



WHAT IS THE COLUMBIA RIVER TREATY?

The Columbia River Treaty (CRT) is an international agreement between Canada and the United States for the joint development, regulation and management of the Columbia River in order to coordinate flood control and optimize hydroelectric energy production on both sides of the border.

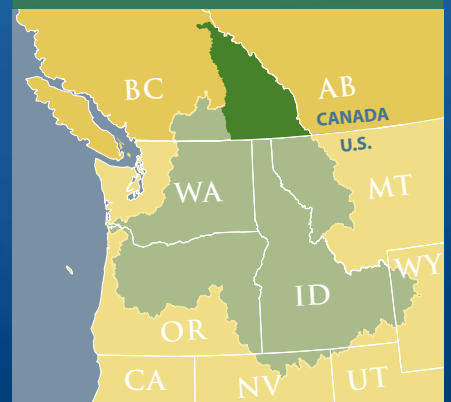
The CRT has no official expiry date, but has a minimum length of 60 years, which is met on September 16, 2024. It is possible that one or both countries may wish to renegotiate parts or all of the CRT, or terminate it entirely.

KEY DATES: 2014 AND 2024

The years 2014 and 2024 are key dates for the CRT for two reasons:

1. The year 2024 is the earliest date either Canada or the U.S. may terminate the CRT, provided 10-year advance notice is given (2014); and
2. The Assured Annual Flood Control provision of the CRT expires automatically in 2024 (unless renegotiated) and flood control specified under the CRT changes to a Called Upon Flood Control operation.

The Columbia River Basin is a transboundary watershed that crosses one international and seven state boundaries.



Why Was the CRT Signed?

THE CHALLENGE

Canada and the U.S. were facing two major challenges in the Columbia River Basin (Basin) after WWII. In addition to an increasing population, the “untamed” Columbia River was causing periodic and sometimes devastating flooding. Simultaneously, an upswing in the economy increased the need for energy sources.

THE SOLUTION

In order to meet these challenges, the two countries ratified the CRT in 1964. The purpose of the CRT is to coordinate flood control and optimize hydroelectric energy production in the Basin on both sides of the border. Under the CRT, Canada agreed to build three storage dams in Canada: Hugh Keenleyside, Duncan and Mica. The CRT also allowed the U.S. to build Libby Dam in Montana, which created a reservoir that flooded back into Canada.

Key Provisions of the Columbia River Treaty

DAMS AND RESERVOIRS

Under the CRT, Canada was required to build and operate three dams in the higher-elevation reaches of the Basin:

- 1967:** Duncan Dam (Duncan Reservoir);
- 1968:** Hugh Keenleyside Dam (Arrow Lakes Reservoir); and
- 1973:** Mica Dam (Kinbasket Reservoir).

The CRT also allowed the U.S. to construct Libby Dam in Montana. Its reservoir—the Kooocanusa—extends 67 kilometres into Canada. Operations at Libby Dam are under the jurisdiction of the U.S. entities.

DOWNSTREAM POWER BENEFITS

Power that can be generated in the U.S. as a result of the additional storage regulation provided by Canada is referred to as downstream power benefits. The CRT requires that the downstream power benefits be shared equally between both countries.

The downstream power benefits from the operation of Libby Dam accrue to the country in which the benefits occur: Canada keeps the power benefits derived in Canada and the U.S. keeps the power benefits derived in the U.S.

THE CANADIAN ENTITLEMENT

Canada’s share of the downstream power benefits is called the Canadian Entitlement. It is calculated as half of the forecast additional hydroelectric energy generated by power plants on the Columbia River in the U.S. that result directly from the operation of CRT dams in Canada. Under the Canada-BC Agreement, these benefits are owned by the Province.

Canada sold the first 30 years of its Canadian Entitlement to a consortium of utilities in the U.S. for \$254 million US. That agreement expired in phases and the Province of BC now receives a Canadian Entitlement worth approximately \$200 - \$300 million US annually.

The CRT coordinates flood control and optimizes hydroelectric energy production on both sides of the border.

WHO IMPLEMENTS THE CRT?

To ensure the provisions of the CRT are met, entities from both countries were appointed to implement the CRT on behalf of their governments. The U.S. entities are the Bonneville Power Administration and the U.S. Army Corps of Engineers. The Province designated BC Hydro as the Canadian entity.

Photo: Columbia wetlands near Harrogate.



Both countries finalize water storage site selection and continue negotiating the CRT.

The Canada-BC Agreement is signed.



Duncan Dam is completed.



Mica Dam is completed.

1944

Canada and the U.S. begin studies in the Basin to address flood control and growing power demands.

1948

Disastrous floods on the Columbia River kill 41 in the U.S., destroy a community of 18,000 south of the border and leave thousands homeless. Trail, BC, is heavily flooded, and homes and properties are damaged.

