



FINANCIAL LIABILITY FOR KINDER MORGAN



Healthy Oceans, Healthy Communities.



Kerry Bodwell

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## Introduction

Residents of the Salish Sea region—Vancouver, Victoria, the Gulf Islands and Washington State—could see a four-fold increase in the number of oil tankers traveling from the Port of Metro Vancouver through Juan de Fuca Strait, if Kinder Morgan is permitted to build a new pipeline to carry oil from the tar sands to markets in Asia. Such a dramatic increase signals exponentially higher risk of oil spills and raises many questions about what is at risk, how the oil is “cleaned up”, and who pays for oil spill response.

This report provides a brief assessment of each of those questions and focuses on who pays for responding to an oil spill from a tanker. We acknowledge and thank the Environmental Law Center at the University of Victoria for conducting research and analysis of the marine insurance laws governing oil spill response.

# About the Kinder Morgan Proposal

In 2005 Kinder Morgan, the largest pipeline company in the world, purchased the Trans Mountain Pipeline which runs from Edmonton, Alberta to Burnaby, British Columbia. Built in 1953, this pipeline originally carried 70,000 barrels per day (bpd) of oil and has expanded to the current level of 300,000 bpd. Approximately 100,000 bpd are shipped to the U.S. for refining, 150,000 bpd are refined or distributed in B.C., and 50,000 bpd are loaded onto tankers and shipped to markets in Asia. This pipeline is the only pipeline in North America that ships crude, refined, and semi-refined oil in the same pipeline.

Kinder Morgan recently announced their plans to build a new pipeline that would run parallel to the existing pipeline. The new pipeline would bring total capacity to 750,000 bpd, most of which would be crude oil shipped to markets in Asia via oil tankers.

Every year, approximately 70-90 Aframax oil tankers travel through the Strait of Juan de Fuca, across the Strait of Georgia, into Vancouver harbour and up Burrard Inlet. Each oil tanker can carry up to 750,000 barrels of oil. If Kinder Morgan's plan to build a new pipeline were to be approved, this would increase to 300 oil tankers per year plying these waters. Larger "Suezmax" tankers are envisaged, which would require dredging of Burrard Inlet to improve berthing depths and the channel depth at both First and Second Narrows.

Kinder Morgan is currently conducting outreach and consultation with the land owners, First Nations, businesses, local governments, and others that would be affected by the new pipeline application. They hope to file a formal application to the National Energy Board in late 2013, have construction start in 2016, and be shipping oil by 2017.

If Kinder Morgan's plan to build a new pipeline were to be approved, tanker traffic in Burrard Inlet would increase from about 90 trips per year to some 300.



# What is at Risk?

**The Salish Sea** is a unique body of water that includes the Strait of Georgia in British Columbia, Puget Sound in Washington State and the shared Juan de Fuca Strait that straddles the border between Canada and the U.S. Hundreds of rivers flow into the Salish Sea<sup>1</sup> creating a unique and extremely biologically rich area that includes a multitude of estuaries, islands and inlets and vast expanses of shoreline.

Within these waters travel the famous Fraser River salmon that supply people, whales, bears, and forests with food. The Fraser River is the largest producer of salmon on the entire Pacific Coast of North America<sup>2</sup>. The current-swept passages of the Salish Sea are blanketed in bright yellow and purple encrusted sponges while rockfish play in the bull kelp and delicate basket stars extend their willow branches in the moving water to catch plankton. Closer to shore, sand dollars stand upright on the beaches, clams squirt water from their burrows, and shore crabs seek shelter under rocks as the tides ebb. Killer whales, Pacific white sided dolphins, and humpback whales can appear out of nowhere while the cormorants nest on the cliffs and great blue heron can be seen feeding in the estuaries.

