage the right people, provide facilitative leadership, conduct policy and other research, and otherwise have the legitimacy and credibility to bring people together within the transboundary river basin.[128] The Universities Consortium on Columbia River Governance may be one option to consider in this capacity.

As implied above, other key considerations in designing any type of transboundary water forum are presented in Appendix 6.10.[129]

Option # 3 -- Create an exclusive transboundary forum led by and for tribes and First Nations. The Yukon River Inter-Tribal Watershed Council, for example, is widely recognized as a model of self-determination, governance, and collaboration because of the leadership role asserted by tribes and First Nations and their development of a well-functioning organization with a clear mission. The Yukon River and its tributaries drain approximately 832,700 km^2 (321,700 mi^2) of British Columbia, Yukon Territory, and Alaska. This transboundary river is home to one of the largest salmon fisheries in the world and was

the primary means of transportation prior to the construction of the Klondike Highway. The legacy of pollution in the watershed, including through gold mining, military activities, and dumping, led to a significant decline in water quality.

While many government agencies are charged with caring for the river, no agency or organization was coordinating restoration efforts. Previous attempts to build a "western-style" committee fell apart. The YRITWC is unique because First Nations and tribal governments have had a leadership role from the very beginning to the ongoing implementation. It provides a forum for both collaboration and for tribal governments to express their sovereignty.

This option may serve the immediate needs and interests of tribes and First Nations in the Columbia Basin, but it may ultimately fall short of their interest, and the interest of many other people in the basin, to promote and support "whole basin" governance. That said, there may be value for tribes and First Nations to do both – i.e., to create a venue like this where they can meet, explore, and advance their common interests, and to provide the catalytic, facilitative leadership for a more inclusive Track II transboundary forum (i.e., Option # 2 above).

Option # 4 -- Encourage the International Joint Commission (IJC) to create an international watershed board for the transboundary Columbia River Basin. The theory of international watershed boards under the auspices of the IJC is to mobilize and engage the two federal governments, the relevant states and provinces, tribes and First Nations, and local interests to jointly create a forum to address watershed-based issues and concerns more from the ground-up rather than the top-down. For example, the St. Croix Watershed Board, the first international watershed board created by the IJC, includes representatives from the two federal governments and one university professor. It is not clear how, if at all, indigenous peoples and other stakeholders have been involved in shaping and implementing any program of work.

Depending on the effectiveness of these boards and the political willingness to move in this direction, it might be possible to envision an International Columbia River Watershed Board with comprehensive tribal and First Nations participation. Among other things, this option would appear to require overcoming a deep and apparent long-standing bias against the IJC by a succession of British Columbia governments of different political persuasions.

While this option may have considerable merit in theory, it effectively defers any future governance arrangement in the Columbia Basin to the federal governments in Canada and the United States. In this respect, it potentially limits the ability of basin residents to shape a genuinely homegrown governance arrangement that is tailored to their particular needs and interests.

4.3 Conclusions

Based on a critical review of 19 international case studies on transboundary water governance, certain examples in the Pacific Northwest, particularly the Pacific Salmon Treaty and Commission, are as progressive as any in the world in terms of sharing power and authority with indigenous peoples. Regrettably, very few of the case studies embrace the multiple interests and objectives relevant to the

Columbia Basin (i.e., ecological function, flood protection, and hydropower production – among other values). Most of the international examples appear to focus on a much narrower mix of objectives.

The review of international case studies also suggests that the role of indigenous peoples in transboundary governance arrangements is often limited to providing "input and advice" to the formal, official decision-makers. In some cases, river basin organizations (RBOs) have established ongoing mechanisms for indigenous peoples to provide such input and advice. More often, the mechanisms for indigenous peoples (and others) to participate are quite general in nature and focus largely on "informing and educating" people about what the river basin organization is doing – they do not actively "seek input and advice" nor do they provide opportunities to "build agreement" among indigenous peoples and/or other stakeholders.

Given the interests and aspirations of tribes, First Nations, and others to promote and support a "whole basin" approach to governing water and related resources in the basin, the following options might be considered to improve governance in the international Columbia Basin:

- Conduct a more complete "gap analysis" to clarify what type of governance functions are most needed in the Columbia Basin;
- Create an independent, state-of-the-art transboundary forum to inform, invigorate, and supplement the formal governing arrangements within the Columbia Basin;
- Create an exclusive transboundary forum led by and for tribes and First Nations; and
- Encourage the International Joint Commission (IJC) to create an international watershed board for the transboundary Columbia River basin.

These options are not mutually exclusive. Rather, they could be pursued simultaneously and/or sequentially. From a practical perspective, it may also makes sense to think of these alternative institutional arrangementsas evolutionary, adaptive, and supplemental to existing governance arrangements.

5.0 Conclusions

> "It ought to be remembered that there is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things. Because the innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new. This coolness arises partly from fear of the opponents, who have the laws on their side, and partly from the incredulity of men, who do not readily believe in new things until they have had a long experience of them." [130]

The CRT is widely seen all over the world as a model of transboundary water governance. It not only moved from allocating water to sharing a broader menu of benefits – in and of itself a significant paradigm shift – but also has been very successful in terms of achieving its two primary objectives – flood risk management and hydropower generation. However, many individuals and organizations are now saying that the CRT should be adjusted by including ecosystem-based function as a third (and equal) objective; involving tribes and First Nations as sovereigns in the ongoing negotiation, decision-making, and administration of the CRT; providing more regular and consistent opportunities for public participation; and using active adaptive management to continuously revise and update the operation of the dams and reservoirs that are the focus of the CRT.

Aside from the CRT, the governance of land and water use in the international Basin is complicated. It involves multiple decision-makers and stakeholders at many different spatial scales. From local watershed groups and states/provinces to regional associations (e.g., Northwest Power and Conservation Council and Columbia Basin Trust) and a wide variety of ad hoc transboundary cooperative arrangements, the CRT is best viewed as one element among many in this nested system of governance.

As people who care about this transboundary neighborhood consider how to improve governing the use of water and related resources, several over-arching principles should be kept in mind:

- *Let form follow function.* In other words, it is best to begin by identifying what needs and interests are not being addressed by existing institutional arrangements and to then explore opportunities to design an appropriate forum to fill those unique objectives or functions. People need a compelling reason to participate in something beyond their existing institutional home. Any new forum must add value and help them achieve their interests and aspirations in a way that not participating does not allow them to achieve such ends.

- *Seek a homegrown solution.* As this report and other literature demonstrates, there is a wide range of institutional designs to govern the use of transboundary waters. Given the unique needs and interests of each basin, there is no single model for success. The most appropriate, effective, and sustainable institutional architecture for the international Columbia Basin will be homegrown, designed by and for the people that live, work, and play in the basin.

- *Integrate formal and informal mechanisms for governance.* While one governance model does not fit all situations, neither can governing the use of water and related resources in the international Columbia Basin be achieved by a single governing arrangement. Different governance

arrangements are designed to achieve different ends. Some are more formal (e.g., the CRT) while others are more informal (e.g., local watershed stewardship groups). Each arrangement has a unique place in the overall fabric of governing a transboundary river basin. The challenge and opportunity is to connect, coordinate, and leverage assets by working together on issues of common interest.

The tribes and First Nations in the international Columbia Basin occupy a unique position in the past, present, and future governance of the basin. Building on their historic identity to the region, along with their knowledge and expertise about water and related resources, the tribes and First Nations are in an excellent position to catalyze a process and provide the facilitative leadership necessary to mobilize and engage the right people with the best available information to shape livable communities, vibrant economies, and healthy landscapes throughout the basin.

Appendix 6.1
The Columbia River Basin: A Sense of the Future

Memorandum

TO: People Interested in the Future of the Columbia River Basin

FROM: Universities Consortium on Columbia River Governance

SUBJECT: The Columbia River: A Sense of the Future

DATE: January 16, 2013

On behalf of the participants in four transboundary symposia focused on the future of the Columbia River Treaty, we are honored to present the attached document – The Columbia River Basin: A Sense of the Future.

Consistent with the standard practice in international diplomacy of preparing a "sense of the meeting," the purpose of the attached document is to capture and present "a sense of the future" of the Columbia River Basin. This document does not represent a consensus within the basin; rather, it is intended to present the overall sense of interests and concerns with regard to the future of the transboundary river basin as captured by the Universities Consortium on Columbia River Governance during the four annual symposium and recent research initiatives.

The Universities Consortium on Columbia River Governance was created in 2008 by universities in the basin committed to facilitating transboundary dialogue, providing decision-relevant information by connecting university research to the needs and interests of constituents in the basin, and preparing future leaders by engaging students in research, education, and policy dialogues. Examples of recent research inquiries include an exploration of the legal mechanisms to modify the Columbia River Treaty131, a situation assessment on revising and updating the Columbia River Treaty[132], a report on the scenario development for the Columbia River Treaty review,[133] research on international water law and principles to sharing downstream benefits,[134] and a book, released December 2012, on transboundary river governance in the face of uncertainty.[135]

Beginning in 2009, the Universities Consortium has convened an annual symposium to inform and facilitate transboundary dialogue on the Columbia River Treaty and other issues related to the future of the basin. While these annual symposiums are unofficial and separate from the formal Columbia River Treaty review processes, they provide a unique opportunity for people and organizations from many walks of life to exchange information, build relationships, and explore alternative futures in a nonpartisan, transboundary forum.

The document -- The Columbia River: A Sense of the Future – is being distributed to members of the Columbia Basin Network - a mailing list of individuals and organizations who have an interest in the future of the Columbia River Treaty and the on-going management of the Columbia River Basin. We encourage you to forward this memorandum and The Columbia River: A Sense of the Future to colleagues and officials.

For more information on the Universities Consortium, including materials associated with each of the past symposia and research initiatives, please go to www.columbiarivergovernance.org. Please let us know how the Universities Consortium can continue to provide a basin-wide, nonpartisan forum.

Sincerely,

Michael Barber, Washington State University

Barbara Cosens, University of Idaho

Matthew McKinney, The University of Montana

Richard Paisley, University of British Columbia

Lynette de Silva, Oregon State University

Aaron Wolf, Oregon State University

Molly Stenovec, Coordinator, Universities Consortium on Columbia River Governance

The Columbia River Basin: A Sense of the Future

Origin and Purpose

- Consistent with the standard practice in international diplomacy of preparing a "sense of the meeting," the purpose of this document is to capture and present "a sense of the future" of the Columbia River Basin.
- Since 2009, the Universities Consortium on Columbia River Governance has convened an annual symposium on the Columbia River Treaty (CRT) and other issues related to the ongoing management of the transboundary river basin. For more information on the consortium, including materials associated with each of the past symposia, please go to *www.columbiarivergovernance.org.*
- This document does not represent a consensus opinion among the participants; it is intended to capture the overall sense of the four annual symposia as captured by the Universities Consortium on Columbia River Governance.
- Although the annual symposia were initially organized around the ongoing review of the CRT, the dialogue and deliberation at the symposia have increasingly expanded beyond the CRT per se to encompass broader issues of management and governance.

Governance

- Treaty Review and Reconsideration

    1. The ongoing review of the Columbia River Treaty provides an opportunity to review all aspects of Columbia River governance.
    2. Existing law in Canada and the United States provides sufficient flexibility to allow sovereigns and other stakeholders to not only review the terms and conditions of the CRT, but also to explore and seek agreement on alternative institutional arrangements for the future of Columbia River governance.
    3. Promote and enable an inclusive process that focuses on the entire Columbia River Basin.

        a. Encourage sovereigns to inform and educate citizens throughout the transboundary river basin on the status and future of the CRT and related issues, and to provide meaningful opportunities to engage citizens and receive their input and advice.

        b. Continue to encourage the Universities Consortium to catalyze, convene, and coordinate transboundary dialogue and research, and to track and integrate input from other parallel processes.

        c. Provide time to allow transboundary dialogue to occur; and convene more frequent forums to facilitate informed transboundary dialogue.

    4. Acknowledge and affirm aboriginal interests, needs, and rights in the Columbia River Basin. Respect the sovereignty of First Nations and Tribes in all aspects of CRT review and

reconsideration, as well as ongoing management and governance of the transboundary river basin.

5. Consider whether CRT is the most effective institutional arrangement to achieve long-term basin-wide interests, or whether some other type of transboundary platform might provide a more desirable framework.

    a. Employ a "whole basin" perspective in planning and management of the river basin, including but not limited to flood control, hydropower, ecosystem functions, cultural values and traditions, and socio-economic interests (e.g., industry, agriculture, and recreation).

    b. Develop a process of joint fact-finding and mutual learning for the entire basin.

    c. Explore authorization of a temporary period for experimentation on changes in governance and river operation.

- Ongoing Management and Implementation

    1. Create and enable a participatory, informed, and transparent process that engages all basin constituencies.

    2. Provide meaningful opportunities for public information and education, as well as input and advice during the process of developing operating plans and other management decisions.

    3. Expand operational decision-making and management to include broader sovereign representation, particularly Tribes and First Nations.

    4. Create an interactive system of dialogue that allows decision-makers to explain how decisions are consistent (or at least not inconsistent) with the multiple needs and interests of constituents throughout the basin.

    5. Establish a permanent "ecosystem function" technical team with the goal of having science and traditional ecological knowledge guide the policy.

    6. Integrate mechanisms for proactive adaptive management and flexibility for mitigating climate change. Establish metrics for measuring success.

    7. Include an explicit mechanism for conflict resolution.

Benefits and Obligations

- Hydropower

    1. Revise the formula for U.S./Canada benefit sharing to reflect actual river operation.

    2. Facilitate a dialogue among basin communities (both upstream and downstream), First Nations, and Tribes on strategies to allocate benefits (including, but not limited to hydropower) as well as the costs, such as exporting cheap power out of the basin.

- Flood Risk Management

    1. Explore feasibility of alternative means to diversify flood risk management, including, but not limited to long-term planning to reconnect river to the floodplain and use of aquifer recharge.

- Ecosystem Functions
    1. Assess the value of ecosystem functions throughout the system; seek to improve ecosystem values and functions, and integrate them into the CRT on par with other objectives.
    2. Promote sustainable solutions to Seven Generations.
    3. Explore the reintroduction of salmon in the Upper Columbia River Basin, movement toward a more natural hydrograph, increased fish passage, and non-Treaty dam removal.
- Reconciliation
    1. Acknowledge and address harms to cultural resources and ecosystem function.
    2. Explore all potential sources of revenue, including hydropower, to address these harms

Universities Consortium on Columbia River Governance

- The Universities Consortium on Columbia River Governance:
    - Convenes and facilitates a nonpartisan forum for transboundary dialogue on Columbia River governance and the Columbia River Treaty;
    - Provides decision-relevant information by connecting university research to the needs and interests of constituents within the basin; and
    - Inspires and prepares future leaders by engaging students in research, education, and policy dialogues.
- For more information on the Universities Consortium, go to *www.columbiarivergovernance.org.*

Appendix 6.2
Letters of Commitment From First Nations and Tribes

Memorandum

TO: Tribes and First Nations in the Columbia River Basin

FROM: Matthew McKinney, The University of Montana
Richard Paisley, University of British Columbia

SUBJECT: Alternative Governance Arrangements for the Columbia River Basin

DATE: April 11, 2013

Building on the successful symposium we convened with you in October 2012 in Polson, Montana, the *Universities Consortium on Columbia River Governance* would like to explore the possibility of working with you to examine alternative governance arrangements for the Columbia River Basin.

One of the key lessons learned and reinforced during the 2012 symposium is that it may be necessary for the core objectives of the Columbia River Treaty to change one way or the other to better integrate such matters as the value of ecosystem-based functions and the rights and responsibilities of indigenous people in the basin.

As you know, various sovereigns in the United States and Canada – including tribes, First Nations, states, the Province and federal agencies -- are now in the process of official reviews of the Columbia River Treaty and are expected to make recommendations to the respective federal governments late in 2013. However, these ongoing reviews are not yet addressing issues related to the future governance and management of the Columbia River Basin.

Given our knowledge of governance arrangements for transboundary waters around the world, we would like to draw on that expertise and work with you to examine alternative governance arrangements for the future of the Columbia River Basin. Our vision is that such a project would inform and invigorate your thinking *and* the thinking of other key decision-makers and stakeholders in the basin about the best arrangement to govern water and related natural resources in the basin. This applied research project could examine regional examples such as the Pacific Salmon Treaty and Commission, as well as other examples from around the world that are relevant to the Columbia River Basin.

If you are interested in this proposal, we would very much like to work with you to develop:

- The scope and outcomes of such an initiative, including but not limited to:
    - Research questions – e.g., options to share decision-making, resolve disputes, inform and engage citizens, finance participation and governance, and participate without jeopardizing tribal treaty and First Nation aboriginal rights;
    - Workshops to review the findings of research and to refine and sharpen options and conclusions; and
    - Strategies to build the capacity of indigenous people in the basin to participate in the future governance of the basin.
- How best to engage all of the tribes and First Nations in the basin;
- The timing and schedule of research, workshops, and other capacity building and implementation activities;
- Opportunities to engage future tribal and First Nation leaders – i.e., college students and mid-career professionals; and finally
- To seek your support to pursue funding for this research effort.

We want to make this applied research and capacity building effort as meaningful as possible to you and other people within the Columbia River basin.

Thank you in advance for your time and consideration. We look forward to hearing from you soon to continue advancing this important dialogue.

For more information on the Universities Consortium, please go to www.columbiarivergovernance.org.

Columbia Basin Tribes Coalition
on the
Columbia River Treaty 2014/2024 Review

TRIBES
- Burns Paiute Tribe
- Coeur d'Alene Tribe
- Confederated Salish and Kootenai Tribes of the Flathead Nation
- Confederated Tribes of the Colville Reservation
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Cowlitz Indian Tribe
- Kalispel Tribe of Indians
- Kootenai Tribe of Idaho
- Nez Perce Tribe
- Fort McDermitt Paiute Shoshone Tribes
- Shoshone-Bannock Tribes of the Fort Hall Reservation
- Shoshone Paiute Tribe of the Duck Valley Indian Reservation
- Spokane Tribe of Indians

INTERTRIBAL ORGANIZATIONS
- **Columbia River Inter-Tribal Fish Commission**
  729 NE Oregon St
  Portland, Oregon 97232
- **Upper Columbia United Tribes**
  25 W. Main, Suite 434
  Spokane, WA 99201
- **Upper Snake River Tribes**
  950 W. Bannock Street
  Suite 1100
  Boise, ID 83702

September 13, 2013

Matthew McKinney
Director, Center for Natural Resources & Environmental Policy
University of Montana
32 Campus Drive, Missoula, MT 59812

Richard Paisley, University of British Columbia
University of British Columbia
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Canada V6T 1Z2

Re: Universities Consortium on Columbia River Governance

Dear Drs. McKinney and Paisley:

Thank you for reaching out to us about the proposed study to explore "Alternative Governance Arrangements for the Columbia River Basin." As you know, the Columbia Basin Tribes Coalition is working diligently in the Sovereign Review Process to develop a modernized Columbia River Treaty that balances three primary drivers: ecosystem-based function, flood risk management, and power production. In order to fully and equitably implement a treaty that addresses these primary drivers in a way that protects the rights and responsibilities of the tribes, we must have a seat at the table in the governance structure for the modernized treaty.

The Columbia Basin tribes intend to work with other sovereigns, including the First Nations, to develop an expanded governance structure that complements a modernized Columbia River Treaty, an endeavor that the Consortium has generously offered to assist the tribes in accomplishing. A small work group to address governance of the CRT has been organized by the tribes. We ask you to work with this Governance Work Group to explore and refine the ideas you provided in the April 11 Memorandum with the subject Alternative Governance Arrangements for the Columbia River Basin. We understand this includes:

- Developing the scope and desired outcomes of a study that identifies and analyzes existing models for governance of

multinational resources, inclusion of indigenous peoples in governance, and other pertinent topics. The results of the study will be documented in a report to the tribes on potential approaches to future governance of the Columbia River Basin;

- Ascertaining how to engage all of the appropriate tribes and First Nations in the basin;
- Identifying a schedule for research, workshops, and other capacity building and implementation activities;
- Developing opportunities to engage future tribal and First Nation leaders; and
- Identifying and pursuing potential funding sources for this effort.

We anticipate that the results of this analysis will be helpful in our efforts to develop a new governance structure. The member tribes of the Columbia Basin Tribes Coalition are ready to start work with the Consortium on this important effort.

Sincerely,

Baptist Paul Lumley
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a legacy for the people

Phone: 1-800-505-8998
Fax: (250) 365-6670
E-mail: cbt@cbt.org
Suite 300, 445 - 13th Avenue
Castlegar, BC V1N 1G1

Reply to:
Box 393, #512 - 8th Ave. N.
Golden, BC V0A 1H0

22 October 2013

Matthew McKinney
Director, Center for Natural Resources & Environmental Policy
The University of Montana
32 Campus Drive
Missoula, MT 59812

Richard Paisley
University of British Columbia
C.K. Choi Building
#371 – 1855 West Mall Road
Vancouver, BC V6T 1Z2

Re: Governing International Waters through the prism of Tribes and First Nations: Integrating Knowledge and Practice
Dear Drs McKinney and Paisley,

The Columbia Basin Trust strongly supports the applied research project "Governing International Waters through the Prism of Tribes and First Nations: Integrating Knowledge and Practice" as part of the ongoing collaboration between the Universities Consortium on Columbia River Governance and the Tribes and First Nations in the basin.

This important applied research project will very much spear head on-going conversations regarding water governance of the Columbia River Basin.

As you know the Columbia Basin Trust (CBT) supports efforts by the people of the Columbia Basin to create a legacy of social, economic and environmental well-being by:

- providing resources and funding;
- focusing on local priorities and issues;
- bringing people together around key issues;
- providing useful, credible, accessible information and expertise;
- encouraging collaboration and partnerships;
- seeking ongoing input from Basin residents; and
- investing prudently in Basin power projects, businesses and real estate.

CBT provides funding through a variety of programs, including ones focused on arts, culture and heritage; economic development ; water and environmental stewardship; and community development. In addition, CBT supports regional initiatives such as literacy, climate change adaptation, affordable housing, land conservation and youth leadership and engagement.

Our motivation to support collaboration between the Universities Consortium, tribes, and First Nations is derived from your project's capacity to distill information that will shape future government-to-government conversations. These government-to-government conversations will affect not just how water resources are managed in British Columbia,

but have far-reaching implications to the culture, economies, ecosystems, and industries in the region.

We are impressed by your continuing ability to successfully complete major complex applied research projects on time and on budget

We anticipate that the results of this applied research project will have the particular benefit of informing and engaging local communities, elected officials, and other key stakeholders in these important conversations.

Yours Truly,

Kindy Gosal
Director Special Initiatives
Columbia Basin Trust

KTUNAXA NATION

Ktunaxa Nation Council
7468 Mission Road
Cranbrook, BC V1C 7E5
tel: 250-489-2464
fax: 250-489-2438

visit us at:
www.ktunaxa.org

October 29, 2013

Matthew McKinney
Director, Center for Natural Resources & Environmental Policy
The University of Montana
32 Campus Drive
Missoula, MT 59812

Richard Paisley
University of British Columbia
C.K. Choi Building
#371 – 1855 West Mall Road
Vancouver, BC V6T 1Z2

Re: **Alternative Governance Arrangements for the Columbia River Basin**

Dear Drs McKinney and Paisley,

Thank you very much for contacting me about the proposed project, "Alternative Governance Arrangements for the Columbia River Basin." The Ktunaxa Nation Council is very interested in this project and is eager to participate.

Given the Province's recent release of their draft recommendation to the Columbia River Treaty, this project will provide much needed information during a very critical opportunity to reshape the Columbia River Treaty.

We appreciate the opportunity to develop the scope of the project, schedule activities, and create opportunities to engage future First Nations leaders. As this project will help inform our conversations with the Province about the Columbia River Treaty and aboriginal rights and title, it is essential for First Nations to have a role in this project from the very beginning.

The following motion was passed by the Ktunaxa Lands and Resources Council at their September, 2013 meeting:

> ***Be it resolved that*** *the Lands and Resources Council supports the proposed research by the Universities Consortium on Columbia River Governance, and directs staff to send a letter of support to the Consortium.*

I look forward to working with you, and the Universities Consortium on Columbia River Governance, to launch this project. Please let me know if I can do anything else to further support your efforts to secure funding.

Sincerely,

William Green
CCRIFC Director

250-420-2744

Adams Lake Indian Band
P.O. Box 588, Chase, BC V0E 1M0
Phone:679-8841 Fax:679-8813
email: receptionist@alib.ca
www.adamslakeband.org

November 25, 2013

Matthew McKinney
Director, Center for Natural Resources & Environmental Policy
The University of Montana
32 Campus Drive
Missoula, MT 59812

Richard Paisley
University of British Columbia
C.K. Choi Building
#371 – 1855 West Mall Road
Vancouver, BC V6T 1Z2

Re: **Alternative Governance Arrangements for the Columbia River Basin**

Dear Drs McKinney and Paisley,

Thank you very much for contacting me about the proposed project, "Alternative Governance Arrangements for the Columbia River Basin. The Adams lake Indian Band would like to support this project. We recently attended the Columbia Basin Watershed network "think like a watershed symposium". One of the main focuses was creating draft principles for a Columbia Basin watershed Governance Entity.

Given the Province's recent release of their draft recommendation to the Columbia River Treaty, this project will provide much needed information during a very critical opportunity to reshape the Columbia River Treaty.

We appreciate the opportunity to develop the scope of the project, schedule activities, and create opportunities to engage future First Nations leaders. As this project will help inform our conversations, with the Province about the Columbia River Treaty and aboriginal rights and title. It is essential for First Nations to have a role in this project.

We look forward to working with you, and the Universities Consortium on Columbia River Governance, to launch this project. Please let me know if I can do anything else to further support your efforts to secure funding.

Sincerely,

Nelson Leon

Chief Nelson Leon

OKANAGAN NATION ALLIANCE

101 - 3535 Old Okanagan Hwy, Westbank, BC V4T 3L7
Phone 250-707-0095 Toll Free 1-866-662-9609 Fax 250-707-0166 www.syilx.org

February 2, 2015

University of British Columbia
Global Transboundary International Waters
Institute of Asian Research
C.K. Choi Building
#371 - 1855 West Mall Road
Vancouver, BC V6T 1Z2

Attention: Richard Paisley
Director, Canadian Water Research Society and Director, Global Transboundary International Waters Governance Initiative and Member, Universities Consortium on Columbia River Governance

University of Montana
School of Law
32 Campus Dr
Missoula, MT 59812

Attention: Matthew McKinney
Director, Center for Natural Resources & Environmental Policy and Member, Universities Consortium on Columbia River Governance

Re: Moving From Vision to Action: Tribes, First Nations, Youth, Communities and Sustainable Urban Water Management in the International Columbia River Basin

On behalf of the Okanagan Nation Alliance please accept this letter of support in regard to the above mentioned. We strongly recommend that the proposed project, "*Moving From Vision to Action: Tribes, First Nations, Youth, Communities and Sustainable Urban Water Management in the International Columbia River Basin*" be recognized as innovative and critically important work for all. We have been an enthusiastic partner of the joint effort by the Universities Consortium on Columbia River Governance and Columbia Basin Tribes and First Nations to improve both the governance and substance of Columbia River policy and management. This is important work that must continue. This project will provide much needed information and guidance during a very critical time to contribute and shape the future of the Columbia River Basin.

Over the past year, during the work on governance arrangements in the Columbia River Basin, we certainly appreciated the opportunity to co-develop the scope of the project, schedule activities, and create opportunities to engage future First Nations Leaders. That work has informed our conversations with the Government representatives of the Province of British Columbia about the Columbia River Treaty and its significance respecting our aboriginal rights and title and interests. It is fundamental for First Nations to have a leadership role in shaping this project and it is essential that First Nations continue to have a role moving forward.

We look forward to working with you, and the Universities Consortium on Columbia River Governance, to further develop and implement the next steps identified in our previous work. Please let me know if I can do anything else to further support your efforts to secure funding for this legacy we are creating, it will be for the citizens of the Columbia River Basin and the generations to come.

If you have any questions, please don't hesitate to contact me directly at by e-mail: director@syilx.org or call 250-707-0095 ext. 214.

Sincerely,

OKANAGAN NATION ALLIANCE

Pauline Terbasket
Executive Director

OKANAGAN NATION ALLIANCE
101 - 3535 Old Okanagan Hwy, Westbank, BC V4T 3L7 Phone 250-707-0095 Toll Free 1-866-662-9609 Fax 250-707-0166 www.syilx.org

Adams Lake Indian Band
P.O. Box 588, Chase, BC V0E 1M0
Phone:679-8841 Fax:679-8813
email: receptionist@alib.ca
www.adamslakeband.org

February 2, 2015

Richard Paisley **by email**
Director, Canadian Water Research Society and
Director, Global Transboundary International Waters Governance Initiative
Member, Universities Consortium on Columbia River Governance
University of British Columbia
Vancouver, British Columbia

Matthew McKinney
Director, Center for Natural Resources & Environmental Policy
Member, Universities Consortium on Columbia River Governance
University of Montana
Missoula, Montana

Re: Moving From Vision to Action: Tribes, First Nations, Youth, Communities and Sustainable Urban Water Management in the International Columbia River Basin

Dear Profs. Paisley and McKinney:

Thank you very much for contacting me about the proposed project, "Moving From Vision to Action: Tribes, First Nations, Youth, Communities and Sustainable Urban Water Management in the International Columbia River Basin." The Adams Lake Indian Band would like to support this project and your effort to once again secure funding from the RBC Blue Water Project.

