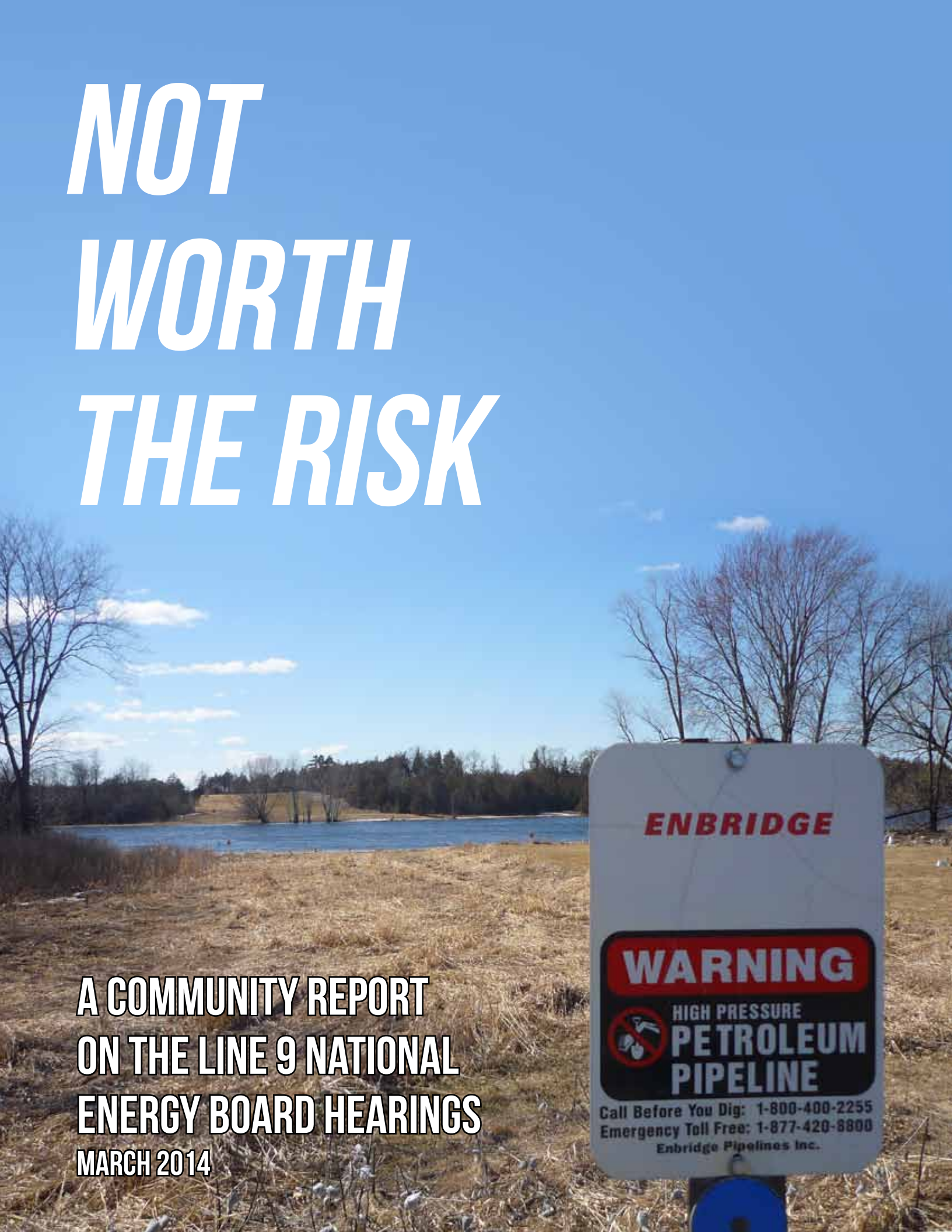
NOT WORTH THE RISK



A COMMUNITY REPORT ON THE LINE 9 NATIONAL ENERGY BOARD HEARINGS

MARCH 2014

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On March 29, 2013, ExxonMobil's Pegasus pipeline ruptured in Mayflower, Arkansas, emptying 795,000 litres of dilbit into neighborhoods. Local residents continued to report health issues many months after the spill. photo: 350.org

INTRODUCTION

In the past few years, we have seen different versions of our possible future: in both Michigan and Arkansas, ageing pipelines whose flows had been reversed spilled and devastated homes, wildlife, waterways and people's health. Chemicals specific to the transport of diluted bitumen poisoned the air, while the heavier bitumen sank in the waterways, making it near impossible to clean.

Enbridge's Line 9 pipeline – a 38 year old pipeline that is almost identical in build and age to the Line 6B pipeline that ruptured into the Kalamazoo river – seeks to gain approval to reverse its flow, increase its capacity, and carry a dangerous heavy crude known as dilbit, or diluted bitumen. Line 9 runs through sensitive ecosystems and important farmlands throughout Southern Ontario and Quebec, and passes within 50 km of over 9 million people, including 18 First Nations communities.[1]

But Enbridge's proposal to send tar sands through ageing infrastructure isn't being considered carefully enough. Instead, the project is being pushed through without as much as an environmental assessment. Additionally, the National Energy Board (NEB) shut out voices from the public in the approval process of this proposal, giving only 2 weeks to fill out a lengthy application in order to participate in the NEB hearings.[2]

Despite the many bureaucratic hoops, the NEB hearings held in Montreal and Toronto in October 2013 heard from many concerned residents, First Nations band councils and advocacy groups, contributing a wealth of knowledge to the debate around Enbridge's Line 9 reversal proposal. This report is a compilation of many of the strongest arguments and information heard during those hearings, and is made with the aim of educating the communities that would be impacted by a spill or rupture along the pipeline route, urging that this project be opposed.

Rouge River, Scarborough, ON.
Photo: eycandy.blogspot.com

SO MUCH AT RISK: WATERSHEDS & ECOLOGICALLY SENSITIVE AREAS

"No other crude oil pipeline in Canada has the same proximity to human activity, water and economic activity" -Goodman Group Report

ONTARIO'S WATERSHEDS AND POTENTIAL WATER & FOOD CONTAMINATION

Line 9 crosses every major tributary that flows into Lake Ontario. When considering the GTA, a pipeline break occurring at the Credit River, Etobicoke Creek, Humber River, Don River, Highland Creek or Rouge River would result in a significant threat of benzene contamination of source water at one or more of Toronto's four intake locations.[3] The benzene levels would exceed the Ontario drinking water standards, resulting in reduced capacity for Toronto to provide water to its residents for some time.[4] Similarly, Montreal's drinking water could be contaminated in the case of a spill at the pumping station upstream of the St. Lawrence River.[5]

Diluted bitumen, which Line 9 is proposed to carry, is composed of not only benzene, but also polycyclic aromatic hydrocarbons and n-hexane, toxins that affect the human central nervous system.[6] Currently, Toronto's drinking water treatment plants cannot safely eliminate these compounds.[7] Additionally, there is no evidence that there is an appropriate benzene monitoring program along the route of Line 9.

In addition to drinking water, important farmlands are also at risk. Surrounding Waterloo, Ontario, a wealth of rich farmland is fed by the Grand River watershed, which is crossed by Line 9. Local food systems are positioned to be at risk of an oil spill. The land is intensively used for both mixed farming as well as cash crops, with 75 per cent of the watershed actively farmed (on approximately 6,400 farms). The frequent tilling and planting of this farmland makes these nutrient dense soils more permeable, which in turn makes it easier for contaminants to penetrate and pollute the soil and groundwater alike.[8]

SENSITIVE AND IMPORTANT ECOSYSTEMS

THE GRAND RIVER WATERSHED

As Line 9 crosses the Grand River and its tributary the Nith River, there is an immediate danger of a spill into this water system.

