

Protecting the Commons: Food Security, Public Policy and the Site C Dam



NOVEMBER 25, 2020
Climate Convergence Webinar on Site C Dam

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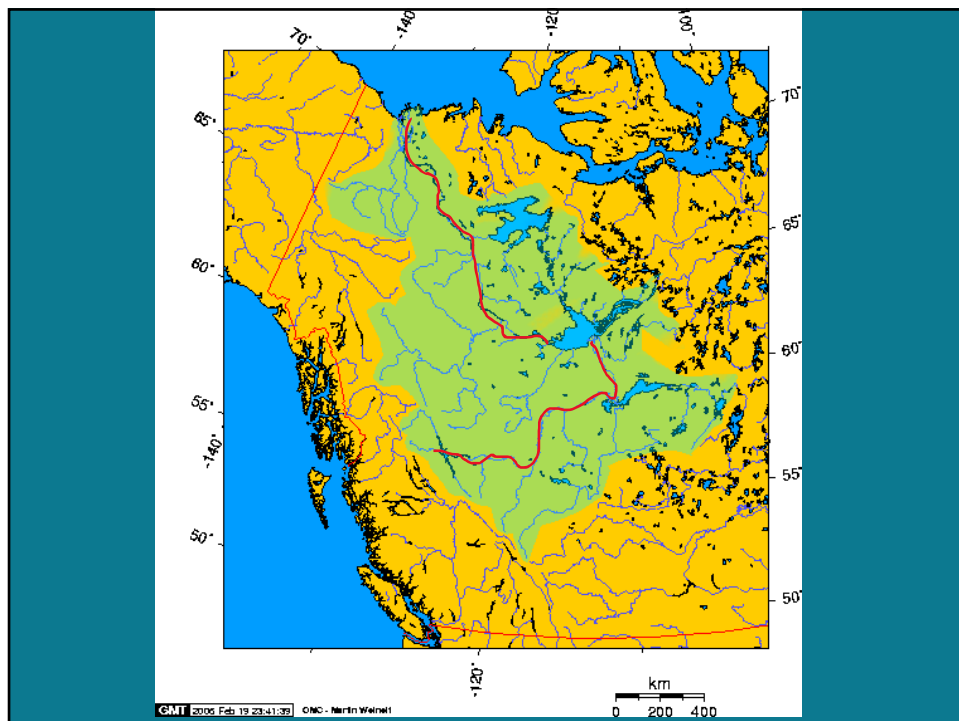
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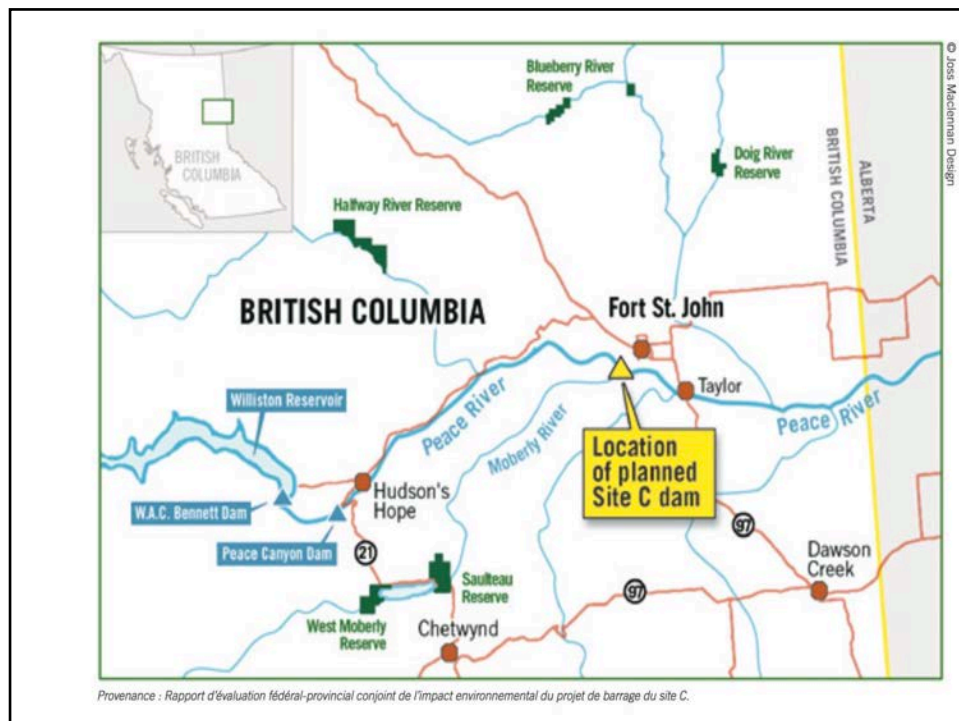
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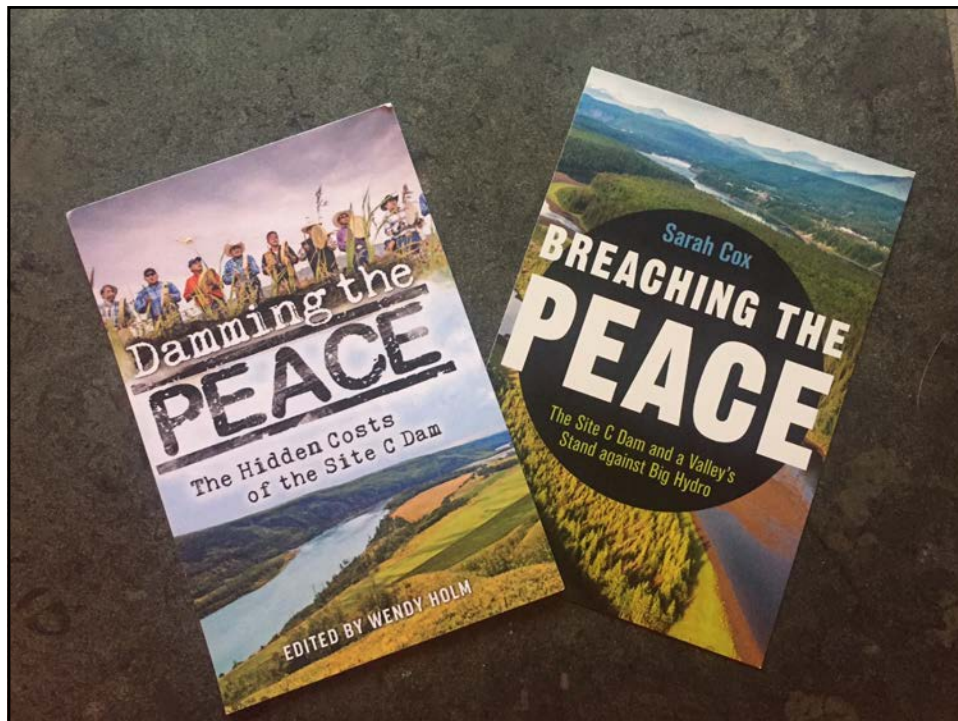
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*"Site C is the
largest
cumulative
violation of
democracy in the
colonial history of
this country..."*

