

## Oil

### Keywords

- > Kinder Morgan
- > Diluted Bitumen
- > Trans Mountain Pipeline
- > British Columbia
- > Tankers

## Introduction & Background

The Kinder Morgan Trans Mountain Pipeline Expansion is a project that would establish a new pipeline, twinning an existing pipeline from Edmonton, Alberta to Burnaby, British Columbia. This is a controversial project due to: the fact that the pipeline passes through neighbourhoods, communities and residential areas; its proximity to environmentally sensitive areas; its implications for increased tanker traffic on marine waterways; and concerns with regard to plans for the pipeline to transport diluted bitumen.

Kinder Morgan is an American energy company, based in Houston, Texas, it is ranked third largest in North America. The publicly traded Kinder Morgan Group retains assets in both Canada and the United States. Its terminals store and manage energy products including coal, gasoline, natural gas, jet fuel and petroleum coke. Kinder Morgan owns Kinder Morgan Energy Partners which functions as the pipeline division of the energy corporation. These pipelines move natural gas, crude oil and other petroleum products including bitumen, which is more commonly referred to as tar sands oil. Kinder Morgan owns and operates the Trans Mountain oil pipeline, connecting Edmonton, Alberta and Burnaby, British Columbia (BC).

In 2013, Kinder Morgan completed the filing process for an application with the Canadian National Energy Board (NEB) for a planned expansion of the Trans Mountain pipeline. This development would twin the present Trans Mountain pipeline with a parallel pipeline transacting the region between terminals in Alberta and British Columbia. The second pipeline would approximately triple the carrying capacity of the entire dual pipeline. This would effectively increase the amount of transported per day from roughly 300,000 to 890,000 barrels. The new pipeline would be employed for the transport of diluted bitumen, which is often referred to as dilbit, for export and refinement outside of Canada.

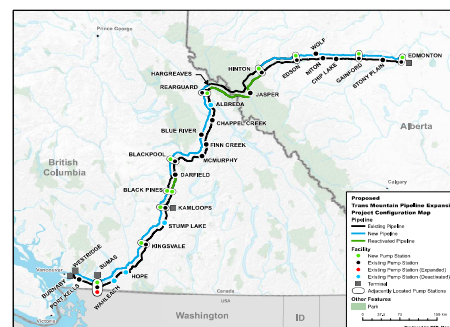


Figure 1: Source <https://www.scribd.com/doc/186152584/Trans-Mountain-Pipeline-System-Map>

The Trans Mountain pipeline has had a number of expansions in its lifecycle. It commenced operation in 1953 with an early addition in 1957. Initially, this pipeline was established to provide for the energy requirements of the Pacific Northwest region by transporting light crude. Prior to 2005 the pipeline was owned and operated by the BC Gas Company. In 2005 Kinder Morgan purchased BC Gas Company, and a substantial expansion project was carried out from 2006 to 2008. This development included improvements to existing stations and the construction of 13 new pump stations.

## Kinder Morgan Trans Mountain Pipeline Expansion Project

The Kinder Morgan Trans Mountain Pipeline Expansion project (Figure 1), if approved, will expand the existing 1,500 km pipeline with a parallel line between Strathcona County (near Edmonton), Alberta and Burnaby, BC. The current pipeline would be utilized to carry lighter and refined oils while the new pipeline would carry heavier oils such as diluted bitumen. The USD 5.4 billion expansion would include laying nearly 994 km of new pipeline and the restoration of an additional 193 km of pipeline. It would also require the construction of 12 new pump stations. A further three terminals will be built at the Westridge Marine Terminal in Burnaby. In addition, the development would incorporate a total of 20 new tanks at the current storage terminals in Burnaby, Edmonton and Sumas, near Abbotsford, BC. The terminal presently accommodates five tankers per month, so the expansion



would increase tanker traffic to roughly 34 per month.