According to the Grand River Watershed Characterization Report,[10] the Grand River watershed is home to some of the most complex groundwater systems and most specialized wildlife habitats in the province. The Grand River Conservation Authority has documented that 80% of the classified "Species at Risk" in Ontario can be found in the Grand River watershed, including Endangered Species such as trumpeter swans and the bald eagle.[11]

THE NIAGARA ESCARPMENT[12]

Musician Sarah Harmer's intervention focused on the significance and fragility of Mount Nemo, part of the Niagara Escarpment, which is a Unesco World Biosphere Reserve in Southern Ontario. Mount Nemo, at mile point 1875, appears to be where Line 9B is at its highest elevation. It is a highly porous geological landscape known for its caves, sinkholes and springs. It's also known for its ancient ecosystems, including white cedar trees that are over 1,000 years old. Mount Nemo relies entirely on precipitation for replenishing its aquifer and is a prime source water area. This landscape is also home to areas of natural scientific interest (ANSIs) including Lake Medad and the Medad Valley.

In Harmer's organic family farm (that relies upon well water) and the surrounding forests and wetlands, there are federally endangered species at risk, including the Jefferson salamander. The area is designated by the Ontario Ministry of Natural Resources as provincially significant and protected. However, even though Line 9 crosses these protected areas, Enbridge shows no knowledge of the protected species at risk habitat or the provincially significant wetlands.

THE ALGONQUIN TO ADIRONDACKS CORRIDOR[13]

The Algonquin to Adirondacks Corridor runs from east of Belleville to east of Cornwall. It constitutes the only viable north-south passageway for terrestrial animals in this part of the continent, because of the Great Lakes to the west and the widening St. Lawrence River to the east. As this area is key to migration between the Boreal Forest in the north and the Appalachians in the south, this area will play a key role in adaptation to climate change.

250 kilometres of Line 9 runs right through this region, which supports a rich and bio-diverse ecosystem, as well as a large number of species at risk. In Ontario's Thousand Islands National Park alone, there are 57 confirmed federally designated species at risk.

This area is also uniquely fragile, owing to its shallow water table, lack of soil cover, fractured bedrock and geological formations such as caves or sinkholes. These factors would promote the quick movement of contaminants into aquifers. The Cataraqui Region Conservation Authority, whose region covers a fairly large part of the Algonquin to Adirondacks region, reports that groundwater aquifers in the region provide drinking water for about one-fifth of the residents, and that the current and proposed contents of Line 9, "have the potential to permanently despoil groundwater via a leak or spill event".

THE ROUGE RIVER

In 2009, Enbridge reported that 3 meters of pipe in the bank of the Rouge River, the future site of Canada's first urban national park, had become exposed, requiring additional cover.[14] Three years later, in August 2012, Adam Scott, a campaigner with Environmental Defence, found the exposed piece of pipe, with what looked like concrete slabs sloppily laid over top of it.[15] Not only is the park home to many threatened or endangered species, but the Rouge River also flows into Lake Ontario, which supplies drinking water for millions.

Photo of Rouge River, by Adam Scott

An Enbridge construction site near the Don River in Toronto. Photo: Michael Toledano

THE LIKELIHOOD OF A LEAK OR RUPTURE

By now, most people have heard the data on Enbridge's horrendous record of spills, averaging one spill every 5-6 days over a 10-year period.[16] Evidence heard during the NEB hearings illuminated this data by evaluating the stats behind Enbridge's leak detection system, as well as their own reporting regarding the effectiveness of their technology for crack and corrosion detection. This studied approach exposes the scary realities behind the safety of this 1/4" thick pipeline.

LEAK DETECTION

In response to an Information Request brought by the Ontario Pipeline Landowners Association (OPLA), Enbridge admitted that "there are no inline inspection (ILI) tools available that can accurately detect pinhole corrosion."[17] With concern, OPLA then noted that pinhole leaks have resulted in the release of over 250,000 litres of oil from Enbridge's Norman Wells pipeline in 2011 (a spill that Enbridge initially reported at 4 barrels).[18]

Regarding Enbridge's leak detection system, they acknowledge that their computation pipeline monitoring system "will not detect a leak below 70.5 [cubic metres], 443 [barrels] over a two-hour period".[19] That works out to 588 litres per minute. But, even at that rate, it would take 2 hours for the system to signal a spill. Outside of that, foot patrols and fly overs constitute Enbridge's leak detection system, so it should be no surprise that – by Enbridge's own admission – more than 30 per cent of the releases in Line 9 were first reported by third parties.[20]

In their submission to the NEB, OPLA presented stories of 3 landowners who were informed during one of Enbridge's integrity digs that their soil and water were contaminated, but the sources of contamination have yet to be determined. In one case, contamination may have negatively affected the health of a farmer's livestock, and in another, has indefinitely shut down a horse farm. Contamination from petroleum products is a risk that landowners face, with pipelines running through their properties.[21]

DETECTING CRACKS AND CORROSION: INLINE INSPECTION TOOLS

Enbridge uses inline inspection (ILI) tools to confirm the integrity of its pipeline system. It involves sending a "smart pig" loaded with ultrasound or electromagnetic sensors to check for cracks and corrosion.[22] We know about the accuracy of these tools, because when Enbridge digs up pipe, we can compare the actual damage on the pipe to what the ILI tool predicted would be present. In these instances, we learn that these tools have what Enbridge's engineering reports call a "non-conservative bias". This means that they under-report on damage, almost always giving a rosier picture than the reality of their pipeline integrity.

"Features" is the innocuous term that Enbridge uses to describe pipeline defects, specifically cracks and stress corrosion cracking (SCC). In addition to under-reporting the severity of pipeline "features", their tools often do not detect this damage in the first place.[23] When the ILI tool does not catch a damaged piece of pipe, it is called a "false negative". These false negatives, or unreported defects in the pipe, sometimes make up over 20% of the total "features", a dismal margin of error.[24]

Another troubling aspect of Enbridge's Engineering assessment is that it predicted failure pressures of 687 – 818 psi at several locations.[25] This is troubling because Enbridge is requesting a maximum operating pressure of 1000 psi, despite the fact that Line 9 has not operated at a pressure of greater than 666 psi in the last 10 years.[26]

HYDROSTATIC TESTING

Surely, one of the upsets of the NEB hearings (from Enbridge's perspective) happened when the Ontario Ministry of Energy gave their intervention. Despite its historic alliance with industry, the Ministry slammed Enbridge's safety culture and requested that the board require an independent engineering assessment and hydrostatic test.[27] Both the Equiterre Coalition[28] and the Ontario Pipeline Landowners Association[29] echoed this request for a hydrostatic test. The engineer behind the Accufacts report went even further, and argued that the pipeline would have a 90% chance of failure[30] in the near term were a hydrostatic test not to be performed.

A hydrostatic test seems to be a fairly simple operation. It involves running high-pressure mixture of water and chemicals through the pipe and seeing what happens. According to the Ministry, when a pipeline has been inactive for more than 12 months, as occurred on Line 9 in 1997, Canadian Pipeline Standards require that a hydrostatic test be conducted to re-establish the maximum operating pressure of a pipeline.[31] Line 9B has had two hydrostatic tests, one prior to being placed into service in 1976 and the second prior to the decision to reverse Line 9 in 1997.[32]

Despite the fact that hydrostatic tests seem to be standard in the industry, Enbridge emphatically rejects that this test is needed for Line 9, which has been minimally operating for over a year. Enbridge goes so far as to say that "there are potential detrimental effects of hydrostatic testing; including the potential to induce or grow cracks that do not fail during the test but may continue to grow in-service. Hydrostatic testing that resulted in propagating crack growth would obviously be counterproductive to the efforts to eliminate pipeline failures." [33]

Perhaps the only clear conclusion to draw from these contradicting reports is that this pipeline is structurally unsafe and should be decommissioned.

