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Termination: A Solution to Canadian Entitlement Valuation Disputes

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INTRODUCTION

The Columbia River Treaty (CRT) is an international treaty between Canada and the United States created to control and harness the Columbia River.¹ The CRT was prompted by a 1948 flood that destroyed the city of Vanport, Oregon.² The water management community regards the CRT as a premier transboundary water management treaty;³ however, a key flood control provision in the CRT will expire in 2024 unless the two countries negotiate a new provision.⁴ How Canada and the United States negotiate this provision will shape the economic and environmental landscape of the Columbia River Basin for decades to come.

This Comment assesses the CRT as currently written and determines how the United States should approach modifying the treaty. Part I of this Comment describes the basics of the CRT. Part II assesses the recommendations put forth by each country's treaty entity and shows that the United States' recommendation is too passive. Part III of this Comment then recommends an alternative to the U.S. and Canadian recommendations—namely, that the United States should terminate the CRT.

Terminating the CRT would free up resources to meet the United States' obligations in the Columbia River Basin. The United States could use the saved resources to reduce U.S. electricity rates and manage fish populations. Terminating the CRT would also allow the United States to work more closely with the tribes in its portion of the Columbia River Basin. The CRT's termination articles, associated dams, and the Boundary Waters Treaty of 1909 would all work to stabilize water flow and levels in the region. If the United States does not terminate the CRT, Canada will continue to exploit U.S.

¹ Treaty Between Canada and the United States of America Relating to Cooperative Development of the Water Resources of the Columbia River Basin, Can.-U.S., pmb1., Jan. 17, 1961, 542 U.N.T.S. 244, <https://treaties.un.org/doc/Publication/UNTS/Volume%20542/v542.pdf> [<https://perma.cc/X2GG-QGK4>] [hereinafter Columbia River Treaty].

² *Columbia River Treaty*, NW. POWER & CONSERVATION COUNCIL, <https://www.nwcouncil.org/reports/columbia-river-history/columbiarivertreaty> [<https://perma.cc/A76C-M8HK>] [hereinafter *CRT – NWPCC*].

³ *Id.*

⁴ Columbia River Treaty, *supra* note 1, at art. IV, ¶ 3.

ratepayers⁵ and the fish of the Columbia River Basin for its own financial gain.

I TREATY BASICS

The importance of the CRT and its expiring flood control provisions can be appreciated only with a basic understanding of the CRT. This Part discusses who implements the treaty for each country, the primary goals and considerations of the treaty, what the Canadian Entitlement is and why it is important, how the CRT determines power benefits, the CRT's termination articles, and the consequences if the United States terminates the CRT.

A. Treaty Entities

The CRT calls for two entities, one from each country, to carry out the treaty.⁶ The United States chose the Bonneville Power Administration (BPA) and the Northwest Division of the U.S. Army Corps of Engineers (USACE) to work in tandem as the U.S. treaty entity.⁷ Canada selected the Province of British Columbia, through BC Hydro, as its treaty entity.⁸ In addition to carrying out the treaty on behalf of their countries, the entities also offer recommendations on operating and modifying the CRT.⁹ However, neither entity may terminate the CRT.¹⁰ The power to terminate the CRT lies solely with the entities' respective governments.¹¹

⁵ A ratepayer is "one who pays for a utility service and especially electricity according to established rates." *Ratepayer*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/ratepayer> [<https://perma.cc/2T7K-BBEZ>].

⁶ Columbia River Treaty, *supra* note 1, at art. XIV, ¶ 1.

⁷ Exec. Order No. 11,177, 3 C.F.R. § 243 (1964–1965).

⁸ *Columbia River Treaty – FAQs*, GOV'T B.C., <https://engage.gov.bc.ca/columbiariver-treaty/faqs/#faq7> [<https://perma.cc/VAA2-G45E>] [hereinafter *CRT – FAQs*].

⁹ *CRT – NWPCC*, *supra* note 2.

¹⁰ U.S. ARMY CORPS OF ENG'RS & BONNEVILLE POWER ADMIN., COLUMBIA RIVER TREATY: HISTORY AND TREATY 2014/2024 REVIEW 8 (revised Feb. 2009), <https://www.bpa.gov/news/pubs/GeneralPublications/crt-Columbia-River-Treaty-History-and-2014-2024-Review.pdf> [<https://perma.cc/P4Q5-8D6F>].

¹¹ *Id.* at 7.

B. Treaty Goals and Considerations

The CRT originally established two primary goals: to provide flood control and reliable power to the Columbia River Basin.¹² The CRT achieved flood control through the construction of four dams (treaty dams).¹³ To address its flood control concerns, the United States purchased 15.5 million acre-feet¹⁴ of flood storage from Canada for \$65 million.¹⁵ The flood storage came from the construction of three Canadian treaty dams in British Columbia.¹⁶ The fourth treaty dam, located in Montana on the Kootenai River, also provides flood storage but was not part of the purchase because the United States owns the dam.¹⁷

The second goal of the CRT was to provide reliable power to the Columbia River Basin.¹⁸ In addition to protecting the Columbia River Basin from floods, the treaty dams' added flood storage allowed river flow to be controlled in a way that increased power output at downstream dams.¹⁹ The treaty dams increased the value of downstream power "by reducing spill and shifting energy generation to high value time periods."²⁰ Since most of the downstream dams and their corresponding power output were in the United States, the CRT established the Canadian Entitlement.²¹

Although the CRT's original goals were to provide flood control and power to the Columbia River Basin,²² new legislation and environmental concerns have added to the responsibilities of the entities carrying out the CRT.²³ Nearly six decades have passed since the treaty was first signed, and preventing any further loss of the river's

¹² *CRT – NWPCC*, *supra* note 2.

¹³ *Id.*

¹⁴ An acre-foot is "a unit of volume of water in irrigation: the amount covering one acre to a depth of one foot, equal to 43,560 cubic feet." *Acre-foot*, DICTIONARY.COM, <https://www.dictionary.com/browse/acre-foot> [<https://perma.cc/NU8N-YHHR>].

¹⁵ *CRT – NWPCC*, *supra* note 2. All dollar amounts are calculated using United States currency.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *CRT – FAQs*, *supra* note 8.

²¹ *CRT – NWPCC*, *supra* note 2.