Given the momentum for greater transboundary collaboration during the October 2014 conference, this project will provide much needed information and guidance during a very critical opportunity to shape the future of the Columbia River Basin.

Over the past year, during the work on governance arrangements in the Columbia River Basin, we appreciated the opportunity to develop the scope of the project, schedule activities, and create opportunities to engage future First Nations Leaders. That work has informed our conversations with the Province about the Columbia River Treaty and aboriginal rights and title. It was essential for First Nations to have a role in shaping that project and it is essential that First Nations continue to have a role moving forward.

We look forward to working with you, and the Universities Consortium on Columbia River Governance, to further develop and implement the next steps identified in our previous work. Please let me know if I can do anything else to further support your efforts to secure funding.

Sincerely,

Cliff Arnouse

Councilor Cliff Arnouse
Adams lake Indian Band

Northwest Power and Conservation Council

January 16, 2014

Richard Paisley **by email**
Director, Canadian Water Research Society and
Director, Global Transboundary International Waters Governance Initiative
University of British Columbia
Vancouver, British Columbia

Matthew McKinney
Director, Center for Natural Resources & Environmental Policy
University of Montana
Missoula, Montana

Re: International Waters and Governance Through the Lens of First Nations: Integrating Knowledge and Practice

Dear Profs. Paisley and McKinney:

Please pass on to your potential funding partners my strong recommendation in support of your proposed project *International Waters and Governance Through the Lens of First Nations: Integrating Knowledge and Practice*. The Council I work for has been an enthusiastic supporter, with our in the Canadian portion of the Columbia River basin (the Columbia Basin Trust), of the joint effort by the Universities Consortium on Columbia River Governance and representatives of the Tribes and First Nations to improve both the governance and substance of Columbia River policy and management. This is important work that needs to continue.

A bit of context: I am the General Counsel for the Northwest Power and Conservation Council, an interstate agency headquartered in Portland, Oregon, and with offices in all four states of the Columbia River Basin in the United States. The U.S. Congress, in the Northwest Power Act of 1980, authorized the governors of those four states -- Washington, Oregon, Montana, and Idaho -- to form the Council and appoint its eight members. The Council develops and oversees a regional power plan for the Pacific Northwest and the Columbia River Basin fish and wildlife protection and mitigation program for the Columbia River Basin, plans and programs then implemented largely by U.S. agencies in the Columbia. The Council works extensively with federal, state, and tribal governments and agencies, industry groups, non-governmental public interest organizations, and the public in the development of these plans and programs and in the efforts of others to implement. The Council also has an extensive public outreach and education mission.

851 S.W. Sixth Avenue, Suite 1100
Portland, Oregon 97204-1348
www.nwcouncil.org

Steve Crow
Executive Director

503-222-5161
800-452-5161
Fax: 503-820-2370

The Council's regional energy and fish and wildlife work would not be successful, or even possible, without building on the extensive work and participation of the co-manager tribes in the basin. It is a 30-year relationship that has been highly productive even while it has had its moments of tension, creative tension mostly. And while the Council's work focuses on developments within the U.S. portion of the Columbia River, we also recognize that the river is international in scope, and we cannot be successful without taking into account the international dimensions of the river, building up relationships with partners across the border and with other groups trying to span the same 49th parallel. The Council has forged a particular relationship with the Columbia Basin Trust in the Canadian portion of the Columbia River. The Trust and the Council together have assisted and even sponsored the Universities Consortium on Columbia Basin Governance in their series of public transboundary symposia on the Columbia River Treaty and Columbia River governance. The most recent was in Polson, Montana, in October 2012, and the signal achievement of that symposia was the way the Consortium and representatives of a number of First Nations and Tribes worked together to present a look at Columbia River policy and governance in a refreshing and useful way, useful to everyone, cutting across boundaries and concepts in a way quite different than the usual.

That collaborative work on governance needs to continue. The challenges we face in the basin in the next 50 years to provide the economic and ecosystem services we all want in a sustainable way require us to draw the best lessons we can from all sources and experiences. The First Nations have a wealth of both historical experience and current management successes to tap into; the Universities Consortium has the research and analytical capacity to draw out that experience in an accessible and useful way. I write for myself and not the Council in supporting this particular proposal, but both and I and the Council as an institution support the work of the Consortium and the First Nations in this regard and in particular the efforts of Profs. Paisley and McKinney to make sure this work continues.

Please let me if there is anything more I can do in support of this proposal.

Sincerely,

/s/ John Shurts
General Counsel

Appendix 6.3
Profiles of 15 Columbia Basin Tribes

Confederation/Tribe (Headquarters Location)	Organic Document	Citation Reference	Acreage of Ceded Territory & Reservation	Membership Population
Cowlitz Indian Tribe[1] (Longview, Washington)	Federal Acknowledgement	62 Fed. Reg. 8983, February 14, 2000	No territory ceded Cowlitz IR 152	3,700
Confederated Tribes and Bands of the Yakama Nation[2] (Toppenish, Washington)	Yakama Nation Treaty	June 9, 1855; 12 Stat. 951; ratified Mar. 8, 1859l proclaimed Apr. 18, 1859	11,500,000+ Yakama IR 1,200,000	10,200
The Confederated Tribes of the Warm Springs Reservation of Oregon[2] (Warm Springs, Oregon)	Treaty with the Tribes of Middle Oregon	June 25, 1855; 12 Stat. 963; ratified Mar. 8, 1859; proclaimed Apr. 18, 1859	10,000,000+ Warm Springs IR 640,000	5,000
Confederated Tribes of the Umatilla Indian Reservation[2] (Mission, Oregon)	Treaty with the Walla Walla, Cayuse, and Umatilla	June 9, 1855; 12 Stat. 945; ratified Mar. 8, 1859; proclaimed Apr. 11, 1859	6,400,000+ Umatilla IR 172,000	2,800
Nez Perce Tribe[2] (Lapwai, Idaho)	Treaty with the Nez Perce	June 11, 1855, 12 Stat. 957; ratified Mar. 8, 1859; proclaimed Apr. 29, 1859	13,000,000+ Nez Perce IR 750,000	3,500
Coeur d'Alene Tribe[3] (Plummer, Idaho)	Executive Order	[ ], 1873 [ ], 1889	4,000,000+ Coeur d'Alene IR 334,500	2,188
Confederated Tribes of the Colville Reservation[3] (Nespelem, Washington)	Executive Order	April 9, 1872	[ ] Colville IR 1,414,133	9,358
Kootenai Tribe of Idaho[3] (Bonners Ferry, Idaho)	Federal & State Court Opinions (adopting Treaty of Hellgate by reference)	In re: Kootenai Tribe of Idaho, 5 Inc. Cl. Comm. 456, August 9, 1957; State v. Coffee, 556 P.2d 1185, November 23, 1976	1,657,726+ [ ] 1,974	152

Confederation/Tribe (Headquarters Location)	Organic Document	Citation Reference	Acreage of Ceded Territory & Reservation	Membership Population
Kalispel Tribe of Indians[3] (Usk, Washington)	Executive Order	[ ], 1914	4,000,000+ Kalispel IR 4,700	409
Spokane Tribe of Indians[3] (Wellpinit, Washington)	Executive Order	Reservation was established on August 18, 1877. As recognized in *Northern Pac. Ry. Co. v. Wismer*, 246 U.S 283, 288 (1918).	3,500,000+ Spokane IR 157,370	2,621
Burns Paiute Tribe[4] (Burns, Oregon)	Federally Approved Tribal Constitution	May 16, 1968	33,600,000+ Burns Paiute IR 871	313
Fort McDermitt Paiute Shoshone Tribes[4] (McDermitt, Nevada)	Federally Approved Tribal Constitution	Ratified in 1936	[ ] Fort McDermitt IR 36,000	1,000
Shoshone Paiute Tribe of the Duck Valley Indian Reservation[4] (Owyhee, Nevada)	Executive Order	April 16, 1877 May 4, 1886 July 1, 1910	[ ] Duck Valley IR 312,320	2,300
Shoshone Bannock Tribes of the Fort Hall Reservation[4] (Fort Hall, Idaho)	Fort Bridger Treaty	July 3, 1868; 15 Stat. 673; ratified Feb. 26, 1869; proclaimed Feb. 24, 1869	1,800,000 Fort Hall IR 544,000	5,681
Confederated Salish and Kootenai Tribes[1] (Pablo, Montana)	Treaty of Hellgate	July 16, 1855; 12 Stat. 975; ratified Mar. 8, 1859; proclaimed Apr. 18, 1859	20,000,000+ Flathead IR 1,317,000	7,500

[1] Self-Represented by tribal staff on the Sovereign Review Team ("SRT") and Sovereign Technical Team ("STT") in the Columbia River Treaty review process and by elected tribal leaders in government-to-government decisions regarding the work of the SRT and STT.

[2] Represented by tribal designees (staff from Columbia River Inter-Tribal Fish Commission) on the SRT and STT in the Columbia River Treaty review process and by elected tribal leaders in government-to-government decisions regarding the work of the SRT and STT.

[3] Represented by tribal designees (staff from Upper Columbia United Tribes) on the SRT and STT in the Columbia River Treaty review process and by elected tribal leaders in government-to-government decisions regarding the work of the SRT and STT.

[4] Represented by tribal designees (staff from Upper Snake River Tribes) on the SRT and STT in the Columbia River Treaty review process and by elected tribal leaders in government-to-government decisions regarding the work of the SRT and STT.

Appendix 6.4
A Primer on Canadian and U.S. Government: Similarities and Differences

To understand the legal and institutional arrangements for governance in the Columbia Basin, it is probably instructive to begin with a primer on government and governance in Canada and the United States.

Canada

Canada is a constitutional monarchy, a federal state, and a parliamentary democracy. Canada has two official languages (English and French) and two legal systems (the common law and the civil law) the latter of which is used only in private law in Quebec. Canada is composed of federal, provincial, territorial and Aboriginal governments. Each type of government generally consists of three main branches: executive, legislative, and judicial. The Canadian Constitution lists the exclusive and joint powers allocated to the federal and provincial levels of government.

The division of legislative powers in Canada between the federal, various provincial and, increasingly, Aboriginal, levels of government, is complex and continues to be the subject of many judicial interpretations as well as the subject of numerous court cases, agreements and protocols.

The executive branch of the federal government of Canada includes the Prime Minister, various Ministers, the Cabinet, the Privy Council, the Governor in Council and the administration, but the Cabinet holds the real power. The Governor General appoints the Prime Minister, who in turn selects approximately thirty Ministers usually from the Members of Parliament (MP) belonging to the party in power to be appointed to the Cabinet. The Ministers are in charge of particular departments and each is responsible, answerable, and accountable to the House of Commons for his or her own department. The link between the Minister and the bureaucracy is made through the appointment of a Deputy Minister, the senior public servant in each department.

The Parliament of Canada is composed of three parts: the head of state, the House of Commons, and the Senate. As Canada is a constitutional monarchy, the head of state is the Queen of the United Kingdom (currently, Queen Elizabeth II). Section 9 of the Constitution delegates all of her powers to the Governor General, whose role has largely become ceremonial, acting on the advice of the government.

The House of Commons is made up of elected MPs. The political party with the largest number of MPs usually forms the government, and the Governor General appoints the leader of this party to become Prime Minister. General elections must be held at least once every five years; however, legally there is no set election date, so elections can be called at any time.

Canadians are governed by common law, statutes, and regulations. These have different legal ramifications. For example, statutes, regulations and orders in council are considered binding law. Guidelines, codes of practice, policies and procedures are usually less formal and often provide guidance rather than enforceable rules. Case law is important in the interpretation of the Constitution, statutes, and regulations. Supreme Court of Canada decisions are binding on lower courts, as are provincial Courts of Appeal. In Canada, courts sometimes refer to decisions from other countries such as the United States or other Commonwealth members.

In Canada, the negotiation, signature and ratification of international treaties is controlled by the executive branch of the federal government. However, many international treaties, such as the Columbia River Treaty, deal at last in part with matters that fall under the provincial sphere of legislative

jurisdiction pursuant to the division of powers between the federal government, the provincial governments and First Nations pursuant to sections 91, 92 and 35 of the Canadian Constitution.

In Canada, implementation of international treaties may require the adoption of new legislation or modification of existing legislation, either at the provincial level or the federal level, or both. In the case of clear discrepancies between Canada's internal law and an international treaty, in general, the internal law takes precedence.

As previously mentioned, the Canadian legal system is one of common law with the exception of Quebec. Almost all the courts in Canada are provincial, though the judges are federally appointed. The highest court in the country is the Supreme Court of Canada, established in 1875. Its judgments are binding on all other courts.

The provincial governments are similar to the federal government, as they have the same separation of the legislative, executive, and judicial branches. Legislative power is vested in the Parliament (Lieutenant Governor and the Legislative Assembly) of each province. The Governor General appoints Lieutenant Governors whose functions are similar to those of the Governor General. The Premier of the province is the leader of the political party with a majority of seats in the provincial legislature.

Local or municipal governments are created by the provincial legislatures, and have the power to regulate matters within their boundaries through bylaws. However, local governments must exercise this power in compliance with the provisions of the enabling provincial act. Local governments are subordinate to the provincial authority that has delegated its power, and thus the structure (which includes towns, townships, villages, counties, regional municipalities, and cities that vary greatly in size) of these governments is determined by each provincial legislature.

United States

The United States is a federalist republic where the federal government has certain powers. However, the fifty sovereign individual states retain substantial autonomy and authority over their respective citizens and residents. The federal government, as well as the state governments, is divided into three branches: executive, legislative, and judicial. A system of checks, balances, and separation of powers is found in the constitutions of both the federal government and the states.

The Supremacy Clause of the U.S. Constitution governs all potential conflicts between state and federal regulation. The Supremacy Clause states that if state and local laws contradict federal laws, such laws are preempted and can be declared unconstitutional by a federal court.

The executive branch of the federal government includes the President, the Vice President, the Cabinet, all federal departments, and most governmental agencies. The government's executive power is vested in the President, who serves a four-year term. Foreign affairs are primarily the responsibility of the President, who also has the authority to make treaties. The heads of the departments are chosen by the President, and form the Cabinet, which advises the President. The U.S. Congress, which consists of the Senate and the House of Representatives, holds all federal legislative power. The U.S. Constitution sets out the specific powers of Congress, which include the power to lay and collect taxes, duties, and tariffs, as well as regulate foreign trade, including trade among the states and with American Indian Tribes.

The House of Representatives and the Senate must both pass a bill that must then be signed by the President to become federal law. Although the President can veto legislation, this can be overridden by a two-thirds vote in Congress. The House of Representatives and the Senate essentially have the power to oversee the executive branch.

The role of the federal judiciary is to decide cases and resolve disputes in a fair and impartial manner. Both the federal and state (except Louisiana) legal systems are based on common law, where previous decisions can set binding precedents for future decisions. Each level of the federal courts can interpret the U.S. Constitution and federal laws and regulations, as well as review federal statutes and agency actions, and determine the constitutionality of federal and state laws. Specific standards for judicial review are included in many federal statutes.

The reviewing court has the authority to: (1) compel any agency action that is unlawfully withheld or unreasonably delayed; and (2) to hold unlawful and set aside agency action, findings, and conclusions found to be:

- Arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
- Contrary to constitutional right, power, privilege, or immunity;
- In excess of statutory jurisdiction, authority, or limitations, or short or statutory right;
- Adopted without procedures required by law;
- Unsupported by substantial evidence in administrative cases; or
- Unwarranted by the facts to the extent that the court can review the facts.

Under the constitutional law of the United States an international "treaty" is an international agreement that has received the "advice and consent" of the U.S. Senate and that has been ratified by the President.136 The U.S. Senate does not ratify treaties. Rather when the Senate gives its consent, the President, acting as the chief diplomat of the United States, has discretion whether to ratify the instrument.

Treaties entered into by the United States are considered the supreme law of the land pursuant to the U.S. Constitution. Federal statutes usually implement them. If there is a conflict between a treaty and a federal statute, the one that is later in time or more specific will typically control.

The fifty states in the United States substantially mirror the federal government: their governments are based on written constitutions, they are divided into the same three branches and they have similar systems of separation of powers and checks and balances. Despite these similarities, the state governments can also differ significantly from each other.

Local governments are not defined in the same way as their state or federal counterparts, though many state constitutions outline the process for the creation of local governments. Typical local governments include counties, cities, villages, and townships. Important environmental responsibilities are often vested in local governments and include issues such as managing solid waste, ensuring clean drinking water, developing and enforcing land-use plans, inspecting local restaurants and other establishments for health and safety, and providing emergency services and planning. Local governments also have the power to administer some state and federal programs, levy taxes, and enact and enforce local ordinances.

Appendix 6.5
Letters of Reference from Canada and the United States to the International Joint Commission

DEPARTMENT OF

EXTERNAL AFFAIRS
CANADA

Ottawa, March 9 , 1944.

Sir:

I have the honour to inform you that in order to determine whether a greater use than is now being made of the waters of the Columbia River System would be feasible and advantageous, the Governments of the United States and Canada have agreed to refer the matter to the International Joint Commission for investigation and report pursuant to Article IX of the Convention concerning Boundary Waters between the United States and Canada, signed January 11th, 1909.

2. It is desired that the Commission shall determine whether in its judgment further development of the water resources of the river basin would be practicable and in the public interest from the points of view of the two Governments, having in mind (A) domestic water supply and sanitation, (B) navigation, (C) efficient development of water power, (D) the control of floods, (E) the needs of irrigation, (F) reclamation of wet lands, (G) conservation of fish and wildlife, and (H) other beneficial public purposes.

3. In the event that the Commission should find that further works or projects would be feasible

The Secretary,
The International Joint Commission,
Ottawa.

and desirable for one or more of the purposes indicated above, it should indicate how the interests on either side of the boundary would be benefited or adversely affected thereby, and should estimate the costs of such works or projects, including indemnification for damage to public and private property and the costs of any remedial works that may be found to be necessary, and should indicate how the costs of any projects and the amounts of any resulting damage be apportioned between the two Governments.

4. The Commission should also investigate and report on existing dams, hydro-electric plants, navigation works, and other works or projects located within the Columbia River system in so far as such investigation and report may be germane to the subject under consideration.

5. In the conduct of its investigation and otherwise in the performance of its duties under this reference, the Commission may utilize the services of engineers and other specially qualified personnel of the technical agencies of Canada and the United States and will so far as possible make use of information and technical data heretofore acquired by such technical agencies or which may become available during the course of the investigation, thus avoiding duplication of effort and unnecessary expense.

I have the honour to be,
Sir,
Your obedient servant,

Secretary of State for
External Affairs

COLUMBIA RIVER BASIN IN THE UNITED STATES AND CANADA

Under date of March 9th, 1944, the Governments of the United States and the Dominion of Canada through their respective Secretaries of State communicated to the International Joint Commission for investigation and report, under the terms of Article IX of the Treaty of January 11, 1909, the following Reference:

March 9th, 1944.

Sirs:

"I have the honor to inform you that in order to determine whether a greater use than is now being made of the waters of the Columbia River system would be feasible and advantageous, the Governments of the United States and Canada have agreed to refer the matter to the International Joint Commission for investigation and report pursuant to Article IX of the Convention concerning Boundary Waters between the United States and Canada, signed January 11, 1909.

2. It is desired that the Commission shall determine whether in its judgment further development of the water resources of the river basin would be practicable and in the public interest from the points of view of the two Governments, having in mind (A) domestic water supply and sanitation, (B) navigation, (C) efficient development of water power, (D) the control of floods, (E) the needs of irrigation, (F) reclamation of wet lands, (G) conservation of fish and wildlife, and (H) other beneficial public purposes.

3. In the event that the Commission should find that further works or projects would be feasible and desirable for one or more of the purposes indicated above, it should indicate how the interests on either side of the boundary would be benefitted thereby, and should estimate the costs of such works or projects, including indemnification for damage to

public and private property and the costs of any remedial works that may be found to be necessary, and should indicate how the costs of any projects and the amounts of any resulting damage be apportioned between the two Governments.

4. The Commission should also investigate and report on existing dams, hydro-electric plants, navigation works and other works or projects located within the Columbia River system in so far as such investigation and report be germane to the subject under consideration.

5. In the conduct of its investigation and otherwise in the performance of its duties under this reference, the Commission may utilize the services of engineers and other specially qualified personnel of the technical agencies of Canada and the United States and will so far as possible make use of information and technical data heretofore acquired by such technical agencies or which may become available during the course of the investigation, thus avoiding duplication of effort and unnecessary expense."

(Signed) Cordell Hull,
Secretary of State,
Washington, D. C.

L 69
-1-1

(Signed) W. L. Mackenzie King,
Secretary of State for
External Affairs,
Ottawa, Canada.

TO INTERESTED PERSONS:

The above copy of reference is being sent to you for your information. Dates of Public Hearings will be arranged by the International Joint Commission later and opportunity will be given to interested persons and organizations to present testimony.

Jesse B. Ellis,
Washington, D. C.

Lawrence J. Burpee,
Ottawa, Canada.
Secretaries,
International Joint Commission.

ADDRESS OFFICIAL COMMUNICATIONS TO
THE SECRETARY OF STATE
WASHINGTON 25, D. C.

DEPARTMENT OF STATE
WASHINGTON

INTERNATIONAL JOINT COMMISSION FILED FEB 3 1959

J.C., Ottawa
Secretary

January 28, 1959

Can. date
29 Jan '59

Dear Governor McKay:

I wish to refer to the letter dated March 9, 1944 from the Secretary of State for External Affairs to the Secretary of the Canadian Section of the International Joint Commission, which sets out the terms of the Columbia River Reference.

The first paragraph of this letter deals with the general objectives of the Reference, and it states in part as follows, "... in order to determine whether a greater use than is now being made of the waters of the Columbia River System would be feasible and advantageous, the Governments of the United States and Canada have agreed to refer the matter to the International Joint Commission for investigation and report pursuant to Article IX of the convention concerning Boundary Waters between the United States and Canada, signed January 11, 1909".

The Governments of the United States and Canada, as a part of their continuing discussions, have agreed to request the International Joint Commission to report specially to the Governments at an early date its recommendations concerning the principles to be applied in determining:

no colon in Canadian copy

(a) the benefits which will result from the cooperative use of storage of waters and electrical interconnection within the Columbia River System; and

"in" not underlined in Can. copy

(b) the apportionment between the two countries of such benefits more particularly in regard to electrical generation and flood control.

comma after "System".

Sincerely yours,

John Foster Dulles

The Honorable
Douglas McKay,
Chairman, United States Section,
International Joint Commission,
Washington 25, D. C.

Chairman
Mr Dauenhauer
Mr Stephens
Secretary
Mr Cleveland (2)

INTERNATIONAL JOINT COMM. RECEIVED JAN 30 1959 WASHINGTON D. C.

Corrections to Chairman and to E.H.

THE SECRETARY OF STATE FOR EXTERNAL AFFAIRS
CANADA

OTTAWA, January 29, 1959.

Dear Madam,

I wish to refer to the letter dated March 9, 1944 from the Secretary of State for External Affairs to the Secretary of the Canadian Section of the International Joint Commission, which sets out the terms of the Columbia River Reference.

The first paragraph of this letter deals with the general objectives of the Reference, and it states in part as follows, "...in order to determine whether a greater use than is now being made of the waters of the Columbia River System would be feasible and advantageous, the Governments of the United States and Canada have agreed to refer the matter to the International Joint Commission for investigation and report pursuant to Article IX of the convention concerning Boundary Waters between the United States and Canada, signed January 11, 1909".

The Governments of the United States and Canada, as part of their continuing discussions, have agreed to request the International Joint Commission to report specially to governments at an early date its recommendations concerning the principles to be applied in determining

(a) the benefits which will result from the co-operative use of storage of waters and electrical interconnection in the Columbia River System, and

(b) the apportionment between the two countries of such benefits, more particularly in regard to electrical generation and flood control.

Yours sincerely,

/S/ Sidney Smith

Sidney Smith

The Secretary,
Canadian Section,
International Joint Commission,
Ottawa.

REPORT OF THE INTERNATIONAL JOINT COMMISSION
UNITED STATES AND CANADA
ON PRINCIPLES FOR DETERMINING AND APPORTIONING
BENEFITS FROM COOPERATIVE USE OF STORAGE OF WATERS
AND ELECTRICAL INTER-CONNECTION WITHIN THE COLUMBIA RIVER SYSTEM

In identical letters to the United States and Canadian Sections of the International Joint Commission, dated January 28, 1959 and January 29, 1959, respectively, the Secretary of State for the United States and the Secretary of State for External Affairs for Canada referred to the general objectives of the Columbia River Reference of March 9, 1944 and requested a special report as follows:

"The Governments of the United States and Canada, as a part of their continuing discussions, have agreed to request the International Joint Commission to report specially to the Governments at an early date its recommendations concerning the principles to be applied in determining:

"(a) the benefits which will result from the cooperative use of storage of waters and electrical interconnection within the Columbia River System; and

"(b) the apportionment between the two countries of such benefits more particularly in regard to electrical generation and flood control."

In the preparation of this special report, the Commission utilized as background data all the information available to it on the water resources development needs and possibilities in the Columbia River area. This included the reports of the International Columbia River Engineering Board under the Columbia

River Reference, as well as studies of other agencies in both the United States and Canada. A special work group was established to prepare summaries of the available data that would provide a background and orientation and thus facilitate mutual understanding of the situation and conditions under which principles for benefit determination and apportionment would be applied. Also, the Commission approached the problem of formulating principles within the context and intent of the Boundary Waters Treaty of 1909.

The studies of the International Columbia River Engineering Board, as well as other available information, indicate clearly that there are possibilities for cooperative development in the Columbia Basin that could be of mutual advantage to the two countries. Accordingly, the Commission was able to approach the problem of formulating principles for benefit determination and apportionment with information on specific projects for cooperative development which would offer advantages to both countries. The Commission was guided by the basic concept that the principles recommended herein should result in an equitable sharing of the benefits attributable to their cooperative undertakings and that these should result in an advantage to each country as compared with alternatives available to that country. The Commission gave consideration to the practical problems that will be encountered in applying the principles to cooperative

arrangements between the two countries on specific projects in the Columbia River Basin. This was done to ensure that the principles would be workable but no attempt was made to spell out in the principles the detailed procedures that will necessarily be delineated when cooperative arrangements are entered into. The Commission recognizes that several administrative and legislative actions in each country may be necessary before these details can be worked out.

The principal benefits in the downstream country from cooperative use of storage of waters within the Columbia River System are improvements in hydro-electric power production and prevention of flood damage. Although other benefits would also be realized from such cooperative use, the outlook at this time is that their value would be so small in comparison to the power and flood control values that formulation of principles for their determination and apportionment would not be warranted. This is not intended to preclude consideration by the two Governments of any benefits, tangible or intangible, which may prove to be significant in the selection of projects or formulation of agreements thereon.

The prospective downstream power benefits are transportable and within reasonable transmission distances of the boundary. With adequate electrical inter-connection, it would therefore be feasible to share these benefits in kind, that is, share the

power itself rather than its value in money. The flood control benefits, however, accrue in specific localities and are not transportable. Cooperative use of storage designed to produce such benefits therefore requires recompense in money or by other means. In addition to providing a means for the return to the upstream country of its share of downstream power benefits, electrical interconnection between the power systems in the upstream and downstream countries opens the possibility of significant economies and advantages in the operation of the interconnected systems in both countries through the cooperative use of generation and transmission facilities.

In view of the foregoing, the Commission's recommendations on principles for benefit determination and apportionment are presented herein in three sections, namely, general principles, power principles and flood control principles.

GENERAL PRINCIPLES

Selection of Projects

A necessary step in the development of cooperative arrangements involving sharing of downstream benefits is the selection of the projects to which such arrangements would apply.

In selecting individual projects from among the available alternatives in both countries for comprehensive development of the Columbia River Basin, it would be consistent with customary practice to give first consideration to those projects that are

most attractive economically as reflected in the ratio of benefits to costs. It is suggested that this widely accepted principle be followed in international cooperative development of the Columbia River Basin to the extent that it may prove practicable and feasible to do so. If projects are developed successively to meet the growing needs for power production and to provide flood protection, the most efficient projects for those purposes should generally be developed first in order to maximize the net benefits to each country. It is recognized, however, that the results to be obtained from possible cooperative projects in the Columbia River Basin will constitute only a part of the total requirements for water resource development and use in the affected regions in both countries. Therefore application of the principle will necessarily be subject to the sovereign responsibilities in each country with respect to many vital and important national interests which must be taken into account in utilizing the water resources in each country. The Commission therefore recommends the following general principles:

General Principles No. 1

Cooperative development of the water resources of the Columbia River Basin, designed to provide optimum benefits to each country, requires that the storage facilities and downstream power production facilities proposed by the respective countries will, to the extent it is practicable and feasible to do so, be added in the order of the most favorable benefit-cost ratio, with due consideration of factors not reflected in the ratio.

Discussion of General Principle No. 1

It is intended in the application of this principle that benefits and costs of the projects given consideration in either country would be determined on the basis of the same or comparable evaluation standards, including such factors as the nature and extent of the benefits to be considered, the evaluation of such benefits, the determination of the initial investment and the computation of the annual costs.