### Conflict and Consequences

The National Energy Board's (NEB) review processes for projects are known to be open, transparent and often lengthy, but this is set to change owing to recent changes in government policy and the authority of the NEB. Legislation passed by the current Conservative Federal Government has ensured the rapid approval of procedures for major projects. Under new legislation the NEB is required to complete the hearings process by July 2015. In an effort to conform to this timeline the NEB has removed space for intervener oral testimonies and the practice of cross-examination of witnesses from all public hearings. More than 400 individuals, communities and organizations with intervener status have thus been blocked from giving oral testimonies or cross-examining witnesses, calling into question the veracity of the review and approval process.

The regions through which the proposed pipeline would pass encompass residential neighbourhoods and sensitive ecological areas. The route could seriously, and in some cases quite adversely, affect hundreds if not thousands of property-owners. The insistence of Kinder Morgan that the project will utilize pre-established right-of-way access from the existing pipeline has been met with unease because of substantial changes to areas surrounding the current pipeline. The planned route would have the pipeline run beneath several schools and it would also be in close proximity to dozens of others. Furthermore, it would be constructed under residential neighbourhoods and shopping centres. Especially worrisome is the proposed route, which would have the pipeline running below aquifers that supply drinking water to Abbotsford and Chilliwack.

Frequent modifications to the pipeline route have left many stakeholders uncertain as to what is taking place, what is to be expected and most

importantly what will be the final route. Given that the regulatory and review process has commenced it is becoming increasingly difficult for other stakeholders to understand what information is to be believed and trusted. These route alterations, which are for the most part unpublicised, have left the impression in the public mind that public participation is being ignored outright or at the very least dissuaded. Many are left wondering if the route will pass through highly populated communities in the Fraser Valley region or the Greater Vancouver area. One of the most recent significant changes to the pipeline route would see a tunnel drilled through Burnaby Mountain.

The Save the Fraser Declaration is a document produced by the Yinka Dene Alliance, to which more than 130 First Nations have become signatories. This declaration unites and declares the First Nations' opposition to the pipeline and the subsequent increase in tanker traffic. In October 2013 members from the Tsleil-Wututh, Squamish and Musqueam Nations protested the pipeline and increased tanker traffic by travelling in traditional canoes along the Burrard Inlet to the Westridge Marine terminal.

The region of Greater Vancouver is very densely populated and could well prove to be a significant impediment to the progress of the pipeline proposal. Many cities, which could also be affected by the expansion, have come out firmly against the project including the City of Vancouver, the City of Burnaby and the District of Abbotsford. In the territory between Yale and Pemberton, the Lower Mainland Local Government Association, which is comprised of 3 regional districts and 33 municipalities, is also opposing the pipeline.

The scope of concerns regarding the pipeline and tankers span terrestrial and marine environments as well as climate change and health. The process by which bitumen is released from the soil involves a great deal of water and energy while contributing a significant volume of greenhouse gases to climate change. One of the more articulated issues involving the marine environment is the substantial increase in tanker



traffic within the Burrard Inlet. The increased risk of spills due to the projected growth in tanker traffic is considerable given the sensitivity of this waterway and its highly productive ecosystem. A diluted bitumen spill would be incredibly detrimental given the composition of dilbit and the vulnerability of this marine system, as dilbit is particularly toxic to marine life. Orcas, which are common to the region, are especially susceptible to the harmful impacts of oil products.

The Kalamazoo River dilbit compound spill provides a clear illustration of the consequences of interactions between a marine environment and diluted bitumen. As the compound separated in water, toxic fumes were released into the air while the heavier bitumen sank to the bottom of the riverbed. Cleaning up such spills is a long and difficult task, and can never be fully successful owing to the accumulation and dispersal of the bitumen material in sediments. Impacts from a dilbit spill in a terrestrial environment are likely to be more localized to habitats and wildlife, unless the spill reaches groundwater tables, which would spread contamination much further and increase the likelihood of significant toxin release.

The impacts on health from exposure to diluted bitumen are still hotly debated but again the Kalamazoo River incident is indicative. In the communities surrounding Kalamazoo River almost 60% of residents experienced symptoms such as headaches, nausea, dizziness, fatigue and coughs. Diluents are composed of a number of solvents, some of which are toxic carcinogens, such as benzene. The exact combination of solvents is not generally known, as it is not a requirement for energy and pipeline companies to make this information available.