LOCATION OF SEGMENT	REPORTED DEPTH OF WORST CORROSION	ACTUAL DEPTH OF CORROSION	# OF REPORTED FEATURES	# OF UNREPORTED "FALSE NEGATIVE "FEATURES
MONTREAL TO CARDINAL	0.8 MM (12.5% OF WALL THICKNESS)	1.6 MM (25% OF WALL THICKNESS)	360	43
CARDINAL TO HILTON	.8 - 1.6 MM (12.5-25% OF WALL THICKNESS)	2 MM (31% OF WALL THICKNESS)	492	113
HILTON TO WESTOVER	1.6 MM (25% OF WALL THICKNESS)	2.2 MM (35% OF WALL THICKNESS)	190	50

This chart is made up of data disclosed in Enbridge's Engineering Assessment B1-15. The data was collected from an excavation program, based on the three crack tool runs preformed between 2006 and 2009, between the Westover terminal (near Hamilton, ON) and Montreal. Enbridge completed a total of 182 excavations involving 1042 reported features during the four-year excavation program.[34] The data clearly shows the "non-conservative bias" in Enbridge's crack and corrosion detection system, which underestimates the damage to the pipe.

DILBIT – DOES IT POSE A GREATER RISK?

Dilbit poses a greater risk to waterways because it is heavier than crude oil, and it is more dangerous to people's health within the spill zone because of the toxic gases it releases that are specific to the transport of bitumen. But, is a pipeline carrying dilbit more likely to spill?

According to a paper entitled "Tar Sands Pipeline Safety Risks" by the NRDC (National Resources Defence Council), the Alberta pipeline system – which routinely carries dilbit – has [...] about 16 times as many spills due to internal corrosion as the U.S. System.[35]

The same document contains a chart of diluted bitumen's characteristics. Among other characteristics, including viscosity and abrasives, quartz and silicates, the chart shows both a higher acidic content in diluted bitumen and a higher sulphuric content than in conventional oil. Additionally, dilbit must be pumped at a higher pressure, increasing risk of failure.[36]

According to the Accufacts Report, written by pipeline expert Richard Kuprewicz, the variation of pipeline material creates greater risk of spill. Since dilbit can vary more in composition than light conventional oil, there is a greater need for 'pressure cycling' (the variation of operating pressures of a pipeline). The greater swings in the levels of operating pressures can create cracks in a pipeline.[37] Kuprewicz estimated a 90% chance of a rupture along Line 9.[38]

THE ALBERTA PIPELINE SYSTEM – WHICH ROUTINELY CARRIES DILBIT – HAS ABOUT 16 TIMES AS MANY SPILLS DUE TO INTERNAL CORROSION AS THE U.S. SYSTEM

ENVIRONMENTAL CONDITIONS AND HAZARDS

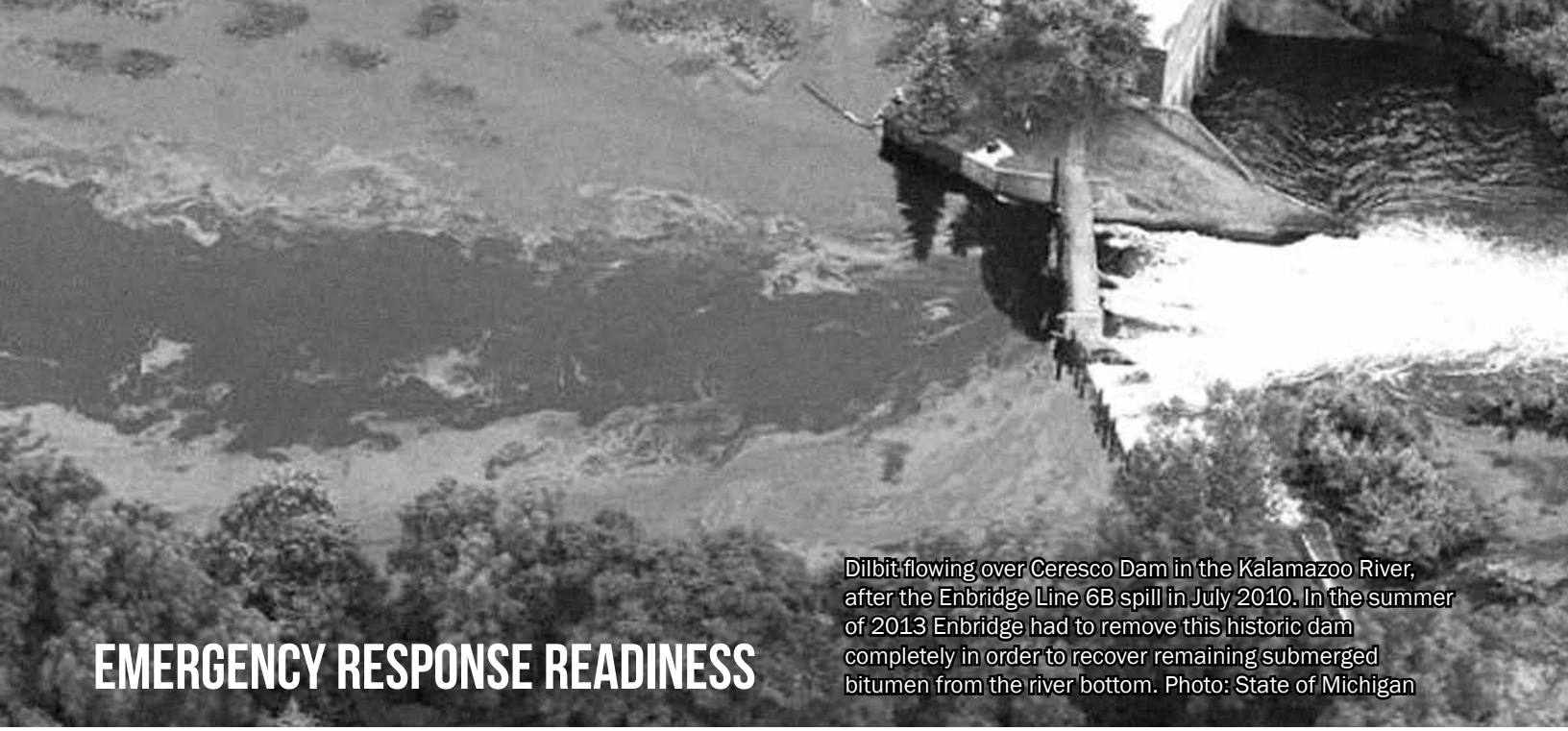
When assessing the safety of a proposed pipeline, it is important to examine the environmental conditions and hazards associated with the area through which the pipeline runs. Intervenors in the NEB process brought concerns related to flooding, earthquakes, sinkholes, and construction along the pipeline route, alongside concerns that relevant emergency first responders and other regional authorities were not notified about pipeline plans or the associated risks and response plans for possible leaks and ruptures.

In Toronto, multiple intervenors brought up their concerns with the impact of flooding on pipelines. Intervenor Louisette Lanteigne cited a report "Toronto's Future Weather and Climate Driver Study", which predicts that Toronto will experience more extreme rainstorms and marked rainfall increase, as it did last summer with unprecedented flooding.[39] She was also concerned that Ayr, where the pipeline crosses the Grand River, is in a flood zone. She points to New Hamburg, a community where the housing is literally in the flood zone and sits upstream from where Line 9 crosses the Grand River. Louisette predicts that in a flooding situation, debris from New Hamburg, as well as on-going degradation from ice jams, pose a significant threat to the safety of the pipeline where is crosses this important body of water.[40]

Marilyn Eriksen, a retired public health professional with industry and government experience in quality assurance, risk assessment and auditing for compliance to health and safety standards, pointed to consequences of flooding in the Toronto area, such as a sinkhole that had swallowed up cars in the Finch Avenue culvert.[41] Her concern is that similar, predictable flooding could compromise the ground supporting Line 9, and her worries are not without precedent.