The phrase "to the extent that it is practicable and feasible to do so" is included in recognition of the fact that it will not always be possible to adopt a project wholly on the basis of its benefit-cost ratio as compared to other projects in the river basin. There may be important non-monetary factors, not reflected in the benefit-cost ratio, which may require consideration and which may be of compelling influence in choosing projects for construction. Such factors include the disruption of community and regional economies, scenic, historic or aesthetic considerations, the preservation of fish and wildlife, and similar considerations, which cannot be adequately evaluated in monetary terms. Other practical considerations that might preclude the theoretically desirable order of construction of projects would include the following:

(a) the availability of funds, whether from public or private sources, may be an important consideration in the scheduling of projects within each country in an extensive basin-wide plan. This factor alone may require selection of a small project providing urgently needed benefits even though the small project

may have a lower benefit-cost ratio than a larger project requiring more funds than are available. On the other hand, it is important to recognize that a small project undertaken for such an immediate consideration might jeopardize an eventual development of far-reaching beneficial consequences.

(b) an urgent need to provide for such purposes as local or regional flood control, navigation, irrigation, or exceptional increases in power requirements may determine the order of project construction rather than the ratio of benefits to costs.

(c) the attitude of affected interests on the flooding of lands and improvements or to the effect of a project on other uses of the water resource may require postponement or abandonment of construction of projects that are the most attractive when viewed solely from the standpoint of their benefit-cost ratio.

General Principle No. 2

Cooperative development of the water resources of the Columbia River basin should result in advantages in power supply, flood control, or other benefits, or savings in costs to each country as compared with alternatives available to that country.

Discussion of General Principle No. 2

This principle was used as a basic concept by the Commission in the preparation of the more specific principles recommended herein, and is recorded for future guidance in the application of those principles.

Trans-Boundary Projects

Projects which could produce downstream benefits to be shared between the two countries may be located entirely in the upstream country, or may be trans-boundary projects in which the benefit-producing potentials of storage and head are partly in each country. Such projects affect the level of water above the boundary and in consequence are subject to Article IV of the Boundary Waters Treaty of 1909. The principles presented elsewhere in this report are applicable directly to storage projects situated entirely in the upstream country and relate to the effects produced in the other. To apply these principles to a trans-boundary project, it is first necessary to assign to each country an "entitlement" to the storage. This entitlement or share of the benefit-producing potential of the storage would then form the basis for determination and apportionment of downstream benefits between the two countries in accordance with the principles recommended herein. In addition, an entitlement to at-site power generation should be determined based on the benefit-producing potential of the head and flow involved. Also, the respective entitlements to share in any other benefit-producing potentials should be determined if significant.

As a basis for determining the "entitlement" of each country to the benefit-producing potentials of storage and head at trans-boundary projects, the Commission recommends the following general principle:

General Principle No. 3

With respect to trans-boundary projects in the Columbia Basin, which are subject to the provisions of Article IV of the Boundary Waters Treaty of 1909, the entitlement of each country to participate in the development and to share in the downstream benefits resulting from storage, and in power generated at site, should be determined by crediting to each country such portion of the storage capacity and head potential of the project as may be mutually agreed.

Discussion of General Principle No. 3

The "entitlements" determined in accordance with this principle provide a basis for establishing benefit credits. The principle is designed to provide flexibility in the arrangements between the two countries for cooperation on trans-boundary projects. The entitlement of a country computed in accordance with this principle would be the basis for determing the share of downstream benefits due that country in accordance with the other principles presented in this report for projects wholly in one country.

POWER PRINCIPLES

The setting in which principles for determining and sharing power benefits from the cooperative use of upstream storage in the Columbia River system would be applied is one in which significant changes are likely to occur within the life of projects that might be considered for development at this time. At present the power loads in the United States portion of the Columbia Basin and adjacent areas of the Pacific Northwest are supplied almost

entirely from hydro-electric plants. The downstream generating plants in the United States are now in a position to benefit materially from storage regulation upstream primarily through improvement of the dependable capacity and useable energy of the downstream plants. As the more economically attractive hydro plants are developed progressively, it will become necessary and advantageous to add thermal plants to the system until ultimately the Pacific Northwest power system in the United States will become predominantly thermal.

In the course of this change, the character of the benefits to downstream hydro-electric plants in the United States from storage will change to benefits in the form of peaking capacity and thermal replacement energy and may change in value.

In Canada, the hydro-electric power potential has not yet been developed to a comparable extent. For this reason, the type of change envisioned in the United States is unlikely to occur in the Canadian portion of the Columbia River Basin and adjoining areas until a considerable period of time has elapsed.

In the light of the foregoing, the Commission has found it necessary in its formulation of principles for determination and sharing of power benefits to allow for changing conditions during the specified period that a cooperative development agreement or any extension thereof would be effective. The principles recommended below for the determination and apportion-

ment of power benefits are believed to be sufficiently flexible to provide for equitable arrangements to permit taking into due account the changing conditions expected.

Application of the power principles to conditions in the Columbia basin would require electrical interconnection between the power systems of the two countries to make possible delivery of the upstream country's share of the power produced in the downstream country from the use of stored waters. Although such delivery could be accomplished initially with a somewhat limited degree of interconnection, the Commission is of the opinion that provision should be made for the eventual development of a broader, long-range plan for cooperative operation of the interconnected power systems of the two countries. Accordingly, the power principles include in addition to those governing cooperative use of stored waters, a principle providing for interconnection and coordination of the major power systems in the Columbia basin and adjoining areas in both countries so as to permit the power utilities of the two countries to gain the advantages of cooperative arrangements in power system operations.

Power Principle No. 1

Downstream power benefits in one country should be determined on the basis of an assured plan of operation of the storage in the other country.

Discussion of Power Principle No. 1

This principle is basic to a determination of the dependable capacity and usable energy that can properly be credited to

operation of upstream storage for the benefit of hydro-electric power generation downstream. Emphasis is placed particularly on the concept of an assured plan of operation of the storage with the expectation that the downstream system will be developed and operated so as to make optimum use of the stream flow regulation provided.

It is a generally accepted engineering principle in the electric power field that any power supply which is classified as "firm" or "dependable" must be deliverable on such a schedule or plan as to assure availability of the power at the times when it is needed to serve the load, particularly during peak load periods. It is, therefore, highly important that river-flow regulation be provided under an agreed operating plan or rule curve that will assure the dispatch of water by the owner of storage facilities to the owners of downstream hydro plants in such a manner as to meet the needs of the latter for delivery of firm power to their customers. Such a plan of operation will provide the maximum downstream power benefit consistent with the degree of coordination agreed upon.

It is expected that a general plan of operation of the upstream storage project will be estimated for the entire period of the agreement with the understanding that mutually satisfactory adjustments in the long-range plan of operation can be made from time to time as necessary. This general provision for

adjustment is additional to the flexibility for changes by either country which may be specifically provided for in the agreement. Factors that may bring about the need for adjustments in the operating plan are covered in the discussion of Power Principle No. 2.

Power Principle No. 2

The power benefits attributable to an upstream storage project should be estimated in advance to the extent possible to the mutual satisfaction of the upstream and downstream countries. These estimates of power benefits should be subject to review in accordance with the agreed principles every five years, or more often as may be agreed, to take into account in subsequent estimates any change in previously assumed conditions and to insure optimum utilization of the storage and accurate determination of future benefits.

Discussion of Power Principle No. 2

This principle is intended to provide in advance of construction of upstream storage reservoirs a long-range estimate of the expected benefits of the international cooperative undertaking. The estimate of benefits, expressed in power, or in monetary terms if necessary, would be determined on the basis of the current assured plan of operation as described under Power Principle No. 1 and in accordance with Power Principle No. 3.

It is contemplated that the appropriate agencies in each country will collaborate in the preparation of the estimate and that it will cover the entire period of the international agreement. Any extension of the agreement would also require similar estimates. It should be based on the relevant conditions of load

and power supply expected to prevail during the period of the agreement. The assumed power supply should include the projects, both hydro-electric and steam-electric, considered most likely to be constructed to meet the long-range needs of the power systems concerned.

In estimating the long range power benefits attributable to upstream storage and in the periodic reviews provided for in this principle, due recognition should be given to the adjustments in storage operation that are likely to be required to meet power loads and other water use needs in either country. Factors in either country which could change and thus alter the role of storage include: the magnitude and characteristics of the power loads to be served, installed generating capacity available in the hydro-electric plants on the affected systems, the amount of thermal generating capacity available and the requirements of other water uses. The time and effect of such changes should be anticipated by the appropriate Canadian and United States agencies as far in advance as possible and taken into account either by provision in the assured plan of operation or by agreement on mutually satisfactory adjustment as a result of the periodic review of the plan of operation and long-range estimate as provided for in this principle.

In addition to the primary purpose of furnishing a long-range estimate of the benefits of the international cooperative undertaking the advance estimate and periodic reviews are expected

to serve several other purposes. The agencies affected will be afforded a basis for anticipating the probable long-range use or role of the storage in the respective countries so that other developments on the affected power systems can be planned well in advance and timely provision made for their construction as required by each country. Assurance as to use of the storage would facilitate advance planning of the transmission systems required to coordinate the storage operation with generating plants on the interconnected power systems. Information provided from the estimates would also aid the two countries in determining the timing and value of other projects of international scope in which they may be jointly interested.

Power Principle No. 3

The amount of power benefits considered to result in the downstream country from regulation of flow by storage in the upstream country should be determined in advance by computing the difference between the amount of power that would be produced at the downstream plants with the storage regulation and the amount that would be produced without such regulation. This determination would be made on the assumption that upstream storage is added at an agreed-upon level or condition of storage and power supply. The storage credit position of the upstream storage thus established should be preserved throughout the period of the agreement.

Discussion of Power Principle No. 3

Application of the with and without principle involves several significant determinations and procedures to insure that the upstream storage receives proper credit for its contribution toward meeting the load. Because of the fact that

successive units of storage capacity added to a system of projects result in decreasing amounts of regulatory effect per unit, the time at which a project is considered as added to the system in relation to the time at which other storages are added affects the amount of regulatory effect and accompanying firm power benefit with which a particular storage project may be credited. Thus the conditions under which a project is considered as added determines its "credit position".

Under this principle, it is intended that the storage credit position of an upstream storage reservoir be determined on the assumption that it is added at an agreed-upon level or condition of storage and power supply. This "level" or "condition" might be defined by relating it to a "base system". The "base system" would be comprised of all developments existing at the time of negotiation of an agreement together with developments actually under construction at that time.

Since many estimates and computations have already been made on the basis of data available during the Commission's consideration of these principles, it is suggested that negotiations undertaken in the near future utilize as a base system the developments existing and under construction on January 29, 1959, the date of the two Governments' request for this report. The pertinent storage developments in the current base system are:

Project	Useable storage
Kootenay Lake	673,000 acre-feet
Hungry Horse	2,982,000
Flathead Lake	1,217,000
Albeni Falls	1,153,000
Coeur d'Alene Lake	225,000
Grand Coulee	5,072,000
Chelan	676,000
Brownlee	1,034,000
	13,032,000 acre-feet

If negotiations are undertaken or continued at a time when major changes have occurred, a revised base system should be agreed upon. Conditions of International Joint Commission Orders of Approval affecting any of these developments would continue to be applicable.

It is contemplated that the representatives of the two governments who negotiate arrangements under these principles would agree on the order in which the storages they have under consideration would be considered as added to the base system so that a credit position for each such storage could be established. It is intended under this principle to provide that the credit positions of the storages thus established will not be adversely affected by the addition of subsequent storage and that the storage credit of such agreed upon storages may increase or decrease only as the role of storage generally in the system changes.

Power Principle No. 4

The amount of power benefits determined to result in the downstream country from regulation of flow by storage in the upstream country would normally be expressed as the increase in

dependable bydroelectric capacity in kilowatts under an agreed upon critical stream flow condition, and the increase in average annual useable hydroelectric energy output in kilowatt-hours on the basis of an agreed upon period of stream flow record. Since this procedure requires relating the increased power production to the loads to be met in the downstream country and adjustment of the upstream country's entitlement to conform more nearly to its load requirements, consideration might be given in the negotiations to the adoption of arrangements that would be less dependent upon consideration of the load patterns in each country.

Discussion of Power Principle No. 4

In determining the increase in dependable hydro capacity and in useable energy output at downstream plants resulting from upstream regulation, the estimates should be based on the ability of those plants, enlarged as necessary, to serve the coordinated system loads in the downstream country expected to be realized during the periods under consideration.

The critical flow period used to determine hydro plant outputs available for supporting dependable capacity on the downstream load would be that corresponding with the agreed-upon level or condition of storage and power supply as contemplated in Power Principle No. 3.

Estimates of increase in average annual useable energy output at the affected downstream plants should be based on an agreed upon period of stream flow record which is expected to give results representative of long term conditions.

It is expected that both dependable capacity and energy benefits will result during the early and intermediate stages of the storage operation, but during the later stages the power benefit may consist only of increased useable energy.

Whether the objectives are to produce the maximum firm power, peaking capacity or thermal replacement energy, the power useable on the downstream load is the basis for determining the monetary value of the power resulting from the co-operative arrangements. Such value as defined later in Power Principal No. 5 would serve as the basis for adjusting the upstream country's entitlement as between capacity and energy, to amounts of equivalent total value, which conform more nearly to the requirements of the upstream country's load.

Power Principal No. 5

Whenever it is necessary to place a monetary value on downstream power benefits arising in one country from storage operation in the other country, the value should be the estimated cost to the downstream country of obtaining equivalent power from the most economical alternative source available except where the appropriate Canadian and United States agencies specifically agree on some other basis of evaluation.

Discussion of Power Principal No. 5

This principal is intended to provide a basis for the evaluation, in monetary terms, of downstream capacity and energy benefits attributable to upstream storages for whatever purposes such monetary evaluation may be required; but is intended to have application only in those cases where appropriate monetary values for specific purposes are not otherwise agreed upon by the appropriate United States and Canadian agencies. It is further intended that where such monetary values are agreed upon by the agencies, for any period during the life of the covering agreement, the value so agreed upon shall over-ride the provisions of this principle.

The alternative source used as a basis for the evaluation should be the most likely source available to furnish an amount of power equivalent to the power being evaluated and might be hydroelectric, thermal or some combination thereof.

Power Principle No. 6

The power benefits determined to result in the downstream country from regulation of flow by storage in the upstream country should be shared on a basis such that the benefit, in power, to each country will be substantially equal, provided that such sharing would result in an advantage to each country as compared with alternatives available to that country, as contemplated in General Principal No. 2. Each country should assume responsibility for providing that part of the facilities needed for the cooperative development that is located within its own territory. Where such sharing would not result in an advantage to each country as contemplated in General Principle No. 2, there should be negotiated and agreed upon such other division of benefits or other adjustments as would be equitable to both countries and would make the cooperative development feasible.

Discussion of Power Principal No. 6

It is assumed that each country would bear all capital and operating costs for facilities it would provide in its own territory to carry out the cooperative development. The upstream country's share of the power would be transmitted to the boundary by the downstream country at such points as may be most economical to the downstream country. Other points could be selected upon request of the upstream country provided that any excess costs to the downstream country are paid by the upstream country. Losses in transmission of the power to the international boundary from the points of generation would be borne by the upstream country.

The voltage at which power would be delivered to the upstream country would be mutually agreed upon but such voltage should be a level that is in common use on the downstream power system through which the transfers of power are to be made.

The load factor at which the upstream country's share of power is delivered should also be agreed upon in advance. Basically, the downstream country should not be required to provide more facilities for generation and transmission to furnish the upstream country its entitlement of power than would be required if the power were to be used in the downstream country at the load factor generally applicable to its affected hydro plants.

Power Principle No. 7

In addition to benefits from cooperative use of stored water, interconnection and coordination of the electric power systems to the extent that they are practicable and desirable, would also provide many mutual benefits which should be shared. Coordination being a continuing function would require specific arrangements on the part of the operating agencies as the need arises.

Discussion of Power Principle No. 7

The first six power principles recommended in this report are directed to determination and apportionment of benefits which would result from international cooperation in the use of stored waters. These are basically hydraulic benefits which can be realized by storing flood flows during the spring and summer months and releasing the stored waters during the fall and

winter months when they can be put to use for the production of firm power at the storage site and downstream. Electrical interconnection between the power systems of the two countries would be required to make possible delivery of the upstream country's share of the power produced in the downstream country from the use of stored waters, but the interconnection capacity provided for this purpose would be only that needed to accomplish such delivery. This limited degree of interconnection would not, however, make possible the greater benefits that would accrue to the two countries from a comprehensive plan of interconnection and coordination.

Such coordination should be recognized in the development of the agreed upon plan of upstream storage operation and in the computation of system power benefits. Separate arrangements may be required for sharing coordination benefits because the electrical coordination envisaged could extend geographically beyond the service areas of the generating plants or power systems directly benefitted by the release of stored waters from storage projects constructed by the upstream country. It is recognized that the power systems in British Columbia are not now developed to the same extent as in the United States portion of the Columbia River basin, but it is the intention of this principle to provide for long-range international cooperation between the systems of the two countries as they continue to develop in the future.

Under arrangements for coordination, it would be expected that all participating power systems would retain their local autonomy but would necessarily operate their generation and transmission facilities under the terms of appropriate agreements with a view to maximizing mutual benefits. The arrangements should set forth the broad operating principles to be observed and should be writtin in sufficient detail to describe the specific purposes and objectives.

FLOOD CONTROL PRINCIPLES

Among the sections in the United States to which principles for flood control benefit determination and sharing would be applicable are the Kootenai River downstream from Bonners Ferry, Idaho, and the lower main stem of the Columbia River. These areas now have partial protection against flooding and there are plans for utilization of storage in the United States to be developed primarily for power purposes in such a way that ultimately a high degree of protection against major floods would be obtained. As successive blocks of storage for flood control purposes are added to the system, the amount of flood damage that can be prevented per unit of flood control storage decreases. Accordingly, the value that can be assigned to upstream storage for flood control purposes is greater for projects to be constructed in the near future than for those to be built later. Also, in the Columbia Basin the hydrologic and

hydraulic characteristics are such that storage can be operated in the interests of flood control to a considerable extent with little, if any, interference with the operation of the same storage project in the interests of power generation.

These factors, as well as other information available to the Commission, have been taken into account in formulating the following principles for determination and sharing of flood control benefits which may result from cooperative development of storage in the Columbia River Basin.

Flood Control Principle No. 1

Flood control benefits should be determined on the basis of an assured plan of operation and flood control regulations agreed to in advance.

Discussion of Flood Control Principle No. 1

The assured plan of operation for flood control would not be a separate plan of operation but rather a joint or composite plan of operation of a given storage project in the interests of flood control as well as for other purposes, principally power. The plan of operation for any reservoir included in the flood control plan, therefore, should be worked out initially so as to obtain the best combination of benefits for all purposes. In the Pacific Northwest meteorological and hydrological conditions and the requirements for storage operations in the interests of power and flood control are such that little, if any, loss of ability to maximize power benefits is required to accommodate flood control

In any event, the plan of operation worked out in accordance with these principles would be the basis for determination of the flood control and power benefits to be shared.

Once the plan of operation is agreed to, normal operations for both power and flood control would be in accordance with that plan. It is to be expected that both the upstream storage interests and the downstream power and flood control interests may wish from time to time to request or suggest deviations from the plan. If such deviations would involve an adverse effect on the other party at interest it would be expected that a basis for compensating for the adverse effect would also be proposed. Such deviations would then be made possible if the deviations and any required compensation were mutually acceptable to both parties. If the upstream country wished to have the option of using alternative storage to provide equivalent downstream flood control effects as contemplated in the plan of operation, such option should be provided for in the agreement.

It is assumed that acts of God, emergencies, and other events over which neither party has control, would be interpreted and handled in the manner usually contemplated in a "force majeure" clause in an agreement.

Flood Control Principle No. 2

The downstream flood control benefit of the upstream storage to be operated in accordance with an agreed-upon flood control plan should be estimated in advance on the basis of the effectiveness of such storage in meeting the flood control objectives applicable in the downstream country at the time the upstream storage is provided.

Discussion of Flood Control Principle No. 2

This principle places prospective Canadian storage to be operated in accordance with an agreed-upon flood control plan in exactly the same position that any concurrently prospective United States storage for flood control purposes would have. The effectiveness of all flood control storage is measured in terms of the flood control objectives applicable at the time the storage is to be provided and the effectiveness determined at that time is applicable for the entire life of the project in question or for the period of agreement in the case of Canadian storage.

In the United States the current primary flood control objective is to obtain storage sufficient to control a flood of the magnitude of that of 1894 at The Dalles to 800,000 cfs. All additional storage in the United States or Canada necessary to achieve this objective (approximately 7½ million acre feet of storage usable for flood control) would, if included in the flood control plan, be given equal credit on the basis of the effectiveness of each acre foot of such storage in controlling floods at The Dalles. Storage either in the United States or Canada added after the necessary amount has been reached to control the 1894 flood to 800,000 cfs would, if included in the flood control plan, be evaluated at a lesser rate based on the average value of all additional storage needed to control the 1894 flood at The Dalles to 600,000 cfs.

Local flood control objectives have also been identified in other parts of the basin especially on the Kootenai River downstream from Bonners Ferry where control of the 1894 flood to a maximum of 60,000 cfs is desirable. Storage either in the United States or Canada should be entitled to credit on the basis of satisfying such local objectives.

Flood Control Principle No. 3

The monetary value of the flood control benefit to be assigned to the upstream storage should be the estimated average annual value of the flood damage prevented by such storage.

Discussion of Flood Control Principle No. 3

The average annual value of flood damage prevented by upstream storage can be computed by conventional methods using stage-frequency and damage-frequency relationships. The methods are described and their application illustrated in the most recent report of the Corps of Engineers on the Columbia River Basin recently submitted by the Division Engineer, US Army Engineer Division, North Pacific, to the Chief of Engineers under the title "Water Resources Development, Columbia River Basin" dated June 1958.

Flood Control Principle No. 4

The upstream country should be paid one-half of the benefits as measured in Flood Control Principle No. 3, i.e., one-half of the value of the damages prevented.

Discussion of Flood Control Principle No. 4

In the event that application of this principle should indicate a payment to the upstream country greater than the estimated cost of alternative means of obtaining equivalent flood control in the United States the requirement of General Principle No. 2 that there should be an advantage as compared with available alternatives would not be satisfied and consideration should be given to this circumstance in the negotiations.

Flood Control Principle No. 5

The amount due to the upstream country under the foregoing principles should be determined in advance of construction of each storage project. Payments to cover the entire period that the arrangements are to be effective should be made in cash as a lump sum or as periodic amounts as may be agreed upon to the mutual satisfaction of the upstream and downstream countries.

Discussion of Flood Control Principle No. 5

The payment of a lump sum or periodic amount as may be agreed upon would, of course, be subject to the authorization of such payment by the Congress of the United States. Request for such authorization could be presented to the Congress for consideration as soon as a definite arrangement between the two countries became available as a basis for the request.

Flood Control Principle No. 6

In the event of the downstream country requesting special operation for flood control of storage included in the assured plan of operation, beyond the type of operation provided for in such assured plan, the upstream country should be compensated for any loss of power which may result thereform. In the event of the downstream country requesting the operation, for flood control, of storage not included in the assured plan, the upstream country should similiarly be compensated for any loss of power which may be sustained by the upstream country and in addition should be paid on the basis of half the damages prevented by the operation of the storage in question.

Discussion of Flood Control Principle No. 6

This principle is included to provide for emergency operations to meet unusual flood producing conditions not covered in the assured plan of operation discussed under Principle No. 1. As long as operations for flood control remain in conformity with the assured plan of operation, there would be no compensation beyond that provided for in the other power and flood control principles.

If, however, unusual flood producing conditions should occur and, at the request of the downstream country, the upstream country should draw down its storages included in the assured plan to a greater extent or at a different time or in any manner not provided for in the assured plan of operation, the downstream country should compensate the upstream country for the loss of power sustained in providing the additional flood protection. That is, if such action caused a loss of power as compared with the results that would have been possible by adhering to the assured plan of operation, then the upstream country would be reimbursed for the loss of power at its plants and for the decrease in its share of power in the downstream country's plants. The reimbursement could be either in cash or in power as might be mutually agreed upon. In any event, the downstream country should give assurances that it would furnish sufficient power to meet minimum load requirements of the upstream country if the

loss of power were so great as to adversely affect the upstream country's ability to meet the loads from its own resources.

The foregoing arrangements will apply also to upstream storage not in the flood control plan but which is operated in response to the request of the downstream country to give emergency relief. In this case, however, the downstream country should, in addition to the compensation to the upstream country for power loss, make a payment to the upstream country on the basis of half the damages prevented.

Signed at Washington this twenty-ninth day of December 1959.

Eugene W. Weber

A. G. L. McNaughton

Francis L. Adams

J. Lucien Dansereau

D. M. Stephens

Appendix 6.6
Chronology of Selected Major Events Since 1964[137]

The intent of this appendix is to highlight major events and decisions since the Columbia River Treaty was adopted and implemented. It is not meant to provide a chronology of major events in the basin since time immemorial. Section 1.0 of the report provides a very concise, high-level overview of the history of basin since time immemorial.

1964: Columbia River Treaty was implemented, delineating power and flood control benefits between the U.S. and Canada. In addition, it authorized construction of a number of Canadian storage facilities to improve storage capacity in the system and maximize hydropower generation.

1965: Water Resources Planning Act. The Water Resources Planning Act of 1965 established a Water Resources Council to be composed of Cabinet representatives, including the Secretary of the Interior. The Council was charged with maintaining a continuing assessment of the adequacy of water supplies in each region of the U.S. The Council also was mandated to establish principles and standards for federal participants in the preparation of river basin plans and in evaluating federal water projects with respect to agricultural, urban, energy, industrial, recreational, and fish and wildlife needs.

1966: To protect dwindling runs of summer chinook above Bonneville Dam, the Oregon Fish Commission asks the Oregon State Police to strictly enforce the law forbidding non-Indian commercial fishing upriver from Bonneville.

1968/69: SoHappy v. Smith and United States v. Oregon. Fourteen Yakima tribal members filed suit to prevent the state of Oregon from interfering with their off-reservation treaty fishing rights. The court found that the state's authority to regulate Indian fishing for conservation purposes was limited as treaties provide tribes an absolute right to a fair share of the fish produced by the Columbia River system.

1969: National Environmental Protection Act. The National Environmental Protection Act of 1969 requires federal agencies to examine the impacts of proposed major federal actions significantly affecting the environment.

1973: Endangered Species Act. "The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take steps as may be appropriate to achieve the treaties and conventions. . . ."

1974: United States v. Washington. A federal district court in the state of Washington found that Native American Tribes were entitled to the opportunity to take up to 50 percent of the harvestable number of fish that can be taken. This harvestable sharing principle was also applied in U.S. v. Oregon (see above).

1977: Four U.S. tribes with treaty fishing rights on the Columbia River form the Columbia River Inter-Tribal Fish Commission to coordinate fish management policies and objectives. The participants are the Nez Perce Tribe, Confederated Tribes of the Umatilla Reservation, Confederated Tribes of the Warm Springs Reservation of Oregon, and Confederated Tribes and Bands of the Yakama Nation.

1980: In December, Congress approves and President Jimmy Carter signs into law the Northwest Power Act, which authorizes the four Northwest States of Idaho, Montana, Oregon and Washington to form the Northwest Power and Conservation Council (the agency was known until 2003 at the Northwest Power Planning Council) and gives the Council three distinct responsibilities: 1) prepare a program to protect, mitigate and enhance fish and wildlife, and related spawning grounds and habitat, of the Columbia Basinthat have been affected by hydropower dams, while 2) assuring the Pacific Northwest an adequate, efficient, economical and reliable power supply, and 3) informing the public about energy and fish and wildlife and involving the public in decision-making. The Council met for the first time in April 1981.

1985: Pacific Salmon Treaty was ratified as a cooperative agreement between U.S. and Canada to research and enhance Pacific salmon stocks.

1988: Snake River coho salmon are considered extinct.

1991: In April, the National Marine Fisheries Service proposes to list Snake River sockeye as an endangered species. In June, the Service proposes to list Snake River spring/summer and fall chinook as threatened species. The Service declines to list lower Columbia coho on the grounds that the population was so infused with the genetic material of hatchery-bred coho that no truly wild coho remain.

1995: In May, British Columbia's Legislative Assembly approves the Columbia Basin Trust Act, which established the Columbia Basin Trust (CBT) ". . .to help create a prosperous economy with a healthy and renewed natural environment." CBT is " . . .an autonomous and independent organization of communities." Through CBT, millions of dollars will flow into the Canadian Columbia Basinfrom the sale of electricity in the United States— so called "downstream benefits"—made possible by the operation of storage reservoirs behind the three Canadian dams of the 1962 Columbia River Treaty.

1995-1999: Endangered Species Act Listings. Nine additional species of fish throughout Columbia Basin, including steelhead native to the upper Columbia, Willamette and Clackamas spring Chinook salmon, and lower Columbia fall Chinook salmon, were listed under the Endangered Species Act.

1999: The Entities determined that some provisions of the CRT covering Entitlement delivery did not address the realities of the Pacific Northwest grid, and that new rules covering the cost of electric transmission had not been anticipated. This change was considered to be "substantial" and the United States' State Department (State) and the Canadian Department of Foreign Affairs and International Trade (DFAIT) were consulted, and ultimately covered the agreements with an Exchange of Notes.