The Salish Sea is home to numerous marine mammals including the Southern Resident killer whales, at least 200 species of fish, over 1,500 species of invertebrates, 100 species of marine birds, and about 500 species of marine plants. The region is also home to over seven million people who live around the shores of Puget Sound, Georgia Strait and the Strait of Juan de Fuca.<sup>3</sup>

The early industrial years were hard on the amazing ecological features of the Salish Sea, with intense fishing, pulp mills, fish farms, and sedimentation from development, municipal sewage and more. The lingcod and rockfish populations declined sharply, the recreational crab fishery in Howe Sound was closed due to pollution, and the sea lice from fish farms infected the juvenile wild salmon. Marine mammal sighting in Vancouver dwindled and the Southern Resident killer whales were listed as threatened. In fact, this place has been dubbed Canada's most at-risk natural area.<sup>4</sup>

But local residents, industry, and government have worked hard to restore the glory of this once great body of water. Britannia Beach in Howe Sound, for instance, once home to the "worst point source of mineral contamination in North America"<sup>5</sup> has recovered thanks to the effort of government, industry and community groups. Many other areas have received some level of protection and the Southern Strait of Georgia National Marine Conservation area moves closer to a reality every day.<sup>6</sup> Killer whales, Pacific whited sided dolphins and humpback whales have been seen in Vancouver harbour in the last two years. The ecological, economic, and spiritual importance of this great sea has inspired many people to take action, but all their work could be in vain if there was one significant oil spill.

The Strait and its adjoining waters, lands and communities are currently home to many different industries including tourism, fisheries and recreation<sup>7</sup>. These industries contribute significantly to B.C.'s economic and social well being. In 2011, tourism contributed over

1 Pacific States/British Columbia Oil Spill Task Force, 2011, [The Stakeholder Workgroup Review of Planning and Response Capabilities for a Marine Oil Spill on the U.S./Canadian Transboundary Areas of the Pacific Coast - Final Project Report](#)

2 British Columbia Waterfowl Society, 2012, <http://www.reifelbirdsantiquary.com/fraser.html>

3 Western Washington University 2011, <http://staff.wvu.edu/stefan/salishsea.htm>

4 Fisheries and Oceans Canada, 2007, [A New Ecosystem Science Framework in Support of Integrated Management](#)

5 [http://en.wikipedia.org/wiki/Britannia\\_Beach,\\_British\\_Columbia](http://en.wikipedia.org/wiki/Britannia_Beach,_British_Columbia)

6 <http://www.pc.gc.ca/eng/progs/amnc-nmca/dgs-ssg/intro.aspx>

7 Bryan Nichols, 2002, [Wave of the Future: Orca Pass international Stewardship Area](#), Georgia Strait Alliance

seven billion dollars to the GDP<sup>1</sup> and directly employs approximately 127,000 people.<sup>2</sup> It is also expected to grow significantly with over 100,000 additional jobs created by 2020.<sup>3</sup>

Although there have been no comprehensive studies done in B.C. with regard to ecological and economic consequences of a major oil spill in the region, next door in Washington State the Department of Ecology conducted a study to determine what the economic impacts of a major spill might be.<sup>4</sup> They concluded that a major spill would cost 165,000 jobs and 10.8 billion dollars in economic impacts alone. This does not include individual claims or environmental impacts. According to NOAA (National Oceanic and Atmospheric Administration) scientists, of all the threats posed to killer whales in the region, the threat of a major oil spill is the single greatest risk to the species.<sup>5</sup> Such a spill could easily eliminate our resident killer whale populations as well as devastate many other species and habitats.

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A Washington State study concluded that a major oil spill would cost 165,000 jobs and 10.8 billion dollars in economic impacts alone.



Paul Manley

1 BC Stats, 2012, [Tourism Indicators: Tourism Sector Sees Modest Growth in 2011](#)  
2 <http://www.go2hr.ca/AboutUs/MediaRoom/FactsAboutTourism/tabid/696/Default.aspx>  
3 <http://www.go2hr.ca/news/bc-tourism-industry-create-101000-new-job-openings-2020>  
4 <http://pugetsound.org/policy/issues/oil-spill-prevention>  
5 <http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/oil-spill-response-and-killer-whales.html>

# Risk of an Oil Spill

Risk is formally defined as the product of two factors: the likelihood of occurrence and the consequences of occurrence. The likelihood of oil tankers spilling oil, on a trip-by-trip basis, is capable of fairly precise calculation and this factor has definitely declined over the past century with improvements in ship technology and navigation aids. The second factor, the consequences of a spill, is different for different types of oil products and their susceptibility to oil spill response technology. This factor also involves value judgments about the acceptability of oil spill response effectiveness: is ‘out of sight, out of mind?’ good enough? Or do we weigh the consequences in terms of the ecosystems affected, the marine mammals, fish and birds killed and the persistent and intergenerational effects on marine life?