In June 2013, Enbridge's own Line 37 in Alberta spilled.[42] By Enbridge's own admission "the leak of Line 37 was caused by heavy rainfall which triggered ground movement on the right-of-way." [43] Meanwhile, Eriksen insisted, "there is no evidence that Enbridge has shown due diligence in taking proactive action to assess the impact of a pipeline release on Toronto's sewer infrastructure and the cumulative risk of a pipeline release and extreme weather flooding." [44]

In addition to concerns about flooding, Lousiette Lanteigne also brought a report titled "Earthquake Zones in Eastern Canada", which illustrated her concerns about seismic activity along the pipeline route.[45] She pointed out that, according to Enbridge's own engineering reports, heavy seismic activity corresponded with more reported pipeline defects, such as in the region from Hilton to Cardinal. This area is impacted by the Lower St. Lawrence Siesmic Zone, where about 60 events are recorded annually, most under the river itself, and the Western Quebec Seismic Zone, where there is an earthquake every five days on average.[46] In the past, this area has been shook by three significant earthquakes (over 5.5 on the Richter scale) in 1732, 1935, and 1944.[47]



Dilbit flowing over Ceresco Dam in the Kalamazoo River, after the Enbridge Line 6B spill in July 2010. In the summer of 2013 Enbridge had to remove this historic dam completely in order to recover remaining submerged bitumen from the river bottom. Photo: State of Michigan

EMERGENCY RESPONSE READINESS

In researching the consequences of Line 9 in their regions, many intervenors were upset when they discovered that local authorities and emergency first responders had no idea about the Line 9 project, let alone what to do in case of an emergency.

According to the City of Toronto's submission, "neither the TTC, Toronto Fire Services, nor Enbridge appear to have any specific contingency plan to manage a leak of petroleum should this occur near the (Finch) TTC entrances. The top stair of the Bishop Avenue stairwell is at grade and provides no barrier to the flow of the product should there be a release. If any petroleum product was (sic) discharged either down the stairs or the escalators, or by other routes into the TTC concourse, platform or track level, there would be an enormous risk to thousands of daily passengers and TTC workers." [48]

Amit, a student at York University, corroborated this finding. After approaching the fire service ward, he "found that the staff was not informed about this project." Amit spoke to Nelson Watt, at the time Acting Captain of Ward 8, who confirmed that they had no knowledge of this project and Enbridge's response plan in case of a spill.[49]

Amit also checked in with members of the Station 141, a fire station at the Keele branch near York University. Members confirmed that they too were not informed about this project. [50]

The Algonquin to Adirondacks Collaborative similarly shared their concern that the staff at Thousand Islands National Park were not notified by Enbridge as a part of their process to notify entities that might be affected, despite the Park's proximity to the pipeline.

LOCAL AUTHORITIES AND EMERGENCY FIRST RESPONDERS HAD NO IDEA ABOUT THE LINE 9 PROJECT, LET ALONE WHAT TO DO IN CASE OF AN EMERGENCY.

"The staff has not been consulted with regard to the general locations of the Park's high value, at risk areas, nor to participate in any table top or spill response exercises, nor to solicit their feedback on the pipeline," the Collaborative explained in their oral intervention. [51]

A natural gas pipeline explosion in Southern Manitoba on Jan. 25, 2014 left 4,000 without heat.[52] Dilbit is a chemical mixture of bitumen and diluent (usually a natural gas condensate).

Additionally, an unusually high number of pipeline and rail explosions involving Bakken oil have led the Pipeline and Hazardous Materials Safety Administration (PHMSA) to warn that Bakken oil is more flamable than other crude oil.[53] Bakken crude has been identified by Enbridge as one of the crudes that could be shipped on Line 9B. Photo by Ken Peters, SteinbachOnline.

Many First Nations people attended the NEB hearings. photo: Micheal Toledano, Vice Magazine

FIRST NATIONS CONSULTATION AND TREATY OBLIGATIONS

Line 9 passes within 50 km of 18 First Nation communities, and impacts the watersheds of several more. The Two Row Wampum, the Nanfan, and the Haldimand treaties, the Royal Proclamation, the Simcoe Deed, the Canadian Charter of rights and freedoms, and the UN declaration on the rights of Indigenous peoples, are a few of the many treaties and agreements that are being infringed upon by the Line 9 project proposal.[54]

The responsibilities outlined in these treaties include ensuring that free prior and informed consent is sought from Indigenous nations when a project that may impact them is proposed, and that real consultation on such projects – not simply notification and follow-up – takes place before they are permitted to move forward. If a corporation is undertaking a project, the NEB must still ensure the duty to consult is undertaken, and in this case, Enbridge must not move forward with their plans until that duty is honoured.[55]

Evidence submitted by intervenors including Mohawk Council of Kahnawà:ke[56], Chippewas of the Thames First Nation and and Aamjiwnaang First Nation[57] indicate that neither the NEB nor Enbridge have honoured the treaties in Line 9's approval process. Meanwhile, other native communities have protested[58] the Line 9 proposal outside of the NEB process.

According to Amanda Lickers, member of Six Nations of Grand River and an intervenor with Rising Tide Toronto, Enbridge never contacted Haudenosaunee communities along the shores of the St. Lawrence River, Lake Ontario or Lake Huron, such as the Tonawanda Senecas or the Onondaga Nation, whose watersheds would be directly impacted by a bitumen release. Lickers also investigated unresolved land claims along Line 9's route. She found several unresolved land claims, despite Enbridge's claims that they were not aware of any land claims along the route.[59]

Drummers from Aamjiwnaang First Nation led a march outside Metro Convention Hall on Oct 19, 2013, where over a thousand people rallied to opposed the Line 9 revesal proposal. Photo by Michael Toledano.

TREATIES IMPACTED BY THE LINE 9 REVERSAL*

"We need to recognize that we are bound by international and nation-to-nation treaties and agreements – some made long ago, others more recently – that establish how relations are to move forward with peace, respect, and friendship between the Canadian crown and Indigenous nations, and we need to act accordingly."

– Grand River Indigenous Solidarity presentation to NEB

THE TWO ROW WAMPUM TREATY (1613 AND 1664)

This treaty, recorded in a wampum belt, outlines a model of coexistence between the Haudenosaunee and settlers. It is a non-interference agreement based on the principles of peace, respect, and friendship. In order to make decisions about our shared landbase without interfering in the other party's course as a society, following the spirit of this agreement requires consultation and free, prior, and informed consent. This has not occurred for the reversal of Line 9.

FORT ALBANY (NANFAN) TREATY (1701)

The Nanfan Treaty assures the protection of Six Nations' ability to hunt and fish in territory extending across the majority of southern Ontario.

ROYAL PROCLAMATION (1763)

The Royal Proclamation is a document that set out guidelines for European settlement of native territories in what is now North America. The Royal Proclamation explicitly states that native title has existed and continues to exist, and that all land would be considered their land until ceded by treaty. The Proclamation forbade settlers from claiming land from the Indigenous occupants, unless it has been first bought by the Crown and then sold to the settlers. The Royal Proclamation further sets out that only the Crown can buy land from Indigenous peoples.

HALDIMAND TREATY (1784)

Six Nations was given a tract six miles wide on either side of the Grand River in recognition of their role defending Upper Canada during the American Revolution and in compensation for their lands lost in what is now the United States. This tract, "which Them and Their Posterity are to enjoy forever," extends along the entire length of the Grand River, which Line 9 crosses.

SIMCOE DEED (1793)

This agreement was made by the Haudenosaunee with King George III. It holds that lands designated as "reserve lands" are strictly forbidden to any non-native. This is important because of a current outstanding land claim in Tyendinaga territory that is likely to render Enbridge in violation of the Simcoe Deed.[60]

HURON TRACT TREATY (1827)

Negotiated over a period of 9 years, the Huron Tract Treaty took 2.1 million acres from 18 Chippewa bands, including Aamjiwnaang First Nation, and the Chippewa of the Thames. In the Treaty, the Aamjiwnaang First Nation was granted 10,280 acres to be used in perpetuity to pursue hunting, trapping, fishing, and cultural lifestyles. Today, Aamjiwnaang holds just 3,100 of those acres, the remainder of which was stolen or forcibly surrendered in order to build 'chemical valley', an area termed "the most polluted in North America" by the World Health Organization in 2011.[61]

CANADIAN CHARTER (1982)

Section 35 of the Canadian Charter recognized and affirmed the existing treaty rights of the Indigenous peoples of Canada, effectively reaffirming the Royal Proclamation of 1763 in the process. With non-compliance of the above treaties and agreements, Enbridge Corp. and the Crown are in contravention of the Canadian Charter.

