

# **Review of the Range of Impacts and Benefits of the Columbia River Treaty on Basin Communities, the Region and the Province**

**Webinar presentation for the**

**Columbia Basin Regional Advisory Committee (CBRAC)**

**Victoria, B.C., December 15, 2014**

# Report Overview

- **Report prepared (2012) in response to input from Basin residents**
- **Supported by the Ministry of Energy, Mines and Natural Gas, BC Hydro, and CBT**
- **Intended to ‘paint the picture’ of impacts and benefits related to the Treaty. No “net” analysis or conclusions.**

# Scope

- **Geographic: B.C. and the Columbia Basin in Canada (Kootenay and Columbia Rivers)**
- **Includes Mica, Revelstoke, Keenleyside/Arrow Lakes, Duncan, Libby/Koocanusa**
- **Information: Relied on readily available information (reports, web sites etc.)**
- **No analysis or “fact checking” beyond what was presented in other reports**
- **No First Nations impacts and benefits – separate consultation**

# Report Challenges

- Limited time frame
- Finding adequate data/information
- No baseline data
- Impacts on individuals and ecosystems difficult to adequately describe with data
- Most report data currently 2 years out of date  
(some updates are in blue)

# Impacts, Compensation and Benefits

- **Perspective on impacts and benefits depends on point of view (e.g. ATV, wildlife/fisheries)**
- **Benefits and impacts occur at different times. Some were 'one time' and others are ongoing**
- **Compensation and mitigation response time frames relative to impacts**
- **Treaty terms are that the liability for impacts in Canada rest with Canada (B.C., BC Hydro)**

# Biophysical Impacts (Inundation)

*Area of Pre-Dam Aquatic and Terrestrial Ecosystems inundated by the Treaty and Revelstoke Reservoirs (ha) in B.C.*

	Mica/ Kinbasket	Revelstoke	Keenleyside/ Arrow	Libby/ Koocanusa	Duncan	Total
Lakes	2,343.0	0	34,992.3	0	2,583.9	39,919.2
Rivers	4,896.6	2,654.4	2,021.9	1,490.1	424.5	11,487.5
Streams	192.1	53.4	50.6	10.3	17.7	324.1
Shallow ponds	555.1	26.9	102.9	210.6	172.3	1067.8
Gravel Bars	235.6	56.9	3,262.8	80.4	22	3,657.7
Wetlands	5,862.6	456	3,431.6	1,071.9	1,824.5	12,646.6
Floodplains, Riparian Forests	15,526.5	4,004.7	3,563.5	2,173.1	1,396.6	26,664.4
Upland Ecosystems	13,035.7	4,199.1	3,844.3	1,646.8	860	23,585.9
<b>Total</b>	<b>42,647</b>	<b>11,451</b>	<b>51,270</b>	<b>6,683</b>	<b>7,302</b>	<b>119,353</b>

# Biophysical Impacts

- Entire terrestrial and aquatic ecosystems inundated
- Impacts on habitat for fish and other aquatic life, mammals, waterfowl and other birds
- Loss of natural features such as hot springs
- 2,153 ha of cultivated fields and 50 ha of cultivated orchards in the inundated area (Keenleyside)
- At low water, drawdown areas are unsightly, “dusty” and ecologically unproductive
- The new reservoir ecosystem needs ongoing support

# Social Impacts

- **Inadequate consultation on CRT with Basin residents and First Nations**
- **Over 2,300 people were displaced**
- **Arrow Lakes: 1,350 ownerships, 3,144 parcels, over 2,000 people and 615 households displaced, with 260 of those on farmsteads, 44 with commercial sales**
- **Concern about the process of private land acquisition and amount of compensation**



# Social Impacts

- **Unrealized commitments made by BC Hydro and/or the Province**
- **Communities lost access to wilderness**
- **Archaeological sites were inundated**
- **Lack of understanding system operations and how decisions are made results in a feeling that community and regional interests are not incorporated into operations**

# Economic Impacts

- **Loss of farms (260), farmland (2,385 ha) and orchards (81 ha)**
- **Loss of potential forestry (public and private land)**
- **Reservoirs were not fully harvested prior to flooding**
- **Loss of tourism and recreation activities and potential**
- **Loss of wildlife and fisheries impacted hunting, fishing and related recreation activities**
- **Fluctuations in water levels constrain tourism and recreation, and add to costs of forestry operations**
- **Problems with dust, debris in the reservoirs**

# Economic Impacts

- **Reservoir access and infrastructure**
- **Loss of tax revenues related to the loss of private lands**
- **Grants in lieu of Taxes (GILT) are not related to municipal impacts or expenditures**
- **Employment benefits have not significantly benefited some of the most impacted communities**
- **Small communities have had difficulty adapting to these changes**
- **Some of the regional economic impacts also have consequences for the province (e.g., stumpage, licences)**

# **Compensation Programs**

## **(In areas affected by BC Hydro's facilities)**

### **BC Hydro Fish and Wildlife Compensation Program –Columbia**

- Consolidated in 1995 and began investing \$3.2 million annually (indexed)
- Over \$4.5 million in 2012
- Since 1995, \$67 million invested in 750 projects that conserve and enhance fish, wildlife and habitat
- CPC annual environmental program 2012 - \$421,000
- No FWCP for Koocanusa