The most famous ship-source oil spill is the *Exxon Valdez*, which spilled an estimated 200 million litres (275,000 barrels) of crude oil into Prince William Sound in 1989. This was heavy oil and to this day, the cobble beaches of the Sound are coated in a smelly, black, viscous mixture of oil and sand. Some 80,000 litres of oil are estimated to remain on the ocean floor in the intertidal zone.<sup>1</sup> The herring fishery collapsed and has not recovered.

The local economy collapsed and struggles to this day. The human misery left in the wake of this tragedy spans the spectrum of economic and social issues. Salmon suffered both the loss of a major food source and mutations caused by persistent toxins have affected subsequent generations.<sup>2</sup> The consequences of this spill are presently measured in decades (three and counting); dollars (\$4 to \$12 billion, depending what you include); and human and ecological damage that remains uncompensated, perhaps incapable of compensation.

From 1996-2006 there were 205 tanker-related oil spills of over 8,155 litres (51 barrels) in size totalling 431 million litres (2.7 million barrels) of oil spilled into the world’s oceans.<sup>3</sup> Oil spill response technologies do not “clean up” more than a small percentage of a spill: at best, they may be used to prevent oil from fouling shorelines when wind, current and wave conditions favour their use. By far most of a spill is left to evaporate or biodegrade; or, as in the case of the Deepwater Horizon catastrophe, chemical agents are used to alter the properties of the oil. In the Gulf of Mexico, chemical-treated globules of oil sank to the bottom and are washed up on shore by wave and storm activity.

1 Exxon Valdez Oil Spill Trustee Council, *Lingering Oil Report*, 2010.

2 Ascites, premature emergence, increased gonadal cell apoptosis, and cytochrome P4501A induction in pink salmon larvae continuously exposed to oil-contaminated gravel during development Gary D. Marty, David E. Hinton, Jeffrey W. Short, Ronald A. Heintz, Stanley D. Rice, Donna M. Dambach, Neil H. Willits, John J. Stegeman, *Canadian Journal of Zoology*, 1997, 75(6): 989-1007, 10.1139/z97-120

3 International Tanker Owners Pollution Federation (ITOPF) website <http://www.itopf.com/information-services/data-and-statistics/statistics/> Sept 2007



Exxon Valdez Oil Spill Trustee Council

## Bitumen and Spill Response Costs

Tar sands bitumen is considered a persistent mineral oil; however, its characteristics are quite different from conventional crude oil. It is so viscous that, in order to be transported, it is thinned with a natural gas condensate and thereafter referred to as “dilbit” (diluted bitumen). Unlike conventional crude oils, bitumen is heavier than water. Dilbit may be heavier, about the same as or lighter than water, depending on its precise constituents. In the event of a spill, dilbit may accordingly sink to the bottom, or float for a time, or emulsify in the water column. Over time, it will likely do all three things.

The best available technology for responding to oil spills depends upon the oil remaining on the surface of the water and this is the least likely thing for dilbit to do. As the diluents volatilize, creating a toxic cloud of benzene and toluene (carcinogens) and hydrogen sulphide (acutely poisonous), a majority of the bitumen will sink, either mixing into the water column or sinking to the ocean floor. If this happens, neither booms and skimmers nor dispersant can have any effect on the bitumen<sup>1</sup>. There is no known technology that can remove it from the ocean floor.