2000: The Entitles agreed to coordinate the operation of Libby with Canadian projects to self compensate Canada for losses incurred as a result of the operation of Libby for Endangered Species. The original difference of opinion was presented to State and DFAIT, but no resolution appeared to be possible, so the Entities were allowed to see if a pragmatic resolution could be developed. The idea of self-compensation allowed an agreement to be developed, without compromising the original position of either country. The agreement provides both parties with very short termination options, so there is an incentive to make it work, rather than go to a very lengthy arbitration process.

2001-2004: Salmon and steelhead returns to the Columbia River are far above recent 10-year averages. Some, such as the returns in 2003, are the highest since record keeping began at Bonneville Dam in 1938. In 2003, more than 920,000 chinook salmon were counted crossing Bonneville Dam, where the 10-year average count was 399,000. A number of factors appeared to be contributing to the increased run sizes, including improved fish passage at dams, improved spawning and rearing habitat, improved feeding conditions in the ocean, and a reduction of intercepting fisheries. In 2004, as strong runs continued, scientists at NOAA Fisheries who monitor the runs said it appeared the runs would stay high at least through 2006.

2008: The Pacific Salmon Treaty established the Pacific Salmon Commission, a bilateral body that recommends to the U.S. and Canada the ocean salmon fishing levels in Southeast Alaska and British Columbia. The United States and Canada adopted a new set of fishing regimes for Chinook, coho, chum and Transboundary Rivers on December 23, 2008 through an exchange of diplomatic notes.

2008: Fisheries have had recent steep declines and there have been closures of recent fishing seasons.

2014: Ocean conditions and improvements to fish passage and habitat led to increased salmon runs in the Okanagan and upper Columbia. The Okanagan salmon run exceeded 500,000. In comparison, runs in the 1990s averaged 21,700.

Appendix 6.7
Recommendations by Canada and the United States on the Future of the Columbia River Treaty

United States Entity

Columbia River Treaty
P.O. Box 3621, Portland, OR 97208-3621

Chairman:
Administrator and Chief Executive Officer
Bonneville Power Administration
Department of Energy

Member:
Division Commander
Northwestern Division
Corps of Engineers
Department of the Army

13 December 2013

In reply refer to: **BPA A-7 / USACE CENWD-DE**

Ms. Sue Saarnio, Director
Office of Canadian Affairs, WHA-CAN
United States Department of State
2201 C Street Northwest
Washington, D.C. 20520

Dear Ms. Saarnio:

The purpose of this letter is to transmit the U.S. Entity's regional recommendation concerning the future of the Columbia River Treaty after 2024. The U.S. Entity for the Columbia River Treaty (Treaty) is composed of the Administrator of the Bonneville Power Administration and the U.S. Army Corps of Engineers Northwestern Division Engineer, and is charged with the duty to formulate and carry out the operating arrangements necessary to implement the Treaty. The attached recommendation is being provided to the U.S. Department of State and the Administration at the direction of the Interagency Policy Committee to produce a regional recommendation that reflects the broadest possible consensus.

The regional recommendation was developed by the U.S. Entity in collaboration and consultation with the region's sovereign states, federally recognized tribes, and a variety of stakeholders through an extensive, multi-year process known as the Columbia River Treaty Review (Treaty Review). The U.S. Entity submits that the Pacific Northwest region broadly supports modernization of the Treaty to bring about better and more balanced benefits, and believes this would be in the best interest of the region and the United States.

The Pacific Northwest depends on a healthy, well balanced, efficiently operated Columbia River system to provide environmental sustainability, carbon free hydropower, flood protection for public safety and infrastructure, and economic well-being. The Columbia River Treaty between the United States and Canada, entered into force in 1964, has helped in achieving these multiple objectives over the years. In 2024 however, certain provisions of the Treaty will change, and other aspects should be improved to address the Columbia Basin's long-term ability to meet these multiple objectives.

Through the Treaty Review process, the U.S. Entity engaged the region to assist in the development of a recommendation that would reflect the region's interests for consideration by the State Department and the Administration. Key to that process has been collaboration with designated representatives of the states of Washington, Oregon, Idaho and Montana, federally recognized tribes, and several federal agencies. Equally critical has been the extensive involvement and input of the region's stakeholders, local communities and the public, who have provided perspectives and comments in individual meetings, workshop sessions, panel discussions, and technical analyses.

U.S. Entity Regional Recommendation for the Future of the Columbia River Treaty after 2024

December 13, 2013

U.S. Entity Regional Recommendation for the Future of the Columbia River Treaty after 2024

Introduction

The Pacific Northwest depends on a healthy Columbia River system to provide environmental sustainability, national energy independence, protection of public safety and infrastructure, and economic well-being. The Columbia River Treaty (Treaty) has provisions that should be improved to address this region's long-term ability to meet these objectives. Consequently, the region's sovereigns and stakeholders believe that modernization of the Treaty is in the best interest of the United States.

This recommendation identifies potential modifications to the Treaty post-2024. It begins by identifying regional goals for the future of the Treaty post-2024. It includes a set of general principles underlying this recommendation, followed by more specific recommendations related to a number of Treaty elements. Finally, in addition to this recommendation, we identify a number of matters related to possible post-2024 Treaty implementation for consideration by domestic interests.

The U.S. Entity developed the regional recommendation in collaboration and consultation with the region's sovereign states, federally recognized tribes, and a variety of stakeholders through an extensive, multi-year process known as the Columbia River Treaty Review.

Regional Goal for the Columbia River Treaty

The Pacific Northwest recognizes the value of the Columbia River Treaty in facilitating shared water resource management in the Basin to maximize benefits to both the United States and Canada. When the Treaty was originally drafted in the 1960s, it was designed to optimize hydropower production and coordinate flood risk management as its two primary benefits. In terms of those purposes, the Treaty has served the people of the region well. The assured streamflows under the Treaty support the region's hydropower system, which serves as a crucial backbone of the Pacific Northwest economy. The Treaty also has assisted in effectively managing flood risk to ensure public safety and facilitate regional development.

While the importance of the Basin's ecosystem has long been recognized and valued by those in the region, the Treaty does not identify ecosystem considerations. Significant efforts to address ecosystem concerns began in the 1980s through various avenues, and the region, principally through its electric utility ratepayers, has invested hundreds of millions of dollars annually to achieve ecosystem mitigation and improvements throughout the Basin over the intervening decades. In addition, the United States and Canadian entities in 1993 began using the flexibility in the Treaty to assist in meeting Endangered Species Act (ESA) requirements and to address ecosystem considerations on an annual basis through actions such as flow augmentation agreements. While it is recognized that significant ecological improvements are being implemented and realized in a number of critical areas and are anticipated to continue over time,[1]

[1] There are a number of domestic actions that have contributed, and will contribute to ecological improvements in the Basin. These include the Federal Columbia River Power System Biological Opinion requirements under the Endangered Species Act, the Nez Perce Water Rights Agreements of 2004, actions under the Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program, actions under the Clean Water Act to improve water quality, and implementation of the Columbia Basin Fish Accords. In addition, there are numerous habitat and conservation programs and FERC license requirements associated with non-federal dams on the Columbia River.

there is an opportunity for inclusion of certain additional ecosystem operations to expand, enhance, and complement these existing ecosystem investments as part of the post-2024 Treaty.

There also is increasing awareness in the region that an imbalance has developed in the equitable sharing of the downstream power benefits resulting from the Treaty. When the Treaty was ratified, the United States and Canada structured Canada's share of these benefits as one-half of the downstream power benefits with the Canadian Treaty projects as compared to without those projects. An equitable sharing of these benefits should instead be based on the more realistic measure of the power value of coordinated operations as compared to non-coordinated operations. Based on the present formula developed in the 1960s, the estimated value of the Canadian share of the downstream benefits in 2024 is significantly greater than anticipated, and far exceeds the value of coordinated power operations under the Treaty.

Flood risk management continues to be a vitally important aspect of coordinated operations with Canada. Recent high water events in 1996/1997 in the Portland/Vancouver area and in the Kootenai River Basin in 2006 and 2012 are examples of the effectiveness of coordinated operations that reduced flood impacts to the communities in both Canada and the United States. After the first 60 years of assured flood risk management operations in Canadian reservoirs, the Treaty shifts to "Called Upon" procedures for post-2024 flood risk management operations. As the nation and region develop a better understanding of the potential implications of climate change, future flood risk management procedures need to be resilient to provide for public safety.

Other important elements of a modernized Treaty are current and future water supply to help meet regional needs for irrigation, municipal and industrial use, in-stream flows, navigation, and recreation. In addition, the Treaty should include both short- and long-term mechanisms that allow for adapting the Treaty to build in flexibility of operations as conditions change (e.g., climate change, ESA listings or de-listings, or as new information and technology become available).

Accordingly, the region's goal is for the United States and Canada to develop a modernized framework for the Treaty that ensures a more resilient and healthy ecosystem-based function throughout the Columbia River Basin while maintaining an acceptable level of flood risk[2] and assuring reliable and economic hydropower benefits. Therefore, it is important to achieve a modernized framework for the Treaty that balances power production, flood risk management, and ecosystem-based function as the primary purposes, while also recognizing and implementing all authorized purposes.[3]

It is essential to note in the reading of this recommendation that, while the inclusion of ecosystem-based function as a third primary purpose of this Treaty is being recommended, a very important balance of water management uses has been established in the Basin and its tributaries over the past 50 years. This recommendation respects the importance, complexity, and trade-offs of each of these many uses and the benefits that the region has strived to achieve.

In summary, this recommendation seeks to formalize, provide certainty, and build on the many ecosystem actions already undertaken through annual or seasonal mutual agreements between the countries, while also providing a net increase in U.S. power benefits based on the actual value of coordinated operations

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[2] Throughout this document, "acceptable" flood risk is defined as "similar to the current level" of flood risk; however, the "acceptable" level of flood risk may change pending the outcome of a regional flood risk review process post-2013 as noted in item 1 listed in the *Domestic Matters to be Addressed Post-2013* section at the end of this document.

[3] In this document, the "primary purposes" refers to the "benefits" to be achieved through the Treaty. Where noted, "authorized purposes" is used to connote those purposes that have been authorized in the Basin through the United States Congress.

with Canada, preserving an acceptable level of flood risk to the people of the Basin, and continuing to recognize and implement the other authorized purposes in the Basin.

In this document the term "modernization" of the Treaty refers to the construct of a post-2024 arrangement. This construct could include amendments or revisions to the existing Treaty, diplomatic notes or protocols, or other means resulting in a modernized Treaty.

General Principles

Nine key principles underlie this recommendation and a modern approach to the Columbia River Treaty. These General Principles are to be taken together with the intent that all of the interests addressed herein be improved.

1. Treaty provisions should enable the greatest possible shared benefits in the United States and Canada from the coordinated operation of Treaty reservoirs for ecosystem, hydropower, and flood risk management, as well as water supply, recreation, navigation, and other pertinent benefits and uses, as compared to no longer coordinating Treaty storage operations.

2. The health of the Columbia River ecosystem should be a shared benefit and cost of the United States and Canada.

3. The minimum duration of the Treaty post-2024 should be long enough to allow each country to rely on the Treaty's planned operations and benefits for purposes of managing their long-range budgets, resource plans, and investments, but adaptable enough to allow responses to new information and changing conditions.

4. All operations of the Treaty should be based on the best available science, and, to the extent practicable, measurable outcomes.

5. U.S. federal reservoirs/projects will continue to meet authorized uses consistent with applicable legislation, Indian treaties and tribal rights, the U.S. Government's trust responsibility to the tribes, and other U. S. laws such as the Clean Water Act and the Endangered Species Act. Non-federal U.S. projects will continue to meet their responsibilities pursuant to their Federal Energy Regulatory Commission licenses.

6. The United States and Canada should pursue a more coordinated use of Treaty and Canadian non-Treaty storage under the Treaty to increase the flexibility to, and benefits of, meeting ecosystem-based function, power, flood risk management, and other authorized water management purposes in both countries.

7. The region anticipates impacts from climate change to all of the elements described in this document. The strategy for adapting the Treaty to future changes in climate should be resilient, adaptable, flexible, and timely as conditions warrant.

8. It is recognized that modifications to the Treaty could result in new benefits and/or costs to both Canada and the United States. U.S. interests should ensure that costs associated with any Treaty operation are aligned with the appropriate party.

9. Implementation of ecosystem-based functions in the Treaty should be compatible with rebalancing the entitlement and reducing U.S. power costs.

Recommendation Details

Consistent with the intent of the general goals and principles, the following sections provide more specific recommendations for a modernized Treaty.

Hydropower

In order to maintain coordinated hydropower operations and a reliable, economically sustainable hydropower system in a modernized Treaty, the region recommends the following:

1. The United States should pursue rebalancing the power benefits between the two countries to reflect the actual value of coordinated operations. This rebalancing is necessary because the present Treaty power benefits are not equitably shared and Canada is deriving substantially greater value from coordinated power operations than the United States. Accordingly, for the Treaty to be sustainable after 2024, the United States should only provide benefits to Canada equivalent to one-half of the actual U.S. downstream capacity and energy benefits received from coordinated operations as compared to a non-coordinated operation.

2. The United States should renegotiate for the replacement of the present "Aspects of Delivery Agreement" to create the least-cost transmission strategy for both countries to return the Canadian Entitlement to Canada. This includes reconsidering the flexibility of the return.

3. A modernized Treaty should retain the ability for both the United States and Canada to maintain an economical and reliable power supply post-2024. This requires consideration of the implications of any reductions in generation capability for either country, including lost revenue, system reliability, substantial increases in loss-of-load probability, carbon emissions, renewable resource integration, energy efficiency and conservation, and shifts in streamflow quantity and timing due to climate change.

4. A modernized Treaty should avoid substantial changes in hydropower generation during peak load periods that result in lower system reliability or flexibility[4].

Flood Risk Management

In order to maintain coordinated flood risk management, and to protect public safety and the region's economy, the region recommends the following:

1. The United States should pursue post-2024 Treaty flood risk management through a coordinated operation plan that provides for an acceptable level of flood risk. Unless modified based upon future review of flood risk management policy for the Columbia River, the level of risk will be similar to the level of risk existing prior to 2024 (see *Domestic Matters to be Addressed Post-2013* section).

2. The United States should pursue an assessment with Canada of potential alternatives for post-2024 operations to meet flood risk management objectives, including the possibility of using planned or assured Canadian Storage.

3. The United States and Canada should establish a common understanding of the methods and procedures for post-2024 Called Upon, which should reflect the following principles based on the

[4] Flexibility in the hydropower system is the ability of hydropower generation to respond rapidly to changes in the balance between demand and system generation and is critical for integrating variable renewable power generation such as wind and solar.

U.S. Entity White Paper: *Columbia River Post-2024 Flood Risk Management Procedure*, September 2011:

A. Called Upon should be considered only if coordinated Canadian power, flood control, and other operations do not provide sufficient storage in conjunction with the use of U.S. system flood storage or when needed during refill season to modify planned Canadian releases.

B. Draft U.S. projects according to their storage reservation diagrams (SRDs). Future flood risk management studies may evaluate alternative SRDs to include incorporation of ecosystem-based function such as dry year operating strategies.

C. Define "effective use" as applying to the eight U.S. reservoirs authorized for system flood control.

4. The United States and Canada should identify reasonable compensation to Canada for economic losses and operating costs associated with Called Upon. Any payments for Columbia River flood risk management should be consistent with the national flood risk funding policy of federal funding with applicable local beneficiaries sharing those costs as appropriate.

5. A modernized Treaty should enable the necessary flexibility to adapt both to changing flood risk management objectives in the United States and Canada and climate change (such as the potential for more frequent and intense winter flood events) to avoid additional risks to authorized purposes.

<u>Ecosystem-based Function</u>
In order to achieve the goal of modernizing the Treaty to further ensure a more comprehensive ecosystem-based function approach throughout the Columbia River Basin watershed, the region recommends the following:

1. A modernized Treaty should provide streamflows from Canada with appropriate timing, quantity, and water quality to promote productive populations of anadromous and resident fish and provide reservoir conditions to promote productive populations of native fish and wildlife. While recognizing existing Treaty obligations, a modernized Treaty should: (a) incorporate existing Treaty flow augmentation operations and accommodate post-2024 modifications to flow augmentation; (b) incorporate a dry-year strategy; and (c) gain long-term assurance of ecosystem-based functions rather than negotiating for these functions on an annual basis.

2. A modernized Treaty should recognize and minimize adverse effects to tribal, First Nations, and other cultural resources in Canada and the United States. To the extent there are adverse effects to U.S. cultural resource interests, such changes should be addressed under the Federal Columbia River Power System (FCRPS) Cultural Resources Program. This Program has the ability to be amended and expanded as needed if there are effects on cultural resources resulting from changes due to future operations in a modernized Treaty.

3. A modernized Treaty should be designed to be adaptable to meeting ecosystem-based function requirements as new information becomes available or conditions change (e.g., climate change) based on the management priorities of both countries.

4. The United States should pursue a joint program with Canada, with shared costs, to investigate and, if warranted, implement restored fish passage and reintroduction of anadromous fish on the

main stem Columbia River to Canadian spawning grounds. This joint program would proceed on an incremental basis, beginning with a reconnaissance-level investigation, and continue with implementation actions. All such federal actions at the Chief Joseph and Grand Coulee projects are subject to congressional authorization and appropriation. Modernized Treaty operations should not interfere with other opportunities to restore fish passage and reintroduction of fish in other blocked areas of the Columbia River Basin.

5. The United States should continue to coordinate its operation of Libby Dam with Canada, with the goal of achieving mutually desirable ecosystem benefits on both sides of the border. VarQ at Libby and Hungry Horse dams, including any modifications to VarQ, balances the multiple uses of the dams and incorporates ecosystem-based function.

Water Supply

Treaty Review studies indicate the potential for a modernized Treaty to allow for additional storage of water in Canada during the fall and winter, and release in the spring and summer. The Treaty should allow the storage and release of water from Canada in the spring and summer for additional in-stream and out-of-stream uses, including irrigation and municipal/industrial uses.

Irrigation has a long and important history in the Columbia River Basin for crop production and other purposes. The need for irrigation will only increase as the region continues to grow and as food supply and security continue to grow in importance. Operations under a modernized Treaty should recognize irrigation as an important authorized purpose in the Basin.

Any future water supply allocation decisions associated with a modernized Treaty should be subject to the requirement that they not adversely affect the operation of upstream reservoirs such as VarQ, and be made through a future domestic process and be consistent with ecosystem-based function and water rights, including tribal reserved water rights (see *Domestic Matters to be Addressed Post-2013* section).

Navigation

Since the Treaty was ratified in 1964, the regional and national economic significance of Columbia River navigation has grown. Operations under a modernized Treaty should recognize navigation as an important authorized purpose in the Basin and provide river flows that do not undermine safe navigation, efficient cargo movement, or the ability of navigation infrastructure to be maintained. This will ensure the economic value of port and transportation facilities, including commercial import and export of agricultural, bulk and manufactured goods.

Recreation

The region recognizes and supports the recreational and cultural opportunities that are a significant outcome of the Columbia River watershed management processes. Operations under a modernized Treaty should strive toward the protection of these resources.

Climate Change

A modernized Treaty should consider impacts from climate change to all elements described above, and create new terms in the post-2024 Treaty to allow the adaptive management of coordinated Treaty operations to better mitigate any impacts associated with climate change. The United States and Canadian Entities' Hydro-meteorological Team should continue to collaborate and share the best available climate change data and information.

Recommendation Timeframe

The region recommends that the U.S. government make a decision by mid-2014 to proceed with a renegotiation of the Treaty with Canada in order to modernize the Treaty by incorporating the objectives in this regional recommendation. Further, the region recommends that the U.S. government seek to complete that effort no later than 2015. If the United States and Canada are unable to achieve agreement on key aspects of a modernized Treaty by 2015, other options to create a modernized post-2024 Treaty should be evaluated.

Domestic Matters to be Addressed Post-2013

In addition to the preceding recommendation to the U.S. Department of State, this section identifies domestic matters related to possible post-2024 modernized Treaty implementation for consideration by domestic interests. Some of these are appropriate for consideration once the United States Entity makes its recommendation to the U.S. Department of State in 2013 and others are more appropriate for consideration once the U.S. government has a better understanding of post-2024 circumstances.

1. **U.S. Columbia River Basin Flood Risk Policy Review:** Pacific Northwest states and tribes support the pursuit of Congressional authorization and appropriations for a region-wide public process to assess potential changes to the current level of flood risk protection in the Columbia River Basin to enhance spring and summer flows. Any such process should occur between 2014 and 2024. Post-2024 Treaty provisions, including Called Upon, will be designed to adapt to any such changes that may be authorized. If a process is initiated, it will be a comprehensive approach, subject to public input, that addresses all opportunities to manage high flow events, including floodplain management, Columbia River Basin reservoir operations, and strategic improvements to existing levees and the need for additional levees. Potential impacts to other river uses and infrastructure such as navigation, bridges and other transportation features, hydropower, irrigation, recreation, fish and wildlife, and cultural resources also will be evaluated and addressed.

2. **Water Supply Allocation:** Pacific Northwest states, tribes, and appropriate federal agencies will design and initiate a process to allocate and manage any additional spring or summer flows for in-stream, irrigation, and municipal/industrial purposes derived through post-2024 Treaty operations. All water rights interests should be represented in this process. The U.S. Entity will incorporate decisions from this process into their post-2024 Treaty planning and operations. It is recognized that the states have authority to allocate and manage water pursuant to state law and consistent with other applicable law.

3. **Assessment of Canadian Entitlement:** BPA will host a public process in which states, tribes, federal agencies, and stakeholders can participate. This process will take place between 2014 and 2024 to assess the expected potential changes to its annual revenue requirements and rates due to any redesign of the Treaty post-2024. BPA also will discuss with the region how to manage those costs and benefits consistent with BPA's statutory authorities.

4. **Plan for Post-2024 Treaty Implementation**: Following the conclusion of the United States and Canadian negotiations of the terms of the post-2024 Treaty, and subject to funding, the U.S. Entity will lead an effort in consultation with regional sovereigns and stakeholders to develop a plan identifying the steps necessary to implement the modern Treaty post-2024. This plan will define the appropriate work needed to incorporate and implement any new ecosystem-based function, flood risk management, hydropower, and any other expected new operational objectives under the Treaty.

5. **U.S. Flood Plain Reconnection**: Tribal, federal, and state sovereigns will work with the Northwest Power and Conservation Council's Fish and Wildlife Program and the National Oceanic and Atmospheric Administration/National Marine Fisheries' Recovery Planning process (particularly estuary actions) or any other identified process throughout the Basin to advance selective flood plain reconnection for the purpose of achieving additional benefits from a modernized Treaty.

6. **U.S. domestic advisory mechanism**: The U.S. Department of State should establish and resource a structured domestic advisory mechanism to assist, inform, and advise the Department of State in the negotiations phase of this process. The Department of State should seek to involve a broad cross-section of regional parties in this mechanism. This mechanism may also be used to provide advice regarding additional work needed to address ecosystem-based function, hydropower, flood risk management, and other beneficial water uses.

7. **Composition of U.S. Entity:** At an appropriate time, membership of the U.S. Entity should be reviewed by the Administration, with consideration given to assuring a composition and membership that is best suited to effectively and efficiently implement the Treaty post-2024.

Columbia River Treaty Review
B.C. Decision

Preamble

The Columbia River Treaty (Treaty) is known throughout the world as one of the most successful models of a transboundary water treaty. Others countries see the agreement as a benchmark on cooperation to create and share benefits.

The construction of the Treaty dams and reservoirs caused much hardship to communities and First Nations that were directly affected, and ongoing reservoir operations continue to cause negative environmental, social and economic impacts. However, the Treaty dams have been a success in preventing damaging floods to Kootenay communities and residents, in creating renewable energy that powers a large portion of the province, in providing jobs and economic spinoffs to nearby communities, and by contributing to the province's general revenue that supports services to all British Columbians. In addition, Columbia Basin Trust was created in 1995 to enhance the social, economic and environmental wellbeing of Basin residents in recognition of the impacts of the Treaty in the Columbia Basin.

In November 2011, the Province initiated a Columbia River Treaty Review (Treaty Review) process to evaluate future decision options, including possible continuation, amendment or termination of the Treaty. Over the past two years the Treaty Review Team has heard from a wide variety of residents and stakeholders regarding the future of the Treaty.

The Treaty Review Team has been consulting on a government-to-government basis with potentially affected First Nations with the objective to avoid further impacts to aboriginal rights and title. Impacts to aboriginal territories, cultures and practices from the construction and operation of the Treaty dams and reservoirs remain a serious and ongoing concern to First Nations. The Treaty Review Team has also explored with First Nations other interests and how they may be addressed in the spirit of the New Relationship and the Transformative Change Accord.

Over the past two years there have been 23 community events in the Columbia Basin, and a public consultation report has been released that reflects the views of residents and feedback collected during four rounds of information sessions and workshops. Feedback was also received by mail and online through the Treaty Review website. The last round of public consultation on the Province's draft recommendation and public consultation report closed on November 20, 2013, and informed the final recommendation.

The Treaty Review Team also worked with elected officials in the Columba Basin through the Columbia River Treaty Local Governments' Committee (Committee). The Committee's primary role is to advocate for local residents and to make recommendations on the future of the Treaty to the Review Team and Ministers. The Committee provided an extensive list of Canadian Columbia Basin Dam and Reservoir Related Issues to the Treaty Review Team. The Province's response to these issues can be found at: http://blog.gov.bc.ca/columbiarivertreaty The Province and BC Hydro have committed to exploring and working with Basin communities on a number of these issues.

The Treaty Review Team heard a wide range of diverse perspectives on matters relating to the Treaty and on those issues that can be addressed within existing programs and initiatives. Some of these issues include:

- Residents are big proponents of ongoing enhancement to environmental values within the Basin through further investments in compensation and mitigation programs and by adjustments to hydro system operations to balance ecosystem needs with those of flood protection and power generation.
- There is an increasing awareness of climate change and a desire for planning and adaptation to be incorporated in future Treaty management decisions.
- Residents appreciate the effectiveness of the Treaty dams in minimizing flood damage and want to see close communication and coordination continue.
- Economic development has been an ongoing concern from the standpoint of lost opportunities as a result of the creation of reservoirs. An economic stimulus has been created for those who participate in ongoing hydro operations, construction and maintenance. The inequity between impact and benefit from the Treaty across communities has been highlighted.
- Public participation in decisions that affect them has changed greatly since the 1960s. Today, residents and stakeholders want to receive timely and pertinent information that they can understand, and have input and influence in management of resources, such Treaty operations including Libby Dam.
- Basin residents want recognition of the full range of benefits to the United States today and in the future, and to ensure that the Province receives its fair share as it relates to the benefits of coordinated operations from Canadian reservoirs.

The following B.C. decision and principles reflect the outcomes of the British Columbia Treaty Review process. Any changes to the Treaty that may be pursued by the Province will be guided by these principles.

B.C. DECISION:

Continue the Columbia River Treaty and seek improvements within the existing Treaty framework.

Principles

1. *The primary objective of the Treaty should be to maximize benefits to both countries through the coordination of planning and operations.*
2. *The ongoing impacts to the Canadian Columbia Basin to meet Treaty requirements should be acknowledged and compensated for. The level of benefits to the Province, which is currently solely in the form of the Canadian Entitlement, does not account for the full range of benefits in the United States (U.S.) or the impacts in British Columbia.*
3. *All downstream U.S. benefits, such as flood risk management, hydropower, ecosystems, water supply (including municipal, industrial and agricultural uses), recreation, navigation and any other relevant benefits, including associated risk reduction arising*

from coordinated operations compared to alternatives available to each country, should be accounted for and such value created should be shared equitably between the two countries.