²² *Id.*

²³ *See infra* notes 23–31 and accompanying text.

once abundant anadromous²⁴ fish populations has become a major concern for the region.²⁵

In 1980, the United States Congress passed the Northwest Power Act, authorizing Idaho, Montana, Oregon, and Washington to create the Northwest Power and Conservation Council (NWPPCC).²⁶ The Northwest Power Act also directed the BPA to fund a program created by the NWPPCC to protect fish in the Columbia River Basin, with a particular focus on protecting spawning grounds and habitat.²⁷ In that vein, the BPA and its partners have opened up more than 2,200 miles of spawning habitat, surface passage, spilling, and fish ladders.²⁸ The BPA spends over \$250 million annually on the NWPPCC's fish and wildlife program, known as the Columbia Basin Fish and Wildlife Program.²⁹

Although fish were not initially included in the Endangered Species Act (ESA),³⁰ the ESA now protects twelve fish populations in the Columbia River Basin.³¹ The ESA provides that all federal agencies must ensure that any new projects the federal agencies undertake do not jeopardize the continued existence of any "threatened" or "endangered" species.³² Consequently, any plan the BPA makes to build generation projects or transmission lines must be examined under the ESA to ensure the plan does not jeopardize any protected species. The CRT drafters did not foresee declining fish populations or the need to protect habitats being such prominent problems for the treaty

²⁴ "Anadromous fish," such as salmon, steelhead, and some species of sturgeon, are fish born in freshwater that spend most of their lives in saltwater and return to freshwater to spawn. *What Does Anadromous Mean?*, NOAA FISHERIES, <https://www.fisheries.noaa.gov/node/8071> [https://perma.cc/V42Q-VGPR].

²⁵ Bonneville Power Admin., *Salmon and Steelhead*, BPA.GOV – ENV'T, FISH & WILDLIFE, <https://www.bpa.gov/efw/FishWildlife/SalmonSteelhead/Pages/default.aspx> [https://perma.cc/MB8G-9T8B].

²⁶ *Northwest Power Act*, NW. POWER & CONSERVATION COUNCIL, <https://www.nwcouncil.org/reports/columbia-river-history/northwestpoweract> [https://perma.cc/8BRV-HEXP].

²⁷ *Id.*

²⁸ Bonneville Power Admin., *supra* note 25.

²⁹ NW. POWER & CONSERVATION COUNCIL, 2018 COLUMBIA RIVER BASIN FISH & WILDLIFE PROGRAM COSTS REPORT 4 (2019), https://www.nwcouncil.org/sites/default/files/2019-5_1.pdf [https://perma.cc/R9DQ-NNFA].

³⁰ *Endangered Species Act, Columbia River Salmon and Steelhead, and the Biological Opinion*, NW. POWER & CONSERVATION COUNCIL, <https://www.nwcouncil.org/reports/columbia-river-history/endangeredspeciesact> [https://perma.cc/BEN8-RKQR].

³¹ *Id.*

³² 16 U.S.C. § 1536(a)(2) (2019).

entities, but nevertheless they are, and now the entities must account for those issues in CRT negotiations.

C. The Canadian Entitlement and Its Importance

The Canadian Entitlement provides that Canada is entitled to half of the downstream power benefits resulting from its three treaty dams.³³ But the benefits are actually owned by the Province of British Columbia in accordance with the 1963 Canada-British Columbia Agreement.³⁴ The United States provides the benefits of the Canadian Entitlement as capacity and energy rather than as money.³⁵ The downstream benefits are calculated by computer six years in advance instead of being determined by actual increases in power output.³⁶

Initially, British Columbia did not need the downstream benefits, so it sold the Canadian Entitlement to U.S. utilities for the first thirty years of the treaty for \$254 million.³⁷ BC Hydro then used that money to fund the construction of their three treaty dams.³⁸

The United States and Canada disagree significantly about the value of the Canadian Entitlement. BC Hydro values the Canadian Entitlement at approximately \$120 million per year,³⁹ while the United States estimates the Canadian Entitlement to be worth between \$229 million and \$335 million annually.⁴⁰

Either the United States or Canada can unilaterally terminate the CRT, but the CRT will not officially terminate until ten years after a country gives such notice.⁴¹ This ten-year grace period gives both sides time to figure out how they are going to proceed in the post-CRT era. Importantly, this grace period provides the United States time to plan how to reallocate its saved resources. But the grace period also means that the treaty countries must continue to work together for a decade after one gives notice of termination. The countries may not cooperate as well after one country moves to terminate the CRT.

³³ *CRT – FAQs*, *supra* note 8, at question 6.

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.* at question 5.

³⁷ *Id.* at question 6.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ CONG. RSCH. SERV., COLUMBIA RIVER TREATY REVIEW 9, n.34 (2019), <https://fas.org/sgp/crs/misc/R43287.pdf> [<https://perma.cc/93KG-JVMT>].

⁴¹ Columbia River Treaty, *supra* note 1, at art. XIX, ¶ 2.

D. Calculating Power Benefits

The downstream power benefits that the United States must transmit to Canada are based on predetermined estimates rather than real-time power increases from Canadian treaty dam releases.⁴² While determining downstream power benefits based on real-time power increases may be more difficult, this calculation method would give the countries a more accurate valuation of benefits. Annex B lays out how the CRT determines the Canadian Entitlement's power benefits.⁴³ The Canadian Entitlement includes "the estimated increase in dependable hydroelectric energy capacity in kilowatts for agreed upon critical flow periods and the increase in average annual usable hydroelectric energy output in kilowatt hours on the basis of an agreed period of stream flow record."⁴⁴

The dependable capacity (DC) credited to Canadian storage is the difference between the average rates of generation during appropriate critical stream flow period with and without the additional Canadian storage (ARW – ARWO), divided by the estimated critical period load factor (ECP) (written as $[(ARW - ARWO) / ECP = DC]$).⁴⁵ The DC credit cannot be more than the amount by which Canadian storage exceeds the system's maximum capability prior to the additional storage.⁴⁶

The entities determine the increased power output at the downstream dams that results from the Canadian storage by first calculating the difference in power at the United States base system with and without the additional storage.⁴⁷ Afterward, the entities work together to decide which portion of that energy is usable energy.⁴⁸

The increase in usable energy is what the Canadian Entitlement compensates Canada for. Usable energy is the sum of (a) firm energy, (b) the energy which can be used for thermal power displacement in Washington, Oregon, Idaho, and Montana, and (c) up to forty percent of the remaining available energy that the entities agree is usable.⁴⁹

⁴² *Id.* at Annex B.

⁴³ *Id.* at Annex B, ¶ 1.

⁴⁴ *Id.*

⁴⁵ *Id.* at Annex B, ¶ 2.

⁴⁶ *Id.*

⁴⁷ *Id.* at Annex B, ¶ 3.

