

COLUMBIA RIVER TREATY: PAST & POSSIBLE FUTURES

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We tend to think of our current water resource problems as the most pressing ever – no issue could be more intractable or controversial than the ones we must solve today. Or, perhaps not. The accomplishments and follies of water managers of the past offer much to students of history. In the Columbia River basin, controversies of the 1950s over international management have important implications for the future of the river.

The Columbia River Treaty between the United States and Canada governs operations at multiple dams and reservoirs on the Upper Columbia River and its tributaries in Washington and British Columbia. The treaty is also a business arrangement between the two nations that committed the U.S. to paying, at least partially, for construction of three British Columbia dams and sharing the benefits of power generation and sales accruing to the U.S. as a result of increased water storage in B.C.

The treaty has no expiration date, but may be cancelled by either party starting in 2024, subject to 10 years notice. The year 2014 will trigger a key decade in which many parties will assess treaty benefits and the merits of opting out of or negotiating new terms of the treaty.

Columbia River Hydrology & Hydro Development

The Columbia River Treaty is best understood in the context of the hydrology of the Columbia River. Originating in the Columbia Ice Fields, the river drops 2500 feet (762 meters) over the course of its 1,240-mile (1,995 kilometer) length. Annual runoff averages 134 million acre-feet (165 billion cubic meters) with a substantial range of unpredictability. Although not the largest river in the United States, the Columbia is the most “powerful” in terms of head (water velocity and drop).

The Columbia River is also one of the most powerful rivers in the world in terms of hydroelectric development. The watershed is heavily developed, with 14 dams on the mainstem, 219 major dams on tributaries, and more than 1,000 small dams scattered throughout the basin.

Treaty History

The Columbia’s flashy hydrology along with the human propensity to build in floodplains combined to create disaster in 1948, when heavy winter snows in the Canadian Rockies led to record spring runoff. Many communities in both the Columbia and Fraser River basins were flooded, but it was Vanport – near Portland – that suffered the worst of it, losing 20,000 homes to floodwaters as a dike failed on May 30 (a disaster strikingly similar to the Katrina floods of 2005). As floodwaters receded, it became apparent that Grand Coulee Dam was incapable of controlling the river during high-runoff years.

However, the specific trigger for a river management treaty arose not from the 1948 floods, but from a proposal to build a hydroelectric dam on the Kootenay River at Libby, Montana. (The river’s name is spelled “Kootenay” in Canada and “Kootenai” in

the U.S.) The Kootenay arises in Canada, loops south through Montana and northern Idaho, then flows north to Castlegar, B.C., where it discharges into the Columbia. Libby Dam would flood 42 miles (68 kilometers) into Canada. The U.S. naturally offered to pay for flooded B.C. lands, but the Canadians sought more – a share of the downstream power benefits that would result from the storage of spring flood waters for later release. Initial reaction by U.S. dam builders to this novel benefit-sharing concept was puzzlement and rejection.

British Columbia countered with a proposal to divert the Kootenay River into Columbia Lake, headwaters of the Columbia River at Canal Flats. This divide is an extraordinary place where the two rivers pass within a kilometer of each other. The proposed breaching of the divide, which could have deprived the U.S. of much of the flow of the Kootenay River, was not well taken. Soon the B.C. plan blossomed into a proposal to divert the Columbia at its northern apex (near present-day Mica Dam) into tunnels that would discharge to the Fraser River. International tensions developed. Meanwhile, British Columbia was entertaining offers from various U.S. interests (including Kaiser Aluminum and a consortium of Puget Sound utilities) to pay for development of hydro dams at Arrow Lakes and Mica.

Although the Columbia-to-Fraser diversion was not really viewed as a serious proposal, the U.S. did take notice when B.C. Premier W.A.C. Bennett began to promote new hydroelectric facilities in the Peace River basin, a central B.C. watershed that flows northeasterly toward the Arctic Ocean. While this project would not impact U.S. waters, it would compete for construction funding. British Columbia could afford to invest in either the Peace River or Columbia River project, but not both.