UNITED NATIONS DECLARATION ON THE RIGHTS OF INDIGENOUS PEOPLES (2011)

This Declaration, to which Canada is a signatory, includes many stipulations to ensure the rights of Indigenous peoples with regard to land, culture, and political self-determination. Paramount among these is the necessity of free, prior, and informed consent for decisions impacting Indigenous peoples or lands.

*This is an incomplete listing of the treaties impacted by the Line 9 reversal and expansion project.

IS THIS WHAT DEMOCRACY LOOKS LIKE?

Nearly 1000 people braved the rain outside the Metro Convention Hall in Toronto to protest Line 9 on Oct 19, 2013, while the NEB hearings were scheduled to take place inside. Photo: Mike Roy, The Indignants

"The weekend after the deadline, my husband, my son and I, spent one afternoon going door-to-door just west of Yonge along the pipeline and found that not one member of the houses we visited knew about the pipeline or the public consultation. A few who voiced interest in commenting were surprised to learn that an application to be considered to comment was required and that the deadline to do so was past." - Marilyn Eriksen[62]

The NEB process for approving the Line 9 reversal and expansion proposal drew criticism early for its barriers to public participation. Being the first major project to be assessed under the Harper government's controversial Bill C-38, the Line 9 NEB process limited who could speak in the hearings and required a 9 page application[63] – due long before most of the public had even heard of Line 9 – for all those wishing to engage in the process, including written comments.

Many intervenors did their own surveys of communities that would be directly impacted by Line 9. What they discovered was that these residents were completely unaware that they lived next to a petroleum pipeline, let alone that this pipeline was seeking approval for substantial changes.

Nicole Goodman, a political scientist who studies political participation and a Burlington resident, conducted an anonymous survey of Burlington residents in July of 2013 to gauge their informedness of the proposed project and their supportiveness of the three proposed changes requested by Enbridge. "Evidence suggests that this process and information efforts undertaken previous to its commencement do not qualify as meaningful public consultation," Goodman testified to the NEB.[64]

"First, there is not public support in Burlington for the passage of this project," Goodman explained. "Second, while a majority of respondents opposed all prospective changes, there is stronger opposition voiced with respect to the proposed increase of capacity and the strongest opposition to the transportation of bitumen or dilbit. An overwhelming majority, 99 percent of respondents, expressed concern about the project."

Durham CLEAR, a community group in Durham, Ontario, held three public meetings in three different areas of the region. Their surveys of residents found people overwhelmingly did not support the current project. Scoring the results against other oil delivery options, the current Line 9 reversal plan scored last amongst meeting attendees.[65]

Other intervenors had different methods of surveying residents along the line. Emily Ferguson knocked door to door in Corbyville, ON to make sure that residents whose houses backed right onto the right-of-way of Line 9 knew of an Enbridge-sponsored "open house" in the region. "None of them had any knowledge of the meeting," explained Ferguson to the NEB, "and some residents didn't even know the Enbridge Line 9 oil pipeline shared the right-of-way with the TransCanada gas line behind their homes." [66]

Similarly, Rick Munroe, an intervenor with the National Farmers Union-Ontario, approached people at the Fountainhead appartments in North York. "Every Fountainhead/MetCap staff person with whom I spoke indicated no awareness whatsoever of any nearby pipeline," he stated in his written evidence to the NEB. He also pointed out that this contradicts Section 33 of the Onshore Pipeline Regulations which states, "A company shall establish and maintain liaison with the agencies that may be involved in an emergency response on the pipeline and shall consult with them in developing and updating the emergency procedures manual."[67]

ECONOMICS OF LINE 9B

The economics of this project have been its major (perhaps only) selling point, but it is a false economy. In this section we will mainly look at the findings of The Goodman Report, which was conducted by The Goodman Group (TGG) submitted to the National Energy Board (NEB) on behalf of Equiterre.

As stated by Enbridge, 'Line 9B, unless it is reversed, would be idled when Line 9A is reversed.'[68] Therefore, if Line 9B is not approved it will remain idled and, 'TGG estimates that the economic benefits and costs of the reference case (i.e. Line 9B idled and no capacity expansion for Line 9) to Canada would therefore be negligible and round off to zero. The following economic benefits and costs are measured relative to a reference case that has essentially zero economics benefits and costs.'[69]

ESTIMATED COST OF SPILL = $1-10 BILLION, ENBRIDGE'S INSURANCE = $685 MILLION

BENEFITS IN THE PROVINCIAL AND NATIONAL ECONOMIC CONTEXT

Virtually all of the economic benefits associated with this project are attributed to the cost savings Quebec refineries will have from inland oil (vs offshore oil), as seen in the Demke Evaluation (the evaluation of economic impacts of the Project prepared for Enbridge).[70] This should be challenged for a number of reasons:

1. Independent economic analysis conducted by experts representing Suncor and Valero estimates that the "extraordinary discounts" on Canadian crude will be eliminated by 2016. This means that the refineries in Montreal will not benefit economically from Line 9 reversal to the degree that Enbridge purports.

2. Even if we follow the Demke Evaluation, it is based on information that is over one year old. 'Meanwhile, crude markets and pricing differentials continue to evolve very rapidly.'[71]

3. The Demke evaluation also assumes that 'the cost differential between inland and offshore crudes will substantially increase over time. But large pricing differentials between inland North American and offshore global crudes may not be sustainable given evolving markets conditions. Thus these benefits could be of considerably smaller magnitude than assumed by Demke and claimed in the Enbridge Application.'[72]

4. Annual refinery cost savings are assumed to average about $440 million over the first 5 years of Project operation (2014-2018), $560 million over the next 5 years (2019-2023), and $900 million over the following 20 years (2024-2043).[73] Therefore TGG, 'concluded that [the] overall Project benefits are less than $1 billion/per year and likely less than $0.5 billion/year, especially in the near-term.'[74]

5. 'When [economic benefits assumed by the Demke Evaluation and claimed in Enbridge's application are] viewed in the relevant context of the Quebec, Ontario, and Canadian economies, economic benefits for the Project are always much less than 1% of the total economic activity. Line 9 traverses Canada's economic heartland. The economic activity along Line 9 is far more significant than any economic activity that will result from the Project.'[75]

6. 'Finally, the Project will not result in lower prices for Canadian consumers (notably in Quebec and Ontario). Refiners want access to lower cost crudes in order to be more profitable, rather than to pass these savings onto the consumers.'[76]

It is also notable that Quebec refineries are still viable despite the outcome of the project and are not contingent upon the Line 9B project approval.[77]

DEBUNKING THE JOBS ARGUMENT

Regarding Line 9, Mike Harris wrote the *Financial Post* suggesting, 'Ontario will gain 3,250 person years of direct and indirect employment, and Quebec will gain 1,969 person-years [over three decades].'[78] Breaking down the math, this translates at best to 108 jobs per year for 30 years related to Line 9 in Ontario, and about 66 in Quebec. Even Enbridge estimates that only 200 jobs per year over the period 2013-2043 once the Project is constructed in operation.[79] Compared to a report by Blue Green Canada, which describes how the annual $1.3 billion federal subsidies to the oil and gas industry[80] could create 18,000 more jobs in the clean energy sectors, it's clear the Line 9B Project isn't providing Ontario with the most economical desireable opportunities.[81]

Enbridge is not committed to providing employment for Canadians. Pat Daniel, president and CEO of proponent Enbridge Inc., was quoted saying 'They [PetroChina] have made the point to us that they are very qualified in building pipelines, and we will take that into consideration when we are looking for contractors ...It's an open bid process. They are a very big organization, they build a lot of pipelines, and they would love to be involved from what they have told me.'[82] While this quote was in reference to Enbridge's Northern Gateway project and not Line 9, it demonstrates Enbridge's only aim is to maximize profits for themselves, not employ Canadians.

BREAKING DOWN THE MATH, THIS TRANSLATES AT BEST TO 108 JOBS PER YEAR FOR 30 YEARS RELATED TO LINE 9 IN ONTARIO, AND ABOUT 66 IN QUEBEC.