Julien Napoleon,
Saulteau FN
Treaty 8

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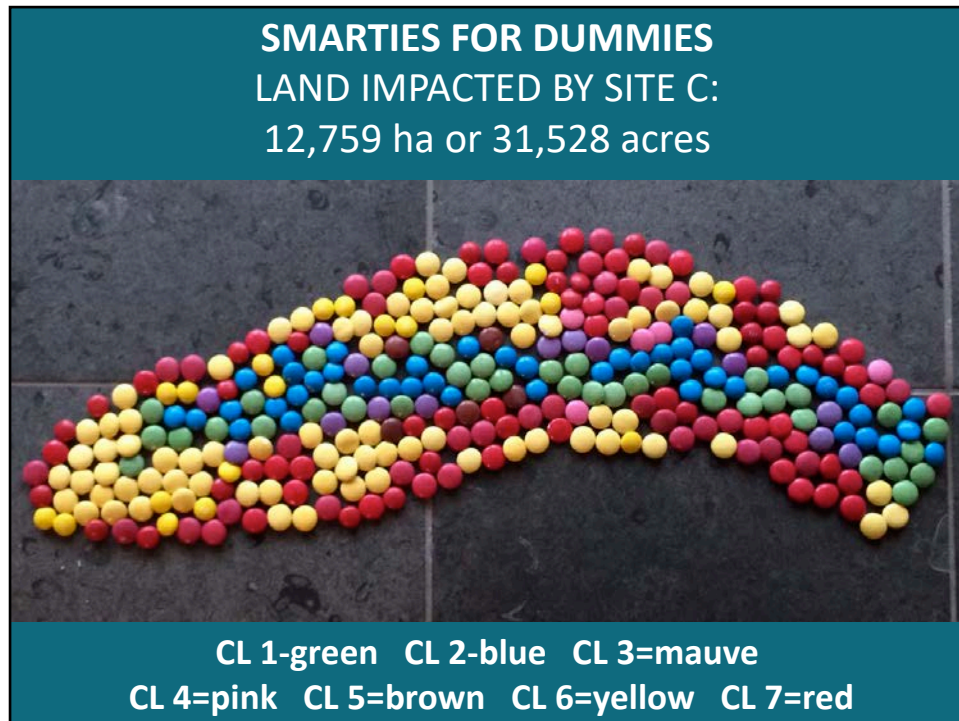
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THE IMPACT OF THE SITE C DAM