4. *Treaty provisions post-2024 should be fixed for a sufficient duration to provide planning and operational certainty while allowing for adaptive mechanisms to address significant changes to key components and interests.*

5. *Implementation of post-2024 flood control obligations will be consistent with the Treaty requirements that a Called Upon Flood Control request can only be made when forecasts of potential floods indicate there is a reasonable risk of exceeding 600,000 cubic feet per second at The Dalles, Oregon, the U.S. must make effective use of all related storage in the U.S. before seeking additional help from British Columbia, and the U.S. must pay Canada compensation due as result of a Called Upon operation.*

6. *To supplement Called Upon Flood Control, a coordinated flood risk management approach should maximize the benefits and mitigate impacts and risks to multiple U.S. interests as compared to Called Upon Flood Control regime post 2024 which includes effective use of U.S. reservoirs.*

7. *Ecosystem values are currently, and will continue to be, an important consideration in the planning and implementation of the Treaty.*

8. *The Province will explore ecosystem based improvements recognizing that there are a number of available mechanisms inside and outside the Treaty.*

9. *Current and future operating conditions of Canadian Columbia Basin dams and reservoirs are subject to provincial and federal licensing including Water Use Plans, where they exist, and consideration of aboriginal rights under the Canadian constitution.*

10. *The Province will seek improved coordination on Libby Dam and Koocanusa Reservoir operations.*

11. *Salmon migration into the Columbia River in Canada was eliminated by the Grand Coulee Dam in 1938 (26 years prior to Treaty ratification), and is currently not a Treaty issue. British Columbia's perspective is that the management of anadromous salmon populations is the responsibility of the Government of Canada and that restoration of fish passage and habitat, if feasible, should be the responsibility of each country regarding their respective infrastructure.*

12. *Adaptation to climate change should be incorporated in Treaty planning and implementation.*

13. *The Canadian Entities (Province of British Columbia and BC Hydro) will continue to consult with First Nations on a government-to-government basis and engage with Basin communities throughout any negotiation process.*

14. *Canadian Columbia Basin issues not related to the Treaty will be addressed through other government programs and initiatives.*

Appendix 6.8
Transboundary Cooperative Arrangements between British Columbia and Washington[138]

- **International**
  - International Joint Commission (IJC)
  - Columbia River Treaty
  - North American Free Trade Agreement (NAFTA)
    - North American Agreement on Environmental Cooperation
    - Commission for Environmental Cooperation
  - U.S.-Canada Air Quality Agreement

- **Federal Agency**
  - Environment Canada – EPA Statement of Cooperation (2000)
  - Georgia Basin/Puget Sound/International Airshed Strategy
  - Transboundary Gas Group (Columbia River dissolved gas)
  - CANUSWEST - Canada-United States Joint Inland Pollution Contingency Plan

- **State & Province**
  - British Columbia – Washington State Environmental Cooperation Agreement (1992)
    - Interagency Agreement on Air Quality (1994)
    - BC - WA Environmental Cooperation Council (1996)
      - Memorandum of Understanding on Referral of Water Right Applications (1996)
      - Interagency Agreement on Air and Water Quality in the Columbia Basin (1996)
      - Memorandum of Understanding on Environmental Assessments and Reviews (2001)
  - Pacific Northwest Emergency Management Agreement (PNEMA 1997)
  - Puget Sound / Georgia Basin (Salish Sea) Ecosystem Research Conference
  - Oil Spill Memorandum of Cooperation (Pacific States and British Columbia Oil Spill Task Force – 2001)

- Western Climate Initiative
- Annual BC – WA Joint Cabinet Meetings
    - Forest Memorandum of Agreement (2007)
    - WA – BC Coastal and Ocean Task Force (2007)
    - WA – BC MOU on Coastal Climate Change Adaptation (2008)
    - Joint Action Plan on Carbon Neutral Government (2011)
    - Joint Action Plan on Awareness and Outreach for Coastal Impacts of Climate Change (2011)
- Pacific Coast Collaborative (Washington, British Columbia, California & Oregon – 2007)
    - Action Plan on Climate & Energy (10/28/13)
    - Climate initiatives (2007)
    - Action Plan on Ocean Conservation and Coastal Climate Adaptation (with California, Oregon – 2010)
- Columbia Basin Rapid Response Plan (with U.S. Columbia Basin States and Tribes – 2009)
- Pacific NW Environmental Directors
- Pacific Northwest Economic Region

❖ **Washington with BC border focus**

- West Coast Governors' Agreement on Ocean Health
    - Marine Spatial Planning
- Northwest Straits Commission
- State Ocean Caucus
- Puget Sound Partnership (includes ad hoc BC advisory scientists)

❖ **Tribes & First Nations**

- Coast Salish Gatherings
- Intergovernmental Policy Council - Olympic Coast National Marine Sanctuary (includes Makah, Hoh, Quileute & Quinault)

International

International Joint Commission (IJC)

http://www.ijc.org/en/home/main_accueil.htm

The International Joint Commission is an independent bi-national organization established by the United States and Canada under the Boundary Waters Treaty of 1909. The purpose of the Commission is to help prevent and resolve disputes about the use and quality of boundary waters and to advise Canada and the United States on questions about water resources. The Commission investigates issues only when requested to do so by both nations. Its recommendations are not binding.[

The Commission has responsibilities related to the following treaties and agreements: Boundary Waters Treaty of 1909; Great Lakes Water Quality Agreement of 1978, amended 1987; and the Air Quality Agreement (1991). Separate boards are responsible for particular boundary waters issues including the International Columbia River Board of Control and the International Osoyoos Lake Board of Control. Ecology operates Zosel Dam on Lake Osoyoos (straddling the BC border and Oroville, Wash.) to achieve levels mandated by the International Joint Commission in 1982.

Columbia River Treaty

http://www.crt2014-2024review.gov/

The Columbia River Treaty (1961) is an agreement between Canada and the U.S. on the development and operation of dams in the upper Columbia Basinfor power and flood control benefits in both countries. The Canadian and U.S. Entities defined by the CRT, and appointed by the national governments, manage most of the CRT required activities. The Canadian Entity is the B.C. Hydro and Power Authority, and the U.S. Entity is the Administrator of the Bonneville Power Administration and the Northwestern Division Engineer for the U.S. Army Corps of Engineers. The CRT also established a Permanent Engineering Board that reports to the governments annually on CRT results, any deviations from the operating plans, and assists the Entities in resolving any disputes.

In 2024 the 60 years of purchased flood control space in Canadian CRT projects expires. Instead of a coordinated and managed plan to regulate both Canadian and U.S. projects for flood control, the CRT calls for a shift to a Canadian operation under which the United States can call upon Canada for flood control assistance. The United States can request this “called-upon” assistance as needed but only to the extent necessary to meet forecast flood control needs in the United States that cannot adequately be met by U.S. projects. When called-upon is requested, the United States will then have to pay Canada for its operational costs and any economic losses resulting from the called-upon flood control operation.

The CRT has no specified end date; it allows either Canada or the United States the option to terminate most of the provisions of the CRT on or after September 16th, 2024, with a minimum of 10 years advance written notice. 2024 is the first year a notice of termination would take effect assuming notice is given by 2014. Unless the CRT is terminated or the federal governments elect to modify the CRT, its provisions continue indefinitely, except for the changes in flood control described above. The U.S. Army Corps of Engineers and the Bonneville Power Administration are conducting a multi-year effort called the 2014/2024 Columbia River Treaty Review.

The North American Free Trade Agreement (NAFTA)

-North American Agreement on Environmental Cooperation

-Commission for Environmental Cooperation

http://www.nafta-sec-alena.org/en/view.aspx

NAFTA is a 1994 agreement signed by the governments of Canada, Mexico, and the United States, creating a trilateral trade bloc in North America. The 1994 North American Agreement on Environmental Cooperation (NAAEC) is an environmental agreement between the United States of America, Canada and Mexico as a side-treaty of NAFTA . The Commission for Environmental Cooperation (CEC) was set up as part of the agreement. CEC strategies focus on Healthy Communities and Ecosystems, Climate Change-Low-Carbon Economy, and Greening the North American Economy with activities related to enforcement, environmental information, sustainability and pollutants and health.

A major trade dispute between the U.S. and Canada under NAFTA and other international forums has been over softwood with its biggest effect on British Columbia, the major Canadian exporter of softwood lumber to the U.S.. The U.S. claims that the provision of government timber the federal and provincial governments at below-market prices constitutes an unfair subsidy. Under U.S. trade remedy laws, foreign goods benefiting from subsidies can be subject to a countervailing duty tariff to offset the subsidy and bring the price of the product back up to market rates. More than $5 billion has been collected in softwood duty deposits. Since 1982, there have been four major iterations of the dispute.

http://en.wikipedia.org/wiki/United_States-Canada_softwood_lumber_dispute

The Commission for Environmental Cooperation's mission is to foster conservation, protection and enhancement of the North American environment in the context of increasing economic, trade, and social links among Canada, Mexico, and the United States. The Council oversees the implementation of the North American Agreement on Environmental Cooperation and serves as a forum for the discussion of environmental matters within the scope of the Agreement. http://www.cec.org/Page.asp?PageID=1115&BL_WebsiteID=1

U.S.-Canada Air Quality Agreement

http://www.epa.gov/airmarkets/progsregs/usca/index.htm

In 1991, the U.S. and Canada entered into an agreement to address transboundary air pollution, whereby pollutants released at one location can travel long distances, affecting air quality at their sources, as well as many miles away. The 1991 Agreement led to reductions in acid rain in the 1990s, and was expanded in 2000 to reduce transboundary smog emissions under the Ozone Annex.

Federal Agency

Environment Canada – Environmental Protection Agency Statement of Cooperation (2000)

http://www.epa.gov/region10/psgb/us_canada_partnerships/soc/

The Statement of Cooperation creates a framework for EC and EPA to promote sustainability in the Salish Sea region. It promotes Canada-U.S. collaboration in addressing the transboundary and global environmental challenges confronting the ecosystem. It confirms the commitment by the two federal levels of government to transboundary collaboration for the health of the Georgia Basin – Puget Sound ecosystem; recognizes the special role and interests of Coast Salish Nations and Tribes; and commits EC and the EPA to develop annual action plans and report to the public on progress.

An annual plan addresses transboundary collaboration, sharing knowledge and information, and transboundary demonstration projects that contribute to improved air quality, water quality and habitat and species health. The Statement of Cooperation Working Group is co-chaired by EC Pacific and Yukon and EPA Region 10 with representation from the Coast Salish Gathering Coordinators, the British Columbia Ministry of the Environment, Washington State Department of Ecology and the Puget Sound Partnership to facilitate a multilateral discussion.

Georgia Basin/Puget Sound International Airshed Strategy (2003)

http://www.epa.gov/region10/psgb/transboundary_air_quality/crossborder_collaboration/index.htm

August 2002, a Statement of Intent was signed by the Regional Director General of EC Pacific and Yukon and the EPA Region 10 Regional Administrator to develop the Georgia Basin-Puget Sound International Airshed Strategy to develop and implement initiatives to improve air quality in the transboundary Georgia Basin-Puget Sound region. The GBPS International Airshed Strategy was developed by a coordinating committee, under the U.S. Canada Border Air Quality Strategy, a cooperative effort to investigate barriers to reducing air pollution in transboundary air basins in North America developed under the auspices of the 1991 U.S. Canada Air Quality Agreement. The Coordinating Committee is made up of members from regional, provincial, state and federal government agencies, and First Nations and Tribes. Environment Canada Pacific and Yukon Region (PYR) and the Environmental Protection Agency (EPA) Region 10 act as co-lead agencies, coordinating joint activities by the Committee. The purpose of the Georgia Basin Puget Sound International Airshed Strategy is to: Reduce the impacts of air pollution to human health, ecosystems, and visibility in the GBPS airshed; Prevent future deterioration and work towards continuous improvement of air quality in the GBPS region; Establish practical and effective instruments to address shared concerns regarding transboundary air pollution in the GBPS region.

Transboundary Gas Group

The Transboundary Gas Group is a forum of dam operators, government scientists and resource managers from the Columbia Basinin the U.S. and Canada. This group meets semi-annually to discuss total dissolved gas reduction strategies and problems in the Columbia River and its major tributaries. Reports to involved agencies and the BC/WA Environmental Cooperation Council (below).

CANUSWEST - Canada-United States Joint Inland Pollution Contingency Plan

http://www.epa.gov/osweroe1/content/canada_border.html

The Canada-United States Joint Inland Pollution Contingency Plan provides for cooperative preparedness, reporting, and response measures between Canada and the U.S. when an oil release or hazardous substances emergency occurs along the shared inland boundaries. The “Annex I – CANUSWEST” (1998) is a cross-border plan for response to Oil and Hazardous Material Spills along the inland borders between British Columbia, Canada and the United States.

The EPA Office of Emergency Management (OEM) administers programs jointly with Canada to prepare for and prevent environmental emergencies along the northern border of the United States. OEM’s Director serves as the EPA chair of the U.S. National Response Team, and OEM’s Deputy Director serves as the U.S. Co-chair for the International Joint Advisory Team. The EPA Regions head their geographically corresponding U.S. Regional Response Teams. The agency provides On-Scene Coordinators (OSCs), scientific support coordinators for inland spills, and Remedial Project Managers for hazardous waste remedial actions under Superfund. EPA funds the Environmental Response Team (ERT), which is dispatched at the OSC’s request to any response episode exceeding available regional resources. The ERT can provide support for site assessments, health and safety issues, action plan development, and contamination monitoring. Legal expertise is also available from EPA to interpret environmental statutes.

State and Province

Annual BC – WA Joint Cabinet Meetings

Beginning in 2005, Governor Gregoire and Premier Gordon Campbell hosted joint cabinet meetings on a range of cross border trade, economic development, transportation, health, emergency services and en-

vironmental issues resulting in over 25 agreements as of 2010. With Campbell's resignation (Nov. 2010), it is not known if his successor will continue these meetings.

WA – BC MOU on Coastal Climate Change Adaptation (2008)

Signed at a Joint Cabinet meeting in Kelowna B, this MOU commits the governments to share data & research, collaborate on sea level impact analysis, and work together on communication and policies related to adapting to coastal climate change impacts; signed by Premier Campbell and Ecology Director Manning for WA.

Pacific Coast Collaborative

http://www.pacificcoastcollaborative.org/Pages/Welcome.aspx

On June 30, 2008, the leaders of Alaska, British Columbia, Oregon, California, and Washington signed the Pacific Coast Collaborative Agreement that brings together the Pacific leaders in a partnership and a forum for leadership, mutual action and a common voice on issues affecting the Pacific Coast region. The agreement was signed by Gov. Chris Gregoire, Oregon Gov. Ted Kulongoski, Alaska Gov. Sarah Palin, California Gov. Arnold Schwarzenegger and B.C. Premier Gordon Campbell.

The Pacific Coast Collaborative meets at least once a year, with the chair and the meeting location rotating annually through each jurisdiction. The purpose of these meetings is to create a forum for information sharing and create the opportunity for collaborative action by several or all of the members together addressing climate change, ocean health, security, or regional economic growth and stability. PCC topics include clean energy; regional transportation; innovation, research and development; a sustainable regional economy, especially with respect to environmental goods and services; emergency management. Agreements signed in 2007 to take action on climate change between British Columbia and California, Washington and Oregon laid the foundation for the PCC.

Action Plan on Climate & Energy (10/28/13)

I. Lead national and international policy on climate change with actions to:

   a. Account for the costs of carbon pollution in each jurisdiction.

   b. Harmonize 2050 targets for greenhouse gas reductions and develop mid-term targets needed to support long-term reduction goals.

   c. Affirm the need to inform policy with findings from climate science.

   d. Cooperate with national and sub-national governments around the world to press for an international agreement on climate change in 2015.

   e. Enlist support for research on ocean acidification and take action to combat it.

II. Transition the West Coast to clean modes of transportation and reduce the large share of greenhouse gas emissions from this sector with actions to:

   a. Adopt and maintain low-carbon fuel standards in each jurisdiction. existing standards.

   b. Take actions to expand the use of zero-emission vehicles, aiming for 10 percent of new vehicle purchases in public and private fleets by 2016.

   c. Continue deployment of high-speed rail across the region.

   d. Support emerging markets and innovation for alternative fuels in commercial trucks, buses, rail, ports and marine transportation.

III. Invest in clean energy and climate-resilient infrastructure with actions to:

a. Transform the market for energy efficiency and lead the way to "net-zero" buildings.

b. Support strong federal policy on greenhouse gas emissions from power plants.

c. Make infrastructure climate-smart and investment-ready.

d. Streamline permitting of renewable energy infrastructure.

e. Support integration of the region's electricity grids.

State of Washington – Province of British Columbia Coastal and Ocean Task Force

The WA/BC Coastal & Ocean Task Force was established in June 2007 through the MOU between Washington and British Columbia on Pacific Coast Collaboration to protect Our Shared Climate and Ocean (a precursor to the Pacific Coast Collaborative), signed by Governor Christine Gregoire and Premier Gordon Campbell. Its mandate is to provide a mechanism to enhance collaboration between the State of Washington and the Province of British Columbia on coastal and oceans issues. The Coastal and Oceans Task Force is to report to the respective governments through the BC/WA Environmental Cooperation Council. The Puget Sound Partnership participates in and convenes the Coastal and Oceans Task. The task force is empowered to address coastal issues, has a three-year work plan covering transboundary issues of mutual interest, and includes priorities for governance and information sharing; science and policy; shared indicators of ecosystem health; and issue areas for habitat restoration, climate, and water quality.

British Columbia - Washington State Environmental Cooperation Council

http://www.env.gov.bc.ca/spd/ecc/index.html

The Environmental Cooperation Council (ECC) was established by the Environmental Cooperation Agreement and entered into by the Governor of Washington State and Premier of British Columbia on May 7, 1992. Its purpose is to ensure coordinated action and information sharing on environmental matters of mutual concern. The ECC is co-chaired by the Director of the Dept. of Ecology and the Deputy Minister of the Ministry of the Environment.

To address critical cross-border environmental issues that require joint attention by Washington State and BC, the Council establishes and directs the work of Task Forces, which facilitate information sharing, coordination and cooperation on issues of mutual interest. The ECC and its Task Forces have addressed: flooding of the Nooksack River, the Abbotsford Sumas Aquifer, air quality in the Fraser Valley/Pacific Northwest airshed, the shared waters of the Georgia Basin and Puget Sound, and air and water quality issues in the Columbia River Basin. The ECC has been inactive in the past two years due to budget constraints and the use of other cross border forums (notably, joint climate initiatives, Pacific Coast Collaborative, and the EC/EPA Statement of Cooperation). ECC task forces continue to meet and work in subject areas.

Pacific States/British Columbia Oil Spill Task Force

http://www.oilspilltaskforce.org/

The Pacific States/British Columbia Oil Spill Task Force was authorized by a Memorandum of Cooperation signed in 1989 by the Governors of Alaska, Washington, Oregon, and California and the Premier of British Columbia, following two oil spill incidents: the tank barge Nestucca spilled oil on the coasts of Washington and British Columbia in 1988; and, three months later, the Exxon Valdez oil spill in Alaska. In 2001 a revised Memorandum of Cooperation was written to include the State of Hawaii and a focus on spill preparedness and prevention needs. The continuing focus of the Task Force is on fostering regula-

tory consistency, sharing information and resources, and coordinating development and implementation of new policies and programs to reduce the risk of marine oil spills.

The Task Force Members are senior executives from the environmental agencies with oil spill regulatory authority in the states of Alaska, Washington, Oregon, California and Hawaii and the Province of British Columbia. Oil spill program managers from each member agency comprise the Task Force's Coordinating Committee, which oversees activities and projects as authorized by the Members when they adopt a Five Year Strategic Plan and Annual Work Plans. The Coordinating Committee convenes four times a year. The Task Force Members hold their Annual Meetings each summer, rotating locations among member jurisdictions. The Task Force Executive Coordinator staffs the Task Force and provides liaison with stakeholders (industry, agencies, NGOs), arranges and facilitates meetings, develops comments and other documents, and coordinates project implementation.

Western Climate Initiative

http://www.westernclimateinitiative.org/

The Western Climate Initiative (WCI) began when the Governors of Arizona, California, New Mexico, Oregon, and Washington signed the 2007 Governors' agreement directing their respective states to develop a regional target for reducing greenhouse gas emissions, participate in a multi-state registry to track and manage greenhouse gas emissions in the region, and develop a market-based program to reach the target. Montana, Utah and the provinces of British Columbia, Manitoba, Ontario and Quebec have since joined. The Western Climate Initiative is one of three regional initiatives in the U.S. that is working to reduce greenhouse gas emissions. Each member state and province designates lead representatives to serve on the WCI, direct the overall work of the WCI, and make recommendations for program design and policies to achieve the collective greenhouse gas emission reduction goals. The Western Governors Association is under contract to the WCI to provide overall project management.

Pacific NW Environmental Directors

This group is made up of the environmental directors Washington, British Columbia, Oregon, Idaho, Alaska, Yukon and Alberta and the administrators of EPA R10, and Environment Canada Pacific & Yukon Region. It has been facilitated by Ross & Associates with two or three informal meetings a year.

Puget Sound / Georgia Basin (Salish Sea) Ecosystem Research Conference

http://www.engr.washington.edu/epp/psgb/

The biennial Puget Sound Georgia Basin Ecosystem Research Conference (AKA Salish Sea Science Conference) is the largest, most comprehensive scientific research and policy conference in the Salish Sea region. It is hosted variously by Environment Canada, EPA, Puget Sound Partnership, Ecology and the Ministry of the Environment; alternating BC and WA locations. Purpose is to highlight and connect cross-border scientific research and management techniques for meaningful action, exploring the science/policy interface. The conferences involve scientists, policymakers, Coast Salish Tribes and First Nations, resource managers, business leaders, elected officials, non-profit organizations, educators, students, and concerned citizens to promote informed action in the Salish Sea based on sound science.

Pacific NorthWest Economic Region

http://www.pnwer.org/Home.aspx

Based on a proposal created by the Pacific NW Legislative Leadership Forum in 1988, PNWER was established in 1991 by statute by seven legislative jurisdictions – Washington, Oregon, Idaho, Montana and Alaska in the United States, and British Columbia and Alberta. Canada´s Yukon Territory, Saskatchewan and Northwest Territories joined later. PNWER is made up of all state and provincial legislators. The governors and premiers were added to the PNWER governance structure in 1993.

PNWER facilitates working groups consisting of public and private leaders to address specific issues impacting the regional economy: Agriculture, Arctic Caucus, Cross Border Livestock Health, Border Issues, Security & Disaster Resilience, Energy I (Transmission), Energy II (Renewable Energy), Environment, Health Care Innovation ,Invasive Species, Sustainable Development, Telecom, Trade and Economic Development, Transportation, Tourism, Water Policy, Workforce Development

The organization´s is primarily funded through three sources, with approximately one third coming from state and provincial dues, one third from private sector sponsorship and dues, and one third from public and private grants. The CEO of PNWER is Matt Morrison; Minister Mel Knight from AB serves as the current president – an executive committee-elected position that alternates annually between elected legislators from the United States and Canada. Founders of PNWER, former senator Bluechel from the Washington State Legislature, and Jim Horsman, former chancellor of Lethbridge University in Alberta remain active in PNWER.

Washington & States with BC border focus

West Coast Governors' Agreement on Ocean Health

http://westcoastoceans.gov/

This agreement does not directly include British Columbia but is noteworthy because its priority activities are related to the purposes of the Pacific Coast Collaborative and the WA/BC Coastal & Ocean Task Force, above. BC counterparts are involved in teams and projects under this agreement, including climate change and Spartina eradication.

This 2006 California/Oregon/ Washington agreement promotes regional collaboration to protect and manage the ocean and coastal resources along the entire West Coast, as called for in the recommendations of the U.S. Commission on Ocean Policy and the Pew Oceans Commission. The Agreement seeks to advance the goals of: clean coastal waters and beaches; healthy ocean and coastal habitats; ecosystem-based management; reduced impacts of offshore development; increased ocean awareness and literacy among the region's citizens; expanded ocean and coastal scientific information; research, and monitoring; and sustainable economic development of coastal communities.

The Governors released the final Action Plan in July 2008 and finalized work plans for 8 regional action coordination teams in 2010. In July 2010, President Obama adopted a national ocean policy and national framework for coastal and marine spatial planning. As a result, the agreement is currently exploring how it can advance regional coastal and marine spatial planning. The national framework discusses the opportunity to work with international partners and this could be a topic for future collaboration with BC counterparts. In March 2010, the Washington State Legislature enacted a new law on Marine Spatial Planning and a draft legislative report was released in September, 2010. The current lead for Washington on the West Coast Governors' Agreement on Ocean Health and on Marine Spatial Planning is Bob Nichols, Senior Natural Resources Policy Advisor, Office of the Governor. Ecology provides staff support for this effort. http://www.ecy.wa.gov/programs/sea/msp/index.html

Northwest Straits Commission

http://www.nwstraits.org/

The Commission does not directly involve British Columbia but it is noteworthy because of its focus on the Washington side of the Salish Sea. Some projects are coordinated with BC counterparts, such as marine debris removal.

Congress authorized a study of the Northwest Straits region in the mid-1980s for potential inclusion in the National Marine Sanctuary system. The proposal was rejected and in 1997, Senator Murray and Representative Metcalf established a commission to explore alternative models for protecting and restoring marine resources in the Northwest Straits. The Northwest Straits Marine Conservation Initiative was authorized by Congress in 1998.

Under this initiative, the Northwest Straits Commission is composed of five gubernatorial appointees, one Secretary of the Interior appointee, and a representative from each of the seven counties in the Northwest Straits region. Its members represent each of the Marine Resources Committees, tribes, the Puget Sound Partnership and additional appointments by the Governor.

The Northwest Straits Commission provides guidance and resources to the marine resources committees (MRCs). MRCs in the Northwest Straits' seven counties conduct projects to restore nearshore, intertidal and estuarine habitats, improve shellfish harvest areas, support salmon and bottom fish recovery and identify and carry out protection strategies for marine species and habitats. MRCs are citizen-based, with representatives from local government, tribal government co-managers, and the scientific, economic, recreational and conservation communities. Projects carried out by MRCs include mapping eelgrass beds, outreach and education to local communities, restoring native shellfish populations, removal of toxic creosote and invasive Spartina.

State Ocean Caucus

http://www.ecy.wa.gov/programs/sea/ocean/oceangroup.html

The State Ocean Caucus is a group of state agencies working together to prioritize activities and solve problems related to the ocean environment. It develops and implements a detailed work plan under the "Washington's Ocean Action Plan: Enhancing Management of Washington State's Ocean and Outer Coasts " and serves to communicate and coordinate with local, tribal, and regional governments, federal agencies, business and environmental interests, academic institutions, and the general public including hosting outreach meetings in coastal communities and soliciting feedback on state activities. The State Ocean Caucus consists of representatives from agencies: Ecology, Agriculture, Commerce, Health, Fisheries & Wildlife, Natural Resources, Military Emergency Management, OFM, PSP, Parks Commission, and Sea Grant; and representatives from Marine Resource Committees.

Tribes & First Nations

Coast Salish Gatherings

http://coastsalishgathering.com/

The first Coast Salish Gathering took place in 2005 in Jamestown S'Klallam, followed by annual gatherings alternating between BC and WA tribal lands. The Gathering facilitates a shared effort to identify priority environmental concerns, issues, and projects in the transboundary Coast Salish Region that is comprised of the Puget Sound in the United States, the Georgia Basin in Canada, and the Straits of Juan de Fuca shared by both countries. The Coast Salish Gatherings provide a policy dialogue for U.S. tribal leaders and First Nation Chiefs, EPA and Environment Canada to build a collaborative body for mutual understanding to solve the environmental issues and recommend policy and actions to federal and state agencies.

The Coast Salish Gatherings are guided by a Coast Salish Gathering Steering Committee with administrative support from the Swinomish Indian Tribal Community, Northwest Indian Fisheries Commission, Coast Salish Sea Initiative and Georgia Basin Action Plan Steering Committee Coast Salish Nation representatives. Key non-tribal senior officials also participate from: Environment Canada, Pacific and Yukon, EPA Region 10, BC Ministry of the Environment, Washington State Department of Ecology, and the Puget Sound Partnership.

Intergovernmental Policy Council - Olympic Coast National Marine Sanctuary

Olympic Coast National Marine Sanctuary was created in 1994, encompassing 3,310 square miles of Washington coastal waters from Neah Bay to the Copalis River. The sanctuary is entirely encompassed by the traditional harvest areas of the Hoh, Makah, Quileute, and Quinault tribes. In 2007 these tribes joined with the State and the National Oceanic and Atmospheric Administration National Marine Sanctuary Program to create the Intergovernmental Policy Council to inform and cooperate in the management of Olympic Coast National Marine Sanctuary. The Policy Council provides a regional forum for resource managers to exchange information, coordinate policies, and develop recommendations for resource management within the sanctuary.

Appendix 6.9
Selected Case Studies on Negotiating Transboundary Water Agreements

Pacific Salmon Treaty

The conservation and management of various species of salmon in the Pacific North-West of North America is exceedingly challenging and difficult including because salmon are highly coveted and move through a multiplicity of jurisdictions throughout their complicated life cycle.

In the case of the Pacific Salmon Treaty, there is a long history of bilateral salmon agreements between the United States and Canada on the west coast going back to 1908 to draw on.139 While treaty relations were initially confined to Fraser River sockeye, the two states ultimately resolved that it was necessary to have an international treaty that better addressed all of the different salmon fisheries on the west coast. Part of the impetus for this came from ongoing litigation in the USA regarding the scope and content of the tribes right to fish and to a clean environment from which to produce those fish. This litigation initially became known as the Boldt decisions after the name of the Federal judge who first ruled in the tribes favour. Among other things the Boldt decisions, and their aftermath, led to the U.S. tribes becoming increasingly involved in the conservation and management of fish throughout the Pacific North West including in the negotiation and implementation of the Pacific Salmon Treaty. This involvement of the U.S. tribes also had the interesting effect of raising the psychological expectations, if not the legal rights, of the Canadian First Nations.

One key objective of the Pacific Salmon Treaty agreement was to address the problem of interception fisheries (i.e. the catch by fishers of state A of fish bound for home streams in state B or transboundary streams in state B) while at the same time recognizing historic fisheries. Important interception fisheries included interceptions of U.S.-bound fish (coho, chinook) by Canadian fishers off Vancouver Island, interception by Alaskan fishers of fish bound for Canadian streams and transboundary panhandle rivers, and a historic interception fishery by Washington fishers targeting Fraser River sockeye. Alaskan fishers also intercepted fish bound for Oregon and Washington rivers raising concerns that such interceptions were interfering with the Stevens and Palmer treaty fishing rights of the tribes. Given salmon migration patterns there was very little interception of Alaskan bound fish and therefore Alaska was the least interested in reaching an agreement that was based on reducing (or at least equalizing) the interception fishery. For these and other reasons, the negotiations of the original treaty and the Annexes were difficult and long drawn out.

The PST established the Pacific Salmon Commission and comprises 15 Articles (covering such matters as principles, conduct of fisheries and specific articles dealing the Fraser River, transboundary rivers and the Yukon River) and four Annexes. Importantly, the PST specifically acknowledges the important indigenous interest in the salmon fishery with a provision in Article XI to the effect that "This treaty shall not be interpreted or applied so as to affect or modify existing aboriginal rights or rights established in existing Indian treaties and other existing federal laws." In addition, Article VI of the Treaty dealing with the Fraser River contains a specific provision enjoining the Fraser River Panel and the Commission to "take into account and seek consistency with existing aboriginal rights, rights established in existing Indian treaties and domestic allocation objectives."

