



# Columbia River Treaty

2014/2024 Review: Phase 1 Technical Studies





Since 1964, the Columbia River Treaty has provided significant benefits to the United States and Canada through coordinated river management by the two countries. It remains the standard against which other international water coordination agreements around the world are compared. When the Treaty was negotiated, its goals were to provide significant flood control and power generation benefits to both countries. However, the Treaty contains two provisions that may significantly change these benefits as early as the year 2024.

First, in 2024 the 60 years of purchased flood control space in Canadian Treaty projects expires. Instead of a coordinated and managed plan to regulate both Canadian and U.S. projects for flood control, the Treaty 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.

Second, while the Treaty has no specified end date, it does allow either Canada or the United States the



option to terminate most of the provisions of the Treaty on or after Sept. 16, 2024, with a minimum of 10 years advance written notice. Thus, the year 2024 is the first year a notice of termination would take effect assuming written notice of termination is given by the Canadian or U.S. governments by 2014. Unless the Treaty is terminated or the federal governments elect to modify the Treaty, its provisions continue indefinitely, except for the changes in flood control discussed above.

Given the significance of both of these provisions, it is important that the parties to the Treaty understand the implications for post-2024 Treaty planning and Columbia River operations. The U.S. Army Corps of Engineers and the Bonneville Power Administration, the agencies that implement the Treaty in the United States on behalf of the U.S. Entity (see Treaty Governance sidebar), are conducting a multi-year effort to understand these implications. This effort is called the 2014/2024 Columbia River Treaty Review.

### Treaty Governance

The Treaty calls for two “entities” to implement the Treaty — a U.S. Entity and a Canadian Entity. The U.S. Entity, created by the President, consists of the Administrator of the Bonneville Power Administration (chair) and the Division Engineer of the Northwestern Division, U.S. Army Corps of Engineers (member). The Canadian Entity, appointed by the Canadian Federal Cabinet, is the British Columbia Hydro and Power Authority.

## Phased Approach

Operations under the Treaty are complex and affect millions of people and a wide variety of issues on both sides of the border. Implementing the required specified Treaty changes in flood control provisions in 2024, and considering the consequences of possible Treaty termination, will be a major challenge for both countries. Due to the scope and complexity of these issues, the U.S. Entity is taking a phased approach to studying the Treaty and the issues related to its future. Each phase will provide valuable information, building toward a comprehensive and informed picture for evaluating the future of the Treaty.

## Phase 1 Joint Technical Studies

Phase 1 of the 2014/2024 Columbia River Treaty Review, the initial modeling and analysis phase, is a joint effort between the U.S. and Canadian Entities. Its purpose is to provide fundamental information about post-2024 conditions both with and without the current Treaty and only from the limited perspective of power and flood control. These initial studies are not designed to establish future operating strategies, alternatives to the Treaty, or government policies, but simply to begin the learning process.

The United States and Canada launched the Phase 1 joint technical studies in early 2008. These joint technical studies will provide some insights into the implications of the Treaty's post-2024 provisions and will provide baseline information such as possible ranges of system operations, reservoir elevations, generation, and Canadian Entitlement (see Canadian Entitlement sidebar). There are three studies in Phase 1:

**Study I:** Assumes the Treaty continues with the current power and flood control operating plans and Canadian Entitlement procedures. This assumption



*Mica Dam is one of four Treaty dams.*

## Canadian Entitlement

Sharing the benefits of cooperative water management was an integral part of the Treaty's design. In exchange for providing and operating the Treaty storage projects for power, Canada received "entitlement" to one-half of the estimated increase in downstream power benefits generated in the United States. Canada initially sold its share of this additional power for \$254 million to a group of U.S. utilities for a period of 30 years. This agreement expired in 2003. Since then, the full Canadian Entitlement to downstream power benefits is delivered to the Province of British Columbia at the U.S.-B.C. border for their use or resale. The Canadian Entitlement delivery is provided by the Bonneville Power Administration and the utilities that benefit from the increased power generation resulting from coordinated operation of Treaty storage. The non-federal project owners, referred to as the "Mid-Cumbias" due to the location of their dams on the Columbia River, provide 27.5 percent of the agreed Canadian Entitlement energy return, while the Bonneville Power Administration provides the remaining balance.

would require a new agreement or modification to the Treaty to enable continuation of the current Flood Control Operating Plan.

**Study II:** Assumes the Treaty continues post-2024 with no significant modifications. Canadian flood control obligations change from a known and coordinated annual plan to the ad hoc “called upon” provisions. Canadian Entitlement continues based on current procedures.

**Study III:** Assumes the Treaty is terminated in 2024 with no replacement agreement. The U.S. payment of the Canadian Entitlement ends. Canadian flood control obligations change from a known and coordinated annual plan to the ad hoc “called upon” provisions. Canadian storage projects are operated only for Canadian benefits except in the implementation of “called upon” flood control provisions. The United States continues to coordinate the operation of Libby with Canada. Study III is looking at two Canadian

operational scenarios, one with minimal Canadian draft for local flood control only and one with reservoir draft specifically for optimizing power production in Canada. Both scenarios are intended to capture a range of possible flows across the U.S.-Canadian border and are not intended to represent future operations.

Results from the Phase 1 technical studies will be presented in a joint Entities’ report that will:

- describe the methodologies and assumptions employed to complete the studies,
- describe the risks, issues, and limitations encountered, and
- discuss results, including findings for each of the three studies.

## Beyond Phase 1

Once Phase 1 is complete, the U.S. Entity and the U.S. Department of State will work together to coordinate next steps, including developing the appropriate level of consultation and involvement with other U.S. parties, such as affected states, tribes and other stakeholders. The U.S. Army Corps of Engineers and the Bonneville Power Administration, on behalf of the U.S. Entity, will play a major role in modeling, data analysis, scenario evaluation and education. However, it is important to remember that while the U.S. and Canadian Entities were given broad discretion to implement the Treaty, they are not authorized to modify or terminate the Treaty. The decision to terminate the Treaty or to re-negotiate its provisions is the responsibility of the respective governments. The information developed in Phase 1 will help ensure that the U.S. and Canadian governments, as well as the stakeholders in their respective countries, are well informed of the basic power and flood control implications should the Treaty remain in effect or alternatively, be terminated.

This brochure is the second in a series intended to provide information about the 2014/2024 Columbia River Treaty Review. The initial brochure in the series describes the history of the Treaty and the issues surrounding the 2014/2024 Review. This brochure is intended to provide additional information about the initial studies being used to better understand the possible post-2024 Treaty outcomes. It is jointly published by the Bonneville Power Administration and the U.S. Army Corps of Engineers. For more information, call the Bonneville Power Administration at 1-800-622-4519 or the U.S. Army Corps of Engineers at (503) 808-4510.



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