The Kalamazoo River tar sands spill of 2010 saw over one million gallons of dilbit poured into the river from a ruptured pipeline. In this case, the oil sank to the bottom of the river and the response, originally expected to be completed within two months, has continued through 2012. Costs exhausted insured limits of \$650 million and were at one point estimated by Enbridge at \$800 million. Over 30 miles of the river were affected; and as Enbridge was proudly announcing the completion of its ‘cleanup’ to shareholders in October, 2012, the USEPA was issuing an order to them to return and do more work. Officials claimed “no-one expected sunken oil to be so difficult to clean up.”<sup>2</sup>

1 Swift, A, N. Lemphers, S. Casey-Lefkowitz, K. Terhune & D. Droitsch (2011) Pipeline and Tanker Trouble: The impact to BC’s Communities, Rivers, and Pacific Coastline from Tar Sands Oil Transport. (Pg 7)

2 Anderson, Mitch, “Spill from Hell: Diluted Bitumen”, The Tyee, 5 March 2012, [www.thetyee.ca](http://www.thetyee.ca)

# Who Pays for Oil Spill Response

In Canada, for ship-source oil pollution damage is governed by the Marine Liability Act and a number of international conventions to which Canada is a party.

The conventions were designed to put a cap on the financial liability of ship owners and establish a scheme for paying for compensation, spill response and natural resource damage from ship-source oil spills. Liability limits are expressed in Special Drawing Rights (SDR) as valued by the International Monetary Fund and then converted into local national currency<sup>1</sup>.

The present scheme for compensation for ship-source oil pollution is comprised of four tiers of coverage.



## Tier 1: Civil Liability Convention and Protection & Indemnity Insurance.

- Owners of ships carrying more than 2,000 tonnes of persistent bulk oil as cargo must carry insurance or other financial security to cover oil pollution damage.
- Ship owners are liable for a maximum of 89,770,00 SDR, approximately \$140 million CAD, paid by the ship's insurer, which is usually a Protection & Indemnity Club.
- Protection & Indemnity Clubs are 'mutual associations' established by ship owners.
- These funds are supposed to be made available immediately, to pay for spill response efforts.
- Once a ship owner believes that the \$140 million limit has been reached, the ship owner can legally "transfer command" of an oil spill response to government.



## Tier 2: International Oil Pollution Compensation Fund

- The International Oil Pollution Compensation Fund can be accessed when the compensation available under Tier 1 is inadequate.

This fund 'tops up' the insurance available under Tier 1 to a cap of 203 million SDR, or about \$318 million CAD.

- In the event that a ship owner were not liable, so that Tier 1 insurance was not available (for example, because the pollution damage resulted from 'a natural phenomenon of an exceptional, inevitable and irresistible character'), this fund could be accessed for the full amount of \$318 million. Otherwise, it would pay only the difference between \$318 million and the Tier 1 amount, \$140 million.
- This fund responds only to spills from ships carrying persistent bulk oil as commercial cargo. It does not respond to spills from ships engaged in war, or operated by states for state purposes. Damage must have resulted from an incident involving one or more ships.



## Tier 3: International Oil Pollution Compensation Supplementary Fund

- Canada joined this fund effective January 2, 2010.
- The Supplementary Fund is available to any person having a valid claim under Tier 2, the value of which exceeds \$318 million.
- This fund 'tops up' the total coverage to about \$1.18 billion CAD, from Tiers 1, 2 & 3.

<sup>1</sup> These figures were generated using the conversion rate of June 26th, 2012 where 1 SDR equals \$1.56 CAN. Current conversion rates can be found at [http://coinmill.com/CAD\\_SDR.html](http://coinmill.com/CAD_SDR.html) and [http://www.imf.org/external/np/fin/data/rms\\_five.aspx](http://www.imf.org/external/np/fin/data/rms_five.aspx).



