

The 'New' Columbia River Treaty: Should the Okanagan be Included?

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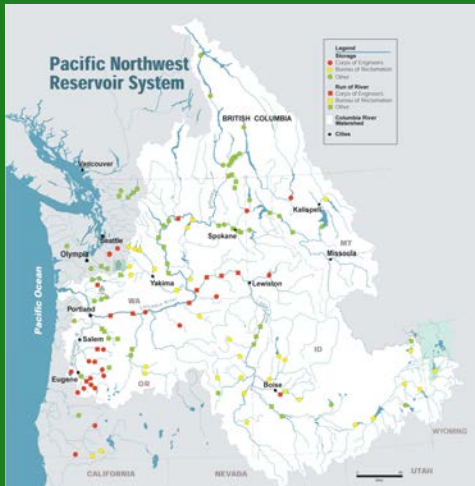


Columbia River Dams



Source: US Army Corps of Engineers website

Pacific Northwest Reservoir System



Columbia River Reservoirs

Source: US Army Corps of Engineers website

Main Stem Columbia Dams

Name	Rank	Location	Completed	Owner	Lake formed
Mica Dam	5	BC	1973	BC Hydro	Kinbasket Lake
Revelstoke Dam	4	BC	1984	BC Hydro	Revelstoke Lake
Keenleyside Dam	14	BC	1968	BC Hydro	Raised Arrow Lakes
Grand Coulee Dam	1	WA	1942	USBR	Franklin D. Roosevelt Lake, Banks Lake
Chief Joseph Dam	2	WA	1955	USACE	Rufus Woods Lake
Wells Dam	12	WA	1967	Douglas PUD	Lake Pateros
Rocky Reach Dam	7	WA	1961	Chelan PUD	Lake Entiat
Rock Island Dam	13	WA	1933	Chelan PUD	Rock Island Pool
Wanapum Dam	9	WA	1963	Grant PUD	Lake Wanapum
Priest Rapids Dam	11	WA	1961	Grant PUD	Priest Rapids Lake
McNary Dam	10	WA & OR	1954	USACE	Lake Wallula
John Day Dam	3	WA & OR	1971	USACE	Lake Umatilla
The Dalles Dam	6	WA & OR	1960	USACE	Lake Celilo
Bonneville Dam	8	WA & OR	1937	USACE	Lake Bonneville

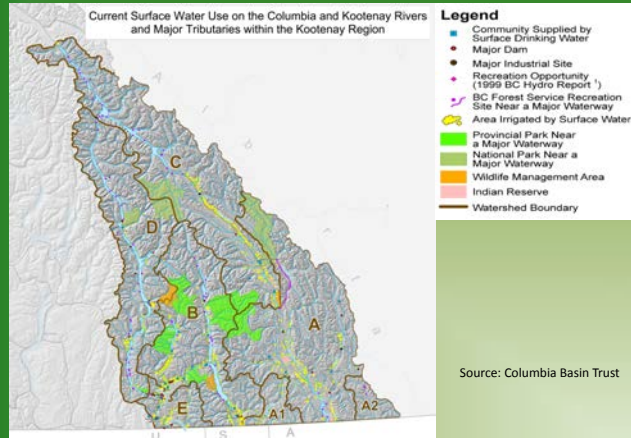
Kootenai River

Name	Purpose(s)	Year	Owner name	Reservoir
Brilliant Dam	Hydroelectric	1944	Columbia Power Corporation	
Kootenay Canal	Hydroelectric	1975	BC Hydro	
South Slocan Dam	Hydroelectric	1928	FortisBC	
Lower Bonnington Falls Dam	Hydroelectric	1925	FortisBC	
Upper Bonnington Falls Dam	Hydroelectric	1907	FortisBC	
Corra Linn Dam	Hydroelectric, flood control, storage	1932	FortisBC	Kootenay Lake
Libby Dam	Hydroelectric, flood control, storage	1975	USACE	Lake Koocanusa

Water and Agriculture in the Columbia Basin

- 3.5 million acres of farmland were being irrigated in the US by 1928
- New Deal dams further increased irrigation capacity and agricultural land base
- Columbia Basin Project, completed in 1952, diverted 2.5 million acre-feet of water from Lake Roosevelt to the big bend area, irrigating 671,000 acres
- Increased storage from Columbia River Treaty dams facilitated further increases in the amount of land that could be irrigated in the US
- About 8 million acres are now being irrigated with water from the Columbia River and its tributaries
- There is far less commercial agriculture on the Canadian side of the Basin
- British Columbia suffered a significant reduction in agricultural land holdings and agricultural production as a result of the Columbia Treaty
- One of the most economically productive and water dependent agricultural areas in the Columbia Basin in Canada (Okanagan and Similkameen Valleys) is not located in the core basin area affected by the treaty