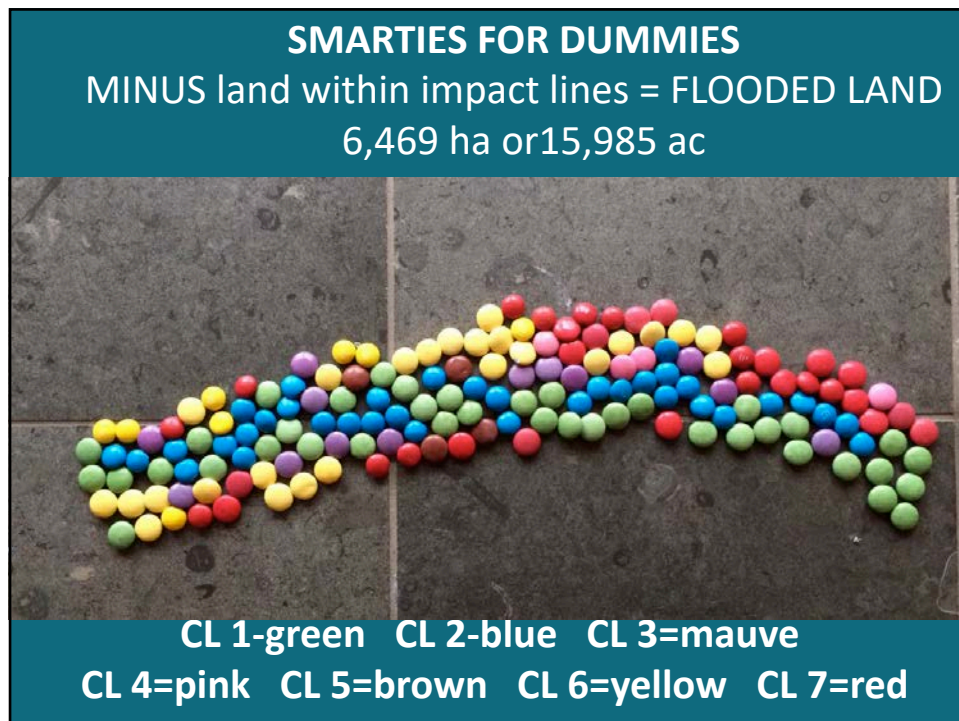
Total land impacted:	12,759 ha	31,528 ac
Less stability		
impacted land	<u>-6,290 ha</u>	<u>-15,542 ac</u>
Equals flooded land	6,469 ha	15,985 ac
minus "low utility" areas*		
Class 6 and 7	<u>-2,653 ha</u>	<u>-6,556 ac</u>
Class 1-5	<u>-2,150 ha</u>	<u>-5,313 ac</u>
LOSS VALUATION (13%)	1,666 ha	4,117 ac

* all class 6 and 7 land + 60% of class 1-5

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SMARTIES FOR DUMMIES
BC HYDRO's "UTILITY RATINGS"
 6,469 ha or 15,985 ac



high = blue (CL 1-3) med = brown (CL 4-5) low = orange (CL 6-7)