#### Tier 4: Canada's Ship Source Oil Pollution Fund

- The Ship Source Oil Pollution Fund came into force on April 24th, 1989. It succeeded the Maritime Pollution Claims Fund of 1973. The current balance of the fund is about \$380 million CAD.
- The maximum liability of the fund to respond to a single spill is \$159 million CAN.<sup>1</sup> This amount is in addition to any amount paid under Tiers 1, 2 and 3.
- The fund was created with levies historically imposed on importers of oil. No levy has been imposed since 1976. Since that date, taxpayers have contributed interest on the accumulated levies, so that the fund continues to grow, albeit slowly.
- The Minister of Transport has the ability to re-impose a levy per metric ton of 'contributing oil' imported into or shipped from Canada in bulk as cargo on a ship. The levy is indexed annually to the consumer price index.
- The purpose of the SOP Fund is to ensure the payment of claims for marine oil pollution that originate from ships when there is a risk of non-payment from the responsible ship owner, or if the identity of the ship that caused the discharge cannot be established.

Thus the total amount of compensation available from all four tiers of funding is approximately \$1.34 billion CAD.<sup>2</sup>

Tier 1, Tier 2 & Tier 3 funding only applies to spills from ships constructed or adapted to carry oil in bulk as cargo. Tier 4 is also available for persistent oil spills covered by Tiers 1, 2 & 3; however, it is unique in that it also covers oil spills from other classes of ships. Tier 4 also applies to so-called 'mystery spills', where the identity of the ship that caused the discharge cannot be established and thus the spill response would not be covered by the funding in Tiers 1, 2 or 3. In the case of a mystery spill, Canada's Ship Source Oil Pollution Fund would become the first and only source of funding for the spill response.

<sup>1</sup> Increased in 2012 - see ship source pollution fund annual report at page iii, accessed Oct 30 2012 <http://www.ssopfund.gc.ca/documents/Annual-Report2011-2012-e.pdf>

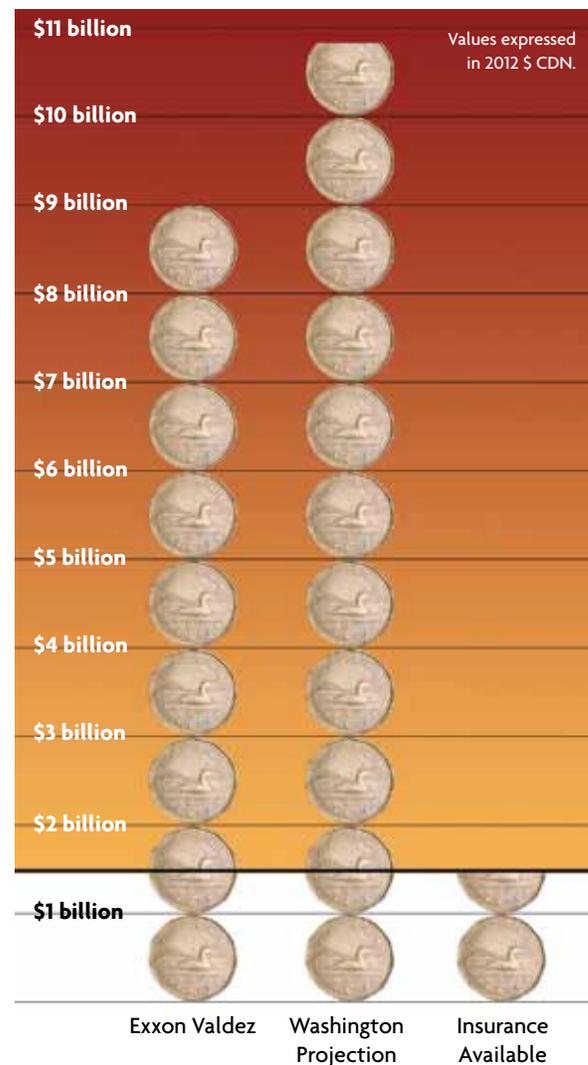
<sup>2</sup> Boulton, Matthew. (2010) Financial Vulnerability Assessment: Who Would Pay for Oil Tanker Spills Associated with the Northern Gateway Pipeline? Environmental Law Center University of Victoria

## Costs to taxpayers

The compensation available in Canada, \$1.34 billion, contrasts sharply with experience: \$4 billion USD were spent to attempt the response to the *Exxon Valdez* conventional crude oil spill, where barely 1/10 of the spill was recovered. The *Exxon Valdez* owners also paid out over \$5 billion in damages claims in addition to spill response costs. And Prince William Sound remains polluted to this day, with consequent impacts on the economy and ecology of the region.

