

# Columbia River Treaty Impacts

## What are historical impacts of constructing Columbia River Treaty dams?

The impacts of large dams include three broad categories: biophysical, socioeconomic and geopolitical.

### Biophysical Impacts

Biophysical impacts are those following directly from altered hydrologic processes within the affected basin. These would include changes in the mixture of habitats making up the ecosystem and the resulting change in species composition.

### Socioeconomic Impacts

Socioeconomic impacts are the changes in the costs and benefits to people living within the basin. These would include the cost of relocation, both economic and emotional. No known comprehensive basin-wide analysis has been undertaken to quantify what the socioeconomic impacts of the construction of the CRT dams were.

### Geopolitical Impacts

Geopolitical impacts refer to the change in relationships between governments at various levels that flows from the investments in dams and the change in relative costs and benefits. No known comprehensive basin-wide analysis has been undertaken to quantify what the geopolitical impacts of the construction of the CRT dams were.



Photo: Kinbasket Reservoir behind Mica Dam. William D. Layman, courtesy of Wenatchee Valley Museum & Cultural Center.

## Overview of Ecosystem Impacts

This table shows hectares (ha) of ecosystems flooded by each CRT reservoir at full pool. The largest areas impacted were Arrow and Kinbasket Lakes. Ecosystem impacts vary by reservoir: some experienced more impacts to aquatic habitats, while others experienced more impacts to terrestrial habitats.

Ecosystem Type	Kinbasket	Arrow Lakes	Koocanusa	Duncan	Total
Lakes	2,343	34,992	0	2,583.9	39,919.2
Rivers	4,896.6	2,021.9	1,490.1	424.5	8,833.1
Streams	192.1	50.6	10.3	17.7	270.7
Shallow Ponds	555.1	102.9	210.6	172.3	1,040.9
Gravel Bars	235.6	3,262.8	80.4	22	3,600.8
Wetlands	5,862.6	3,431.6	1,071.9	1,824.5	12,190.6
Flood plains	15,526.5	3,563.5	2,173.1	1,396.6	22,659.7
Upland Ecosystems	13,035.7	3,844.3	1,646.8	860	19,386.8
<b>Total</b>	<b>42,647.2</b>	<b>51,270</b>	<b>6,683.2</b>	<b>7,301.5</b>	<b>107,901.8</b>

Source: Utzig and Schmidt (2011) Dam Footprint Impact Summary: BC Hydro Dams in the Columbia Basin. Prepared for Fish and Wildlife Compensation Program: Columbia Basin. Available at: [www.fwpcolumbia.ca/version2/reports/details.php?reportID=553](http://www.fwpcolumbia.ca/version2/reports/details.php?reportID=553)

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