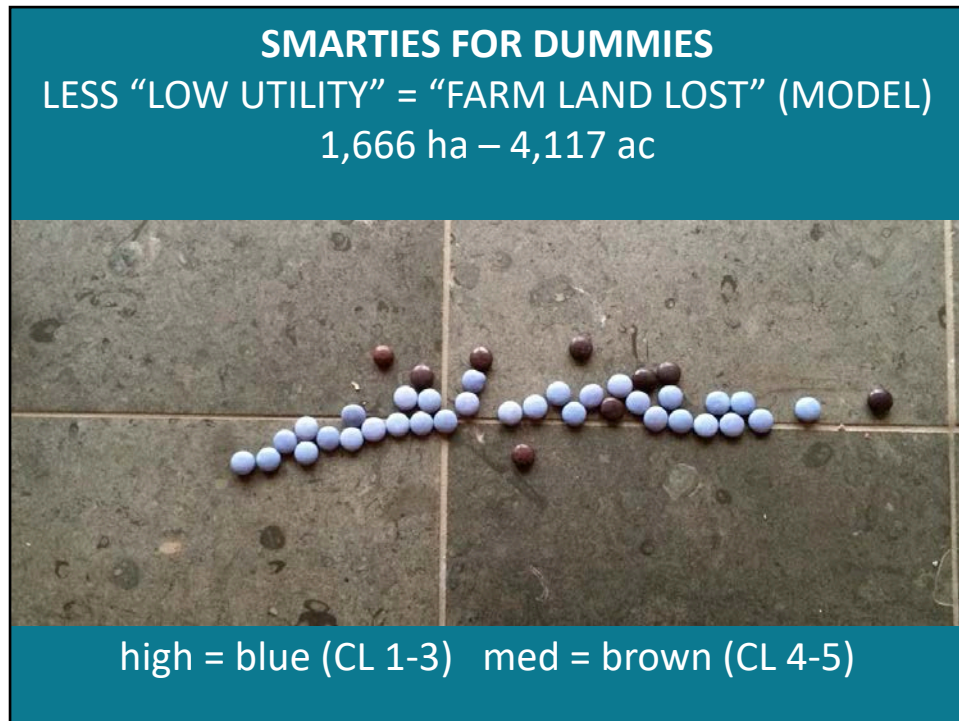
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SMARTIES FOR DUMMIES
"ADJUSTED" UTILITY RATINGS
 6,469 ha – 15,985 ac

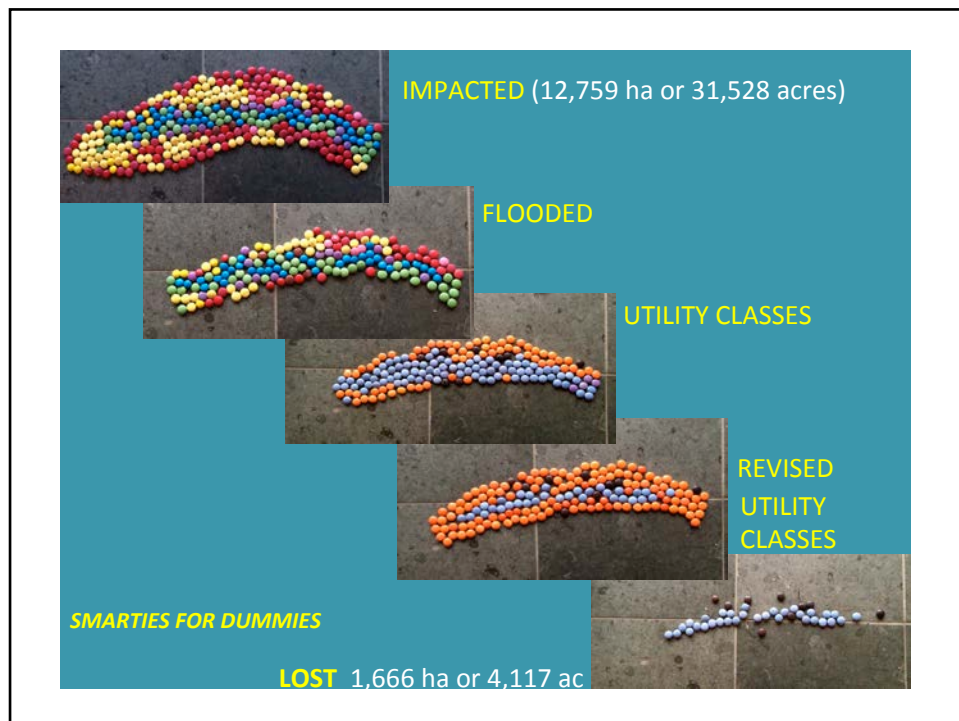


high = blue (CL 1-3) med = brown (CL 4-5) low = orange (CL 6-7)


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DIMINISHED AND DISMISSED

Submission to CEAA/EAO
Joint Review Panel
BC Hydro Site C Clean Energy Project

Environmental Impact Statement (EIS) –
Potential Project Impact on Agriculture
January 14, 2014
Fort St John, B.C., Canada

Prepared for the Peace Valley Environment Association

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GLOBAL FORCES PRESSURING FOOD PRICES

- climate change
- global loss of farmland (use conversion)
- water shortages
- soil salinization in supply areas (e.g. Calif.)
- higher energy costs (production/ manufacturing)
- higher transportation costs
- supply chain concentration
- population growth
- global pandemic (impact on supply chains)