⁴⁸ *Id.*

⁴⁹ *Id.*

Before the Canadian treaty dams became operative, the entities initially determined the United States' downstream power benefits in the United States from the additional Canadian storage.⁵⁰ The entities based this determination on estimated downstream power benefits for each year until the Canadian storage was completely finished.⁵¹ Then, five years before the Canadian treaty dams were expected to be completed, the entities estimated the downstream power benefits for the sixth succeeding year—the first year of the dams being fully operational.⁵²

The treaty entities must agree on each determination of downstream benefits.⁵³ If the entities cannot agree upon an appropriate determination, then the downstream power benefits are based on stream flow information from July 1928 to July 1948 that was published in a 1957 report.⁵⁴ The CRT prohibits the entities from making retroactive adjustments to downstream power benefits or attributing downstream power reductions to Canadian storage.⁵⁵

The CRT lays out a three-step procedure for computing the increase in dependable hydroelectric capacity and in average annual hydroelectric energy.⁵⁶ This procedure also considers the energy loads of the Pacific Northwest Area, which consists of Oregon, Washington, Idaho, and Montana west of the Continental Divide.⁵⁷ The first step explains what the system includes.⁵⁸ The system includes “the Canadian storage, the United States base system, any thermal installation operated in coordination with the base system, and additional hydroelectric projects which will provide storage releases usable by the base system or which will use storage releases that are usable by the system.”⁵⁹ The aforementioned thermal installations⁶⁰ include those that are necessary to meet the forecasted power load in

⁵⁰ *Id.* at Annex B, ¶ 4.

⁵¹ *Id.*

⁵² *Id.* at Annex B, ¶ 5.

⁵³ *Id.* at Annex B, ¶ 6.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *Id.* at Annex B, ¶ 7.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ The term “thermal installations” refers to thermal power plants, which produce electricity “by burning a fossil fuel, such as coal or natural gas, and using the heat to boil water to produce steam to drive turbines.” *Hydrothermal Power Program*, NW. POWER & CONSERVATION COUNCIL, <https://www.nwcouncil.org/reports/columbia-river-history/hydrothermal> [<https://perma.cc/9BW5-R7T6>].

the United States and any necessary reserve installations, as well as the estimated flow of power at interconnections with adjacent areas and the portion of the Canadian Entitlement expected to be used in Canada.⁶¹

The second and third steps then direct the entities to determine energy capability using the same thermal installation and the United States base system with the same installed capacity as in the first step.⁶² However, the second step also includes Canadian storage in its determination.⁶³ The downstream power benefits credited to the Canadian storage are equal to the difference between the second and third steps' determinations in DC and average annual usable energy.⁶⁴

This calculation method has not been updated since the CRT was first authored in 1961, leaving the Canadian Entitlement unable to adapt with the needs, costs, or benefits felt by the United States and Canada. Since the method for calculating the Canadian Entitlement's value is part of the original treaty, a new method for calculation must come from a new or modified treaty. However, terminating the treaty would remove the need for this outdated calculation method and would provide each country with more autonomy to achieve its goals for the region.

E. Expiring Flood Control Provision

1. Assured Versus Called-Upon Flood Control

One of the primary benefits the CRT provides to the United States is assured flood control from Canada's operation of its treaty dams. Assured flood control guarantees that BC Hydro will monitor water flow and level pursuant to flood control plans approved under Annex A at no additional cost to the United States.⁶⁵

However, assured flood control will be replaced with "called-upon" flood control when the CRT's assured flood control provision expires in 2024.⁶⁶ Called-upon flood control provides no guaranteed flood control.⁶⁷ To use called-upon flood control, the United States must request Canadian flood storage but may do so only after the United

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.* at Annex B, ¶ 8.

⁶⁵ *Id.* at art. IV, ¶ 2.

⁶⁶ *Id.* at art. IV, ¶ 3.

⁶⁷ See *CRT – FAQs*, *supra* note 8.

States has used all its available flood storage to manage flood risk.⁶⁸ The United States must then pay for the operating costs and economic consequences of using Canada's additional flood storage.⁶⁹

Presently, the U.S. and Canadian entities dispute how called-upon flood control will operate once assured flood control expires in 2024. Part of their dispute over how called-upon flood control will operate involves a disagreement regarding how to determine which reservoirs in the United States must reach maximum capacity before the United States may request Canadian storage. The U.S. entity believes that only the large federal storage dams that are named in the treaty would have to be at maximum capacity before the United States could call upon Canadian storage.⁷⁰ Those dams include, but are not limited to, Libby Dam, Hungry Horse Dam, Kerr Dam, Dworshak Dam, Brownlee Dam, Albeni Falls Dam, Grand Coulee Dam, and John Day Dam.⁷¹ However, the Canadian entity believes that the CRT requires all dams on the Columbia River and its tributaries south of the Canadian border to participate in flood control before Canadian storage may be called upon.⁷²

There are currently 281 hydropower dams and about 200 more dams that exist for purposes other than power generation on the Columbia River, most of which are in the United States.⁷³ Requiring all state and local dams to coordinate flood storage with federal dams would cause a logistical nightmare because state and local dams that were created to meet the flood control and irrigation needs of their local communities would be asked to balance both those local needs and the needs of the larger federal system.⁷⁴ Burdening state and local dams with those

⁶⁸ Exchange of Notes Constituting an Agreement Between Canada and the United States of America Concerning the Treaty Relating to Co-operative Development of the Water Resources of the Columbia River Basin, Signed at Washington, on 17 January 1961, Can.-U.S., Protocol, ¶ 1, Jan. 22, 1964, 542 U.N.T.S. 292, [https://treaties.un.org/doc/Publication/UNTS/Volume 542/v542.pdf](https://treaties.un.org/doc/Publication/UNTS/Volume%20542/v542.pdf) [<https://perma.cc/8R24-GHT9>] [hereinafter CRT Protocol].

⁶⁹ Columbia River Treaty, *supra* note 1, at art. IV, ¶ 4.

⁷⁰ Eric Barker, *Columbia River Treaty Deadline Could Shift Downstream Flood Risk Management*, OR. LIVE (Mar. 17, 2019), <https://www.oregonlive.com/pacific-northwest-news/2019/03/columbia-river-treaty-expiration-could-shift-downstream-flood-risk-management.html> [<https://perma.cc/URH9-ALJL>].

⁷¹ Columbia River Treaty, *supra* note 1, at 290.

⁷² Barker, *supra* note 70.

⁷³ *Dams: History and Purpose*, NW. POWER & CONSERVATION COUNCIL, <https://www.nwcouncil.org/reports/columbia-river-history/damshistory> [<https://perma.cc/52V5-PZU5>].