There have been 4 large spills involving the Trans-Mountain pipeline since 2005. In 2005, 210,000 litres of crude oil spilled from a ruptured pipeline in Abbotsford, BC. Another ruptured pipeline in 2007 released 232,000 liters of crude oil in the City of Burnaby, BC. A storage facility, once again, in Burnaby, leaked 200,000 litres of crude oil. In 2012 another storage facility leaked an estimated 110,000 litres of crude oil, but this time in Abbotsford, BC.

#### More on this case

- Burnaby Pipeline Watch – <http://www.burnabypipelinewatch.ca/>
- Coastal First Nations – <http://www.coastalfirstnations.ca/programs/anti-oil-tanker-campaign>
- Georgia Strait Alliance – <http://www.georgiastrait.org/>
- Let BC Decide – <http://letbcdecide.ca/>
- NS Nope – <http://nsnope.org/>
- Pipe Up Network – <http://www.pipe-up.net/>
- Real Hearings.Org – [http://realhearings.org/?page\\_id=11](http://realhearings.org/?page_id=11)
- Sacred Trust Initiative. Kinder Morgan Proposal – <http://twnsacredtrust.ca/kinder-morgan-proposal/>, <http://216.187.109.203/~twnsacrd/wp-content/uploads/2013/04/ShortBrochure.pdf>
- Salish Sea Map – <http://www.salishseaspillmap.org/>
- Save Salish Sea – <https://wildernesscommittee.org/salish-sea>
- Tanker Free BC – <http://tankerfreebc.ca/>
- Tar Sands SOS: Save Our Shore – <http://www.tarsandssos.org/>
- Wilderness Committee – <https://wildernesscommittee.org/>

#### This document should be cited as:

Voss, Coral. 2015. The Kinder Morgan Trans Mountain Pipeline Expansion Project in British Columbia, Canada, EJOLT Factsheet No. 33, 4 p.



Concerns regarding the safety of Kinder Morgan's facilities and pipelines are also evident in the US, where the National Response Centre has established that Kinder Morgan has been responsible for approximately 500 pipeline incidents since 1997.

An update on the NEB process states that as of July 15<sup>th</sup> the board will suspend the review of the Trans Mountain Expansion pipeline project as a consequence of significant modifications to the projected route of the pipeline thru Burnaby. A decision is not expected until 2015 with an anticipated release date for the report in 2016.

### Timeline

**2012** – application process commenced by Kinder Morgan

**2012 to 2014** – assessments and restrictive engagement process

**2013** – filing of comprehensive construction and facilities application

**October 14, 2013** – Tsleil-Wututh, Squamish and Musqueam First Nations protest the Trans Mountain pipeline by travelling along Burrard Inlet in traditional canoes

**May 2014** – Tsleil-Waututh First Nations commence legal action

**September 2014** – 13 trees cut down by Kinder Morgan illegally in Burnaby Mountain Conservation Area for test drilling

**September 13, 2014** – protest against Kinder Morgan by demonstrators objecting to the loss of trees in the Conservation Area and any further removals

**September 25, 2014** – City of Burnaby wins ruling to impede any further test drilling in the Burnaby Mountain Conservation Area

**2014 to 2015** – regulatory review

**2015** – originally proposed start date for construction (postponed)

**2016 to 2017** – projected construction dates (new adjusted timeline after postponement)

**2017** – proposed commencement date for operations

### More on this case

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This publication was developed as a part of the project Environmental Justice Organisations, Liabilities and Trade (EJOLT) (FP7-Science in Society-2010-1, under grant agreement no 266642). The views and opinions expressed in all EJOLT publications reflect the authors' view and the European Union is not liable for any use that may be made of the information contained therein. EJOLT aims to improve policy responses to and support collaborative research and action on environmental conflicts through capacity building of environmental justice groups around the world. Visit our free resource library and database at [www.ejolt.org](http://www.ejolt.org) or Facebook ([www.facebook.com/ejolt](http://www.facebook.com/ejolt)) or follow tweets (@EnvJustice) to stay current on latest news and events.