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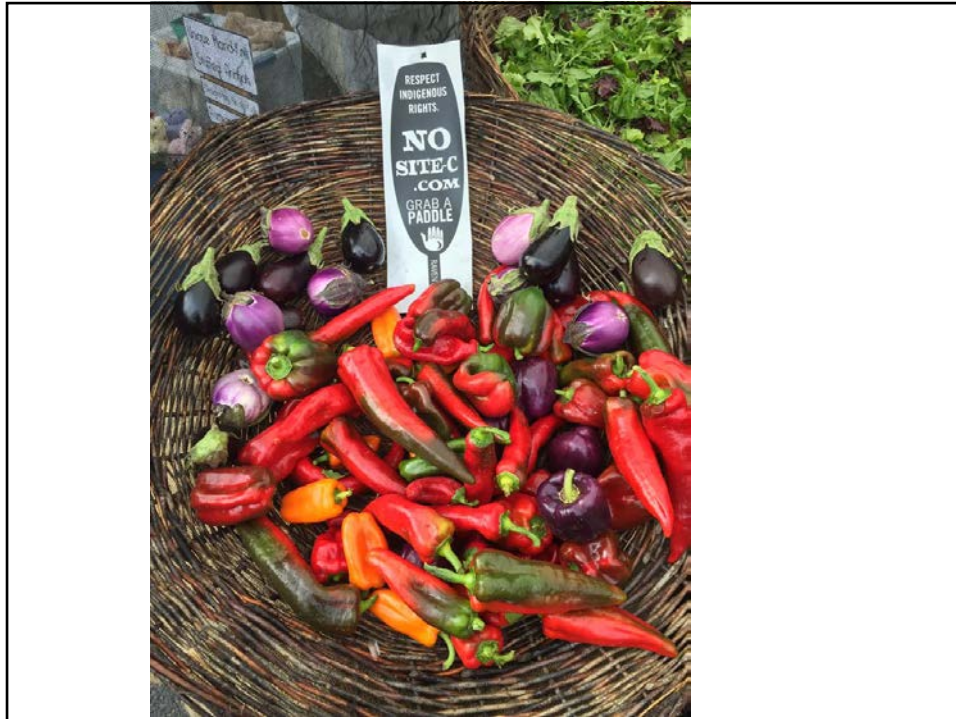
PEACE RIVER VALLEY IS UNIQUE - SOME OF BEST LAND IN CANADA

- combination of fertile **alluvial soils** in a west – east running valley with Class 1 climate for agriculture...
- range of crop options **equivalent to the Fraser and Okanagan valleys, but with higher yields.**

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PEACE RIVER VALLEY: PRIME AGRICULTURAL LAND

Peace River Valley can produce **all the vegetable crops grown in Fraser Valley**:

early and late maturing **corn**,

berries (raspberries are indigenous)

heat loving crops (beans, cucumber, eggplant, peppers, tomatoes, squash, melons, okra)

cool hardy crops (celery, onions, broccoli, cauliflower, cress, lettuce)

cold tolerant crops (garlic, leeks, mustard greens, kale, radish, spinach, chard, parsley, herbs, cabbage kohlrabi, Brussel sprouts, kale and

root crops (including parsnips, carrots, potatoes, rutabagas, turnips, beets)

The valley also supports the **production of grains** to support a healthy livestock sector, including:

Cereal grains

Wheat

Winter wheat

Barley

Fall rye

Flax

Rapeseed (canola)



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There are lots of energy sources,
but only fruits and vegetables
are fruits and vegetables....



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NUTRITION AND FOOD SECURITY

Fresh fruits & vegetables are the **building blocks of human nutrition.**

Early child poverty is greatest predictor of poor health outcomes later life (nutrition)

BC has **highest child poverty** rate in Canada

Canada's North is dramatically nutrition deficient

Peace Valley is closer to LM and **much closer to Northwest Territories and Yukon** than California

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NUTRITION AND FOOD SECURITY

**The alluvial soils + Class 1 climate for
agriculture of BC's Peace River Valley
give it the capacity
– if in full production –
to meet the nutritional requirements
of over 1 million people a year.
FOREVER.**

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PEACE RIVER VALLEY IS PART OF CANADA'S FOODLAND COMMONS

re•sil•ience

*the ability to become strong,
healthy, or successful again
after something bad happens...*

Merriam Webster

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THE ANSWER?

- Education Coop
BC, AB, YT, NWT
- Int'l Centre of Excellence in Organic Ag
- 2 yr apprenticeship programs to students
- homestead opportunity post-grad
- food (today) + farmers (tomorrow)...