The structure of the Commission and the various panels established for particular rivers was important to both sides but especially so within the United States since it wished to use its appointments on these bodies as a way of ensuring regional and tribal representation. The treaty itself leaves the matter of representation to the parties but provides that the Commission shall be composed of two national sections each comprised of four commissioners. Each section shall have one vote. This is an important

provision because it means that each commissioner has a veto. The U.S. implementing legislation contemplates that the four U.S. Commissioners shall be appointed as follows: one official of the U.S. government who shall be a non-voting member, one member from a list nominated by the Governor of Alaska, one from a list nominated by the Governors of Oregon and Washington and one from a list nominated by the treaty Indian tribes of Washington, Oregon and Idaho. The federal commissioner is expected to "serve in a conciliatory and advisory role". The representative approach carries over to the appointment of panel members.

On the Canadian side it is important to emphasise that there is an important distinction between the PST and the CRT. The subject matter of the CRT as we have already noticed is largely concerned with provincial property and legislative powers. By contrast, the federal government has exclusive jurisdiction over fisheries matters and thus did not need to follow a provincial lead in the negotiations. In his account of the negotiations in 1998 and 1999, McRae suggested that this circumstance allowed the federal government to simplify things on the Canadian side of the negotiating table, ultimately reducing the negotiating team to a group of three. This team responded to the complexities on the U.S. side of the table by meeting separately with Alaska, Washington, Oregon and the Tribes and then with the full delegation – a truly extraordinary process.

The 1995 treaty was expressed to be subject to ratification. The treaty was ratified only following the advice and consent of the Senate. The initial term of the treaty is three years subject to termination thereafter on 12 months notice. The Treaty does not make express provision for its amendment but Article XIII does provide for the amendment of Annexes. It contemplates that the Commission shall keep the Annexes under review and make recommendations to the Parties for their amendment. Annexes may be amended through an Exchange of Notes. Although the Treaty does not authorize the addition of new Annexes this has not proven to be an impediment since the parties have simply added new chapters to an existing annex. In many respects the PST serves as a framework convention. The terms of the treaty establish the principles and some of the framework leaving the detail to be fleshed out in the Annexes.

The entry into force of the PST terminated the Convention for the Protection, Preservation and Extension of the Sockeye Salmon Fishery in the Fraser River System (as amended, of 1930) except insofar as the Commission established by that Agreement has continuing responsibilities under the PST.

The Annexes to the PST have been amended in 1991, 1999 and 2002. The 2002 amendments included a new chapter to deal with the Yukon River.283 The Yukon River chapter of Annex IV is particularly significant in the present context for a number of reasons.

First, this chapter creates a new treaty in all but name. There are several indications of this. For example, the chapter provides that several articles of the PST shall not apply to this new chapter. Most importantly, the parties clearly contemplate that the Yukon River chapter should survive termination of the PST.140

Second, the new chapter contains an additional and specific acknowledgement of an indigenous interest in the fishery insofar as it contains an express recognition of priority as follows: "(b) that subsistence fisheries in Alaska have priority over other fisheries in Alaska; (c) that aboriginal fisheries in Yukon have priority over other fisheries in Yukon."

Third, the new chapter adds some remarkably strong provisions dealing with habitat protection that have no real precursor in the original treaty.

In sum, the parties to the PST have clearly not felt constrained by content of the treaty or by the form of its ratification in the United States in elaborating the Annexes to the treaty. There is however some acknowledgment that the form of adoption of amendments to the Annexes may constrain implementation at least insofar as funds may need to be appropriated in order to fulfill treaty obligations. For example, the new Yukon River chapter contemplates the creation of a Yukon River

Salmon Restoration and Enhancement Fund. The Exchange of Notes acknowledges this in the following ways: "5. The obligations under this Agreement shall be subject to the obtaining of specific legislative authority from the United States Congress for the Fund. Such Congressional action (i.e., authorization and appropriation) lies within the discretion of the U.S. Congress. 6. If in any year the United States does not make an annual contribution as required in Attachment C, until the United States makes such contribution for that year the Parties' obligations under this Agreement shall be suspended.

In this regard the Annex follows the example of the Souris Agreement already discussed.

The Great Lakes Water Resources Compact and Agreement[141]

According to Karkkainen (citations omitted):

Management of the Great Lakes has rarely been seen as a pressing national concern in either the United States or Canada. For their part, the eight U.S. states [FN4] and two Canadian provinces [FN5] that lie wholly or in part within the Great Lakes-St. Lawrence Basin individually lack the capacity to manage the lakes and the St. Lawrence River effectively without cooperation of all the others. Collectively, because they are not sovereign nation-states for purposes of international law and because their respective federal constitutions vest the foreign affairs power at the federal level, [FN6] these subnational governments lack the legal authority to enter into binding transboundary agreements among themselves. What is needed, then, is some alternative coordinating mechanism--one that, unlike international law, does not depend on legally binding agreements between sovereign *999 nation-states, yet carries sufficient normative weight to actually influence and constrain the actions of subnational governments (in the case of the Great Lakes-St. Lawrence system, eight U.S. states and two Canadian provinces).

...[T]he recently adopted Great Lakes Water Resources Compact [FN7] and Agreement [FN8] represent just such a subnational but transboundary coordinating mechanism. The substantive aims of the Compact and Agreement are relatively modest: they seek to curb or prevent large-scale exports of fresh water out of the Great Lakes-St. Lawrence basin. [FN9] More important than the substantive goals, however, are the mechanisms by which these shared policy goals are to be implemented and enforced. The Compact is a legally binding agreement among the eight U.S. basin states, duly authorized by Congress as required by the U.S. Constitution. [FN10] It requires its member states to adopt and implement enforceable processes, measures, and substantive commitments to manage Great Lakes Basin water withdrawals and diversions in accordance with standards set out in the Compact; [FN11] further, it establishes a regional coordinating body made up of representatives of the member states to make decisions of region-wide scope or impact and to review the member states' compliance with the Compact. [FN12] The Agreement is a parallel, non-binding, *1000 good-faith agreement that extends identical requirements to the Canadian provinces of Ontario and Quebec, and establishes a Regional Body of which the eight states and two provinces are all members. [FN13] Although the Agreement is legally non-binding (because U.S. states and Canadian provinces may not make international law), it is considered morally obligatory; and the eight U.S. states are already, in effect, legally bound to its substantive provisions insofar as they are identical to those in the legally binding Compact. The Compact, then, should ensure the cooperation and compliance of eight of the ten parties, thereby creating an incentive for Ontario and Quebec also to cooperate and comply, secure in the knowledge that there should be no defectors among the more numerous parties on the U.S. side of the border. Moreover, because each of the states and provinces has adopted implementing legislation to give effect to the commitments set out in the Compact and Agreement, [FN14] even the provinces have in a sense bound themselves. It is in that sense that the Compact and Agreement create a unique kind of transboundary normativity, even in the absence of public international law.

Appendix 6.10
Case Studies on Implementing Agreements and Governing Transboundary Waters

The table on the following pages presents a high-level overview of 19 case studies on transboundary water governance. It compares these case studies according to the "key elements" presented below. This list of case studies emerged from consultations with the Steering Committee and other people knowledgeable about transboundary natural resources governance. At the request of the Steering Committee, project staff prepared short vignettes for each of the case studies using the key elements below as a framework. At its March 2014 meeting, the Steering Committee agreed that, while its primary interest is the role of indigenous people in negotiating and implementing agreements over transboundary waters, it is also instructive to examine a fuller range of governance issues as presented here.

Key Elements of Transboundary Water Governance

1. Geography (What is covered within the framework?)
2. Legal Basis (i.e., is it based on a Treaty, Memorandum of Understanding etc.)
3. Purpose & Function (Why was the initiative created and what does it seek to accomplish?)
4. Implementation Arrangement (What is the organization structure to implement the transboundary arrangement?)
5. Members (What nations, states, or groups are part of the implementation arrangement? Are there "observer" participants?)
6. Role of Indigenous People (What is the unique role of indigenous people in implementation and ongoing governance? Is it an "advisory" role or "shared" decision-making authority or something else?)
7. Stakeholder Participation (Is there a mechanism to inform and educate, and to mobilize and engage stakeholders?)
8. Dispute Resolution (Is there an explicit method for preventing and dealing with disputes among members?)
9. Joint Fact Finding (Is there a mechanism for the participants to share, exchange, and harmonize data?)
10. Adaptive Management (Is there a mechanism or protocol to facilitate ongoing monitoring, learning, evaluation, and adaptive management?)

Case Study	Geography	Legal Basis	Purpose & Function	Implementation Arrangement	Members	Role of Indigenous People	Stakeholder Participation	Dispute Resolution	Joint Fact Finding	Adaptive Management	Comments relative to Columbia River Basin
Pacific Northwest											
Pacific Salmon Commission	Rivers & coastal waters of AK, WA, ID, OR, BC, Yukon Terr.	Treaty	Conserve salmon & divide harvest	Pacific Salmon Commission	8 Commissioners appointed by federal governments			Yes	Yes		Provides a good place to begin; semi-shared governance
Mackenzie River Basin Board	River basin in BC, Sask., NW Terr., Yukon Terr.	Master Agreement	Coordinate water management	Board	1 aboriginal & 1 govt. rep. from each jurisdiction	Actively involved; no authority per se		Yes	Yes		Signatory governments fund transboundary forum
Yukon River Inter-tribal Watershed Council	Yukon River Watershed (AK, BC, Yukon Terr.)	Inter-tribal Accord	Protect & enhance water quality	YRITWC	Only indigenous groups	Catalyzed, founded, & govern	Yes		Yes		Illustrates the value of indigenous leadership
Skagit Watershed Council	Watershed between BC & WA	NGO	Support sustainable fisheries	Board of Directors & "work groups"	Any organization that supports the mission	None currently involved					Limited in scope & authority; demonstrates the value of NGOs
Fraser Basin Council	Southern British Columbia	nonprofit	Sustain the unique social, economic and environmental value	Board of Directors	Members represent federal, provincial, local, and First Nations governments; private sector and civil society	involved	yes				
North America											
Great Lakes Water Quality Agreement	5 Great Lakes	Binational Agreement	Restore & maintain integrity of waters	Executive Committee; multi-layered	Sovereigns & stakeholders	Consulted during negotiation; serve on EC	Yes		Yes		Another good place to begin; semi-shared governance
International St. Croix River Watershed Board	International river basin in New Brunswick & Maine	IJC Boundary Waters Treaty	Manage water quality & quantity	St. Croix Watershed Board	IJC appoints	Not involved					Good theory; not sure it plays out in practice
Missouri River Recovery Implementation Committee	Missouri River Basin (529,350 sq. miles) 7 states, 28 tribal nations	Advisory committee authorized by Congress	Develop & implement ecosystem management	MRRIC Multi-stakeholder	70 members appointed by Corps of Engineers	20 of 28 tribes participate regularly	Yes	Yes	Yes	Yes	Not a transboundary model; indigenous participation limited to advisory

Case Study	Geography	Legal Basis	Purpose & Function	Implementation Arrangement	Members	Role of Indigenous People	Stakeholder Participation	Dispute Resolution	Joint Fact Finding	Adaptive Management	Comments relative to Columbia River Basin
Colorado River Compact	7 western states and Mexico	"Law of the River"	Allocate and manage water	Compact and treaty	?	Not involved originally, but play a greater role	Yes	?	Yes	Yes	Example of how a narrow agreement can be a springboard for other more adaptive and inclusive agreements
Comprehensive Everglades Restoration Plan	18,000 square-mile ecosystem in South Florida	Agency initiative and federal legislation	Coordinate restoration activities	Working group includes local, state, tribal, and federal governments	?	?	Yes	?	Yes	Yes	Not transboundary; good model of coordination & adaptive management
Around the World											
Estonian-Russian Transboundary Waters Commission	Largest transboundary lake in Europe shared by Estonia & Russia	Inter-governmental agreement	Exchange information & jointly monitor for water quality	Commission	National ministries, border guards, regional & local authorities	Local people & NGOs provide input & advice	Yes	Yes	Yes		Limited scope & purpose
International Commission for the Protection of Lake Constance	Large lake shared by Germany, Austria, & Switzerland	International agreement	Monitors water quality; provides guidance;	Commission, along with 200 affiliated transboundary groups & expert panels		Local people & NGOs apparently active	Yes	?	Yes		Limited scope, purpose, & authority; focused on information exchange
International Commission for the Protection of the Danube River	19 countries 10% of continental Europe	Danube River Protection Convention	Facilitates cooperation on water management	Commission, Secretariat, Expert Work Groups	14 countries & European Union	Local people & NGOs provide input & advice	Yes	Yes	Yes		Largely a coordinating body; limited authority & benefit sharing
Lake Tanganyika Authority	Global hotspot of biodiversity; Zambia, Tanzania, Burundi, & Republic of Congo	Convention on Sustainable Management of Lake Tanganyika	Ensure protection of biodiversity & sustainable development	Ministers, Secretariat, & Technical Committees	4 riparian countries	Local people & NGOs provide input & advice	Yes	Yes	Yes		
Lake Victoria Basin Commission	Africa's largest lake and the world's 2nd largest lake; Kenya, Tanzania, & Uganda	International protocol in sustainable development	Harmonize law, policy, & management	Sectoral Council (Ministers) & Secretariat and Working Groups	Secretaries of all relevant Ministries from the 3 Partner States	Local people & NGOs provide input & advice	Yes	Yes	Yes		Largely a coordinating body; limited authority & benefit sharing

Case Study	Geography	Legal Basis	Purpose & Function	Implementation Arrangement	Members	Role of Indigenous People	Stakeholder Participation	Dispute Resolution	Joint Fact Finding	Adaptive Management	Comments relative to Columbia River Basin
Mekong River Basin Commission	China, Myanmar, Thailand, Laos, Cambodia, & Vietnam	Mekong Agreement	Promote & coordinate sustainable development of water & related resources	Commission, Secretariat	Thailand, Laos, Cambodia, Vietnam	Local people & NGOs provide input & advice	Yes	Yes	Yes		Not all riparians involved; limited local involvement; limited authority
Nile Basin Initiative	Longest river in the world; shared by 11 countries – Tanzania, Uganda, Rwanda, Burundi, Republic of the Congo, Kenya, Ethiopia, Eritrea, South Sudan, Sudan & Egypt	Cooperative Framework Agreement	Cooperatively develop & manage the Nile River Basin	Nile Council of Ministers & Technical Advisory Committee	Water Ministers of 10 states	Local people & NGOs provide input & advice via the Nile Basin Discourse	Yes	Yes	Yes		There seems to be much to learn from this arrangement; not clear on authority, but lots of joint initiatives
Organization of the Amazon Cooperation Treaty	Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname and Venezuela	Amazon Cooperation Treaty	Affirms individual sovereignty & encourages, institutionalizes & guides regional cooperation; reconcile growth & environmental protection	Ministers of Foreign Affairs, Amazon Cooperation Council, Secretariat, & other coordinating bodies	All signatories to the Treaty	Coordinating Office for Indigenous Affairs; local people & NGOs provide input & advice	Yes		Yes		Fosters coordination & joint initiatives on economy & environment; no regional authority per se
Trinational Commission of the Trifinio Plan	Biosphere reserve in El Salvador, Guatemala, & Honduras Lempa, Ulua, & Motagua river basins among	Treaty (1998)	Develop & implement Trifinio Plan – provide access to water, citizen participation, etc.	Commission, Secretariat & Advisory Committee	Vice-Presidents of 3 countries	Local govts, 45 munis, & NGOs regularly participate on Advisory Committee	Yes	Yes	Yes		Considered a model of bottom-up regional integration; citizen participation within & across countries

Pacific Salmon Commission

The Pacific Salmon Treaty was signed by Canada and the United States in 1985 and revised in 1999 and 2009. It was catalyzed in part by the need for greater transboundary coordination between the two countries and part by U.S. tribes asserting their Treaty rights to harvest Pacific salmon.[142] The Pacific Salmon Treaty seeks to "conserve the Pacific Salmon in order to achieve optimum production, [and] to divide the harvests so that each country reaps the benefits of its investment in salmon management."[143] Key elements of the Pacific Salmon Treaty and "1999 Agreement" include (1) creation of a Transboundary Panel and a Committee on Scientific Cooperation; (2) the inclusion of habitat provisions; (3) a move from fisheries based on negotiated catch ceilings to fisheries based on abundance-based management; and (4) the establishment of Northern and Southern Restoration and Enhancement funds. This agreement encompasses the rivers and coastal waters of Alaska, Washington, Idaho, Oregon, British Columbia, and Yukon Territory.

The Pacific Salmon Commission is a bilateral body responsible for implementing the Treaty by providing regulatory recommendations and advice to agencies with management authority in each country. The Commissioners make decisions based on the advice and information provided by the Regional Panels and Committees. Each country has one vote. Once both countries are in agreement, the recommendation is given to the Governments of Canada and United States for their approval and implementation.

The Commission is made up of 8 Commissioners (four from each country) who have been appointed by their respective federal government. The Commissioners work closely with Committees and Regional Panels, which represent federal, state/provincial, and tribal governments as well as the interests of commercial and recreational fishing.

United States tribes were involved in the negotiation, signing, and implementation of the Pacific Salmon Treaty, as explained in an earlier appendix.[144] Disputes are submitted to the Chairman of the Commission who then submits the dispute to the Technical Dispute Settlement Board. Resolutions by the Board are final and based on the facts and materials submitted via the Chairman.[145]

Bilateral technical committees collect and analyze each countries "conduct of its fisheries, preseason expectations and enhancement activities."[146] Panels, representing smaller geographic regions, use the technical reports to inform their fishery recommendations to the Commissioners.

Website: http://www.psc.org/

Lessons for the Columbia Basin Tribes and First Nations can be involved in the successful negotiation and implementation of a major transboundary international waters governance arrangement.

Mackenzie River Basin Board

The Mackenzie River Basin covers about 1.8 million square kilometres, roughly 20% of the landmass of Canada. The mean annual flow volume of the Mackenzie River is about 310 billion cubic metres of water, a volume comparable to that of the St. Lawrence River and Mississippi River. The basin includes parts of British Columbia, Alberta, Saskatchewan, Yukon and Northwest Territories.

First Nations and Inuit communities live throughout the basin. Some have old treaties with the Crown and others, such as the Inuvialuit, Gwich'in and Sahtu, have more recently negotiated land claim agreements which include complex co-management structures as well as provisions dealing with water quality and water quantity.

The five jurisdictions have long realized that it is essential to cooperate in developing natural resources and protecting environmental values throughout the basin. To this end, the governments of Canada, Alberta, British Columbia, Saskatchewan, Northwest Territories and Yukon signed the Mackenzie River Basin Transboundary Waters Master Agreement in 1997. This agreement establishes guiding principles ("equitable utilization, prior consultation, sustainable development, and maintenance of ecological integrity"147) and provides an institutional framework for future cooperation. Several bilateral agreements are currently under negotiation, guided by a risk-based approach that envisions more intense management of transboundary waters based upon the classification of each water body. The operating framework includes provisions related to joint fact-finding, dispute resolution, and stakeholder participation.

Website: http://www.mrbb.ca/information/8/index.html

Lessons for the Columbia Basin – Although the Master Agreement is very much a work in progress, and an arrangement among sub-national governments, it offers some compelling lessons that may inform future management of the transboundary Columbia River. First, rather than focusing on particular outcomes at the start, such as power and flood control, the participants sought agreement on guiding principles and the right organizational structure. Second, the guiding principles suggest that the ongoing bilateral negotiations will result in agreements that accommodate a broad suite of interests, rather than focusing only on a narrow set of issues. Finally, the risk-based approach embedded within ongoing negotiations suggests a strong commitment to ongoing learning and adaptive management.

Yukon River Inter-Tribal Watershed Council

The Yukon River Inter-Tribal Watershed Council (YRITWC) is an international organization with charitable recognition in both Canada and the United States that works to clean up and preserve the Yukon River and its tributaries for current and future generations. In 2005, the Harvard Project on American Indian Economic Development recognized the Council as a model for "self-determination, governance, and collaboration" because of the leadership role asserted by tribes and First Nations and their development of well-functioning organization with a clear mission.[148]

The Yukon River and its tributaries drain approximately 832,700 km^2 (321,700 mi^2) of British Columbia, Yukon Territory, and Alaska. This transboundary river is home to one of the largest salmon fisheries in the world and was the primary means of transportation prior to the construction of the Klondike Highway. The legal basis of the council is an Inter-Tribal Accord, signed by 70 tribal and First Nation governments within the Yukon River Watershed.

The Accord and YRITWC were catalyzed by the legacy of pollution in the watershed – through gold mining, military activities, dumping, etc – that led to a significant decline in water quality. While many government agencies are charged with caring for the river, no agency or organization was coordinating restoration efforts. Previous attempts to build a "western-style" committee fell apart.

The YRITWC, which was formed to implement the Accord, seeks to protect and enhance water quality in the Yukon watershed for current and future generations. It is composed of over 70 tribes and First Nations located within the Yukon River Watershed. A consensus process at the bi-annual summit meetings chooses an Executive Steering Committee. Once on the committee, members do not represent any particular government, but rather a geographic area of the watershed. Delegates from the 70 signatory First Nation and Tribes governments make decisions by consensus at the biennial summit.

The goals of the Accord are accomplished by coordinating initiatives between Tribes and First Nations and by providing technical assistance, facilitating the exchange of information, and conducting research, education, and training programs for indigenous governments.

The YRITWC is unique because First Nations and tribal governments have had a leadership role from the very beginning to the ongoing implementation. It provides a forum for both collaboration and for tribal governments to express their sovereignty. Only indigenous organizations within the Yukon River Watershed may sign the Accord. Organizations and governments that fall outside that criteria, but support the mission and vision of the Council and Accord, may sign a Yukon River Watershed Affiliated Organization Agreement. Organizations who sign this agreement do not have to pledge financial support, but they do commit to cooperate with the Council on any initiatives that "may affect the environmental integrity of the Watershed and the cultural vitality of its people."

Biennial summits bring members of the YRITWC and supporters together to learn about the watershed, make decisions, and ensure that initiatives are on track. Signatories to the Accord may propose amendments to the YRITWC Executive Committee. The Executive Committee must then present the proposed changes to the members of the YRITWC at least 30 days prior to the biennial summit.

Website: http://www.yritwc.org/

Lessons for the Columbia Basin – The Yukon River Inter-Tribal Watershed Council and Accord are innovative examples of how Tribes and First Nations with diverse interests across a large region have come together to assert their sovereignty and right to make decisions on natural resource issues. This framework has been especially successful in articulating clear and concise goals and in creating a framework for government-to-government conversations, not just between Tribes and First Nations, but also with state, provincial, and federal governments as well.

Skagit River Treaty

The Skagit River is a short (150 miles) but powerful stream that rises in the mountains of southwestern British Columbia, cuts through the northern Cascades, and empties into Puget Sound approximately sixty miles north of Seattle. Seattle City Light (SCL), a municipally owned utility, constructed its three dam (Gorge, Diablo, and Ross) hydroelectric project on the Upper Skagit River beginning in 1927.

In response to growing demands for energy, SCL proposed to raise the height of Ross Dam and received approval from the International Joint Commission (IJC) in 1942. The IJC's approval, however, was contingent on Seattle's reaching an agreement with British Columbia concerning compensation for the land to be inundated. A tentative agreement reached in 1952 was not ratified in British Columbia, but an agreement was reached and signed in 1967. Seattle City Light then proceeded with its plans to construct the fourth and final stage of Ross Dam (which came to be known as High Ross Dam). The proposal ran into an unexpected storm of controversy when people realized it would have flooded approximately 5,475 acres of pristine wilderness in British Columbia.

Ultimately, after lengthy efforts to resolve the issue, the United States agreed not to raise the height of the dam in exchange for a long-term supply of electricity from Canada, at the price it would have cost to raise the dam. Over the years, the negotiation process itself has been hailed as a unique success. Unlike many transboundary natural resources disputes that are resolved by high-level officials representing the respective nations, local officials from British Columbia and SCL negotiated the Skagit River Treaty.

Various observers have suggested three factors contributed to the success of the negotiations. First, even though it was a transboundary dispute, local negotiators, with local knowledge and a stake in the outcome, played a central role in resolving the dispute. These negotiators were able to balance different interests without getting caught up in other, unrelated, disputes between the two countries. Second, the resolution included the participation of a variety of interest groups. Third, the availability of both scientific and experiential knowledge was useful in achieving a mutually acceptable resolution. Involving local negotiators helped to ensure availability of sound scientific and experiential knowledge regarding the transboundary water body.

Website: http://www.ijc.org/en_/Fraser_River_Basin

Lessons for the Columbia Basin - The negotiations that led to the Skagit River Treaty demonstrate the value of empowering local people within a transboundary watershed to shape agreements related to water and related resources. Although local groups are being given the opportunity to provide input during the formal Columbia River Treaty review process, decision-makers could also explore the possibility of building on the plethora of existing local watershed groups throughout the basin to help govern land and water resources.

Fraser Basin Council

The Fraser Basin drains more than 25% of British Columbia's land and supports more than two-thirds of the province's population. Often referred to as BC's economic engine, the basin contributes 80% of the province's gross domestic product and 10% of Canada's gross national product. The Fraser River and its tributaries provide important transportation corridors and position the Basin as a gateway to the Asia-Pacific. The basin also boasts the world's most productive salmon river system, supports BC's most productive waterfowl breeding area, contains 21 million hectares of forest and about one-half of BC's agricultural land, and several productive mines. Recreation and tourism opportunities abound.

For thousands of years, the basin has been home for many Aboriginal people including the Sto:lo, Nlaka'pamux, Secwepmec, Stl'atl'imx, Tsilhqot'in, Carrier and Okanagan Nations. Today, 2.9 million residents from a variety of backgrounds call the basin home. The population of the basin is expected to increase significantly over the next 20 years. The Fraser River has been designated as a BC Heritage River and as a Canadian Heritage River. These designations offer special recognition of the diverse cultural, natural, recreational and economic values of the Fraser River and its many watersheds.

Over several decades, people representing a diversity of interests and viewpoints have worked together to sustain the unique social, economic and environmental value in the basin. In 1992, federal, provincial, and local governments created the Fraser Basin Management Board and Program to address sustainability issues and to develop a strategic plan for sustainability of the Fraser Basin. The Board created a draft Basin Plan and circulated it for input. Using that input, the Board developed this Charter for Sustainability, the strategic plan for the Fraser Basin.

The Fraser Basin Council, a non-profit organization, was created in 1997 to coordinate implementation of the Charter. It has 38 Directors: an impartial Chairperson and 37 other Directors who represent the four orders of government — federal, provincial, local and First Nations — as well as the private sector and civil society. This governance structure is one of the first of its kind and a reflection of the Council's commitment to collaboration.

The Directors set a strategic focus and policy for the Council, in accordance with the principles of the Charter for Sustainability. Their decisions are by consensus. The Board is supported by a team of 26 staff in six offices throughout the basin.

Website: http://www.fraserbasin.bc.ca

Lessons for the Columbia Basin Demonstrates the ability and willingness of a wide range of First Nations to work together, and with others, towards common objectives.

Great Lakes Water Quality Agreement[149]

The Great Lakes (Superior, Michigan, Huron, Erie and Ontario) are the largest surface freshwater system on the earth (including 84% of North America's freshwater and about 21% of the worlds supply of freshwater). The transboundary watershed spans more than 750 miles (1,200 kilometers) from west to east and provides water for consumption, transportation, power, recreation and a host of other uses.

The Great Lakes Water Quality Agreement (GLWQA) addresses critical environmental health issues in the Great Lakes region and is a model of binational cooperation to protect water quality. The Agreement was initially signed in 1972 and was updated in 1987 and most recently in 2012. Both governments sought extensive input from indigenous people and stakeholders before and throughout the negotiation process, which started in 2009. Additionally, the revised Agreement expands opportunities for public participation in Great Lakes issues.

The GLWQA is part of the governing fabric of this shared watershed. It was created as the "best means to preserve the Great Lakes Basin Ecosystem and to improve the quality of the Waters of the Great Lakes." "The purpose of this Agreement is to restore and maintain the chemical, physical, and biological integrity of the Waters of the Great Lakes" and the portion of the St. Lawrence River that includes the Canada-United States border. The 2012 Agreement facilitates transboundary action on threats to Great Lakes water quality and includes measures to prevent ecological harm. New provisions address the nearshore environment, aquatic invasive species, habitat degradation, and the effects of climate change. It also supports continued work on existing threats to people's health and the environment in the Great Lakes basin such as harmful algae, toxic chemicals, and discharges from vessels.

The governance of the Great Lakes system is shared among the United States and Canada; 10 U.S. federal agencies; 8 states; nearly 40 Tribal Nations; more than half a dozen major 5metropolitan areas; and numerous county and local governments. The 2012 Agreement established the *Canada-United States Great Lakes Executive Committee* with participation from federal, state, tribal, provincial and municipal governments, First Nations, Métis, watershed management agencies, and other local public agencies, in order to coordinate action and to advise the Parties on implementation of the Agreement.