⁷⁴ See Barker, *supra* note 70.

additional concerns may compromise the ability of those dams to serve the local communities they were created to serve.⁷⁵

2. *What Constitutes a Flood?*

Another issue with called-upon flood control is that the two countries disagree about what constitutes a flood large enough to allow the United States to call upon Canadian storage.⁷⁶ This disagreement is based on the water flow in cubic feet per second at The Dalles Dam in Oregon.⁷⁷ The U.S. entity believes that water flows projected to reach 450,000 cubic feet per second should permit the use of Canadian storage, while the Canadian entity believes the flows would have to reach 600,000 cubic feet per second.⁷⁸

Canada has taken an aggressive negotiating position given the fact that called-upon flood control continues to exist if the CRT is terminated. Without the benefit of assured flood control, the United States is less likely to see the value in continuing under the CRT, particularly with such stringent requirements to call upon Canadian flood storage. Canada may be overestimating the United States' need for the treaty without assured flood control.

Although flood control and the CRT's expiring flood control provision is a primary topic of the ongoing CRT negotiations, the Columbia River does not actually have a history of frequent catastrophic flooding even before the United States heavily dammed the river and signed the CRT.⁷⁹ Prior to the Vanport Flood of 1948, the Columbia River experienced only a handful of catastrophic floods.⁸⁰ During that time, the United States and Canada managed the Columbia River via the Boundary Waters Treaty of 1909.⁸¹

The next section discusses the CRT's termination provisions, the Boundary Waters Treaty, and the International Joint Commission (IJC), explaining how the three are related.

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ CRT Protocol, *supra* note 68, at 294.

⁷⁸ Barker, *supra* note 70.

⁷⁹ *Floods and Flood Control*, NW. POWER & CONSERVATION COUNCIL, <https://www.nwcouncil.org/reports/columbia-river-history/floods> [<https://perma.cc/2D9H-G2DK>].

⁸⁰ *Id.*

⁸¹ Treaty Between the United States and Great Britain Relating to Boundary Waters and Questions Arising Between the United States and Canada, Gr. Brit.-U.S., pmbl., Jan. 11, 1909, 36 Stat. 2448, <https://www.loc.gov/law/help/us-treaties/bevans/b-gb-ust000012-0319.pdf> [<https://perma.cc/77TC-QP8F>] [hereinafter Boundary Waters Treaty].

***F. CRT Termination, Boundary Waters Treaty, and the
International Joint Commission***

Article XIX of the CRT addresses the termination process.⁸² That article provides that the CRT may be unilaterally terminated by either country after it gives ten years' notice of its intent to terminate.⁸³ However, terminating the CRT does not eliminate all its articles.⁸⁴ Importantly, Article XIX of the CRT preserves the Article IV, Paragraph 3, called-upon flood control to be provided by Canada and paid for by the United States in accordance with Article VI, Paragraphs 4 and 5.⁸⁵ The CRT also provides that if a party terminates the CRT, the Boundary Waters Treaty of 1909 will govern the Columbia River Basin.⁸⁶

The primary goals of the Boundary Waters Treaty are to solve and prevent disputes over use of boundary waters.⁸⁷ Article I of the Boundary Waters Treaty ensures free movement in navigable boundary waters and prevents either country from interfering with the other's navigation of those waters.⁸⁸ Article II of the Boundary Waters Treaty says that each country has exclusive jurisdiction and control over the use and diversion of transboundary waters on its side of the boundary.⁸⁹ But if such diversion injures the other party, remedies available in the diverting party's jurisdiction are available to the injured party.⁹⁰

Article III of the Boundary Waters Treaty effectively limits the exclusive jurisdiction of Article II.⁹¹ Article III says that any new uses, obstructions, or diversions that affect the natural flow or water level across the boundary must be approved by the International Joint Commission (IJC).⁹² Article IV adds to the IJC's regulatory responsibilities, including that no dams may be built without IJC

⁸² Columbia River Treaty, *supra* note 1, at art. XIX.

⁸³ *Id.* at art. XIX, ¶ 2.

⁸⁴ *Id.* at art. XIX, ¶ 4.

⁸⁵ *Id.*

⁸⁶ *Id.* at art. XVII, ¶ 2.

⁸⁷ *See generally* Boundary Waters Treaty, *supra* note 81.

⁸⁸ *Id.* at art. I.

⁸⁹ *Id.* at art. II.

⁹⁰ *Id.*

⁹¹ *Id.* at art. III.

⁹² *Id.*

approval.⁹³ The construction, maintenance,⁹⁴ and operation of any dam is also subject to IJC approval.⁹⁵

The Boundary Waters Treaty lays out the structure of the IJC in Article VII.⁹⁶ It provides that the IJC has six commissioners, three from each country.⁹⁷ Article VIII gives the IJC jurisdiction over Article III and IV uses, obstructions, and diversions, as well as establishes an order of rights.⁹⁸ The order of rights prioritizes the uses of the Columbia River, with domestic and sanitary purposes being first in line.⁹⁹ Next comes navigation, followed by power and irrigation.¹⁰⁰ This means that one country cannot build a dam to create power if the IJC determines that the dam will infringe on the other country's right to domestic uses or navigation of its waters. But the order of rights applies only to new uses, diversions, or obstructions.¹⁰¹ Existing uses, such as the CRT dams, are not subject to the order of rights.¹⁰²

The IJC also has the power to resolve disputes between Canada and the United States.¹⁰³ A majority vote of the commissioners has the power to decide a case; however, if there is a 3–3 split, then each country's commissioners will file reports to their respective country and the countries will then attempt to come to an agreement based on those reports.¹⁰⁴

The IJC originally issued the report expressing that Canada was interested in building storage dams in British Columbia in exchange for electricity or money from the United States.¹⁰⁵ Today, British Columbia's treaty dams provide over half of the flood storage available on the Columbia River;¹⁰⁶ however, devastating floods on the Columbia River were rare before the construction of these storage

⁹³ *Id.* at art. IV.

⁹⁴ *Id.*

⁹⁵ *Id.* at art. III.

⁹⁶ *Id.* at art. VII.

⁹⁷ *Id.*

⁹⁸ *Id.* at art. VIII.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Floods and Flood Control*, *supra* note 79.

¹⁰⁶ *Id.*

facilities and nonexistent after construction of the CRT dams.¹⁰⁷ The CRT dams created an infrastructure that is stable enough to operate safely and efficiently under the watch of the IJC and the Boundary Waters Treaty.

II ENTITY RECOMMENDATIONS

The United States and Canadian entities have provided recommendations to their respective governments on how to modify the CRT.¹⁰⁸ Valuation of the Canadian Entitlement is at the heart of both recommendations. The recommendations differ on how to value the Canadian Entitlement, adjust flood control, and handle environmental concerns in the Columbia River Basin. This Part compares the two entities' recommendations on each of these three issues.