RISKS OUTWEIGH POTENTIAL BENEFITS – COST OF SPILL

As discussed earlier in this report, there is a 90% chance of a rupture along Line 9. TGG finds that, 'due to Line 9B's extraordinary proximity to people, water and economic activities, the rupture costs of the Project, under a range of pipeline malfunction/accident possibilities, vary from significant to catastrophic.'[83]

Further explained, a $1 billion economic cost is probable if Line 9B ruptures in a High Consequence Area (but not an urban setting), while if it were to happen in an urban setting such as Toronto, these costs could escalate to multi-billion dollar damages ($5-10 billion) when key infrastructure is affected and could even involve loss of human life.[84] It is important to note that these cost estimations are based on market economics and do not include less predictable costs such as the loss of human life.[85]

Among the densely populated areas Line 9B threatens are Toronto Pearson Airport, York University, Toronto's Finch Subway Station[86], not to mention the petro chemical corridor (with serious fire and explosion possibilities) and densely populated communities.[87] 'Thus a pipeline rupture could potentially affect large numbers of people, and damage and disrupt key infrastructure.' [88] These potential hazards are important to highlight, as Line 9B is a unique project with extreme risks that should be evaluated further by the Province of Ontario.

ONTARIO TO FOOT THE CLEAN-UP BILL OF SPILL ON LINE 9B?

The estimated spill costs of $1-10 billion are particularly troubling as Enbridge reports it only has general liability insurance covering up to $685 million.[89]

An alarming example of who may foot the bill can be seen from the Lac-Mégantic disaster:[90] Montreal, Maine and Atlantic Railway (MMA) has filed for bankruptcy and with the lawsuits and growing cleanup costs the company estimates the cost will surpass $200 million. "'[MMA] was depending on its insurers to start cutting cheques to address the contamination." One expert in civil responsibility has questioned whether the company's insurance would be enough to cover the huge costs and said taxpayers could be stuck with a bill in the hundreds of millions of dollars.' [91]

Already, '[Federal Transport Minister Lisa Raitt] said Ottawa would work with the Quebec government to ensure the cleanup would continue. Each government has promised $60 million for emergency assistance and longer-term reconstruction.' [92]

The relevance of this to the Line 9B project is clearly outlined here:

'The Lac-Mégantic tragedy is relevant to the current Enbridge Project for the following reasons:

'1. It demonstrates the consequences of a crude oil accident in a small town by a lake, thus proximate to people, water and economic activity.

2. Bakken crude, which caused the explosion and which is highly flammable, has been identified by Enbridge as one of the crudes that could be shipped on Line 9B.

3. In addition to the devastation of the town, there has been significant release of crude into soil, air and water (5.7 million litres).

4. There are serious concerns about who will bear the financial responsibility for the disaster.

'Although Lac-Mégantic was devastating and may even exceed the costs of the Line 6B spill, it is nowhere near a worst-case scenario for the Project. A large pipeline under pressure such as Line 9 can spill far more than 70 tank cars.' [93]

The City of Toronto is facing a $60 million price tag after the flooding in July, 2013 - this does not include the $850 million in claims for the Insurance Bureau of Canada. Photo: Randy Risling, Toronto Star via google images

THE BIGGER PICTURE – TAR SANDS AND CANADA'S ECONOMIC FUTURE

On top of the very subjective benefits for Ontario and Quebec, one must consider the bigger picture and the roles pipelines play in climate change to fully understand the 'false economy' of extracting (and therefore transporting) oil. Line 9B, and various proposed pipelines in Canada are intended to triple oil sands production by 2035.[94]

The Massachusetts Institute of Technology (MIT) reports that when a global price on carbon emerges to prevent climate change, which is happening around the world as people witness extreme climate change, the oil sands will become economically non-viable.[95]

Line 9B's role in allowing the tar sands operation to continue and expand could not be submitted as evidence in the NEB Hearings. Consequently, environmentalists, concerned residents and the like are forced to address each new fossil fuel project like a separate piece of the puzzle, like nothing is connected. This is how these industries get away with making millions and dumping the costs on everyone else, as outlined above. The fact of the matter is that climate change is happening and is caused by the choices of human beings.[96] This is why it is so imperative that our Provincial Government steps up where the Federal Government refuses to and demand an independent and full comprehensive environmental assessment of Line 9B.

TAXPAYERS FOOTING THE TAR SANDS BILL DIRECTLY AND INDIRECTLY THROUGH CLIMATE CHANGE

Not only is Canada unable to meet its carbon targets because of the tar sands[97], but also it is actually using taxpayers' money to pay for and promote it. The $1.38 billion in federal subsidies[98] and $22 million federal tax dollars that were just committed for advertising[99] should instead be invested in research for new sustainable technologies (which are emerging all over the world) and/or training programs to train oil sands workers and the like in new sustainable energy jobs.

According to NASA climate scientist James Hansen, 'exploitation of tar sands would make it implausible to stabilize climate and avoid disastrous global climate impacts. If the tar sands are thrown into the mix it is essentially game over.'[100]

The best-case scenario? We deal with the severe weather and storms and pay the price in infrastructure. The City of Toronto is currently on the hook for $93 million – the cost of responding to and cleaning up the recent ice storm in Dec 2013 ($13 million belongs to Toronto Hydro) and is currently looking for aid from Provincial and Federal governments. The City of Toronto is also facing a $60 million price tag after the flooding in July, 2013 - this does not include the $850 million in claims for the Insurance Bureau of Canada.[101] No doubt, that will also require aid from the Province.

APPENDIX: THE KALAMAZOO RIVER SPILL

On July 26, 2010, Enbridge reported that its Line 6B pipeline had ruptured, gushing oil into the Kalamazoo River near Marshall, Michigan. Over 3.8 million litres of dilbit were spilled, affecting a 60km stretch of the river and devastating the surrounding ecosystem and communities.

An investigation conducted by the National Transportation & Safety Board determined that Enbridge's deficient maintenance of the pipeline, its inadequate training of control centre personnel, and its poor public awareness programs led to unchecked corrosion in Line 6B, which in turn caused the pipeline to rupture. Indeed, multiple alarms about abnormal pressure in Line 6B were triggered in Enbridge's control centre in Edmonton on July 25th, 2010, but the company did not discover or report the spill for another 17 hours. Instead, Line 6B was restarted twice, and it was during these attempts to restart the flow of the pipeline that 81% of the spilled dilbit was released.[102]

In the days after the spill, Enbridge told response agencies that Line 6B had been carrying conventional crude oil. It was not until weeks later, when pressured by investigative reporters, that Enbridge admitted that Line 6B had been carrying dilbit from the Alberta tar sands.[103] If public health officials had known that surrounding communities were exposed to such hazardous chemicals, they likely would have been quicker to order an evacuation, and to expand the zone of evacuation.[104]

Although residents were exposed to strong airborne toxins in the aftermath of the spill, federal agencies declined to do a long-term health study of the affected communities. Meanwhile, many residents are experiencing new and aggravated medical problems, such as frequent headaches, persistent colds and flus, seizures, kidney problems, respiratory difficulties, chemical sensitivities, worsened cancers, and still other symptoms. Some residents also attribute several recent deaths of people and pets to the spill.[105]

The Kalamazoo River spill was the first time American agencies had to respond to a spill of dilbit, and they discovered that this dirty oil is much more difficult to clean than conventional crude. Upon spilling in the Kalamazoo River, the dilbit carried by Line 6B separated, with the diluents evaporating into the air and the heavier bitumen sinking to the bottom of the river. The submerged oil has been extremely difficult to remove from the river bottom. Over three years later, the clean-up is still ongoing, and Enbridge has thus far incurred over $1 billion in clean-up costs.[106] The EPA estimates that even when Enbridge's mandated clean-up duties are complete, there will remain over 600,000 litres of "unrecoverable" oil in the river, which may (or may not) be retrieved over a period of many years.[107]

APPENDIX: THE TAR SANDS

The tar sands underlie 140,000 km^2 of Alberta's boreal forest. These deposits of bitumen (a mixture of sand, clay and heavy crude oil) give Canada the third largest oil reserves in the world, eclipsed only by Saudi Arabia and Venezuela. In 2013, the tar sands produced about 1.9 million barrels per day (b/d) of crude oil. The majority of this oil is exported to the U.S, approximately 1.4 million b/d. In the next decade, production is expected to double, and industry anticipates reaching 5 million b/d by 2030.[108]

There are two main extraction methods to separate crude oil from bitumen: surface mining and in situ technologies. In 2012, in situ methods accounted for 52% of tar sands extraction. 80% of tar sands deposits are accessible only by in situ techniques.[109]

IN SITU METHOD

In situ operations occur when tar sands deposits are located 100 m under the ground or deeper. There are two main technologies for in situ: SAGD (Steam Assisted Gravity Drainage) and CSS (Cyclic Steam Simulation). Both technologies inject steam directly into the ground to separate the crude oil from bitumen, which is then pumped to the surface for processing. Currently, 79,000 km^2 of land is leased for in situ development.