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DOWNSTREAM SAFETY



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DOWNSTREAM SAFETY – UNTESTED DAM DESIGN + NO INDEPENDENT REVIEW



- NO BEDROCK required the redesign of the dam
- LONG-L design never used for earth-filled dam
- Calls for independent engineering evaluation ignored:

*"...it is **imperative** that BC Utilities Commission immediately order that both Dam designs... **be reviewed by top engineers and geologists outside of BC, to ensure the safety of people in communities living downstream of the Dam...** (Dry Vern Ruskin)*

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EARTH FILLED DAMS+EARTHQUAKES+FRACKING OH MY!

FRACKING (Andrew Nikiforuk. *Damming the Peace*):

- “industrial enema” gobbles up water from lakes, streams, industry-made dams produces enormous volumes of highly salty and radioactive waste water
- *more than thousand earthquakes since 2006, turning previously quiet seismic zone into a highly active one...*
- *Some 12,000 fracking operations in BC and Alberta have triggered **nearly 40 earthquakes > magnitude 3 (all felt on the surface) in recent years***
- *2015 – 4.6 magnitude earthquake in Ft St John sets **world record as the largest tremor ever attributed to the technology of fracking***
- **SITE C DAM IS SMACK IN THE MIDDLE OF THIS**



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PEACE ATHABASCA DELTA



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DRYING OF THE PEACE ATHABASCA DELTA

- **2/3 due to flow regulation Peace River dams**
+ 75% in winter – 20% in summer
- **1/3 due to climate change**
- **Bennett Dam ('68) and Peace Canyon dam ('80):**
 - Reduced ice-jam floods in the PAD due to reduced spring flooding (drying)
 - Reduction in sediments that feed PAD (resulting in shrinkage)
 - Reduction in fish migrations
- **Site C Dam will exacerbate; block passage of 25 fish species**
 - Including mountain whitefish, greyling, bull trout, walleye, burbo, goldeye, long nose sucker, large nose sucker
 - Also result in swim bladder rupture and air embolisms as pass thru dam

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METHYL MERCURY



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METHYL MERCURY

- The result of increased anoxic **decomposition of organic matter in flooded areas.**
- **Mercury is normally sequestered** for decades in organic soils and vegetation
- After flooding
 - decomposition consumes oxygen,
 - anoxic decomposition by bacteria produces methane
 - inorganic mercury changes to toxic and mobile methyl mercury, which bio-accumulates in aquatic food chains.



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DAVID SCHINDLER on METHYL MERCURY

from Damming the Peace

*"...Subsistence users downstream of dams therefore are **susceptible to mercury poisoning for several generations** after a dam is built.*

*"...High mercury has had **devastating effects on indigenous communities that rely on fish, or organisms that eat fish.***

*"...The threat of mercury poisoning is a major Reason that Indigenous Peoples are resisting the completion of the **Muskrat Falls hydro project** on the Churchill River ..."*



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SITE C IS JUST THE BEGINNING...



“...Canada has agreed to reduce its GHG emissions by 80% by 2050, using 2005 emissions as a baseline.

The required hydro development would require the equivalent of building over 100 Site C dams in the next 32 years...

To accomplish this, many large, remote northern rivers would need to be dammed. Most of them are totally undeveloped at present.

The Peace, Slave, Athabasca, Nelson and Churchill rivers are explicitly mentioned in the report

Almost all would be on lands guaranteed to support Indigenous Peoples by Canada's numbered treaties....