A. Canadian Entitlement Valuation

The U.S. entity's recommendation primarily takes issue with how the CRT calculates the Canadian Entitlement.¹⁰⁹ The U.S. entity recommends that the shared power benefits should include only the increase in downstream power benefits from coordinated operations rather than including uncoordinated operations like the calculation does now.¹¹⁰ The U.S. entity also recommends that the modified treaty should meet regional needs, such as irrigation, municipal water needs, and recreation, and be flexible enough to adapt to future changes in legislation and the environment.¹¹¹

BC Hydro also disagrees with the valuation of the Canadian Entitlement but asserts that the Canadian Entitlement is undervalued because the valuation does not fully encompass the benefits that the United States receives or all the negative impacts on British Columbia.¹¹² BC Hydro wants the two countries to equitably share all downstream benefits of Canadian storage, which requires a proper

¹⁰⁷ *Id.*

¹⁰⁸ *CRT – NWPCC, supra* note 2.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

accounting of the benefits to the United States and the negative impacts to Canada.¹¹³

There are three key aspects to valuing the Canadian Entitlement and each will be discussed below. First, the United States' practice of spilling water. Second, the value from coordinated and uncoordinated operations. Third, the impact that the CRT has on British Columbia.

1. Spilling

The first reason that the Canadian Entitlement is overvalued is because the value does not reflect the different purposes of releasing stored water from Canadian treaty dams. The United States regularly releases water to assist salmon and steelhead to pass through downstream dams, a practice known as spilling.¹¹⁴ However, the valuation of the Canadian Entitlement does not differentiate between whether the dams release water to spill or to generate power.¹¹⁵ Thus, the CRT treats all water released, including spilled water, as water released to generate power, which leads to an inaccurate accounting of the power that results from Canadian storage. One possible way to achieve a fair and accurate valuation would be to differentiate between power-generating and non-power-generating releases.

Spilling is an effective tool to help juvenile salmon navigate the numerous powerful turbines on the Columbia River.¹¹⁶ Spilling allows fish to pass over the dams, rather than through the turbines.¹¹⁷ While spilling has proven to be effective,¹¹⁸ it needs to be used more frequently. A 2017 coastal survey completed by the National Oceanic and Atmospheric Administration found the lowest number of juvenile salmon in twenty years.¹¹⁹ Adult fish counts are down as well, and the inability of fish to safely navigate the dams on the Columbia River is the primary cause of these lower fish counts.¹²⁰ Spilling could possibly double the number of salmon and steelhead that safely return from the

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ WILD SALMON CTR., HOW SPILL CAN HELP SALMON (2018), <https://www.wildsalmoncenter.org/wp-content/uploads/2018/08/Columbia-Spill-Handout-2-26-18.pdf> [<https://perma.cc/LS36-EGJ4>].

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ *Id.*

ocean to their spawning grounds.¹²¹ Higher numbers of fish will restore balance to the ecosystem and benefit local economies through increased tourism and fishing.¹²²

While the BPA has an obligation to protect fish populations, the BPA is hesitant to spill too much water because spilling lowers power generation and increases power rates.¹²³ By considering all water releases as power-generating releases, the Canadian Entitlement disincentivizes the BPA's spilling efforts and overestimates power produced from water releases. If the Canadian Entitlement continues not to differentiate between water released to spill and water released to generate power, the BPA will likely invest in other environmental actions that do not decrease power generation, such as rebuilding habitats and spawning grounds. It is important not to disincentivize the BPA from spilling because spilling is such an effective tool for protecting fish populations, and the BPA might spill more water if the Canadian Entitlement differentiated between spilled water and water released to generate power. Hence, the Canadian Entitlement is overvalued because it does not account for the BPA's spilling efforts.

2. Coordinated Versus Uncoordinated Operations

The U.S. entity believes that the Canadian Entitlement should be limited to power produced from coordinated operations.¹²⁴ However, the Canadian entity asserts that the valuation needs to include all benefits that the United States receives (from both coordinated and uncoordinated operations).¹²⁵ Moreover, the Canadian entity asserts that the valuation must also include all impacts on British Columbia as a result of those coordinated and uncoordinated operations.¹²⁶

However, it is illogical to include uncoordinated benefits to the downstream system in the valuation of the Canadian Entitlement. The United States paid for the flood storage and construction of the dams at the outset of the CRT.¹²⁷ Thus, the United States has already purchased the uncoordinated benefits that result from that construction. The only

¹²¹ *See id.*

¹²² *See id.*

¹²³ *Id.*

¹²⁴ *CRT–NWPPCC, supra* note 2.

¹²⁵ *Id.* “Coordinated benefits” result from the U.S. and Canada working together to operate the treaty dams. *See id.* “Uncoordinated benefits” result from the mere existence of the treaty dams. *See id.*

¹²⁶ *Id.*

¹²⁷ *Id.*

added benefit to the United States comes from the coordinated operations provided by BC Hydro to maximize the river's power output. Since the uncoordinated benefits would continue without the CRT, uncoordinated benefits should not be included in the Canadian Entitlement's value.

3. Negative Impacts on British Columbia

Canada is also not content with the current valuation of the Canadian Entitlement because Canada believes the CRT does not properly account for the negative impacts on British Columbia.¹²⁸ The CRT and the construction of its dams have negatively affected Canadians, primarily in British Columbia.¹²⁹ Notably, the construction of the treaty dams flooded communities and forced people to move from their homes with little notice.¹³⁰ The communities lost approximately 600 square kilometers of fertile, low-lying land.¹³¹ Constructing the dams also disrupted local agriculture and submerged cultural and historical sites, including many First Nations' sites.¹³² Moreover, the reservoirs also disrupted the local ecosystems and transportation routes.¹³³ Finally, fluctuating water levels have limited recreation and tourism near the dams and have created harmful dust storms.¹³⁴

While these negative impacts are undeniable, the United States should not be held responsible for compensating British Columbia for these impacts via the Canadian Entitlement. Rather, British Columbia's government should be responsible for those impacts.¹³⁵ When the CRT was first negotiated, Premier of British Columbia W.A.C. Bennett was responsible for those impacts.¹³⁶ He was determined to develop British Columbia's portion of the Columbia River Basin.¹³⁷ After the federal Canadian government and private power companies repeatedly refused

¹²⁸ CRT – NWPPCC, *supra* note 2.

¹²⁹ See COLUMBIA BASIN TR., AN OVERVIEW: COLUMBIA RIVER TREATY 4, <https://leg.mt.gov/content/Committees/Administration/Consumer%20Counsel/Reports/columbia-river-treaty-overview-brochure.pdf> [<https://perma.cc/HJ49-439G>].

¹³⁰ *See id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ See Jeremy Mouat, *Columbia River Treaty and Canada*, HISTORYLINK.ORG (Sept. 2, 2013), <https://www.historylink.org/File/10474> [<https://perma.cc/F64F-HGWU>].