# Compensation Programs

## (In areas affected by BC Hydro's facilities)

### BC Hydro Water Use Planning (WUP)

- WUP's developed 2000-2007
- Based on public, First Nations and stakeholder consultation
- Plans address flow management priorities, fish, waterfowl, riparian and wildlife habitat, dust and debris, wetlands, reservoir access, research
- Columbia River investment: Over \$115 million, 2008 to 2020, \$47.4 million to date (2012)
- Duncan investment: \$13.4 million, 2008 to 2018, \$5.5 million to date (2012)
- No WUP for Koocanusa, Kootenay Lake

# Columbia Basin Trust Koocanusa Contributions

## Recreation

- Boat launch, floating breakwater, floating dock, outhouse, garbage receptacle and parking for up to 60 vehicles and trailers. Two-hectare site located on the northwest side of Kikomun Bridge. (2011)
- Financial support from BC Hydro, Columbia Basin Trust (CBT) and Teck Resources (approximately \$1.6 million)
- Land made available by the Ktunaxa Nation and B.C.

# Columbia Basin Trust

## Koocanusa Contributions

### East Kootenay-Koocanusa Fish and Wildlife Program (EKKFWP)

- CBT approved funding of \$3 million for EKKFWP (2013). This is a one-time amount to be expended over five years.
- The fund is managed by FWCP
- Watershed Action Plan was completed in May 2014
- First project funding will be awarded in April 1, 2015
- Funding is for both habitat restoration and recreation

# Regional Benefits

- **Flood Control:** In 2012, water levels would have been 2 m (6.5 ft.) higher on Kootenay Lake
- **Grants-in-lieu of Taxes (GILT):** BCH and CPC pay approximately \$5.5 million (No GILT for Koocanusa)
- **Tourism and Recreation:** Provincial Parks and Forestry Recreation Sites.
  - Four Arrow Lakes Provincial Parks had 166,070 visitors in 2010
  - 11,400 boat launches in 2011



# Regional Benefits

## Regional Construction employment (2011):

- approximately 33,000 person years, or an average of 685 construction jobs per year since 1964

## Permanent Regional Employment (2012):

- BCH: 109 and 11 temporary
- FWCP: 4
- CPC and CBT: 82
  
- The total employment budgets: \$24 million
- Contracted services: \$16-18 million
  
- Construction Mitigation: infrastructure, dikes, roads, settlements, facilities, parks, spawning channels

# **Regional Benefits: Columbia Basin Trust**

- **Created in 1995 “to support efforts by the people of the Basin to create social, economic and environmental well-being”**
- **B.C. provided \$276 million for power projects, \$45 million endowment and \$2 million per year from 1995-2010**
- **B.C. also established Columbia Power Corporation (CPC) to act as a joint venture partner and endowed it with \$250 million**

# Regional Benefits: Columbia Basin Trust

- \* **Over \$18 million in Distribution of Benefits to communities in 2011/2012 (2012/13 - \$19.3 million, 2013/14 - \$19.4 million, 2014/15 - \$20.1 million (forecast))**
- **Programs include Community Initiatives (CIP) and Affected Areas (AAP), Community Development, Water, Environment, Economic, Social and Youth**
- **Since 1996, total delivery of benefits has been \$90 million with over half of that since 2009/10**
- **Current level of benefits expected to continue until 2017/18 when annual benefits are expected to double**

# Provincial Benefits

- \* **Canada (B.C.) received an up-front lump sum pre-payment of US \$64 for flood control benefits in the U.S. , and US \$254 million for the first 30 years of Canadian Entitlement benefits**
- **Electricity Generation**
- **Mica (Treaty) 1,800 MW (Mica units 5, 6 - an additional 1,000 MW)**
- **Additional Generation**
  - Revelstoke, Kootenay Canal (3,060 MW) (28 % of BCH Total)
  - Arrow Lakes, Brilliant Expansion (305 MW) (68% of CPC total)
- **Non-Treaty Storage (5 MAF at Mica/Arrow Lakes)**
  - additional head (Mica), power shaping and flow management
  - NTSA agreement with the U.S. generates approximately \$12 million in BCH revenue and environmental benefits to both countries
- **The Columbia Basin provides approximately 44% of BCH generation capacity. B.C. electricity rates are the 3<sup>rd</sup> lowest in Canada**

# Provincial Benefits

## Canadian Entitlement (from the U.S.)

- Phased in 1998 to 2003
- Provides between \$100-300 million annually to the Province (\$202 million average over the last 10 years) (\$110 million in 2012, \$89 million in 2013)

## Water Rental

- Fee based on size of facility, storage and power output
  - BCH approximately \$120 million annually
  - CPC approximately \$7 million annually

## Provincial Crown Land Occupation Fees

- For facilities and reservoirs - approximately \$365,000 in 2012

# Provincial Benefits

## BCH and CPC Payments to the Province

- BCH - \$260M average annual over the last ten years  
The Columbia Basin share was approximately \$106 million (**\$230 million in 2012, \$215 million in 2013**)
- CPC pays the Province a \$2 million annual dividend

## Other Provincial Benefits

- Tax revenues from wages , goods and services, Park fees, hunting and fishing licences

# Thanks!

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