Industry and government promote in situ as having less impact on lands. However, when a full life cycle assessment of land disturbance is considered (including roads, pipelines and land fragmentation), in situ is projected to disturb 6,500 km^2 compared to 4,800 km^2 for surface mining methods.[110] Moreover, in situ has proved to be extremely unstable and dangerous. Since May 20, 2013 over 235 million litres of crude have spilled from an uncontrollable pressure rupture at an in situ facility on Beaver Lake Cree territory near the Cold Lake region.[111] The leak has still not been controlled at time of publication of this report in January 2014.

SURFACE MINING METHOD

Surface mining operations occur when tar sands are located within 100m of the ground surface. First, the 'overburden' (boreal forest) is removed by clearcutting, then the bitumen is stripped and transported using 'heavy hauler' trucks (over 3 storeys high) to industrial "cookers" where steam and chemicals separate the heavy crude from bitumen. Currently, 4,800 km^2 of land are leased for surface mine operations.[112]

As of 2013, 715 km^2 of land had been lost to surface mining.[113] Both industry and government claim these lands can be returned to natural landscapes through reclamation. After 50 years of operations, only about 0.2% of land has been certified as reclaimed.[114]

Each barrel of oil from surface mining requires 2-4 barrels of freshwater and produces about 1.5 barrels of toxic waste. This waste is held in tailings ponds that in 2013 covered 176 km^2, holding 830 billion litres.[115] Each day, an estimated 11 million liters of this waste leaks into the Athabasca River.[116] The waste is so toxic that when 1600 ducks landed on a Syncrude tailings pond in 2008, all of the ducks died within hours of contact.[117]

Health impacts have been severe for downstream communities. In 2006, unexpectedly high rates of rare cancers were reported in the community of Fort Chipewyan. In 2009, Alberta Health confirmed a 30% rise in the number of cancers between 1995 - 2006.[118] However, the study lacks appropriate data and is considered conservative estimate by many residents. To date, a comprehensive health study has not been completed.

Caribou populations have been severely impacted by tar sands extraction. The Beaver Lake Cree First Nation has experienced a 74% decline of the Cold Lake herd since 1998 and a 71% decline of the Athabasca River herd since 1996. Today, just 175 – 275 caribou remain. By 2025, the total population is expected to be less than 50 and locally extinct by 2030.[119]