¹³⁶ *See id.*

¹³⁷ *Id.*

to cooperate with his plans to develop the region, Premier Bennett announced in 1961 that he was taking over both B.C. Electric (BC Hydro's predecessor) and the Peace River Power Development Company.¹³⁸

Premier Bennett knew that British Columbia's Lower Mainland could not use all the power produced from developing the Columbia and Peace Rivers and that he needed to sell electricity to the United States.¹³⁹ Premier Bennett was a key, early supporter of a treaty between Canada and the United States to develop the Columbia River Basin.¹⁴⁰ Premier Bennett, along with newly elected Prime Minister Lester B. Pearson, accelerated revisions and ratification of the CRT between the United States and Canada in 1964.¹⁴¹ Premier Bennett and Prime Minister Pearson ratified the CRT over numerous objections from provincial citizens, engineers, and other government officials.¹⁴² Prime Minister Pearson focused on strengthening relations with the United States, and Premier Bennett focused on developing (which to him meant damming) the Columbia River; Pearson and Bennett saw any other concerns as trivial.¹⁴³

During current CRT negotiations and modifications, the treaty entities should consider the history and past negotiations that led to the original CRT. The Canadian government played an active role in negotiating and creating the original CRT, and the United States should not be required to pay for the unfortunate negative impacts that the original CRT had on British Columbia. The governments of British Columbia and Canada ignored their own citizens and engineers when they negotiated the CRT. The United States should not be held responsible for the choices that Premier Bennett and Prime Minister Pearson made on behalf of their governments, and the Canadian Entitlement should not be increased to encompass the negative impacts that resulted from their decisions.

B. Adjusting Flood Control

The two CRT entities also disagree on how flood control should be adjusted. The U.S. entity hopes to modify the CRT to provide more flexibility and adaptability, while still maintaining acceptable

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *See id.*

¹⁴¹ *See id.*

¹⁴² *Id.*

¹⁴³ *See id.*

flood risk.¹⁴⁴ On the other hand, the Canadian entity recommends implementing an additional flood management plan to supplement post-2024 called-upon flood control.¹⁴⁵ The disparity in how to handle flood control may be an offshoot of the disagreement over the Canadian Entitlement. An additional flood management plan would encompass more coordinated operations, which would increase the value of the Canadian Entitlement under both recommendations. Therefore, it is unsurprising that the Canadian entity desires to see as much coordination as possible, which would lead to a greater Canadian Entitlement valuation. Meanwhile the U.S. entity seeks less coordination and more autonomy and flexibility, and consequently, a smaller Canadian Entitlement.

C. Environmental Concerns

The two recommendations also disagree on how treaty modifications should approach environmental concerns in the region. BC Hydro appears less concerned than the U.S. entity about the impact that modifying the CRT would have on the environment.¹⁴⁶ While BC Hydro suggests improving the ecosystem, BC Hydro also wants each country to be responsible for its own anadromous fish populations.¹⁴⁷ This position makes sense for Canada because anadromous fish populations north of the Grand Coulee Dam (located in Washington state) have been extinct for decades.¹⁴⁸ Without anadromous fish populations in its region of the Columbia River Basin, British Columbia will be hesitant to view the plight of anadromous fish in the United States as a major treaty issue. However, the United States believes environmental concerns (namely protecting fish populations) should be on equal footing with the goals of power and flood control.¹⁴⁹ The United States wants to include an ecosystem-based function as a third primary purpose of the CRT, while continuing to provide reliable and responsive hydropower to the region.¹⁵⁰

¹⁴⁴ *CRT – NWPCC*, *supra* note 2.

¹⁴⁵ *Id.*

¹⁴⁶ *See id.*

¹⁴⁷ *Id.*

¹⁴⁸ ALLAN SCHOLZ ET AL., UPPER COLUMBIA UNITED TRIBES FISHERIES TECHNICAL REPORT #2, at 82 (1985), https://www.nwcouncil.org/sites/default/files/Ch3_0.pdf [<https://perma.cc/VSQ8-8CDJ>] (stating that the Grand Coulee and Chief Joseph dams completely block the passage of salmon into the Upper Columbia).

¹⁴⁹ *CRT – NWPCC*, *supra* note 2.

¹⁵⁰ *Id.*

This disparity in environmental importance likely arises because Canada would receive minimal benefit from a third treaty prong that aims to protect fish. Coordinated operations in Canada to aid the plight of fish downstream could cost Canada money because operating dams to assist downstream fish operations does not maximize downstream power output. Rather, Canada would forfeit maximum downstream power output without the environmental benefits felt downstream. As currently designed, the Canadian Entitlement does not encompass environmental benefits, it values only downstream power output. In fact, environmental efforts could even decrease downstream power output and, consequently, the value of the Canadian Entitlement. Thus, Canada would experience an increase in expenses and a decrease in benefits. To convince Canada to cooperate with an environmental program, the United States would have to compensate Canada for its efforts. Perhaps Canada's cooperation could be considered part of the "impacts to British Columbia" included in Canada's proposed valuation of the Canadian Entitlement.

III

ALTERNATIVE UNITED STATES RECOMMENDATION

The United States should terminate the CRT. Under either entity's valuation, the Canadian Entitlement costs the United States millions of dollars each year.¹⁵¹ With the added pressure placed on the U.S. entity to ensure healthy fish populations and Canada's seeming indifference to that pressure, the Canadian Entitlement is too big of a burden on the United States. The United States could reallocate the millions of dollars lost each year on the Canadian Entitlement benefits to ensure healthy fish populations, lower U.S. electricity rates, and promote tribal involvement in managing the Columbia River.

A. Benefits of Termination

Terminating the CRT would save the United States millions of dollars. The United States could use those savings to lower the cost of electricity for U.S. ratepayers and increase funding to protect fish. Additionally, terminating the CRT could increase tribal involvement in managing the Columbia River and assist the United States in meeting its obligations to those tribes.

¹⁵¹ See *id.*; see also CONG. RSCH. SERV., *supra* note 40, at 4.

1. Save U.S. Ratepayers Millions of Dollars

Terminating the CRT would relieve the United States of the duty to supply the Canadian Entitlement. Although the Canadian Entitlement is delivered as power and capacity, the value of those services is worth between \$120 million¹⁵² and \$335 million annually.¹⁵³ By any estimation, those are valuable services that cost the United States millions of dollars each year. Terminating the CRT would instead make those services available to the United States, and U.S. ratepayers would reap the benefits. The power that is currently being transmitted to Canada would instead be placed on the United States' Western Grid, and the increased supply of energy on the Western Grid would decrease U.S. electricity rates.¹⁵⁴ While uncoordinated control of the river may decrease the total amount of power that the river produces, all the power produced from the uncoordinated river would be transmitted on the Western Grid for the benefit of U.S. ratepayers.