The 2012 Agreement also (a) increased opportunities for public and stakeholder engagement; and (b) established a Great Lakes Public Forum to present, discuss and receive public input on trends in environmental quality, progress in implementing the 2012 Agreement, and future priorities. The 2012 Agreement also instructs "The Parties, in cooperation and consultation with State and Provincial Governments, Tribal Governments, First Nations, Métis, Municipal Governments, watershed management agencies, other local public agencies, and the Public, [to] undertake …" a joint fact finding program. The International Joint Commission shares information, assesses progress, and advises the two governments on science, policy and action.

Website: http://www.epa.gov/greatlakes/glwqa/

Lessons for the Columbia Basin – The GLWQA has raised awareness and understanding of water quality in the region; reduced algae by limiting phosphorus inputs; adopted the "ecosystem approach" to identify, manage, and prevent environmental problems; reduced the release of toxic chemicals into the environment; identified specific impairments such as fish and wildlife consumption restrictions, undesirable algae or beach closings, and to restore the ecosystem within these areas; and engages citizens, provinces, municipalities, tribes, First Nations, industry, non-governmental organizations and other stakeholders. As a model of governance, this agreement was forged through an "executive agreement" rather than the formal international treaty processes in the United States and Canada. While it provides more flexibility to meet changing needs and interests, it is also not as binding as a treaty.

International St. Croix River Watershed Board

The St. Croix River runs along 185 km (115 miles) of the international boundary between the United States (Maine) and Canada (New Brunswick). The river basin covers an area of about 4,230 sq km (1,630 sq miles) making it the 4th largest river basin in New Brunswick and the 7th largest in Maine. The river has always played an important role in the development of this area because the economy is based largely on natural resources and tourism. The river is known for its fisheries and recreational resources as well as being a source of hydro-electric power and municipal and industrial water supply.

In 2000, the IJC combined two existing boards -- one concerned with water levels and flows and another concerned with water quality – into a single board, the International St. Croix River Watershed Board. Combining the boards was consistent with the ecosystem approach adopted by the IJC in order to address water quantity and water quality together as part of the full range of water-related issues.

The new Board helps prevent and resolve disputes over the boundary waters of the St. Croix River, monitors the ecological health of these waters, and ensures that four dams comply with the Commission's Orders of Approval. The Board seeks to involve local stakeholders.

The Board consists of a United States Section and a Canadian Section, comprising an equal number of members from each country. The Commission shall normally appoint each member for a three-year term. Members may serve for more than one term. Members shall act in their personal and professional capacity, and not as representatives of their countries, agencies, or institutions. The IJC appoints one member from each Section to be chair of that Section, normally for a term of two years. The Commission strives to appoint chairs with complementary expertise that encompasses a broad spectrum of watershed concerns. At the request of any member, the Commission may appoint an alternate member to act in the place and stead of such member whenever the said member, for any reason, is not available to act as a member of the Board. The chairs of the two Sections shall be co-chairs of the Board and shall be responsible for maintaining proper liaison between the Board and the Commission, and between their respective sections of the Board and the corresponding sections of the Commission.

According the IJC's vision of international watershed boards, the goal is to mobilize and engage the two federal governments, the relevant states and provinces, tribes and First Nations, and local interests to jointly create a forum to address watershed-based issues and concerns – more from the ground-up rather than the top-down. For whatever reason, the St. Croix Watershed Board apparently includes representatives from the two federal governments and one university professor. It is not clear how, if at all, indigenous people and other stakeholders have been involved in shaping and implementing any program of work.

Website: http://www.ijc.org/en_/iscrwb/International_St._Croix_River_Watershed_Board

Lessons for the Columbia Basin Demonstrates that the IJC can still lay a meaningful role in the governance of transboundary international waters at least in a non-British Columbia context.

Missouri River Recovery Implementation Committee

The Missouri River is the longest river in North America, encompassing over 529,350 square miles. The river flows 2,341 miles through ten states and two Canadian provinces.

In 1989, the U.S. Army Corps of Engineers announced it would undertake a revision of the Master Water Control Manual for Missouri River Reservoir Operations, the principal water management tool for the river. The extensive revision process coincided with the listing of the pallid sturgeon, least tern and piping plover as threatened or endangered species under the federal Endangered Species Act; the issuance by the U.S. Fish and Wildlife Service of two Biological Opinions on steps necessary to recover these species; and extensive federal and state court litigation on water management and species recovery issues. When the Corps of Engineers finalized the revised Master Manual in 2004, the agency committed to establishing a group consisting of stakeholders and sovereign nations to be known as the Missouri River Recovery Implementation Committee, often referred to as MRRIC.

According to the 2007 Water Resources Development Act (WRDA), the purpose of MRRIC is to (1) provide guidance to federal agencies on the existing Missouri River recovery plan including priorities for recovery work and implementing changes based on the results of adaptive management; (2) provide guidance to federal agencies on a long-term study of the Missouri River and its tributaries to determine actions required to mitigate losses of aquatic and terrestrial habitat, recovery of federally listed species, and restore the ecosystem to prevent further declines among other native species; and (3) develop recommendations that recognize the social, economic and cultural interests of stakeholders; mitigate the impacts on those interests; and advance the multiple uses of the river.

The Secretary of the Army adopted the Charter for the Missouri River Recovery Implementation Committee (MRRIC) on July 1, 2008, pursuant to congressional authorization set forth in the Water Resources Development Act of 2007. The Assistant Secretary of the Army for Civil Works appointed MRRIC members during fall 2008 and the first Committee meeting was held in 2008. MRRIC serves as a basin-wide collaborative forum to come together and develop a shared vision and comprehensive plan for Missouri River recovery. The Committee makes recommendations to the Corps of Engineers on (1) a study of the Missouri River and its tributaries known as the Missouri River Ecosystem Recovery Plan (MRERP); and (2) activities in the existing Missouri River recovery and mitigation program (MRRP).

MRRIC has nearly 70 members who represent a wide array of local, state, tribal, and federal interests throughout the Missouri River Basin. It has 28 stakeholder members who represent 16 non-governmental categories. Stakeholder representatives, and their alternates, are selected by the U.S. Army Corps of Engineers with input from the U.S. Fish and Wildlife Service. Stakeholder members serve for three-year terms.

MRRIC seeks consensus recommendations on all substantive issues consistent with the functions defined above. The search for consensus follows a two-step decision-making process with a tentative recommendation made at an initial meeting and a final recommendation made no sooner than the next MRRIC meeting. This process is intended to allow time between the tentative and final recommendation for members to deliberate and consult with their constituents. While this process is often tedious, it encourages informed decision-making and widespread agreement for approved recommendations.

The Missouri River basin is home to 28 American Indian Tribes. Over 20 of the tribes participate actively on MRRIC.

Website: http://moriverrecovery.usace.army.mil/mrrp/f?p=136:3:0::::

Lessons for the Columbia Basin-- In its fifth year of operation (2013), the Committee made six substantive recommendations to the lead agencies. The lead agencies "concurred" with at least two of the six recommendations, according to the 2012-2013 Annual Report. The Tribal Interests Work Group, a standing working group of MRRIC, focused on strategies to enhance tribal participation in MRRIC, including meeting location, virtual participation, and meeting in conjunction with other professional meetings.

Colorado River Compact

The Colorado River is the lifeblood of much of the western United States, providing water to seven American states and Mexico. What was once a wild river, flowing from the Rocky Mountains through parched deserts and the Grand Canyon into the Gulf of California, is now heavily utilized and highly regulated. The river is managed and operated under numerous compacts, federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." This collection of documents apportions the water and regulates the use and management of the Colorado River among the seven basin states and Mexico.

The cornerstone of the "Law of the River" is the Colorado River Compact, which was negotiated by the seven Colorado River Basin states and the federal government in 1922. It defined the relationship between the upper basin states (Colorado, New Mexico, Utah, and Wyoming), where most of the river's water supply originates, and the lower basin states (Arizona, California, and Nevada), where most of the water demands were developing. At the time, the upper basin states were concerned that plans for Hoover Dam and other water development projects in the lower basin would, under the western water law doctrine of prior appropriation, deprive them of their ability to use the river's flows in the future.

The states could not agree on how the waters of the Colorado River Basin should be allocated among them, so the Secretary of Commerce Herbert Hoover suggested the basin be divided into an upper and lower half, with each basin having the right to develop and use 7.5 million acre-feet (maf) of river water annually. This approach reserved water for future upper basin development and allowed planning and development in the lower basin to proceed. The Mexican Water Treaty of 1944 committed 1.5 maf of the river's annual flow to Mexico.

To improve management and storage of water from the river, the Bureau of Reclamation constructed Glen Canyon Dam above Lee's Ferry, Arizona and created Lake Powell between 1956 and 1963. This location was chosen because Lee's Ferry marks an important division between the upper and lower basins of the Colorado River. The Dam allows the upper basin to meet its treaty obligations by releasing nine million acre-feet while holding back its share. The Bureau of Reclamation can store water in Lake Powell—and Lake Mead downstream—and release it when necessary to smooth out the Colorado's significant year-over-year variability in flow and ameliorate the impacts of droughts.

To address the variety of challenges associated with managing the Colorado River, including enduring water scarcity, increasing droughts, and ecological impacts generated by Glen Canyon and other dams, the Bureau of Reclamation established the Glen Canyon Dam Adaptive Management Program in 1997. The program provides for long-term research and monitoring of downstream resources. The scientific information obtained under the Adaptive Management Program is used as the basis for recommendations for dam operations and management actions.

Website: www.usbr.gov/lc/.../lawofrvr.html

Lessons for the Columbia Basin – The Glen Canyon Dam Adaptive Management Program provides a number of lessons related to stakeholder participation, joint fact-finding, and adaptive management. As decision-makers and stakeholders in the Columbia Basin continue to explore alternative futures, there is much to learn from this experiment in collaborative adaptive management. Although the 29 tribes with reservations in the Colorado River Basin were not included in the Colorado River Compact, they have made great strides over the years securing water rights and playing an increasingly significant role in the ongoing management of water in the basin. Finally, the International Boundary and Water Commission, which oversees implementation of the US-Mexico Treaty of 1944, has demonstrated the value of adaptive management through the use of a flexible decision-making process referred to as the "Minute" process. In November 2012, the Commission adopted Minute 319 to address the challenges created by extended drought due to climate change.

Comprehensive Everglades Restoration Plan

In 1993, responding to widespread concern about impacts of water development of the 18,000 square mile Everglades ecosystem, six federal agencies involved in water management in South Florida formed a Task Force to coordinate restoration activities over the 18,000 square mile Everglades ecosystem. The U.S. Army Corps of Engineers developed the Comprehensive Everglades Restoration Plan (CERP), and the Task Force established a Working Group to coordinate implementation of the CERP.

Federal legislation in 1996 expanded the Task Force and Working Group to include broader representation of state, local, and tribal governments. The current CERP was approved in the Water Resources Development Act of 2000, which articulated its overall goals as restoration, preservation, and protection of the South Florida ecosystem while providing for other water related needs of the region, including water supply and flood protection. The CERP, led by the Corps and the South Florida Water Management District, includes more than 60 elements to increase storage capacity, improve water quality, reduce loss of water from the system, and reestablish pre drainage hydrologic patterns. This ambitious restoration initiative will take at least 30 years to complete.

From fiscal years 1999 through 2006, the federal government contributed $2.3 billion, and Florida contributed $4.8 billion, for a total of about $7.1 billion for restoration.

The National Research Council's Committee on Independent Scientific Review of Everglades Restoration Progress reported on implementation of the CERP in 2006 and 2008. The most recent report applauded the agencies for developing a great deal of solid scientific information and establishing the necessary foundations to implement adaptive management. The state of Florida has acquired more than 200,000 acres of land, about half of the total CERP target. Moreover, CERP has increased interagency and intergovernmental coordination, and has resulted in more environmentally sound water management practices by the Corps and the South Florida Water Management District.

The Committee on Independent Scientific Review of Everglades Restoration Progress noted that the CREP's progress to date is "mostly programmatic," concluding that: "(1) the condition of the Everglades ecosystem is declining; (2) the CERP is entangled in procedural matters involving federal approval of projects and lacks consistent infusions of financial support from the federal government; and (3) without rapid implementation of the projects with the greatest potential for Everglades restoration, the opportunity for meaningful restoration may be permanently lost." Other critics fault an unbalanced stakeholder process, which they see as emphasizing development interests concerned about maintaining water supplies over environmental water needs.

Website: www.evergladesplan.org

Lessons for the Columbia Basin – This intergovernmental plan seeks coordinated implementation of the nation's most ambitious ecosystem restoration initiative. It demonstrates how different levels of government which conflicting missions and mandates can come together to achieve mutual gains across a broad spectrum of interests.

Estonian-Russian Joint Transboundary Waters Commission

The bilateral Estonian-Russian Joint Transboundary Waters Commission focuses on water quality, water protection measures, and investments made for improving the state of the aquatic environment in the Neretva River Basin. The two riparians exchange information about the state of the aquatic environment and engage in joint monitoring and comparative tests of laboratories.

Decisions of the commission and its work groups are to be adopted by consensus. Monitoring is carried out by both sides to get regular information about the state of transboundary waters and to predict its possible changes. The parties exchange the monitoring data obtained, as well as the results of scientific studies through arranging joint seminars and scientific conferences.

Cases of disagreements concerning the interpretation or execution of the agreement are to be solved by negotiations between the riparians. The Commission must review proposals for amending the agreement.

The Commission facilitates cooperation with local groups, and guarantees publicity for discussing issues covered by the agreement and involving discussion between representatives of local self-governments and the public. Both riparians encourage cooperation between agencies of executive power, local self-governments, scientific and public interest organizations, as well as other institutions in the field of sustainable development and protection of transboundary waters.

Website: N/A

Lessons for the Columbia Basin Two very disparate sovereigns with unequal economic and bargaining power can successfully cooperate in a transboundary international waters governance context.

International Commission for the Protection of Lake Constance

This commission was formed in 1961 between Austria, Germany and Switzerland. The Commission focuses on water quality issues. The Commission monitors the state of the lake and sources of pollution. It also advises riparians on possibilities for improving the state of water and works on legal documents for maintaining cleanliness of the lake.

Decisions of the Commission are taken with all parties present and unanimously. Issues concerning administrative issues and procedures are decided with a simple majority. All disputes and disagreements between organizations will be resolved by negotiations and consultations.

The Commission distributes information to the media, which includes regular publications, special reports, and a website. The Commission is not an executing agency and gives only recommendations to members. Stakeholders are involved according to national legal possibilities.

Website: http://www.igkb.de/

Lessons for the Columbia Basin Form best follows function. In this case the objectives of the parties were limited and an institutional mechanism with only advisory role was deemed sufficient to successfully meet those objectives.

International Commission for the Protection of the Danube River

Founded in 1994, the commission consists of: Austria, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Montenegro, Romania, Serbia, Slovakia, Slovenia, Ukraine, and the European Community. The issues addressed in this commission include water quality, fisheries and biodiversity protection, environmental protection, hydromorphological alterations, navigation, climate change, and hydropower.

The Secretariat prepares work programs for each year, performs administrative and technical services, and drafts and disseminates reports from the meetings of the bodies. Each country has one vote and decisions are taken with consensus or a 4/5 majority. Disputes are resolved with negotiation, or, if appropriate, with the help of the Commission. If that fails, cases are referred to the International Court of Justice or arbitration.

The countries have agreed to exchange information on general conditions of the river, the application of techniques and research, monitoring, emissions, measures planned and taken, wastewater discharges, and accidents.

Parties harmonize their monitoring methods for water quality, emission control, flood forecast, and water balance. Parties also establish monitoring points and present their results to the public. Independent observers can be registered.

The ICPDR programs and projects often utilize multiple public and private stakeholders in determining policy priorities and implementing specific programs. The 2005 development of Guidelines for Participants with Consultative Status and for Observers includes provisions for information sharing and distribution of its final documents, as well as clear criteria for participation.

Website: http://www.icpdr.org/

Lessons for the Columbia Basin Leadership is really important. Much of the success of the Danube Commission appears to have largely been the result of enlightened leadership. Having modest objectives also appears to have been important.

Lake Tanganyika Authority

The Lake Tanganyika Authority was formed in 2003 with Burundi, Democratic Republic of Congo, Tanzania, and Zambia as member riparians. The Authority's mission includes ensuring the protection and conservation of biological diversity and sustainable use of the natural resources of the lake and its basin based on integrated and cooperative management. Other issues that the Authority handles include fisheries management, pollution control, and navigation.

The Secretariat carries out financial and technical services; formulates the annual work program; obtains and updates information on the implementation of the convention; prepares plans, projects and reports; and arranges and supports meetings. The organization itself is broken into the Conference of Ministers, the Management Committee, the Secretariat, and several Technical Committees.

The riparians exchange information and data through the Secretariat on sustainable management of the basin, including the state of the basin, its biological diversity, hydrogeology, meteorology, ecology, water quality, and other data.

Disputes are resolved through negotiation, and the Secretariat shall be informed. If the dispute cannot be settled through negotiation, the States involved are instructed to notify the Secretariat of the dispute and attempt to resolve it through further negotiation. If the dispute persists, States agree on a dispute resolution procedure, which may include jointly seeking mediation by a third party, impartial fact-finding, and arbitration.

Public awareness raising and participation are tasks of the Authority. The public has a right to participate in decision-making and to be informed.

Website: http://lta.iwlearn.org/about/

Lessons for the Columbia Basin Form best follow function. The LTA looks very good on paper but has regrettably been crippled by a combination of overly ambitious objectives and chronic budget shortfalls.

Lake Victoria Basin Commission

The Lake Victoria Basin Commission was formed in 2003 by Kenya, Tanzania, and Uganda. The Commission focuses on harmonizing policies and laws on the management of the environment in the Lake and its catchment area. Some of the areas of focus have included control and eradication of the water hyacinth; management and conservation of aquatic resources (including fisheries); economic activities in development of fishing, industry, agriculture and tourism; and the development of infrastructure on and around the Lake.

The Secretariat is responsible for implementing work of the Commission in accordance with the policy and decisions of the Sectoral Council, as well as submitting reports on the Commission's work. The Secretariat is also in charge of convening meetings of Sectoral Committees of the Commission and other Working Groups, as well as facilitating research and studies. Finally, the Secretariat is also charged with disseminating information on the Commission to stakeholders and the international community, mobilizing resources for the implementation of projects and programs, and developing a sustainable funding mechanism.

The agreement for the establishment of the Commission states that the riparians shall, on a regular basis, exchange readily available and relevant data and information on existing measures and on conditions of natural resources of the basin. The agreement also require an environment conducive for facilitating collaboration in research and exchange of data, reports and information among stakeholders in the riparians through the Commission. The Secretariat is charged with establishing a regional database and promoting the sharing of information and development of information systems and data exchange.

Decisions of the Summit (which is composed of the Heads of State of the East African Community Member States) and the Council of Ministers of the EAC are taken by consensus. Disputes are resolved by negotiation. If the dispute is not resolved after negotiating, either the Partner State or the Secretary General may refer the dispute to the East African Court of Justice, whose decision shall be final.

Under the agreement, the Commission will cooperate with other states and international organizations in educational and public awareness programs with respect to conservation and sustainable use of the resources of the basin. The Commission has also signed Memoranda of Understanding with various institutions and governments. Member states are charged with creating an environment conducive for stakeholders' views to influence governmental decisions on project formulation and implementation and promote community involvement and mainstreaming of gender concerns at all levels of socio-economic development, especially with regard to decision-making, policy formulation and implementation of projects and programs.

Website: http://www.lvbcom.org/

Lessons for the Columbia Basin The more an institutional mechanism for governance of transboundary international waters is adaptive the more likely it is to be sustainable and succeed.

Mekong River Commission[150]

The Mekong River Commission began in 1995 with Cambodia, Laos, Thailand, and Vietnam as member riparians. The Commission's scope of work includes all fields of sustainable development, utilization, management and conservation of water and related resources, including irrigation, hydropower, navigation, flood, fisheries, timber floating, and tourism.

The Joint Committee and the Secretariat have responsibilities related to general data information sharing, exchange, and harmonization. The MRC maintains a hydrologic monitoring network. In each member state, one or more government agencies are responsible for collecting data and providing it to the MRC. The Secretariat assists the participating agencies with network maintenance, improving field data collection and arranging in-service training for staff. The Secretariat also monitors the state of the basin in its State of the Basin Report, as well as provides technical services, financial administration and advice; formulates the annual work program; and assists in the implementation and management of programs and projects.

The Council and the Joint Committee must reach a unanimous result in order to implement a decision, unless otherwise provided for in their Rules of Procedure. The Council is responsible for resolving issues and disputes referred to it by any Council member of the Technical Committee. The Technical Committee is responsible for making every effort to resolve differences that arise between members. If the Mekong River Commission is unable to solve the dispute, it is referred to the governments, who may request external assistance.

Civil society representatives have been invited to attend the Joint Committee and Council meetings. Information is shared with the public through reports and accessible data. Consultations also occur with the public on projects and programs.

Website: http://www.mrcmekong.org/

Lessons for the Columbia Basin Ideally all the relevant parties need to be involved for a transboundary international waters governance mechanism to be entirely successful. The fact that China (and Myanmar) have yet to play a full role in the MRCS appears to have limited what that entity can do.

Nile Basin Initiative[151]

The agreement that formed the Nile Basin Initiative was signed in 2002 between Burundi, Central African Republic, Democratic Republic of the Congo, Egypt, Eritrea, Ethiopia, Kenya, Sudan, Tanzania, and Uganda. The NBI has helped the countries to engage in planning efforts. The objectives of the NBI are as follows:

- Develop the water resources of the Nile Basin in a sustainable and equitable way to ensure prosperity, security and peace for all its peoples
- Ensure efficient water management and the optimal use of the resources
- Ensure cooperation and joint action between the riparian countries, seeking win-win gains
- Target poverty eradication and promote economic integration
- Ensure that the program results in a move from planning to action.

It is important to note that the NBI was developed as a "regional intergovernmental partnership" that seeks to develop the Nile in a cooperative manner. It was divided into the Shared Vision Program, comprising inter-related capacity projects across the basin, and the Subsidiary Action Program (SAP), aimed at "on the ground" investments. This latter program itself was divided geographically into the Eastern Nile and the Equatorial Lakes region. Nile-COM is the Council of now 10 ministers in charge of water affairs that governs the NBI (Eritrea has observer status) and a technical advisory committee (Nile-TAC) is made up of 20 officials from the member states.

The Secretariat renders administrative services to Nile-COM and Nile-TAC and works to ensure efficient and effective administration, financial management and logistical support. The Secretariat also mobilizes funds for NBI projects and provides financial management support and liaison with donors; represents and promotes NBI; facilitates and supports implementation of Shared Vision Program Projects and Subsidiary Action Programs; and manages the NBI Resource Center and disseminates information.

Disputes are referred to Nile-COM and Nile-TAC to work out solutions mutually agreed upon by parties. In the case of that not working, the dispute is referred to international arbitrators.

The NBI runs the Nile Basin Discourse, which is a civil society network with over 1200 member and partner organizations within the Nile Basin region. The NBD offers a public platform for dialogue, partnership and cooperation among civil society organizations in the Nile Basin. The NBI shares information on its website.

Website: http://www.nilebasin.org/newsite/

Lessons for the Columbia Basin Moving from the allocation of water to the equitable sharing of baskets of benefits leads to more successful and sustainable agreements for the governance of transboundary international waters.

Organization of the Amazon Cooperation Treaty

The Treaty for Amazonian Cooperation was signed in 1978 by Bolivia, Brazil, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela. The agreement focused on socioeconomic development of the countries; protection of the environment, conservation and rational utilization of natural resources; maintaining ecological balance within the region and preserving species; complete freedom of commercial navigation on the Amazon and other international rivers; observing fiscal and police regulations in force now or in the future within the territory of each nation; promoting coordination of present health services; cooperating in fields of scientific and technological research; and road, river and telecommunication links and infrastructure.

The Agreement calls for information exchange as well as promoting scientific research and exchanging information and technical personnel among competent agencies within respective countries. The Agreement also establishes a regular system for proper exchange of information on conservationist measures adopted. An annual report needs to be presented by each country. The Agreement also calls for organization of seminars and conferences.

When implementing projects, the Organization invites the participation of multiple stakeholders, from both international institutions and local civil society, especially as project partners and sponsors. Contracting parties, whenever they deem it necessary and convenient, may request the participation of international agencies in the execution of studies, programs and projects resulting from the forms of technical and scientific cooperation.

Website: http://www.otca.org/br/en/

Trinational Commission of the Trifinio Plan

In 1998, El Salvador, Guatemala and Honduras signed a treaty establishing the Commission. The Commission is charged with the development of international watersheds involving the Lempa, Ulua, and Motagua river basins. More specifically, the Commission is charged with natural resources management, economic diversity, and natural disaster and risk management. The Commission is the permanent coordination and consultative body for the definition of policies and correct orientation of programs, sub-programs and projects included in the Trifinio Plan. The Commission also functions as a forum to analyze sustainable development problems of the Trifinio Region and proposes solutions to relevant authorities through joint actions, as well as promoting and accepting technical and financial cooperation for the execution of trinational projects and initiatives.

The Secretariat is charged with executing the mandate of the Commission, regularly evaluating the plan's execution, administering resources assigned by governments for the plan's implementation, preparing meetings, and preparing the annual operational plan.

All members have to be present for decisions, which are taken through consensus. All disputes related to the interpretation of the treaty are discussed between parties for a solution. If no solution is possible through mediation and discussion, the dispute is referred to an arbitration committee, including the Central American Court of Justice.

Public participation is manifested through ATRIDES, which was created in 1996 to reinforce institutional development of Trifinio Plan, consisting of different representatives of civil society and NGOs. Each government created environmental committees designed to promote citizen participation in protection and conservation efforts. The environmental committees in each of the countries serve as vehicles for citizen participation in environmental protection and conservation.

Website: http://www.sica.int/trifinio/

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[1] For purposes of this report only, the authors use the term "indigenous people" when referring to an international context. When referring specifically to indigenous people on either side of the Canada/USA border in the international Columbia Basin, the authors will use the terms "tribes" on the USA side and "First Nations" on the Canadian side.

[2] "The term "cultural heritage resources" is used in this document to include, but is not limited to, archaeological/heritage sites and objects, cultural/heritage landscapes, sacred/spiritual sites, and sites with cultural values. It encompasses sites and objects regardless of age." First Nations Leadership Council, First Nations Heritage Conservation Action Plan (First Nations Leadership Council 2011), http://www.ubcic.bc.ca/files/PDF/HeritageConservationActionPlan_030311.pdf (accessed February 9, 2015).

[3] The CRT authorized the creation of U.S and Canadian Entities to implement the treaty. The U.S. Entity is composed of the Administrator of the Bonneville Power Administration and the Division Engineer, North Pacific Division, U.S. Army Corps of Engineers. The Canadian Entity is represented by BC Hydro.

[4] For more information, go to www.columbiarivergovernance.org.

[5] The word "governance" is often used to mean different things. Sometimes governance is used to characterize corporate relationships among stakeholders, stockholders, and boards of directors. It is often used in international circles as a way of characterizing relationships among sovereign nations, or among governmental and non-governmental organizations that interact on very different levels. Sometimes governance is used [albeit mistakenly] as a synonym for government. Government refers to legal and institutional mandates and arrangements. Governance refers to the style or method by which decisions are made and conflicts among actors are resolved. Politics is related but refers to the exercise of power within governance. Governance is about representation, style of interaction, authority, and decision rules. It also refers to processes that support governance – i.e., fostering scientific and public learning, and building civic and political will. In the context of natural resources policy and management, it is a question of how people integrate the interests and concerns of multiple jurisdictions, government agencies, and public and private stakeholders to address land, water, and conservation issues.

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[11] Barbara Cosens, Lynette de Silva, Adam M. Sowards, The Columbia River Treaty Revisited Ed. Barbara Cosens (Oregon State University Press, Corvallis, Oregon, 2012), 3.

[12] John Harrison, Columbia River History Project (Northwest Power and Conservation Council, https://www.nwcouncil.org/history/Hydropower accessed February 9, 2015).

[13] Blaine Harden, A River Lost: The Life and Death of the Columbia (W.W. Norton & Company 1996), 17.

[14] Robert Carson, Where the Great River Bends: A natural and human history of the Columbia at Wallula Ed. Robert J. Carson et al. (Keokee Books, Sandpoint, Idaho, 2008).

[15] John Harrison, Columbia River History Project (Northwest Power and Conservation Council, http://www.nwcouncil.org/history/IndianTribes accessed February 9, 2015).

[16] Deward W. Walker, Jr. "Plateau: Key to Tribal Territories" in Handbook of North American Indians (Smithsonian Institution, 1998), V.12: Plateau Map.

[17] Andrea Thompson, Wayne Choquette, and Ian Tamasi, Archaeological Inventory and Impact Assessment of the Bear Island Area in the Kinbasket Reservoir (BC Heritage Conservation Act Inspection Permit #2012-0181, 2013).

[18] John Harrison, Columbia River History Project (Northwest Power and Conservation Council, https://www.nwcouncil.org/history/IndianTribes accessed February 9, 2015).

[19] John Harrison, Columbia River History Project (Northwest Power and Conservation Council, https://www.nwcouncil.org/history/IndianTreaties accessed February 9, 2015).

[20] John Harrison, Columbia River History Project (Northwest Power and Conservation Council, https://www.nwcouncil.org/history/IndianTreaties accessed February 9, 2015).