Sources of Information: Northwest Power and Conservation Council website; BC Agricultural Land Reserve website; Columbia Basin Trust website



Some Cross-Border Characteristics of Columbia Basin Agriculture

- There are significant differences in the scale and structure of agriculture in Canada and the US
- Climate change impacts combined with other demands on water will likely result in water deficits in the agricultural sector by mid-century
- In theory the BC Agricultural Land Reserve (ALR) protects agricultural land in British Columbia
- The Okanagan region has experienced a net loss of agricultural land over the past several decades despite the ALR

Table 2: Area Included and Excluded from the ALR by Regional District, in hectares For the Period from 1974 to December 31, 2009.

Regional District	Area at Designation	Area as of Jan 1, 2010
Central Kootenay	71,539	63,575
Columbia Shuswap	67,409	50,860
Kootenay Boundary	55,061	53,423
East Kootenay	272,510	265,162
North Okanagan	70,283	65,211
Central Okanagan	33,077	26,076
Okanagan Similkameen	86,478	83,757
BC Total	4,717,519	4,759,829

Source: Agricultural Land Reserve Website

US Columbia Basin Agriculture

- What are the concerns on the US side regarding retention of agricultural land?
- What are the concerns regarding the amount of available water for agriculture in the future?
- How might a "new" Columbia River Treaty address these issues?
- Note: Okanagan Basin Water Board and the BC Agricultural Water Reserve Committee are now both exploring the feasibility of creating an agricultural water reserve...

To Renew or not to Renew...

- The term of the existing treaty is 60 years, 1964-2024
- The treaty will continue in force unless either Canada or the United States give 10 years notice to terminate
- Many studies have already been conducted on both sides of the border
- Public consultation processes are underway
- What do the cost/benefit analyses say about the economic benefits to Canada and the US if the treaty is terminated rather than retained?
- What will our energy demands be over the next 50 years?
- What will be the long term effect of climate change?

The Columbia River Treaty as an International Success Story?



- affordable electricity economic development
- flood control peaceful Canada/US relations

Problems Caused by the Columbia River Treaty

- contributes to the destruction of fisheries that began with earlier dams
- further environmental degradation, more endangered species
- flooding of aboriginal lands without compensation or agreement
- flooding and destruction of important First Nation cultural sites
- flooding of 231 sq miles of valley bottom land in Southeastern BC and additional agricultural land in the US north of the Libby Dam
- Northwest Power and Conservation Council has identified "ecosystem health, water supply and quality, potential climate-change impacts, cultural resources, recreation, navigation, irrigation" as among the issues that will have to be considered as part of the review process for the existing treaty
- impedes rather than supports movement towards a more effective governance system for the Columbia Basin as a whole

The Cost of Recovering from Past Errors....

Okanagan River at Penticton before and after channelization



Source: Penticton Museum Archives. Taken in the 1920s

Source: <http://www.canada-photos.com/penticton-river-channel-okanagan-13-pictures.htm>. Recent photo by Rolf Hicker

Deficiencies in the Columbia River Basin Governance System

- Lack of consensus on the value of competing interests
- Lack of consensus on how to achieve a balance among competing interests
- Lack of an over-arching governance model that all actors can support
 - see Eric Mogren's historical analysis of basin governance in the US
- Lack of an international agreement on the full range of governance issues at stake

Recommendation: Develop a far more comprehensive Columbia River Treaty and create an international Commission to oversee and coordinate achievement of treaty goals

Should the Okanagan (Okanogan) be included in a 'new' Columbia River Treaty?

Conference Overview: Osoyoos Lake Water Science Forum

"Osoyoos Lake is a microcosm of global Columbia Basin concerns. This beautiful lake spans the Canada United States border in the Okanagan River basin, and has many environmental challenges.

"The 2011 Osoyoos Lake Water Science Forum will focus attention on the needs and challenges for sustaining the ecological health of the lake, along with the related well-being of the basin's residents and visitors. It will review progress made since the last Forum in 2007, and science studies related to the renewal of the International Joint Commission's operating orders for Zosel Dam.

"Lake sustainability depends on the actions of all who work, live or visit the basin, and all those involved in governance."

Answer (tentatively): Yes, but only if it is a comprehensive treaty....