Because of how regional electricity markets have evolved since the CRT was enacted, the Canadian Entitlement is outdated and unnecessary. Long-distance transmission and the sale of electricity between the Pacific Northwest and other parts of the Western Grid—namely California—is commonplace.¹⁵⁵ For example, BC Hydro transmits and sells its hydroelectric power to U.S. customers in California.¹⁵⁶ The CRT is also not necessary for British Columbia to sell and transmit its electricity to U.S. customers because the newly ratified United States-Mexico-Canada Agreement (USMCA) promotes international trade, including the sale of electricity.¹⁵⁷

Since regional electricity markets have become more liberalized and competitive, it does not make sense for the United States to continue to provide British Columbia with millions of dollars' worth of electricity

¹⁵² *CRT—FAQs*, *supra* note 8.

¹⁵³ CONG. RSCH. SERV., *supra* note 40, at 4.

¹⁵⁴ See Leslie Kramer, *How Does the Law of Supply and Demand Affect Prices?*, INVESTOPEDIA (June 25, 2019), <https://www.investopedia.com/ask/answers/033115/how-does-law-supply-and-demand-affect-prices.asp> [<https://perma.cc/X4TQ-86YE>].

¹⁵⁵ *Market Snapshot: Electricity Exports from B.C. to California Are Increasing*, CAN. ENERGY REGUL. (Mar. 15, 2017), <https://www.cer-rec.gc.ca/nrg/ntgrtd/mrkt/snpsht/2017/03-03lctrcxprtbcclfrn-eng.html> [<https://perma.cc/UTR6-RDUQ>].

¹⁵⁶ *Id.*

¹⁵⁷ See Benjamin Zycher, *USMCA Will Help Us Make the Most of Our Energy Resources*, THE HILL (Feb. 28, 2019), <https://thehill.com/opinion/energy-environment/431847-usmca-is-critical-to-our-nations-energy-wealth-and-thus-our> [<https://perma.cc/LJK2-UKKU>].

and then turn around and have to compete with BC Hydro to provide power to U.S. ratepayers. The U.S. entity and ratepayers alike would benefit from keeping the Canadian Entitlement electricity on the U.S. system, rather than transmitting a substantial amount of power to a foreign competitor in the regional electricity market.

2. Increase Funds to Protect Fish

The U.S. entity also has additional responsibilities to the region that the Canadian entity does not share. Most notably is the BPA's obligation to manage fish populations and migration.¹⁵⁸ In 2018, the BPA spent \$257.8 million on these obligations,¹⁵⁹ but this amount could be increased with the millions of dollars saved through terminating the Canadian Entitlement. Even if the United States reallocated half of the lowest Canadian Entitlement valuation, the reallocation would provide the BPA with an additional \$62.5 million, which would be a twenty-four percent increase in its wildlife program's yearly budget.¹⁶⁰

The BPA manages fish populations and migration by funding the NWPCC's Columbia Basin Fish and Wildlife Program.¹⁶¹ This program is the largest of its kind in the world, spanning Oregon, Washington, Idaho, and Montana.¹⁶² The program currently has 332 projects, 758 contracts, and 65,351 work sites throughout the program's four states.¹⁶³ Funding such a large program is difficult, particularly when BPA must fund the program in addition to its power and transmission operations.¹⁶⁴ But if the United States terminated the CRT, then the additional funding could ease the burden on the BPA and improve the wildlife program.

3. Increase Tribal Involvement

In addition to environmental responsibilities, both countries have unique relationships with the tribal people in their respective regions. The U.S. entity could also use the funding resources from terminating

¹⁵⁸ *Northwest Power Act*, *supra* note 26.

¹⁵⁹ NW. POWER & CONSERVATION COUNCIL, *supra* note 29.

¹⁶⁰ *See id.*

¹⁶¹ *Welcome to the Columbia Basin Fish & Wildlife Program*, COLUMBIA BASIN FISH & WILDLIFE PROGRAM, <https://www.cbfish.org/> [<https://perma.cc/2M5H-32GJ>].

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ Bonneville Power Admin., *About Us*, BPA.GOV, <https://www.bpa.gov/news/AboutUs/Pages/default.aspx> [<https://perma.cc/8TFH-YCB5>].

the Canadian Entitlement to benefit the Columbia River Basin tribes. The U.S. entity could begin by ensuring healthier fish populations. Many tribes in the region retain fishing rights from their respective treaties with the United States;¹⁶⁵ however, without healthy fish populations, those treaty provisions are just empty promises.

The BPA has a unique relationship with many tribes in the region who help the BPA to meet its responsibility to maintain healthy fish populations.¹⁶⁶ The BPA could use the saved financial resources from terminating the CRT to compensate those tribes. Providing additional resources could strengthen the relationship between the tribes and the BPA as they both strive to keep the Columbia River healthy.

Currently, there is little room at the CRT negotiating table for tribes. The United States has asked for tribal input about how to handle CRT negotiations but has not given tribes official status at the negotiating table.¹⁶⁷ Thus, the United States can use the tribes' input as the United States sees fit but is not bound by the tribes' input in any way. Canadian First Nations have fared a little better, with Canada giving three First Nations official observer status at CRT negotiations,¹⁶⁸ but that is still a small fraction of the 198 First Nations in British Columbia.¹⁶⁹

Tribes are key partners in maintaining a healthy river system, but tribes and the United States federal government do not always agree on what is best for the Columbia River and the tribal and non-tribal people who rely on it. Jaime Pinkham, a member of the Nez Perce tribe and the Executive Director of the Columbia River Inter-Tribal Fish Commission, knows firsthand how difficult negotiating water agreements can be.¹⁷⁰ For nearly thirty years, Pinkham worked on the

¹⁶⁵ See *Fisheries Timeline: Chronology of Tribal Fishing and Fishing Rights on the Columbia River*, COLUMBIA RIVER INTER-TRIBAL FISH COMM'N, <https://www.critfc.org/about-us/fisheries-timeline/> [https://perma.cc/M4FT-DBWP].

¹⁶⁶ See Bonneville Power Admin., *Columbia Basin Fish Accords Extensions*, BPA.GOV – ENV'T, FISH & WILDLIFE, <https://www.bpa.gov/efw/FishWildlife/CBFA/Pages/default.aspx> [https://perma.cc/NB8R-5PMY].

¹⁶⁷ Barker, *supra* note 70.