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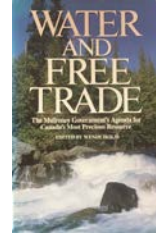
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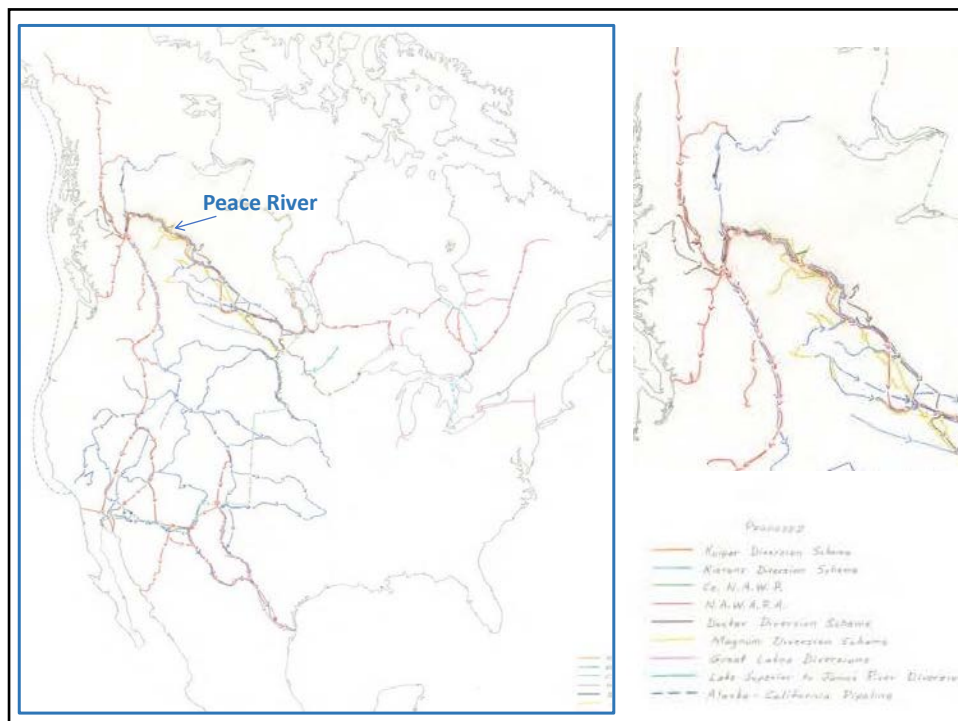
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CONTINENTAL WATER SHARING: THE SITE C END GAME

1. 1950's USACE tasked by Washington to make sure America doesn't run out of water
2. Mapping of North American water resources under auspices of NORAD
3. Dams planned on both the Columbia and Peace Rivers in late 1950's, flood Reserve placed on Peace River Valley
4. FTA (1988) and NAFTA (1994) define investor rights in water
5. Once water removed from free flowing state (impoundment) all NAFTA rights apply if US investors



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NAFTA SEALS THE DEAL...

FTA/NAFTA refer to HCCS of GATT

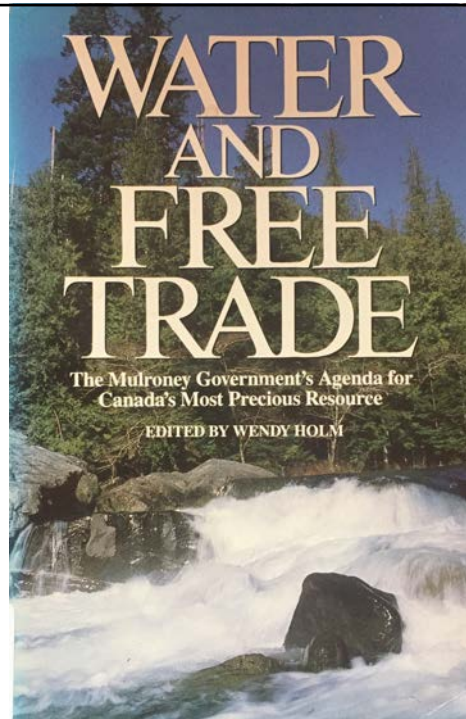
Item 22.01.09 = water

Once water removed from its “free-flowing” state, it becomes a “good” subject to Goods, Services and Investment provisions of NAFTA:

- National Treatment
- Proportional Sharing
- No price discrimination
- Can't interrupt normal supply channels