In most cases the \$1.34 billion will be a hard cap on the insurance available to answer a spill. If spill response costs and damages exceed that amount, taxpayers and those suffering the damage may have to bear the additional costs. In exceptional cases, a civil action might be attempted but would only be effective if the owner had sufficient assets to cover any damage claims. Since the *Exxon Valdez* experience, oil companies no longer operate tankers in integrated companies, where vast assets are available to answer judgments. It has become commonplace that a ship will be the sole asset of an independent operating company, which is chartered by the party exporting or importing the oil. Thus, liability is limited both by international convention and practice to the funds described above<sup>1</sup>.

Furthermore, it must be noted that the Tiers 1 through 4 funds are limited to compensation for “pollution damage.”<sup>2</sup> An oil spill from a tanker will generally only give rise to claims for five types of damage including: property damage; costs of spill response operations at sea and on shore; direct economic losses by fishermen or those engaged in mariculture; direct economic losses in the tourism sector and costs of reasonable measures for reinstatement of the environment. Indirect or non-market losses, such as the long-term damage to ecosystems and aesthetics, are not compensable.



<sup>1</sup> Boulton, Matthew. (2010) Financial Vulnerability Assessment: Who Would Pay for Oil Tanker Spills Associated with the Northern Gateway Pipeline? Environmental Law Center University of Victoria

<sup>2</sup> Article 1, Schedule 5 of the Marine Liability Act defines ‘pollution damage’ as: ‘loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken.’

## Conclusion

Kinder Morgan, like Enbridge, will try to calm fears about this mega project by claiming that the risks of a spill are low and that there are funds in place to pay the spill response costs. Neither statement is entirely true.

The risk of a catastrophic oil spill will more than quadruple with the increased numbers of tankers. Experience from the Kalamazoo River has proven that the dilbit from a tar sands pipeline behaves very differently from conventional oil, making “cleanup” all but impossible. And the funds that are designed to pay for oil spills at sea will probably not be enough, leaving taxpayers on the hook.

Kinder Morgan says they are asking the public to support their new pipeline and tanker project. But what they are really asking is if the people of the Salish Sea are willing to put their health and that of their economy and environment at risk. And if they'd like to pay, and go on paying, for attempts to reverse the damage.

# About the Authors

## Living Oceans Society

Based in British Columbia, Living Oceans Society is the largest organization in Canada focusing exclusively on marine conservation. It advocates for oceans that are managed for the common good, according to science-based policies that consider ecosystems in their entirety.

For more information please visit [www.livingoceans.org](http://www.livingoceans.org)

## Wilderness Committee

With over 60,000 members, donors and volunteers, we are Canada's largest membership-based, citizen-funded wilderness protection group. We are united in our mission to protect Canada's biodiversity through strategic research and grassroots public education.

For more information please visit [wildernesscommittee.org](http://wildernesscommittee.org)

## Georgia Strait Alliance

Since 1990, Georgia Strait Alliance has been working to protect and restore the marine environment and promote the sustainability of Georgia Strait, its adjoining waters, and communities. We are committed to a future for our region that includes clean water and air, healthy wild salmon runs, rich marine life and natural areas, and sustainable communities achieved by using the best available science, precautionary principle, experience, traditional ecological knowledge, and in consideration of community values.

For more information please visit [www.GeorgiaStrait.org](http://www.GeorgiaStrait.org)

## West Coast Environmental Law

West Coast Environmental Law is BC's legal champion for the environment. Through legal advice, education and advocacy, West Coast provides citizens and organizations with the knowledge, tools and innovative solutions needed to protect our environment and build sustainability locally, nationally and internationally.

For more information please visit [wcel.org](http://wcel.org)