¹⁶⁸ Alex Skultety, *Three First Nations Granted Observer Status in Columbia River Treaty Re-Negotiations*, MY KOOTENAY NOW (Apr. 26, 2019), <https://www.mykootenaynow.com/34785/three-first-nations-granted-observer-status-in-columbia-river-treaty-re-negotiations/> [https://perma.cc/EEJ5-JXB9].

¹⁶⁹ *B.C. First Nations & Indigenous People*, WELCOMEBC, <https://www.welcomebc.ca/Choose-B-C/Explore-British-Columbia/B-C-First-Nations-Indigenous-People#:~:text=Today%2C%20there%20are%20approximately%20200%2C000,are%20spoken%20in%20the%20province> [https://perma.cc/MRW5-GZLG].

¹⁷⁰ Barker, *supra* note 70.

Snake River Basin Adjudication (SRBA),¹⁷¹ an administrative and legal process that determined water rights in the Snake River Basin drainage.¹⁷² The SRBA process began in 1987 and concluded in 2014 after an Idaho district court issued a Final Unified Decree.¹⁷³ Pinkham's work on the SRBA has made him wary of changing the CRT in a way that might disrupt existing water agreements.¹⁷⁴ However, Pinkham is not wholly opposed to an updated CRT that encompasses environmental concerns, and he believes that the energy sector is capable of innovating solutions that meet power and environmental goals.¹⁷⁵ Giving tribes a seat at the negotiating table would give the United States an opportunity to better understand tribal concerns, like Mr. Pinkham's, and learn from tribal members who are heavily involved in and concerned with maintaining their water rights.

Furthermore, if the United States terminates the CRT and gives tribes a seat at the negotiating table, tribal voices will have more impact than they currently have. For instance, if tribes were to push for more drastic fish mitigation measures in the new CRT, the United States may agree with that goal, but Canada's less sympathetic view of the United States' fish dilemma may push the tribes' goals aside. Without the CRT, the tribes and the United States could discuss river management without having to appease Canada. But simply removing Canada from the equation does not mean that the United States and tribes will agree or that managing the Columbia River will be smooth sailing. Ultimately, the United States has final say over managing the Columbia River, but the tribes will have a better opportunity to be heard and the United States will more likely be able to meet tribal concerns if the United States terminates the CRT and focuses on tribal concerns.

B. Potential Canadian Water Mismanagement After Termination

Terminating the CRT would also provide Canada with more autonomy over its management of the Columbia River. Some people might worry that such autonomy could result in Canadian water management plans that disadvantage the United States, but the Boundary Waters Treaty prevents either country from managing its

¹⁷¹ *Id.*

¹⁷² *Snake River Basin Adjudication (SRBA)*, IDAHO DEP'T WATER RES., <https://idwr.idaho.gov/water-rights/adjudication/SRBA/> [<https://perma.cc/D4T2-2GBX>].

¹⁷³ *Id.*

¹⁷⁴ Barker, *supra* note 70.

¹⁷⁵ *Id.*

side of the Columbia River in ways that are hostile to the other.¹⁷⁶ Even without the Boundary Waters Treaty, the risk of hostile Canadian water management is low because Canada's river infrastructure was built specifically for the CRT.¹⁷⁷ Canada and the United States designed the CRT infrastructure to give Canada maximum power benefit when the United States receives maximum power benefit. Therefore, hostile water management by Canada would be as hostile to Canada as it would be to the United States. Simply by acting in its own best interest, Canada should continue to operate its side of the river as if the CRT were still in place.

The water flow and water level provisions of the Boundary Waters Treaty, in conjunction with the remaining infrastructure of the CRT, will maintain a stable Columbia River, but at a lower cost to the United States. Canadian dams currently provide 20.5 million acre-feet of flood storage capacity on the Columbia River,¹⁷⁸ which exists regardless of the CRT's existence. Articles III and IV of the Boundary Waters Treaty ensure that the benefit of this flood storage is still felt, and additional use of that storage is still available as called-upon storage via Article IV, Paragraph 3, of the CRT.¹⁷⁹

Furthermore, the IJC is capable of handling transboundary water disputes in the Columbia River Basin that arise over water flow and water level. The IJC handles disputes across the United States-Canada border arising from transboundary waters in the Yukon-Alaska-British Columbia Region to the St. Croix River on the Maine-New Brunswick border.¹⁸⁰ Although the Columbia Basin is currently governed by the CRT, the IJC still has a hand in the region with three international boards governing, overseeing, and reporting on the Columbia River, Kootenay Lake, and Osoyoos Lake dams.¹⁸¹ Since the IJC is already involved in the region and governs transboundary water issues along the U.S.-Canada border, the IJC is in a prime position to resume governing the Columbia River Basin.

The IJC is the ideal regulatory body for a post-CRT Columbia River Basin. The IJC will not interfere with or regulate either country's

¹⁷⁶ Boundary Waters Treaty, *supra* note 81, at art. II.

¹⁷⁷ Barker, *supra* note 70.

¹⁷⁸ *Floods and Flood Control*, *supra* note 79.

¹⁷⁹ Columbia River Treaty, *supra* note 1, at art. IV, ¶ 3.

¹⁸⁰ See *Transboundary Waters*, INT'L JOINT COMM'N, <https://www.ijc.org/en/transboundary-waters> [<https://perma.cc/4N8D-449A>].

¹⁸¹ *Id.*

management of its portion of the river so long as neither country's management is interfering with the other's. Aside from when disputes arise, the IJC will be nearly invisible. The IJC will provide optimal autonomy for each country and allow the countries to reach the goals and needs of their respective regions of the Columbia River Basin.

CONCLUSION

The CRT has shaped the economy and environment of the Columbia River Basin for nearly six decades. The CRT dams have established a stable infrastructure for the river, but there is no longer a need for the CRT itself. The United States should exercise its right to unilaterally terminate the CRT and allow the Boundary Waters Treaty of 1909 to take the CRT's place as the regulatory compact governing the Columbia River Basin. The CRT infrastructure and surviving called-upon flood control provisions, combined with the water flow and water level provisions of the Boundary Waters Treaty, will continue to provide stability to the Columbia River Basin.

Additionally, the Boundary Waters Treaty provides each country with more autonomy and less regulation over the use of waters in its jurisdiction. Each country's autonomy is subject to the use limitations provided in Articles III and IV of the Boundary Waters Treaty, and those limitations are adequate to maintain stability while also providing optimal autonomy. The IJC, which is already present in the region, would efficiently handle any disputes that may arise out of such autonomy. The autonomy that would come from terminating the CRT would also allow the United States to work more closely with the Columbia River Basin tribes and amplify their voices. Finally, terminating the CRT will relieve the United States from the financial burden of the Canadian Entitlement, allow the United States to reallocate resources to benefit U.S. ratepayers, and help the BPA implement the Columbia Basin Fish and Wildlife Program.