



For Immediate Release, January 3, 2022

Re-Drilling the Fraser: Trans Mountain Applies Trial and Error Under the World's Greatest Salmon River

Unceded kwikwəłəm Territory (Coquitlam, BC) — After completing the Fraser River tunnel for the new expansion pipeline, [Trans Mountain Canada announced it must relocate and redrill 350 metres of tunnel](#). This comes after a series of troubling incidents around this segment of the multi-billion dollar project, all pointing to cost cutting measures on risk management. More troubling is that the Crown corporation **ignored the advice of its expert consultants**, who recommended more test drilling and highlighted concerns about the choice of standard horizontal direct drilling (HDD) on soft and untested soils.

On Dec. 22, 2021, [Trans Mountain Canada announced it would relocate and redrill part of its new Fraser River pipeline tunnel](#). Taken with the other issues at this location – [sinkholes that threatened the lives of motorists; the release of 1m3 drilling fluid](#) into the River – the announcement infers the application of trial and error and refreshes concerns about the risks of this project and its management. In the case of this segment of the 1,150 km new pipeline, the **world's greatest salmon producing river** is at risk.

Contrary to concerns expressed by several expert consultants, Trans Mountain elected to use HDD for the Fraser river crossing. In 2015, Trans Mountain was advised by BGC Engineering to drill additional test bores at the Fraser River crossing. Although Trans Mountain filed with CER two “feasibility reports” on [Feb 20th](#) and [Feb 26th](#), 2015 citing 20 boreholes, [only one was drilled in 2017](#) and it was quite some distance from the location of the proposed crossing, north of Colony Farms Regional Park. Also, in 2015 Hatch Mott MacDonald, another engineering firm hired by Trans Mountain, warned about hydraulic fracturing in Coquitlam and suggested the use of drilling intersect method rather than conventional HDD. In 2018, Trans Mountain was advised yet again about concerns with HDD for the Fraser crossing; [Thurber Engineering](#) analyzed previous reports and advised about options, such as microtunneling. **Trans Mountain did not adopt any of those recommendations.**

“Our engineers have analyzed Trans Mountain's technical reports for the new Fraser River tunnel” said public health physician and SFU professor, Dr. Tim Takaro. “We anticipated problems upon learning that Trans Mountain ignored advice from its own engineers, and have been monitoring the issues arising in this area south of Colony Farms Regional Park. The sinkholes in the highway were the first consequence of cost-cutting measures. The expenses

and damage incurred by re-drilling is another consequence and, unfortunately, it'll be taxpayers and the natural environment who pay for this latest mistake."

Larger rivers require *trenchless underground drilling*, which require expensive machinery; methods include conventional HDD drilling, microtunneling and DirectPipe. These different methods vary in price: conventional HDD is less expensive than microtunneling or Direct Pipe. The choice of method is also crucially informed by the soil structure, which is evaluated by test bores and soil surveys. Trans Mountain selected DirectPipe for its Clearwater River crossing and plans DirectPipe at its Vedder River crossing in 2022. For the Thompson, North Thompson and Clearwater River crossings, multiple test bores were drilled directly on the route.



Figure 1. Location of boreholes used on Trans Mountain Expansion (TMX) pipeline feasibility studies. Plotted on geoplaner.com using UTM coordinates provided in the feasibility reports (see References).

On top of this professional disregard, Trans Mountain did not investigate the soils under the Fraser River. Trans Mountain used soil data from test drilling conducted between 2002 and 2009; however the test sites were 276 to 400 metres (the length of 3 to 4 football fields) downstream of the proposed crossing. **Testing and investment in a river crossing of such high stakes has been wholly inadequate.**

In spite of soil studies near Kamloops, problems with the Thompson River tunnel led to re-drilling in late October 2020. The new plans to re-drill under the Fraser include the use of a casing pipe of 120 metres length to prevent further tunnel collapses under the Mary Hill bypass. However, these plans do not refer to a tunnel casing under the Fraser River, which could result in the release of drilling fluids into the river. Shockingly, the plans in the Dec 22 announcement do not mention additional test drilling of the soil.

Dr. Christine Thuring, ecologist, said, "This project poses extreme risk to the Fraser (Sto:lo) River, associated ecosystems and communities. The cost-cutting measures we've observed should be of concern to all Canadians, who are the owners of this pipeline. Inadequate regulations and lacking oversight threaten the future liveability of this entire bioregion. The [IEA report in May 2021](#) called for **a moratorium on all new fossil fuel infrastructure, and yet Trans Mountain proceeds with impunity.** This project reeks of mismanagement and

corruption; how can a government both own a pipeline and police the pipeline? **The conflict of interest is monumental.**”

30

Media Contacts

Dr. Tim Takaro: (604) 838-7458

Dr Christine Thuring: (604) 725-4964

Technical Briefings:

Peter Vranjkovic: (604) 359 5274

For more information:

Web: tinyurl.com/stopTMX

FB: <https://www.facebook.com/StopTMX>

Twitter: @PPSTMX1

YouTube: Protect the Planet Stop TMX

References

- Appendix 1: BGC Engineering 2015, *Preliminary Geotechnical HDD feasibility Assessment*, CER document B324-13, [link](#).
- Appendix 2: Hatch Mott MacDonald 2015, *Fraser River Crossing Preliminary HDD Feasibility Report*, CER document B324-11, [link](#).
- Appendix 3: Thurber Engineering Ltd 2018, *Geotechnical Assessment of Property Fragmentation Forensic Psychiatry Institute, Coquitlam, BC*, CER document A90529-1, [link](#).
- Appendix 4: BGC Engineering 2018, *TMEP Fraser River Crossing – Borehole BH-BGC-BH17-FRA-04*, CER document A89165-1, [link](#).
- Appendix 5: Hatch Mott MacDonald 2015, *Vedder River Crossing Preliminary HDD Feasibility Report*, CER document B324-41, [link](#).
- Appendix 6: BGC Engineering 2018, *Geotechnical HDD feasibility Assessment Thompson River*, CER document C03935-6, [link](#).
- Appendix 7. Universal Pegasus International 2018, *Feasibility Report for Clearwater River Crossing*, CER document B324-1, [link](#).
- Appendix 8: Transmountain 2015, *HDD trenchless construction (types) and video on HDD*, [link](#).
- Appendix 9: Herrenknecht AG, 2015, *Direct Pipe (explanation) company video*, [link](#).
- Appendix 10: Transmountain 2019, *PPBOR Spread 7.4*, CER document C00965-5, [link](#).

BACKGROUND

The estimated \$20 billion pipeline project was purchased for \$4.5 billion from Texas oil giant Kinder Morgan by the federal government in 2018. This creates a conflict of interest for the federal government because the federal government is responsible for regulating pipelines through the Canada Energy Regulator (CER).

Costs on the pipeline have ballooned since the purchase requiring ever greater subsidies from the federal government. Trans Mountain has not provided a cost update since February 2020. This lack of transparency from Trans Mountain is not limited to finances. Trans Mountain's press release about the Thompson River tunnel redrill referred to "technical issues" as the cause of the need to redrill. Trans Mountain claims the Fraser River tunnel problem is due to a "mechanical failure", however the tunneling equipment performed as expected. The Fraser tunnel problem has its origin in the Company's decision to not drill test bores at the crossing and to use HDD contrary to the advice of its experts.

The project is opposed by the Squamish Nation, Tsleil-Waututh Nation and Coldwater Indian Band, who were denied leave to appeal by the Supreme Court of Canada. It also conflicts with Canada's commitment under the Paris Climate Agreement to keep global temperatures from rising above 1.5 degree Celsius. The project crosses 1,300 streams and rivers and would impact numerous drinking water sources along the route, as well as Burnaby Mountain and Simon Fraser University. It would also spell a 7-fold increase in tanker traffic in Burrard Inlet and an increased threat to the endangered Southern Resident Orcas. The Province of British Columbia, the State of Washington, and 20 municipalities oppose the pipeline project, including the Cities of New Westminster and Burnaby.

The existing Trans Mountain pipeline is already a major environmental and public health hazard with a long history of disastrous spills. In June 2020, 50,000 gallons of crude oil spilled from a pump station located above an aquifer that supplies the Sumas First Nation with drinking water. The thirteen 67-year old tanks at the terminus of the pipeline are too close together to put out in the event of a fire, according to the Burnaby Fire Department. The tank farm expansion makes it more difficult for the Burnaby Fire Department to fight fires, according to [a recent affidavit from the Fire Chief](#). 240,000 people live within the 4.2 km radius of the site that is considered an evacuation zone including 32,000 members of the SFU community.

A growing number of insurers have pulled out of the pipeline project; those still involved are facing pressure to divest. In November 2020, the Canada Energy Regulator released a report stating that there is no need for any pipeline expansion if Canada takes measures to curb GHGs. In Sept 2020, [economists warned](#) that the TMX project was no longer financially viable. Indigenous groups, as well as the final report of the National Inquiry into Missing and Murdered Indigenous Women and Girls have pointed out the connection between resource extraction man-camps and [violence against Indigenous women](#).

The coalition of environmental groups opposing the TMX pipeline includes, but is not limited to, Protect the Planet Stop TMX (PPST), Mountain Protectors, Protect the Inlet, Extinction Rebellion Vancouver, STAND.earth, Burnaby Residents Opposing Kinder Morgan Expansion (BROKE), Climate Convergence, Dogwood, Colony Farms Regional Park, Babies for Climate Justice, Sustainabilityteens Vancouver, 350 Vancouver, 350 SFU, and Wilderness Committee.