The B.C. Premier's role in the water politics of the era illustrates an important difference in the federalist structure of the two countries. Canadian provinces exercise greater control over natural resources than do the U.S. states. This control included, at the time of Columbia Treaty negotiations, provincial power to license hydroelectric facilities (in contrast to Federal Power Commission control over licensing in the United States). Premier Bennett, a charismatic politician who fought with Ottawa over authority to develop B.C. rivers, promoted dams as good for the economy of the province. Ottawa countered by enacting the 1955 International River Improvements Act, transferring control over dams on the Columbia and other international rivers to the federal government. But the internal Canadian battle was not over.

Once the U.S. agreed to entertain Canadian demands to share in downstream benefits, progress on the terms of the Columbia River Treaty sped to conclusion. In 1959, the International Joint Commission issued two key reports, one proposing three options for engineering multiple dams, and one proposing a 50-50 basis for apportioning the U.S. benefits of flood control and power production. Treaty negotiators accepted this principle, agreed on an engineering plan, and reported the treaty text to the parties in January 1961.

The United States Senate immediately ratified the Columbia River Treaty, but the conclusion of international negotiations merely shifted the stage to a provincial-federal turf battle in Canada. A major concern was how to fund construction of the B.C. dams. Premier Bennett favored the sale of surplus power to the United States. The federal government opposed power exports, fearing that commitments to sell

energy would, as a practical matter, forever commit Canada to sending the power south.

The Canadian federal negotiators secured a “no sale” provision in the treaty. Bennett countered by creating the B.C. Power Corporation and taking over two Peace River power suppliers. This put the province in the position of both owning the power supply and providing service to major markets in Vancouver and Victoria. It also put the federal government in the position of having no Canadian market for new Columbia River hydroelectric supply.

Without a local market, Canada was forced to concede the point and enter into federal-provincial agreements detailing construction funding and power sales. Rather than re-visit the terms of the treaty, Canada and the U.S. signed a protocol authorizing downstream power sales in the United States. The House of Commons approved the treaty in 1964.

Treaty Provisions

The Columbia River Treaty required Canada to construct 15.5 million acre feet (MAF) of reservoir storage on the Columbia and Duncan Rivers for optimum downstream power generation and flood control. The U.S. must return to Canada one-half of the benefits that Canadian storage produces in the U.S. The Treaty also authorized the U.S. to construct and operate Libby Dam on the Kootenay River. The United States made cash payments of \$245 million to Canada upon ratification, and another \$64 million upon completion of the three Canadian dams: Duncan (1967), Keenleyside (1968) and Mica (1973).

Day-to-day implementation of the Columbia River Treaty is complex, requiring coordinated operation of reservoirs throughout the basin to ensure flood control and maximize power benefits. Treaty terms have been augmented by agreements to address flows for Columbia basin salmon, sturgeon, whitefish and rainbow trout. Other agreements have addressed non-treaty storage, coordination of the Libby project, and other non-power issues.

Treaty Impacts

The drowning of major reaches of the Columbia River and its tributaries caused massive impacts in Canada and the United States. Dissatisfaction over the terms of the treaty is now being expressed in parts of British Columbia, where it was not well understood that the Canadian reservoirs would be operated like bathtubs. Dams blocked and destroyed fisheries (including extirpating salmon from the Upper Columbia in Washington and B.C.), drowned riverside communities, created intractable water quality problems, and took a terrible toll on native and First Nation cultures and economies in both countries.

The treaty also created an enormous amount of electrical power, much of which is shipped south to California markets in exchange for substantial cash payments making their way north to B.C.

Treaty Futures

Lessons may be learned from the story of this 43-year old treaty. First, as in the 1950s, U.S. citizens and government tend not to understand Canadian attitudes and

motivations about resource management. There are rumblings that British Columbians want changes in the management of the Canadian dams. That fact must be part of the equation for downstream water management. Second, the dams did a huge amount of damage to habitat, wildlife and people. Consideration of all of these impacts did not occur during treaty negotiations. This is an error that should not be repeated. Third, the treaty did not contemplate the damage it would set in motion, nor that optimizing power production may not be desirable (or even possible) when all interests are considered. In 2014, new voices will be heard and it will be up to governments to listen.

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