BCH -> PPP with US investors

DONE LIKE DINNER – SOVEREIGNTY GONE



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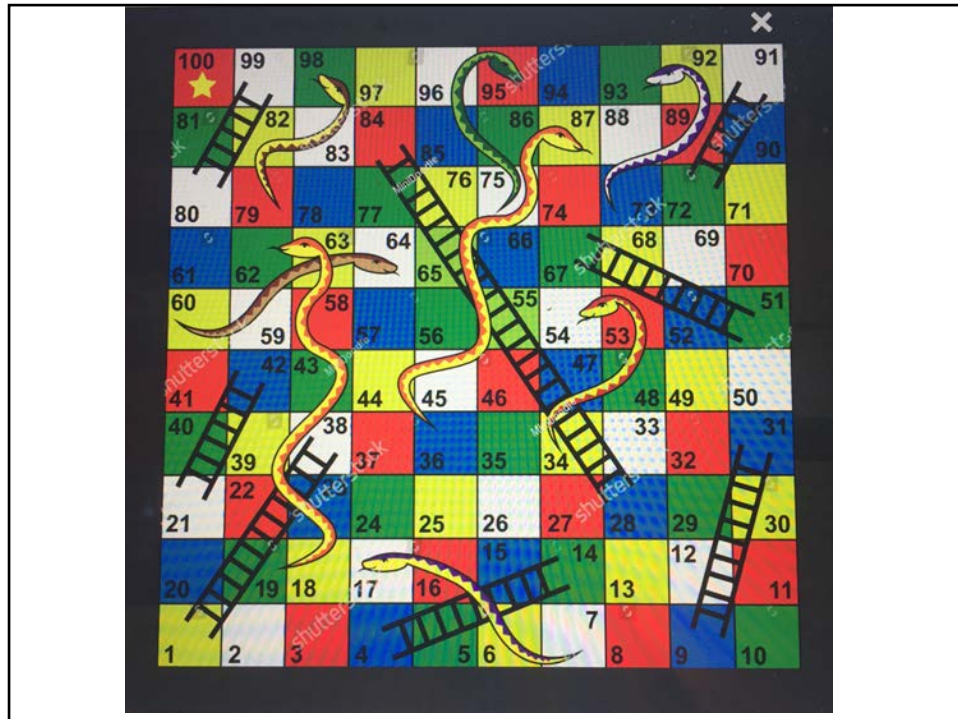
CONNECTING THE DOTS – SITE C AND CONTINENTAL WATER SHARING Jeffrey Sachs April 2018 Op-ed Globe and Mail

*“...Canada has so much **untapped zero-carbon energy** that it can be **a major exporter to the United States**. ... Canada can provide **energy storage services** to the United States by deploying the **hydroelectric reservoirs as giant storage “batteries”** for an **interconnected Canada-U.S. power grid**.*

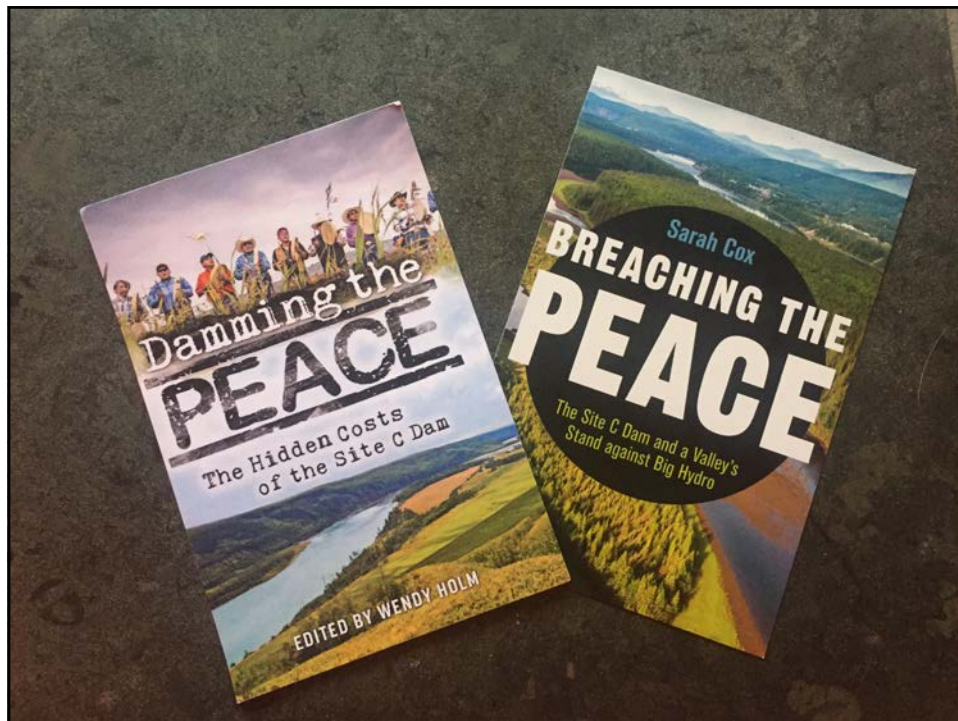
*“.. the study shows the **huge advantage to both the United States and Canada** of working together to supply much of the **zero-carbon energy from Canada’s hydroelectric potential**, and to store excess flows of renewable energy in Canada’s hydroelectric reservoirs...”*

*Jeffrey Sachs
Op-Ed, Globe and Mail, April 13, 2018...*

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A large, dark, abstract sculpture of a person standing with arms raised. The sculpture is holding a sign that reads 'WE KEEP YAKHONMISE TREATY 8'. The background shows a sunset or sunrise sky with clouds.

*"Site C is the
largest
cumulative
violation of
democracy in the
colonial history of
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Julien Napoleon,
Saulteau FN
Treaty 8

ONWARD!

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