1960

Canada and the U.S. sign the CRT.

1961

1963

The CRT is ratified at the Peace Arch.

1964

1967

Hugh Keenleyside Dam is completed.

1968

1973

Libby Dam is completed.

Columbia River Treaty Timeline



FLOOD CONTROL

The CRT prescribes two primary types of flood control provisions.

1. Assured Annual Flood Control

Under the CRT, Canada agrees to provide assured annual water storage for flood control purposes at the three CRT reservoirs for 60 years. The Assured Annual Flood Control provision expires automatically in 2024.

2. On Call Flood Control

On Call Flood Control is designed to be used during periods of very high inflows. The U.S. can request that Canada provide On Call storage in addition to the Assured Annual Flood Control provision. This means Canada would provide additional storage at Canadian reservoirs over and above what the CRT prescribes for Assured Annual Flood Control.

In order for the U.S. to request On Call Flood Control, it must first make effective use of its own reservoir storage space, flows must exceed target levels at the Dalles Dam in the lower Columbia River near Portland and Canada must be compensated for operational costs. The On Call Flood Control provision remains in effect as long as the CRT dams exist, even if the CRT is terminated. After 2024, the On Call Flood Control provision will be referred to as Called Upon Flood Control.

2024: EITHER COUNTRY MAY TERMINATE

The CRT has no official expiry date, but has a minimum length of 60 years, which is met in September 2024. It is possible that one or both countries may wish to renegotiate parts or all of the CRT, or terminate it entirely.

If neither country terminates it, the current CRT will continue indefinitely, with the exception of the Assured Annual Flood Control provisions. By mutual agreement, parts or all of the CRT could potentially be renegotiated at any time.

Under the CRT, the U.S. paid \$64.4 million US in advance for the first 60 years of Assured Annual Flood Control operations. This sub-agreement expires in 2024, whether the CRT is terminated or not.

2014: A MINIMUM OF 10 YEARS' NOTICE

With a minimum of 10 years' written advance notice, either Canada or the U.S. may terminate the CRT any time on or after September 16, 2024. Either country may give notice earlier than 2014, but 2024 is the earliest date for termination.

The Future of the CRT

WHAT'S BEING LOOKED AT?

The Canadian and U.S. entities are exploring two basic scenarios: to either terminate or continue the CRT. Under the scenario to continue the CRT, the Assured Annual Flood Control provision will expire unless renegotiated prior to 2024. As part of their work to understand the implications of each scenario, the entities are examining what changes may occur compared to the CRT as it currently operates.

1 a) CRT Continues: Assured Annual Flood Control provision expires. Canada continues to receive payments for downstream power benefits. Canadian flood control obligations change from the current regime known as Assured Annual Flood Control to Called Upon Flood Control.

b) CRT Continues: Assured Annual Flood Control provision continues, as do the downstream power benefits. This scenario represents a status quo option in terms of all elements of the CRT with the exception that both parties would need to agree to new Assured Annual Flood Control provisions.

2 CRT Is Terminated: The current CRT is terminated with no replacement agreement. Downstream power benefits payments to BC (\$200 - \$300 million US/year) expire. Canada's requirement to regulate flows for power interests in the U.S. ends. Canadian flood control obligations change to Called Upon Flood Control. There is increased uncertainty in the U.S. regarding Canadian operations.



Basin residents in Canada come together to seek recognition for impacts of the CRT.

The first 30 years of the Canadian Entitlement expire and full entitlement returns to BC.

The U.S. entities will provide information to their federal government to inform the U.S. decision on the future of the CRT.

The Assured Annual Flood Control provision ends.

1990s 1992

Local governments in Canada create the Canadian Columbia River Treaty Committee.

1995

Columbia Basin Trust is created.

2003



2010 2013

The Canadian and U.S. entities begin to review the CRT to explore its future.

2014

A minimum of 10 years' notice must be given by either country to terminate the CRT in 2024.

2024

This is the earliest date the CRT can be unilaterally terminated.



The Columbia River Basin

Major mountain ranges and large volumes of precipitation provide the foundation for the Columbia River Basin. The large volumes of annual runoff, combined with changes in elevation—from the river's headwaters at Canal Flats in BC's Rocky Mountain Trench, to Astoria, Oregon, where the river flows into the Pacific—make the Columbia one of the most powerful rivers in North America.

Fifteen per cent of the total Basin area is in Canada, and the Canadian portion of the Basin contributes approximately 30 to 40 per cent of the average river flows and an even higher proportion of peak river flows.

The Columbia River flows into the Pacific Ocean at Astoria, Oregon.

The Columbia River Treaty

The Columbia River Treaty (CRT) addressed two main issues facing Canada and the U.S.:

- It increased the ability to regulate river flows and reduced the risk of flooding; and
- It optimized hydroelectric energy production for both countries.