[21] UN Watercourses Convention, User's Guide Fact Sheet Series: Number 2. The Columbia Basin is an "international drainage basin" or "international watercourse." The 1997 UN Watercourses Convention uses the term "international watercourse" - meaning a "watercourse, parts of which are situated in different States" (Art. 2(b)). A "watercourse" is defined as "a system of surface waters and ground waters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus" (Art. 2(a)). This definition slightly differs from the approach of the International Law Association's (ILA) Helsinki Rules on the Uses of the Waters of International Rivers, which uses the term "international drainage basin" defined as "a geographical area extending over two or more States determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus". Some scholars maintain that, through its use of the term "drainage basin", the scope of the Helsinki Rules is more expansive than that of the UN Watercourses Convention. A question has therefore been raised over whether the approach of the Convention is restrictive in only applying to the waters, whereas the Helsinki Rules adopted a seemingly more expansive definition of the entire drainage area meaning the land and water of a river basin.

[22] Alex Grzybowski, Stephen C. McCaffrey and Richard Kyle Paisley, "Beyond International Water Law: Successfully Negotiating Mutually Beneficial Agreements for International Watercourses," Pacific McGeorge Global Business & Development Law Journal 22 (2010). International watercourses are conspicuously different from non-international watercourses, and have certain characteristics that make their conservation and management particularly challenging. The most notable of these characteristics is the tendency for regional politics to regularly exacerbate the already difficult task of understanding and managing complex natural systems. As explained in Section 3.0 of this report, international watercourses are governed by either of two general forms of international law: international treaty law or customary international law. If the states sharing an international freshwater resource are not parties to an applicable international treaty, their international rights and obligations are governed by customary international law.

[23] Columbia River Inter-Tribal Fish Commission, First Salmon Feast (http://www.critfc.org/salmon-culture/tribal-salmon-culture/first-salmon-feast/ accessed February 9, 2015).

[24] Columbia River Inter-Tribal Fish Commission, First Salmon Feast (http://www.critfc.org/salmon-culture/tribal-salmon-culture/celilo-falls/ accessed February 9, 2015).

[25] For a critical review of the history and performance of the Boundary Waters Treaty and the International Joint Commission, see Richard Kyle Paisley, et al., "Transboundary Water Management: An Institutional Comparison Among Canada, the United States, and Mexico," (Ocean and Coastal Law Journal 9, 2004), 177-194.

[26] Ibid.

[27] Ibid.

[28] As explained by Jim Heffernan in The Future of the Columbia River Treaty (undated powerpoint presentation), Office of the Executive Director, Columbia River Inter-tribal Fish Commission.

[29] Personal communication with Jim Heffernan, 2014.

[30] British Columbia Ministry of Energy and Mines, U.S. Benefits from the Columbia River Treaty - Past, Present and Future: A Province of British Columbia Perspective, (British Columbia Ministry of Energy and Mines 2013).

[31] The deadline for notice that would allow termination to coincide with the Sept. 16, 2024 expiration of assured flood control has already passed without action.

[32] Canadian and United States Entities, Columbia River Treaty 2014/2024 Review: Phase 1 Report, (Canadian and United States Entities, 2010). Subsequent BC reports: http://blog.gov.bc.ca/columbiarivertreaty/review/technical-studies/; subsequent U.S. reports: http://www.crt2014-2024review.gov/OtherStudies.aspx

[33] For more information see: http://blog.gov.bc.ca/columbiarivertreaty/ and http://www.cbt.org/crt/.

[34] British Columbia Columbia River Treaty Review, B.C. Decision (B.C. Columbia River Treaty Review, 2014) The full recommendation can be found online: http://www.crt2014-2024review.gov/.

[35] U.S. Entity, U.S. Entity Regional Recommendation for the Future of the Columbia River Treaty after 2024, (U.S. Entity, 2013). It is worth noting that the traditional beneficiaries of basin management who felt either left out or harmed by the addition of ecosystem function immediately ran to their allies in Congress after release of the regional recommendation. Congressional hearings were then held in the basin.

[36] U.S. Entity, U.S. Entity Regional Recommendation for the Future of the Columbia River Treaty after 2024, (U.S. Entity, 2013).

[37] The full agreement can be found at http://www.cbt.org/uploads/pdf/LibbyCoordinationAgreement.pdf.

[38] John Shurts, "Rethinking the Columbia River Treaty" in The Columbia River Treaty Revisited ed. Barbara Cosens, (Oregon State University Press, Corvallis, Oregon, 2012), p 225.

[39] John Shurts, "Rethinking the Columbia River Treaty" in The Columbia River Treaty Revisited ed. Barbara Cosens, (Oregon State University Press, Corvallis, Oregon, 2012), p 225.

[40] Columbia Basin Trust, Columbia River Treaty and Libby Dam, (Columbia Basin Trust, nd).

[42] For a critical review of this MOU, see Harvey Locke and Matthew McKinney, "The Flathead River Basin," in Water Without Borders: Canada, the United States, and Shared Waters (University of Toronto Press 2013), 193-220. The full memorandum can be found at http://www.gov.bc.ca/igrs/attachments/en/MTEnvCoop.pdf.

[43] Memorandum of Understanding and Cooperation on Environmental Protection, Climate Action and Energy between The Province of British Columbia and The State of Montana (2010).

[44] Ken Salazar, Order No. 3289, Amendment No. 1, (U.S. Department of the Interior 2010).

[45] For more information, see http://northpacificlcc.org/.

[46] For more information, see http://greatnorthernlcc.org/overview.

[47] Columbia Basin Trust, About Us. (https://www.cbt.org/About_Us/ accessed February 9, 2015).

[48] National Environmental Policy Act, (42 U.S.C. §§4321-4370h).

[49] Endangered Species Act (7 U.S.C. § 136, 16 U.S.C. § 1531 et seq.)

[50] Species at Risk Act Public Registry (Canada), and Canada. 2003. The Species at Risk Act Public Registry: your source for information and documents relating to the Species at Risk Act. [Ottawa]: Govt. of Canada.

[51] Arthur Manuel, Report on Canada's Self-Government + Land Rights Policies at the Root of Canada's Opposition to the UN Draft Declaration on Indigenous Rights, (Indigenous Network on Economies and Trades, 2006).

[52] School, Allan et al. Compilation of Information on Salmon and Steelhead Total Run Size, Catch and Hydropower Related Losses in the Upper Columbia River Basin, above Grand Coulee Dam. (Eastern Washington University 1985).

[53] Columbia Basin tribes and First Nations, Fish Passage and Reintroduction into the U.S. and Canadian Upper Columbia: An Interim Joint Paper of the U.S. Columbia Basin Tribes and Canadian First Nations, (2014).

[54] Armstrong, Derickson, Maracle, Young-Ing, eds., "We Get Our Living Like Milk From the Land" in Original People. Theytus Books Ltd, nd.

[55] Office of Indian Services, Bureau of Indian Affairs, American Indian Population and Labor Force Report, (U.S. Department of the Interior 2005).

[56] U.S. Bureau of Labor Statistics, A Profile of the Working Poor, 2011, (U.S. Bureau of Labor Statistics 2011).

[57] Statistics Canada. "Labour force characteristics of Aboriginal and non-Aboriginal populations aged 25-54 by province or region, 2008-2010, Table 3" in Aboriginal People and the Labour Market: Estimates from the Labour Force Survey, 2008-2010. (Statistics Canada 2013).

[58] This sub-section focuses on the interests and aspirations of tribes in the United States, and was prepared in consultation with Jim Heffernan (Columbia River Inter-Tribal Fish Commission) and John Marsh (Confederated Salish & Kootenai Tribes). The tribes include the Burns Paiute Tribe, the Coeur d'Alene Tribe, the Confederated Salish and Kootenai Tribes of the Flathead Nation, the Confederated Tribes of the Colville Reservation, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes and Bands of the Yakama Nation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Cowlitz Indian Tribe, the Kalispel Tribe of Indians, the Kootenai Tribe of Idaho,

the Nez Perce Tribe, the Fort McDermitt Paiute Shoshone Tribe, the Shoshone-Bannock Tribes of the Fort Hall Reservation, the Shoshone Paiute Tribe of the Duck Valley Indian Reservation, and the Spokane Tribe of Indians, with support from the Columbia River Inter-Tribal Fish Commission, Upper Columbia United Tribes, and the Upper Snake River Tribes tribal organizations are working together to consider the effects and alternatives related to the Columbia River Treaty.

[59] Columbia Basin tribes, Common Views on the Future of the Columbia River Treaty (15 Columbia Basin tribes, February 25, 2010).

[60] Confederated Salish and Kootenai Tribes of the Flathead Reservation, Cultural Resources and the Columbia River Treaty: A Statement by the Confederated Salish and Kootenai Tribes of the Flathead Reservation (May 7, 2013).

[61] Columbia Basin Tribes Coalition on the Columbia River Treaty 2014/2024 Review, Ecosystem-Based Function (June 2013).

[62] Columbia Basin Tribes Coalition on the Columbia River Treaty 2014/2024 Review, Restore Fish Passage (undated).

[63] Columbia Basin Tribes Coalition on the Columbia River Treaty 2014/2024 Review, Flood Risk Management (undated).

[64] By comparison, the state of California had a population in 2014 of 38.33 million.

[65] The Constitution Act, 1982, being Schedule B to the Canada Act 1982 (UK), 1982, c 11

[66] Roger L. Nichols, Indians in the United States and Canada – A Comparative History, (University of Nebraska Press, 1998)

[67] The Aboriginal Justice Implementation Commission, The Justice System and Aboriginal People, (http://www.ajic.mb.ca/volumel/chapter5.html accessed February 9, 2015).

[68] Haida Nation v British Columbia (Ministry of Forests), [2004] 3 SCR 511

[69] Tsilhqot'in Nation v British Columbia, 2014 SCC 44.

[70] U.S. Columbia Basin Tribes and Canadian First Nations, Fish Passage and Reintroduction into the U.S. and Canadian Upper Columbia River (February 14, 2014).

[71] "The term "cultural heritage resources" is used in this document to include, but is not limited to, archaeological/heritage sites and objects, cultural/heritage landscapes, sacred/spiritual sites, and sites with cultural values. It encompasses sites and objects regardless of age". First Nations Leadership Council, First Nations Heritage Conservation Action Plan (First Nations Leadership Council 2011).

[72] U.S. Columbia Basin Tribes and Canadian First Nations, Fish Passage and Reintroduction into the U.S. and Canadian Upper Columbia River (February 14, 2014).

[73] Caponera, Dante A., The Role of Customary International Water Law, in Water Resources Policy for Asia (M. Ali, G. Radosevich & A. Khan eds., 1985), 365, 36768, 372, 380-81.

[74] The stages of developing a treaty typically include (1) identification of the problem; (2) building political consensus to address the problem; (3) convening meetings to draft the treaty text by negotiation; (4) signing the completed treaty; (5) ratification, acceptance, approval or accession to the treaty (alternate procedures for making the treaty binding on a state); (6) the treaty comes into force; (7) elaborating on the treaty, or developing more detailed actions that must be taken, either in a protocol to the treaty or through Plans of Action or programmes of work that set out what needs to be done; and (8)

amendments to the treaty and expanding on the treaty secretariat's programme of work. Paisley, Richard Kyle et. al., International Watercourses / River Basins Including Law, Negotiation, Conflict Resolution and Simulation Training Exercises, FAOWATER, United Nations Food and Agriculture Organization (FAO), Rome (2008).

[75] A. Wolf, S. Yoffe, and M. Giordano, "International Waters: Identifying Basins at Risk" in Water Policy (2003): 5 (1):29-60.

[76] Glen S. Hearns, Taylor W. Henshaw and Richard K. Paisley, "Getting What You Need: Designing Institutional Architecture for Effective Governance of International Waters" in Elsevier Environmental Development (2014). Commissions and other bi/multilateral organizations are especially relevant to the management, allocation, protection, and development of international waters. Such entities have been employed on a multitude of international rivers in Europe; in North America, on the Great Lakes, the Rio Grande and the Colorado River; in Africa on the Okavango and Zambezi Rivers and for Lake Chad; in Asia on the Mekong River; in Latin America on the frontier waters between Guatemala and Mexico and on the Uruguay River.

[77] United Nations, United Nations Convention on the Law of the Non-navigational Uses of International Watercourses. (United Nations, 21 May 1997, annexed to UN Doc. A/RES/51/229, of 8 July 1997).

[78] International Court of Justice, Judgment of 25 Sept 1997.

[79] The Helsinki Rules (Campioni Consolidation) and the Commentary to the Helsinki Rules on the Uses of the Waters of International Rivers, ILA Report of the 52nd Conference, Helsinki 1966, at 484, 484-505 (1966, 1987): Arts. J-XI, 4. Coming from the non-governmental International Law Association (ILA), the Helsinki Rules, a predecessor to the 1997 UN Watercourses Convention, are not intergovernmentally authoritative, technically speaking. However, they reflect many years of research by a representative body of international law experts, and therefore are clearly persuasive authority within the terms of Article 38(i.)(d) of the Statute of the International Court of Justice.

[80] These rules are generally utilized by international organizations. For example, the World Bank has at least 3 documents reflecting these principles: Bank Operational Policies (OP 7.50): Projects on International Waterways; Bank Procedures (BP 7.50): Projects on International Waterways; Bank Good Practices (GP 7.50): Projects on International Waterways.

[81] Richard Kyle Paisley, "Adversaries into Partners: International Water Law and Down Stream Benefits" Melbourne Journal of International Law 280 (2002).

[82] Stefania Errico, "The UN General Assembly adopts the Declaration on the Rights of Indigenous Peoples" in American Society of International Law INSIGHTS, (Volume 11 Issue 25, Tuesday 09 October 2007).

[83] Aboriginal Affairs and Northern Development Canada, Canada's Statement of Support on the United Nations Declaration on the Rights of Indigenous Peoples, (Government of Canada, November 12, 2010).

[84] The following discussion in part draws in part on materials presented by Nigel Bankes and Barbara Cosens in The Future of the Columbia River Treaty (Munk School of Global Affairs, 2012).

[85] See also: Paust, Jordan J., Non State Actor Participation in International Law and the Pretense of Exclusion, 51 Va. J. Int'l L. 977 (2011) at 979 to 984.

[86] Cf. Article 37 of the UN Declaration on the Rights of Indigenous Peoples states that indigenous peoples have "the right to the recognition, observance and enforcement of treaties, agreements and other constructive arrangements concluded with States …"

[87] Harvey Locke and Matthew McKinney, "The Flathead River Basin," in Water Without Borders: Canada, the United States, and Shared Waters (University of Toronto Press 2013).

[88] Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters done at Aarhus, Denmark, (June 25, 1998).

[89] Tribes and First Nations both repeatedly emphasize that they are "sovereign" entities and not under any circumstances to be treated as "stakeholders" or "public participants." Analysis of the comparative rights and responsibilities of Canadian First "Nations" v. U.S. "sovereign" tribes v. "sovereign nation states" under international law is beyond the scope of this report.

[90] For example, the first time that non-governmental organizations (NGOs) took a role in formal UN deliberations was through the Economic and Social Council (ECOSOC) in 1946. Article 71 of the UN Charter opened the door for suitable arrangements for consultation with NGOs. This relationship with ECOSOC is governed today by ECOSOC resolution 1996/31. International, regional and national NGOs, non-profit public or voluntary organizations are eligible to obtain consultative status. There are three categories of status: general, special, and roster consultative status. See: http://esango.un.org/civilsociety/displayConsultativeStatusSearch.do?method=search&sessionCheck=false.

[91] United Nations Economic Commission for Europe, Guide to Public Participation under the Protocol on Water and Health – Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes. (United Nations, 2013).

[92] Several additional resources on the topic of representation and participation in international environmental treaties include Jon Martin Trolldalen, International Environmental Conflict Resolution (World Foundation for Environment and Development, 1992); Lawrence E. Susskind, et al., International Environmental Treaty Making (Program on Negotiation, Harvard Law School, 1992); Lynton Keith Caldwell, International Environmental Policy: From the Twentieth to the Twenty-First Century (Duke University Press, 1996); and Larry Susskind, et al., Transboundary Environmental Negotiation: New Approaches to Global Cooperation (Jossey-Bass, 2002).

[93] Richard F. Grimmett, Foreign Policy Roles of the President and Congress, (U.S. Department of State, 1999).

[94] Richard F. Grimmett, Foreign Policy Roles of the President and Congress, (U.S. Department of State, 1999).

[95] Congressional Research Service, Treaties and other International Agreements: The Role of the United States Senate, (106th Congress, 2d Session, January 2001).

[96] According to Bankes and Cosens, the failure to consult tribes in the past has in general been addressed as a matter of domestic law (e.g., litigation by tribes against the U.S. for failure to fulfill trust responsibility, rather than at the international level or as a challenge to entering into or implementing a treaty.

[97] More recently, some reports allege that tribes in the midwest part of the country feel that the U.S. Department of State did not adequately consult or include them in negotiations with respect to the Keystone XL pipeline. See Christine Graef, Nebraska's Cowboys and Indians Unite Against Keystone XL Pipeline, (Mint Press News, September 22, 2014).

[98] Nigel Bankes and Barbara Cosens, The Future of the Columbia River Treaty (Munk School of Global Affairs, 2012).

[99] Nigel Bankes and Barbara Cosens, The Future of the Columbia River Treaty (Munk School of Global Affairs, 2012).

[100] Nigel Bankes and Barbara Cosens, The Future of the Columbia River Treaty (Munk School of Global Affairs, 2012).

[101] Rio Tinto Alcan Inc. v. Carrier Sekani Tribal Council, 2 SCR 650 (2010).

[102] Nigel Bankes and Barbara Cosens, The Future of the Columbia River Treaty (Munk School of Global Affairs, 2012).

[103] Tsilhqot'in Nation v. British Columbia (2014 SCC 44).

[104] Paust, Jordan J., "Non State Actor Participation" in International Law and the Pretense of Exclusion, 51 Va. J. Int'l L. 977 (2011).

[105] Barbara A. Boczar, Avenues for Direct Participation of Transnational Corporations in International Environmental Negotiations, 3 N.Y.U. (Envtl. L.J. 1 1994).

[106] Erik B. Bluemel, Separating Instrumental from Intrinsic Rights: Toward an Understanding of Indigenous Participation in International Rule-Making, 30 (Am. Indian L. Rev. 55. 2005 -2006); Miranda, Lillian Aponte, Indigenous Peoples as International Lawmakers. 32 U. Pa. J. Int'l. L. 203 (2010); Weissner, Siegfried, Indigenous Sovereignty: A Reassessment in Light of the UN Declaration on the Rights of Indigenous Peoples. 41 Vand. J. Transnat'l. L. 1141 (2008) and Annika Tahvanainen, "The Treaty-- Making Capacity of Indigenous People" (2005), 12 International Journal on Minority and Group Rights" 387

[107] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters in Aarhus, Denmark 25 June 1998 (2161 UNTS 447; 38 ILM 517, 1999).

[108] See http://www.inuitcircumpolar.com/.

[109] Consultative Status to the United Nations Economic and Social Council is the highest status granted by the United Nations to non-governmental organizations, thereby allowing them to participate in the work of the United Nations. Consultative Status is divided into three categories: General Consultative Status (formerly Consultative Status 1), the highest level, which may be granted to organizations that are concerned with most of the activities of the Council, that are making substantive and sustained contributions in many fields, with a considerable membership, and that are broadly representative of major segments of society in a large number of countries. These organizations are entitled to deliver oral presentations during the Council's meetings. Special Consultative Status (formerly Consultative Status 2), which may be granted to organizations concerned with only a few of the fields of activity covered by the Council Roster, which are "other organizations that do not have general or special consultative status but that the Council, or the Secretary-General of the United Nations in consultation with the Council or its Committee on Non-Governmental Organizations, considers can make occasional and useful contributions to the work of the Council." Consultative Status, depending on level, gives the organizations a number of rights to participate in the work of the UN, to present their views and deliver testimony. http://en.wikipedia.org/wiki/List_of_organizations_with_consultative_status_to_the_United_Nations_Economic_and_Social_Counci

[110] Williams, Austen, The Pacific Salmon Treaty: A Historical Analyis and Prescription of the Future. 22 J. Envtl. L. & Litig. 153 (2007) and Johnson, James T., Treaty Fishing Rights and Indian Participation in International Fisheries Management. 77 Denv. U. L. Rev. 403 (1999)

[111] Karkkainen, Bradley C., The Great Lakes Water Resources Compact and Agreement: Transboundary Normativity without International Law. 39 Wm. Mitchell L. Rev. 997 (2013).

[112] Adapted from Barbara A. Boczar, Avenues for Direct Participation of Transnational Corporation in International Environmental Negotiations, 3 N.Y.U. Envtl. L.J. 1 1994

[113] In recent years, natural resource managers and others have paid increasing attention to "traditional ecological knowledge." TEK, as it is often referred to, describes aboriginal, indigenous, or other forms of traditional knowledge regarding sustainability of local resources. It refers to a cumulative body of knowledge, belief, and practice handed down through generations through traditional songs, stories and beliefs. For an introduction to this emerging field, see R. Barnhardt and A.O. Kawagley, "Indigenous Knowledge Systems and Alaska Native Ways of Knowing," Anthropology and Education Quarterly, 2005 (36) (1): 8-23.

[114] The Pacific Salmon Commission illustrates how tribes and First Nations participated in the negotiation of the Pacific Salmon Treaty and now participate in the ongoing governance provided by the Pacific Salmon Commission. The Nordic Saami Convention, Inuit Circumpolar Council, and Great Lakes Water Resources Compact and Agreement (albeit, a sub-national initiative) demonstrate that the international trend and best practice to include indigenous people in both negotiating and governing the use of transboundary land and water resources.

[115] As a result of the 1963 Canada/British Columbia Agreement, BC Hydro is currently a British Columbia Crown Corporation.

[116] See: www.icpdr.org/main/icpdr/observers

[117] Additional resources for this section include: White & Case, International Waters: Review of Legal and Institutional Frameworks UNDP-GEF International Waters Project. (2011); Paisley, Richard Kyle et. al. International Watercourses / River Basins Including Law, Negotiation, Conflict Resolution and Simulation Training Exercises, FAOWATER, United Nations Food and Agriculture Organization (FAO), Rome (2008); Emma S. Norman, Governing Transboundary Waters: Canada, the United States, and Indigenous Communities (Routledge, 2014); Susanne Schmeier, Governing International Watercourses: River Basin Organizations and the Sustainable Governance of Internationally Shared Rivers and Lakes (Routledge, 2013); Shafiqul Islam and Lawrence E. Susskind, Water Diplomacy: A Negotiated Approach to Managing Complex Water Networks (RFF Press, 2013); "Special Issue: Exploring the Governance Landscape of Indigenous Peoples and Water in Canada," Indigenous Policy Journal 23(4)(2013); Karkkainen, Bradley, "The Great Lakes Water Resources Compact and Agreement: Transboundary Normativity Without International Law," 39 WMLR 997 (2013); Jennifer Lynne Archer, Transcending Sovereignty: Locating Indigenous Peoples in Transboundary Water Law (Master of Laws Thesis, University of British Columbia, 2012); and Johnson, James T., "Treaty Fishing Rights and Indian Participation in International Fisheries Management," 77 Denv. U.L. Rev. 403 (1999).

[118] In an international context (i.e., outside Canada and the United States), there is not always a clear difference or distinction between "indigenous" people and "local" people.

[119] Case studies may have various limitations and constraints including, but not limited to, (1) differing objectives and/or criteria for measuring "success"; (2) different physical, social, political, economic, environmental and cultural circumstances; (3) strong cross cultural communication issues; and (4) what appears to work at one scale may well not work at a different scale.

[120] Paisley, Richard K. and Taylor W. Henshaw. If You Can't Measure it You Can't Manage it: Transboundary Waters, Good Governance and Data & Information Sharing & Exchange. 203 Ind. Int'L & Comp. L. Rev. [Vol. 24:1] 2014

[121] Susanne Schmeier, Governing International Watercourses: River Basin Organizations and the Sustainable Governance of Internationally Shared Rivers and Lakes (Routledge, 2013).

[122] Susanne Schmeier, Governing International Watercourses: River Basin Organizations and the Sustainable Governance of Internationally Shared Rivers and Lakes (Routledge, 2013).

[123] Adaptive management (AM), also known as adaptive resource management (ARM) or active adaptive management (AAM), is a structured, iterative process of robust decision making in the face of uncertainty, with an aim to reducing uncertainty over time via system monitoring. In this way, decision making simultaneously meets one or more resource management objectives and, either passively or actively, accrues information needed to improve future management. Adaptive management is a tool that should be used not only to change a system, but also to learn about the system. Because adaptive management is based on a learning process, it usually improves long-run management outcomes. The challenge in using the adaptive management approach lies in finding the correct balance between gaining knowledge to improve management in the future and achieving the best short-term outcome based on current knowledge.

[124] Nigel Bankes and Barbara Cosens, Protocols for Adaptive Water Governance: The Future of the Columbia River Treaty (Program on Water Issues, Munk School of Global Affairs, University of Toronto) October 2015.

[125] In its most basic formulation, the principle of subsidiarity holds that social problems should be dealt with at the most immediate (or local) level consistent with their solution.

[126] In The Columbia River Basin: A Sense of the Future (Appendix 6,1), "whole basin" perspective is defined as "… planning and management of the river basin, including but not limited to flood control, hydropower, ecosystem functions, cultural values and traditions, and socio-economic interests (e.g., industry, agriculture, and recreation)."

[127] This was one of the clearest and most explicit recommendations that emerged from the Columbia River Basin: 2014 Conference – Learning From Our Past to Shape the Future (October 21-23, 2014), Spokane, Washington.

[128] For more on the role and value of "backbone support" in collaborative governance, see Shiloh Turner, Kathy Merchant, John Kania & Ellen Martin, "Understanding the Value of Backbone Organizations in Collective Impact: Part I," Standford Social Innovation Review (July 17, 2012).

[129] See also Glen S. Hearns, Taylor W. Henshaw, and Richard K. Paisley, "Getting What You Need: Designing Institutional Architecture for Effective Governance of International Waters" Environmental Development 11 (2014): 98-111.

[130] Niccolò Machiavelli, The Prince (1513)

[131] Bankes, Nigel and Barbara Cosens. The Future of the Columbia River Treaty (Program on Water Issues, Munk School of Global Affairs, University of Toronto. October 2012).

[132] Matthew McKinney, et al., "Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty," West-Northwest Journal of Environmental Law and Policy (Summer 2010, 16): 307-350. Reprinted in Barbara Cosens, ed., Transboundary River Governance in the Face of Uncertainty: The Columbia River Treaty (Oregon State University Press, 2012).

[133] http://www.columbiarivergovernance.org/UI_OSU_CRT_Scenario_Development__Combined_Report_-_FINAL-1.pdf

[134] Paisley, Richard. "Adversaries into Partnerships: International Water Law and the Equitable Sharing of Downstream Benefits." Melb. J. Int'l L. 3 (2002): 280.

[135] Cosens, Barbara, ed. The Columbia River Treaty Revisited: Transboundary River Governance in the Face of Uncertainty, A Project of the Universities Consortium on Columbia River Governance (Oregon State University Press, 2012).

[136] Frederic L. Kirgis, "International Agreements and U.S. Law" in American Society of International Law, (Vol. 2; Issue 5, 1997).

[137] Adapted from Matthew McKinney, et al., "Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty," West Northwest Journal of Environmental Law and Policy, 16(2) (2010): 307-350.

[138] C. Thomas Laurie, Executive Advisor for Tribal and Environmental Affairs, Washington Department of Ecology (February 2014).

[139] Adapted from Bankes & Cosens

[140] If the Treaty is terminated in accordance with Article XV(2) thereof: (a) this Agreement shall be suspended and enter into force under the name "Yukon River Salmon Treaty" upon an exchange of diplomatic notes indicating that the necessary internal procedures of the Parties for the entry into force of the Yukon River Salmon Treaty have been completed; (b) the functions of the Yukon River Panel shall be assumed by a new commission, the "Yukon River Salmon Commission", and the Yukon River Panel shall thereupon cease to exist; (c) other provisions of the Treaty, to the extent they apply to the Yukon River, shall remain in effect as part of the Yukon River Salmon Treaty, mutatis mutandis; and (d) our two Governments shall seek to agree on other measures necessary for the continuation and application of the Yukon River Salmon Treaty.

[141] See Karkkainen op. cit.

[142] Columbia River Inter-Tribal Fish Commission, "Pacific Salmon Commission Update," (December 5, 2013).

[143] Pacific Salmon Commission, "Role of the Commission," (http://www.psc.org/about_role.htm last accessed February 13, 2015).

[144] Syma A. Ebbin, "Dividing the Waters: Cooperative Management and the Allocation of Pacific Salmon," (2002).

[145] Oregon State University, "Pacific Salmon Treaty" in Transboundary Freshwater Dispute Database, (http://ocid.nacse.org/tfdd/rbo_new.php?page=full&origin=river&id=394 last accessed February 13, 2015).

[146] Pacific Salmon Commission, "Role of the Commission," (http://www.psc.org/about_role.htm last accessed February 13, 2015).

[147] Mackenzie River Basin Board, Mackenzie River Basin Transboundary Waters Master Agreement, (http://www.mrbb.ca/information/31/index.html last accessed February 13, 2015).

[148] The Harvard Project on American Indian Economic Development, Honoring Nations: Directory of Honored Programs 1998-2010, (2010), 46.

[149] Karkkainen, Bradley. The Great Lakes Water Resources Compact and Agreement: Transboundary Normativity Without International Law. 39 WMLR 997 (2013).

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