

The Columbia River Treaty (Canada/USA)

Economic benefits of transboundary water cooperation within and beyond the basin



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Columbia River Basin: The Background

- Basin is shared between Canada and U.S. covering 671,000 km (roughly twice the size of Germany)
- 15% of basin in Canada
- 2000 km long
- flow from Canada to the U.S., but...
- Four principal river systems: main stem Columbia River, Kootenay River, Pend d'Oreille River System; and Snake River-Clearwater River System
- Columbia / Kootenay River Systems are less than 15% of basin, but supply 35% of the water flowing through the river at Portland, and 50% at flood levels
- Climate Change may have significant impact





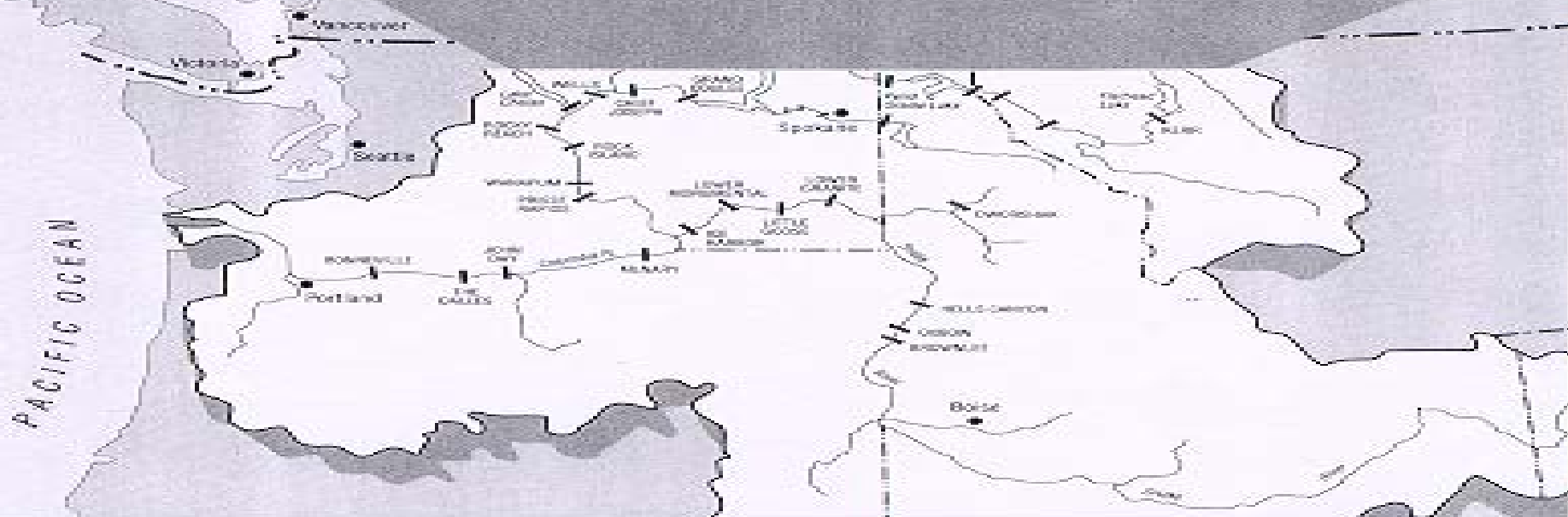
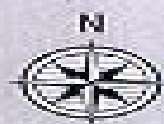
The Columbia River Treaty (CRT)



- CRT created in 1964
- CRT regulates main stem Columbia and Kootenay Systems
- Four dams constructed under CRT: three in Canada (Duncan Dam, Mica Dam, Keenleyside Dam) and one in the United States (Libby Dam)
- Sharing with Canada of one-half of the downstream U.S. power / flood benefits, and allows the operation of Treaty storage for other benefits.
- **Impacts:**
 - Economic benefits - hydroelectric generation, irrigation and flood control.
 - Social and economic impacts to the local communities - environmental effects associated with the construction and operation of large dams.

COLUMBIA RIVER BASIN

 TREATY PROJECTS
 OTHER PROJECTS



Economic Benefits

- Canada and U.S. agreed to share 50/50 the benefits of incremental power (“Canadian Entitlement”) (value: \$100 to \$300M / year)
- Canada agreed to sell 30 years worth of Canadian Entitlement to U.S. for \$256M and then use the money to develop both the Columbia River basin and Peace River basin Hydro electric systems.
- Power benefits were estimated by a team from U.S. and Canada
- Flood control benefits: lump sum for 30 years of \$64M (expires 2024)
- Irrigation Benefits
- Other?

SOME BENEFITS

- Flood control
- Power generation
- Irrigation
- Economic Development
- Sharing of downstream benefits between countries
- Increased integration and coordination of water and power management
- Other?

SOME COSTS

- Increased negative impact to fish, including salmon
- Negative impacts to wildlife and the loss of important wetlands
- Displacement of people
- Flooding of productive valley floor and wetlands
- Increased sense of marginalization of local communities
- Increased sense of marginalization of Indigenous peoples
- Other?

Lessons Learned?

- Establishing and maintaining trust and cooperation always takes longer than anticipated
- Focus on sharing gross benefits rather than calculating net benefits helped assure project would proceed
- The perfect is the enemy of the good
- The fact that future always seems to be very difficult to predict makes compelling case for “active” adaptive management
- Fortune favours the bold. See Machiavelli

“There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, that to take the lead in the introduction of a new order of things.

The reformer has enemies in all who profit by the old order, and only lukewarm defenders in all those who would profit by the new order.

The lukewarmness arises partly from fear of their adversaries who have law in their favour, and partly from the incredulity of mankind, who do not truly believe anything new until they have had actual experience of it”

Machiavelli, The Prince, 1532