REFERENCES

1. 2011 Census. Independent calculation using First Nations map of Ontario
2. Toronto Star. “Line 9 assessment process is undemocratic: Editorial” Aug 18 2013
3. Council of Canadians -- York University Chapter, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7, pg 65-67
4. ibid.
5. Algonquin to Adirondacks Collaborative, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5, pg 74
6. Council of Canadians -- York University Chapter, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7, pg 68
7. City of Toronto, testimony to NEB. October 16, 2013. NEB Hearing transcript, Volume 5, pg 116
8. Grand River Indigenous Solidarity, testimony to the NEB. October 17, 2013. NEB Hearing transcript, Volume 6. pg 33
9. ibid.
10. Grand River Watershed Report, approved by the Ministry of the Environment on Wednesday, Aug. 16, 2012. cited by Grand River Indigenous Solidarity, testimony to the NEB. October 16, 2013.
11. Grand River Indigenous Solidarity, testimony to the NEB. October 17, 2013. NEB Hearing transcript, Volume 6. pg 33
12. Sarah Harmer, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7, pg 11-12
13. Algonquin to Adirondacks Collaborative, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5, pg 66-72
14. Kaleigh Rogers, Toronto Star. “Exposed Enbridge pipeline in Rouge Park puts waterways at risk” August 3, 2012
15. Adam Scott, Environmental Defence “Enbridge Oil Pipeline found dangerously exposed in the Rouge River” August 2, 2012
16. Richard Girard and Tanya Roberts Davis, Polaris Institute. “Out on the Tar Sands Mainline: Mapping Enbridge’s Web of Pipelines” May 2010, updated March 2012.
17. Ontario Pipeline Landowners Association, testimony to the NEB. October 17, 2013. NEB Hearing transcript, Volume 6. pg 117
18. CBC, “No coverup in N.W.T. pipeline leak: Enbridge” June 7, 2011.
19. DurhamCLEAR, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5, pg 147
20. ibid.
21. Ontario Pipeline Landowners Association submission to NEB. C21-08 - Written Evidence (Attachments 13-24) retrieved from: https://docs.neb-one.gc.ca/ll-eng/llisapi.dll?func=ll&objId=981555&objAction=browse&viewType=1#
22. Enbridge, “Supporting New Pipeline Technology” http://www.enbridge.com/AboutEnbridge/CorporateSocialResponsibility/
Environment/SupportingNewInspectionTechnology.aspx, downloaded
23. Enbridge Engineering Report B1-15 “Line 9B Reversal and Line 9 Capacity Expansion Project: Pipeline Integrity Engineering Assessment”, cited by Amanda Lickers, Rising Tide Toronto, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7, pg 121-124
24. ibid.
25. ibid.
26. DurhamCLEAR, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5, pg 144
27. Ontario Ministry of Energy, testimony to the NEB. October 17, 2013. NEB Hearing transcript, Volume 6. pg 75-85
28. Accufacts, “Report on Pipeline Safety for Enbridge’s Line 9B Application to NEB”, submitted by the Equiterre Coalition
29. Ontario Pipeline Landowners Association, testimony to the NEB. October 17, 2013. NEB Hearing transcript, Volume 6. pg 114
30. Derek Leahy, DeSmog Canada. “Pipeline Expert: Over 90% Probability of Line 9 Rupture with Tar Sands Dilbit”, Oct 22, 2013.
31. Ontario Ministry of Energy, testimony to the NEB. October 17, 2013. NEB Hearing transcript, Volume 6. pg 75-85
32. ibid.
33. Enbridge, testimony to the NEB. October 8, 2013. NEB Hearing Transcript, Volume 1. pg 46
34. Enbridge Engineering Report B1-15 “Line 9B Reversal and Line 9 Capacity Expansion Project: Pipeline Integrity Engineering Assessment”, cited by Amanda Lickers, Rising Tide Toronto, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7, pg 121-124
35. Anthony Swift, Susan Casey-Lefkowitz and Elizabeth Shope, National Resources Defence Council (NRDC) “Tar Sands Pipeline Safety Risks” February 2011. pg. 3. cited by Carrie Lester on October 18, 2014 at the NEB hearings in Toronto.
36. ibid
37. Derek Leahy, DeSmog Canada. “Pipeline Expert: Over 90% Probability of Line 9 Rupture with Tar Sands Dilbit”, Oct 22, 2013.
38. ibid.
39. SENES Consultants Limited, “Toronto’s Future Weather and Climate Driver Study” Volume 1, December 2011. Cited by Louisette Lanteigne on October 16, 2014 at the NEB hearings
in Toronto.
40. Louisette Lanteigne, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5
41. Marilyn Eriksen, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7
42. ibid.
43. CBC “Enbridge restarts northern Alberta pipeline closed during flooding” July 2, 2013.
44. Marilyn Eriksen, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7
45. Natural Resources Canada, “Earthquake Zones in Eastern Canada” last modified on NRC website, April 26, 2013. Cited by Louisette Lanteigne on October 16, 2014 at the NEB hearings
in Toronto.
46. ibid
47. ibid
48. Jessica McDiarmid, “Enbridge oilsands pipeline plan raises chilling issues for GTA” October 2, 2013. Quoting the City of Toronto’s submission to the NEB.
49. Amit Praharaj, Council of Canadians -- York University Chapter, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7
50. Algonquin to Adirondacks Collaborative, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5
51. ibid
52. Kiley Kroh, “TransCanada Pipeline Explosion Shuts Off Gas For 4,000 Residents In Sub-Zero Temperatures”, January 27, 2014.
53. Pipeline and Hazardous Materials Safety Administration (PHMSA)” Preliminary Guidance from OPERATION CLASSIFICATION”
January 2, 2014.
54. Grand River Indigenous Solidarity, testimony to the NEB. October 17, 2013. NEB Hearing transcript, Volume 6.
55. ibid.
56. Mohawk Council of Kahnawà:ke testimony to the NEB. October 9, 2013. NEB Hearing transcript, Volume 2
57. Chippewas of the Thames and Aamjiwnaang First Nation, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5
58. CBC News, “Oka joins protests against oil sands pipeline: Demonstrations held in more than 120 communities across Canada” Novemeber 16, 2013. and
Tim McSorley, Media Coop “Enbridge No More, says rally on Kanehsatà:ke territory” July 12, 2013.
59. Amanda Lickers, Rising Tide Toronto, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7
60. ibid
61. Klippensteins Barristers & Solicitors. “The Steel Company and the 1,184 acres stolen from Aamjiwnaang” http://monicavirtue.com/portfolio-items/the-steel-company-and-the-1184-acres-stolen-from-aamjiwnaang/
62. Marilyn Eriksen, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7
63. Michael Toledano, “How Activists Shut Down the Enbridge Line 9 Pipeline Hearings” October 21, 2013.
64. Nicole Goodman, testimony to the NEB. October 18, 2013. NEB Hearing transcript, Volume 7
65. DurhamCLEAR, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5
66. Emily Ferguson, testimony to the NEB. October 16, 2013. NEB Hearing transcript, Volume 5
67. Rick Monroe, National Farmers Union-Ontario (NFU-O) and the Ecological Farmers of Ontario (EFO). Written Evidence submitted to NEB
68. The Goodman Report, Page 9, Lines 19-20
69. The Goodman Report, Page 10, Lines 1-5
70. The Goodman Report, Page 18, Lines 14-16
71. The Goodman Report, Page 20, Lines 4-6
72. The Goodman Report, Page 21, Lines 8-13
73. The Goodman Report, Page 28, Lines 19-21
74. The Goodman Report, Page 29, Lines 1-3
75. The Goodman Report, Page 28, Lines 1-3
76. The Goodman Report, Page 27, Lines 14-16
77. The Goodman Report, Page 25, Lines 1-10
78. Mike Harris, Financial Post “Mike Harris: Turn Line 9 around” Dec. 5, 2012
79. The Goodman Report, Page 14, Lines 23-24
80. Keith Stewart, Greenpeace “Government subsidies to tar sands companies larger than Environment Canada’s entire budget” Nov. 7, 2010
81. Blue Green Canada, “More Bang for our Buck” Nov. 2012
82. Claudia Cattaneo, Financial Post “PetroChina bids to help build $5.5-billion Northern Gateway pipeline”. March 28, 2012
83. The Goodman Report, Page 4, Lines 29-31
84. The Goodman Report, Page 5, Lines 5-11
85. The Goodman Report, Page 8, Lines 18-21
86. Detailed Map of Line9B from Westover – Montreal – Portland [https://maps.google.com/maps?q=docs://0B79wVci3MuMFWGJ3Wm1KWlRSUFU]
87 Michael Toledano, Vice Magazine “Which Parts of Toronto Are Being Put at Risk by Enbridge’s Line 9?” Nov 26, 2013.
88. The Goodman Report, Page 11, Lines 10-11
89. The Goodman Report, Page 50, Lines 60
90. Description of Disaster in The Goodman Report, Page 38, Lines 11-27
91 AP “Railroad files for bankruptcy after Lac-Mégantic tragedy” August 7, 2013.
92. The Goodman Report, Page 27, Lines 14-16
93. The Goodman Report, Page 40, Lines 4-17
94. Reuters, “Canada oil sands output to triple by 2035: report” Nov. 22, 2011
95. The MIT study “Canada’s Bitumen Industry Under CO2 Constraints”
96. The Intergovernmental Panel on Climate Change found it extremely likely (90-95% sure) that human beings are the dominant cause of warming.
97. Via the Copenhagen Accord in 2009, Prime Minister Stephen Harper committed Canada to reduce our emissions to 17 percent below 2005 levels by 2020.
98. Keith Stewart, Greenpeace “Government subsidies to tar sands companies larger than Environment Canada’s entire budget” Nov. 7, 2010
99. Alex Boutilier, “Ottawa hires ad firm for $22 million oilsands campaign” January 9, 2014
100. Jenny Brown, LABOUR NOTES “Tar Sands Pipeline Risks Too Great, Canadian Unions Say” October 23, 2013
101. Elizabeth Church, Globe & Mail “Toronto to ask for help with ice storm costs” January 10, 2014. and
Kim Nursall, Toronto Star “Flood will cost City of Toronto more than $60 million” September 17, 2013.
102. National Transportation and Safety Board (NTSB), Pipeline accident report: Enbridge Incorporated Hazardous Liquid Pipeline Rupture and Release Marshall, Michigan July 25, 2010, Washington, DC. July 10, 2012.
103. Personal communications. See also Eartha Melzer, “Pipeline spill underlines fear of new tar sands developments” Michigan Messenger, August 10, 2010.
104. House of Representatives Committee on Transportation and Infrastructure (HRCTI). Enbridge Pipeline Oil Spill
in Marshall, Michigan: Hearing: One hundred and eleventh congress: Second session. Washington DC: US Government Printing Office, 2010.
105. Personal communications. See also Fritz Klug, “Kalamazoo
River Oil Spill Health Questions Go Unanswered Without Long-term Study.” MLive. December 12, 2011.
106. Carol Linnit, “Official Price of the Enbridge Kalamazoo Spill, A Whopping $1,039,000,000” DeSmog.ca, August 26, 2013
107. Environmental Protection Agency (2013). Dredging Begins on Kalamazoo River.
108. Alberta Energy (2014) http://www.energy.alberta.ca/oilsands/791.asp
109. Pembina Institute (2013) “Forecasting the Impacts of Oil Sands Expansion” http://www.pembina.org/pub/2455
110. ibid
111. Timoney, K. & P. Lee (2013) CNRL’s Persistent 2013 Releases near Cold Lake, Alberta: Facts, Unanswered Questions,
and Implications.
112. Pembina Institute (2013) “Forecasting the Impacts of Oil Sands Expansion”
113. Alberta Energy (2014) http://www.energy.alberta.ca/OilSands/791.asp
114. Pembina Institute (2013) “Losing Ground: Why the problem of the oilsands tailing waste keeps growing” http://www.pembina.org/pub/2470
115. ibid
116. Environmental Defense (2008) “11 million liters a day: The Tar Sands Leaking Legacy” http://environmentaldefence.ca/reports/11-million-litres-day-tar-sands-leaking-legacy
117. Toronto Star (25 June, 2010) “Syncrude guilty in death of 1,600 ducks in toxic tailings pond”
118. Alberta Health
(2009) “Cancer Incidence in Fort Chipewyan, Alberta, 1995-2006” http://www.albertahealthservices.ca/500.asp
119. The Co-operative (2010) “Save the caribou, Stop the tar sands” http://www.raventrust.com/beaverlakecree.html

Front Cover: Line 9 Moira River Crossing (Belleville)
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