The Canadian Columbia River Basin generates approximately 50 per cent of the total hydroelectricity produced in BC, producing low-cost, zero-carbon electricity.

Legend

- Columbia River Treaty Dams
- Other Dams/Generating Stations
- Direction of Water Flow
- Communities
- Columbia Basin Trust region
- Columbia River Basin in Canada
- Columbia River Basin in the U.S.

0 100 200 km

NAD 83 Lambert Conformal Conic
 Central Meridian: -117
 Standard Parallel 1: 45
 Standard Parallel 2: 49
 Features on the map have been generalized for illustrative purposes.



COLUMBIA BASIN TRUST
a legacy for the people



Changes in Canada

BENEFITS
 The CRT benefited the Basin and the Province.

- BC still receives approximately US\$200 – 300 million each year in downstream power benefits.
- The increased water storage and regulated flows resulting from the CRT dams led to the development of hydroelectric projects such as Kootenay Canal Generating Station (1976), Revelstoke Dam (1983) and Arrow Lakes Generating Station (2002).
- BC used the pre-sale of its Canadian Entitlement (US\$254 million) and the Assured Annual Flood Control prepayments (US\$64.4 million) to construct the three CRT dams in Canada.
- Dam construction provided employment opportunities for several thousand people over several years and continues to provide ongoing employment opportunities.
- There was increased economic activity in local communities during construction.
- Industry and communities across the province and within the Basin have benefited from low-cost hydroelectricity.
- Many Canadian communities benefit from flood control provided by the CRT.
- Reservoir-based recreation opportunities.

IMPACTS

Although there were benefits, there were also many negative impacts of the CRT, most of which occurred in the Canadian portion of the Basin.

- Some communities were lost or changed forever and local businesses and private properties were impacted.
- Approximately 600 km² of fertile and productive valley bottoms in Canada were flooded to fill the Arrow Lakes, Duncan, Kinbasket and Kootanusa reservoirs.
- Agriculture and forestry activities have been limited due to the loss of fertile, low-elevation land.
- Approximately 2,300 people along the Arrow Lakes, Duncan and Kootanusa reservoirs were relocated.
- Numerous First Nations' cultural and archeological sites were submerged.
- Ecosystems were altered, impacting fish and wildlife values, and reducing habitat availability.
- Transportation routes were altered or eliminated.
- Dust storms on reservoirs can negatively impact human health.
- Fluctuating water levels limit recreation and tourism opportunities.

Columbia River Treaty Roles and Responsibilities

The Columbia River Treaty (CRT) was agreed to by the Province of BC and the Canadian and U.S. federal governments. Both federal governments, as well as the Province, have specific roles under the CRT.

UNITED STATES

Under the U.S. constitution, only the President can make decisions on international treaties, based on the advice and consent of the Senate.

CANADA

The 1963 Canada-BC Agreement transferred the rights and obligations under the CRT to the Province of BC. It also requires that Canada obtains the concurrence of the Province prior to issuing any notice of termination. It does not specify exact roles for the federal government around termination and renegotiation, but any substantive changes to the CRT will require federal government involvement.

PROVINCE OF BC

The Canada-BC Agreement transferred the rights and obligations under the CRT to the Province. The Province's role in the future of the CRT has not yet been fully determined, as this agreement does not specify exact roles around termination and renegotiation. Any substantive changes to the CRT will require provincial government involvement.

The Province has committed to undertake consultations with affected stakeholders and Basin residents around potential changes to the CRT.

ABOUT COLUMBIA BASIN TRUST

Columbia Basin Trust supports 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.

COLUMBIA BASIN TRUST

The original process in which decisions were made to enact the CRT by the provincial and federal governments did not allow for adequate consultation with Basin residents in Canada. As a result, residents did not have the opportunity to provide input into a decision that had a major impact on their lives and life in the Basin.

Columbia Basin Trust (CBT) was created to benefit the areas most adversely affected by the CRT. During the creation of CBT, there was clear public direction that one of its priorities should be to prepare residents for the potential renewal or renegotiation of the CRT when that opportunity occurs.

CBT's primary role in regards to the CRT is to act as an information resource for Basin residents and local governments. CBT is also working with provincial and federal government agencies to provide advice on meaningful consultation processes with Basin residents and local governments on any process to amend, renew or terminate the CRT or any of its related sub-agreements.

Photo: Spillway at Mica Dam north of Revelstoke.

Columbia River Treaty
Learn about our past.
Think about our future.

What Can I Do?

- Learn more about the history of the CRT and build your understanding and awareness of how your community and region was affected by the CRT.
- Prepare to engage in positive and productive dialogue on the future of the CRT.
- Work with CBT to provide direction on how it can effectively fulfill its role with residents concerning the CRT.

Learn more at www.cbt.org/crt.

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